ANTI-IL-13 ANTIBODIES AND COMPLEXES

RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application Number 60/578,736, filed June 9, 2004, U.S. Provisional Patent Application No. 60/578,473, filed June 9, 2004, and U.S. Provisional Patent Application No. 60/581,375 filed June 22, 2004. The contents of each of these applications are incorporated herein by reference in their entirety.

TECHNICAL FIELD

The invention relates to anti-IL-13 antibodies, crystals of anti-IL-13 antibodies, IL-13 polypeptide/anti-IL-13 antibody complexes, crystals of IL-13 polypeptide/anti-IL-13 antibody complexes, IL-13Rα1 polypeptide/IL-13 polypeptide/anti-IL-13 antibody complexes, crystals of IL-13Rα1 polypeptide/IL-13 polypeptide/anti-IL-13 antibody complexes, and related methods and software systems.

BACKGROUND

Interleukin-13 (IL-13) is a pleiotropic cytokine involved in immune response conditions, such as atopy, asthma, allergy, and inflammatory response. The role of IL-13 in immune response is facilitated by its effect on cell-signaling pathways. For example, IL-13 can promote B cell proliferation, induce B cells to produce IgE, and down regulate the production of proinflammatory cytokines. IL-13 can also increase expression of VCAM-1 on endothelial cells, and enhance expression of class II MHC antigens and various adhesion molecules on monocytes.

IL-13 function is mediated through an interaction with its receptor on hematopoietic and other cell types. The human IL-13 receptor (IL-13R) is a heterodimer that includes the interleukin-4 receptor α chain, IL-4Rα, and the IL-13 binding chain, IL-13Rα1. The association of IL-13 with its receptor induces the activation of STAT6 (signal transducer and activation of transcription 6) and JAK1 (Janus-family kinase) through a binding interaction with the IL-4Rα chain. IL-13Rα2, which may be found on the cell surface or in soluble form in the circulation,

binds to IL-13 with high affinity but does not mediate cellular responses to IL-13. It is thought to function as a decoy receptor.

SUMMARY

In one aspect, the invention features a crystalline antibody. The crystalline antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

In another aspect, the invention features a crystalline composition that includes an antibody. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

In a further aspect, the invention features a crystalline complex that includes an IL-13 polypeptide and an antibody. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

In another aspect, the invention features a crystalline complex that includes an IL-13Rα1 polypeptide and an IL-13 polypeptide.

In yet another aspect, the invention features a method that includes using a three-dimensional model of an antibody to design an agent that interacts with an IL-13 polypeptide. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

In another aspect, the invention features a method that includes using a three-dimensional model of an IL-13 polypeptide to design an agent that interacts with the IL-13 polypeptide.

In another aspect, the invention features a method that includes using a three-dimensional model of an IL-13 polypeptide bound to an IL-13Rα1 polypeptide to design an agent that interacts with the IL-13 polypeptide.

In another aspect, the invention features a method that includes selecting an agent by performing rational drug design with a three-dimensional structure of a crystalline complex that includes an IL-13 polypeptide; contacting the agent with an IL-13 polypeptide; and detecting the ability of the agent to bind the IL-13 polypeptide.

In a further aspect, the invention features a method that includes contacting an IL-13 polypeptide with an antibody to form a composition; and crystallizing the composition to form a crystalline complex in which the antibody is bound to the IL-13 polypeptide. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-

13 antibody, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

In another aspect, the invention features a method that includes contacting an IL-13 polypeptide with an antibody and an IL-13Rα1 polypeptide to form a composition, and crystallizing the composition to form a crystalline complex in which the antibody and the IL-13Rα1 polypeptide are each bound to the IL-13 polypeptide. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

In another aspect, the invention features a software system that includes instructions for causing a computer system to accept information relating to a structure of an IL-13 polypeptide bound to an antibody, the antibody including an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody. The instructions also cause the computer system to accept information relating to a candidate agent and to determine binding characteristics of the candidate agent to the IL-13 polypeptide. The determination of binding characteristics is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

In another aspect, the invention features a computer program residing on a computer readable medium. A plurality of instructions is stored on the computer readable medium. When the instructions are executed by one or more processors, the one or more processors will accept information relating to a structure of an IL-13 polypeptide bound to an antibody, the antibody being an anti-IL-13 polypeptide or a Fab fragment of an anti-IL-13 antibody; accept information relating to a candidate agent; and determine binding characteristics of the candidate agent to the IL-13 polypeptide. Determination of the binding characteristics is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

In another aspect, the invention features a method that includes accepting information relating to the structure of an IL-13 polypeptide bound to an antibody and modeling the binding characteristics of the IL-13 polypeptide with a candidate agent. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody. The method of accepting information and modeling the binding characteristics is implemented by a software system.

In another aspect, the invention features a computer program residing on a computer readable medium containing a plurality of instructions. When the instructions are executed by one or more processors, the one or more processors will accept information relating to the structure of an IL-13 polypeptide bound to an antibody, the antibody being an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody; and model the binding characteristics of the IL-13 polypeptide with a candidate agent.

In another aspect, the invention features a software system, that includes instructions for causing a computer system to accept information relating to the structure of an IL-13 polypeptide bound to an antibody, and model the binding characteristics of the IL-13 polypeptide with a candidate agent. The antibody is an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

In another aspect, the invention features a crystalline antibody. The antibody is capable of binding to a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In a further aspect, the invention features a crystalline composition that includes an antibody capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In another aspect, the invention features a crystalline complex that includes an IL-13 polypeptide and an antibody. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In yet another aspect, the invention features a crystalline complex that includes an IL-13 polypeptide, an IL-13Ra1 polypeptide, and an antibody. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In another aspect, the invention features a method that includes using a three-dimensional model of an antibody to design an agent that interacts with an IL-13 polypeptide. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In another aspect, the invention features a method that includes contacting an IL-13 polypeptide with an antibody to form a composition; and crystallizing the composition to form a crystalline complex in which the antibody is bound to the IL-13 polypeptide. The antibody is capable of binding a site of an IL-13 polypeptide to

which an IL-4R polypeptide binds *in vivo*, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

In yet another aspect, the invention features a method that includes contacting an IL-13 polypeptide with an antibody and an IL-13Rα1 polypeptide to form a composition, and crystallizing the composition to form a crystalline complex in which the antibody and the IL-13Rα1 polypeptide are each bound to the IL-13 polypeptide. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

In another aspect, the invention features a software system that includes instructions for causing a computer system to accept information relating to a structure of an IL-13 polypeptide bound to an antibody, accept information relating to a candidate agent, and determine binding characteristics of the candidate agent to the IL-13 polypeptide. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds in vivo. The determination of binding characteristics of the candidate agent is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

In another aspect, the invention features a computer program residing on a computer readable medium containing a plurality of instructions. When the instructions are executed by one or more processors, the one or more processors will accept information relating to a structure of an IL-13 polypeptide bound to an antibody, accept information relating to a candidate agent; and determine the binding characteristics of the candidate agent to the IL-13 polypeptide. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*. Determination of the binding characteristics of the candidate agent is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent

In another aspect, the invention features a method that includes accepting information relating to the structure of an IL-13 polypeptide bound to an antibody and modeling the binding characteristics of the IL-13 polypeptide with a candidate agent. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*. The method of accepting information and modeling the binding characteristics is implemented by a software system.

In another aspect, the invention features a computer program residing on a computer readable medium containing a plurality of instructions. When the instructions are executed by one or more processors, the one or more processors will accept information relating to the structure of an IL-13 polypeptide bound to an antibody and model the binding characteristics of the IL-13 polypeptide with a candidate agent. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In another aspect, the invention features a software system that includes instructions for causing a computer system to accept information relating to the structure of an IL-13 polypeptide bound to an antibody and model the binding characteristics of the IL-13 polypeptide with a candidate agent. The antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

In another aspect, the invention features a method of modulating IL-13 activity in a subject. The method includes using rational drug design to select an agent that is capable of modulating IL-13 activity, and administering a therapeutically effective amount of the agent to the subject.

In a further aspect, the invention features a method of treating a subject having a condition associated with IL-13 activity. The method includes using rational drug design to select an agent that is capable of effecting IL-13 activity, and administering a therapeutically effective amount of the agent to the subject.

In another aspect, the invention features a method of prophylactically treating a subject susceptible to a condition associated with IL-13 activity. The method includes determining that the subject is susceptible to the condition associated with IL-13 activity, using rational drug design to select an agent that is capable of effecting IL-13 activity, and administering a therapeutically effective amount of the agent to the subject.

Structural information of a polypeptide or a corresponding ligand can lead to a greater understanding of how the polypeptide functions *in vivo*. For example, knowledge of the structure of a protein or a corresponding ligand can reveal properties that facilitate the interaction of the protein with its ligands, including other proteins, antibodies, effector molecules (*e.g.*, hormones), and nucleic acids. Structure based modeling can be used to identify ligands capable of interacting with an IL-13

polypeptide, thus eliminating the need for screening assays, which can be expensive and time-consuming. Structural information can also be used to direct the modification of a ligand known to interact with IL-13 to generate an alternative ligand with more desirable properties, such as tighter binding or greater specificity.

The study of the interaction between an anti-IL-13 antibody and an IL-13 polypeptide and between an IL-13 polypeptide and its receptor can facilitate the design or selection of ligands (*e.g.*, drugs) for modulating the activity of IL-13 *in vivo*. Such studies can therefore be useful for designing therapeutic agents. Activity assays indicated that mAb13.2 blocked IL-13 function *in vitro* and *in vivo* (see Examples 1 and 2 below), including the use of an antibody to identify IL-13-binding agents capable of disturbing the normal function of the protein. Accordingly, it is believed that the crystal structures of the mAb13.2Fab fragment, the human IL-13/mAb13.2 Fab fragment complex, and the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex (see Tables 10-12 below) can be useful for designing or identifying agents that can interact with IL-13 and the IL-13 receptor polypeptide, IL-13Rα1. Such agents may be useful in modulating the activity of IL-13 in immune response conditions, such as, for example, asthma (*e.g.*, nonallergic asthma, or allergic asthma, which is sometimes referred to as chronic allergic airway disease), chronic obstructive pulmonary disorder (COPD), airway inflammation, eosinophilia, fibrosis and excess mucus production (*e.g.*, cystic fibrosis, pulmonary fibrosis, and allergic rhinitis), inflammatory and/or autoimmune conditions of the skin (*e.g.*, atopic dermatitis), inflammatory and/or autoimmune conditions of the gastrointestinal organs (*e.g.*, inflammatory bowel disease (IBD) and/or Crohn's disease), liver (*e.g.*, cirrhosis), inflammatory and/or autoimmune conditions of the blood vessels or connective tissue (*e.g.*, scleroderma), and tumors or cancers (*e.g.*, soft tissue or solid tumors), such as Hodgkin's lymphoma, glioblastoma, and lymphoma.

Other features and advantages of the invention will be apparent from the accompanying drawings and description, and from the claims. The contents of all references, pending patent applications and published patents, cited throughout this application are hereby expressly incorporated by reference. In case of conflict, the present application, including definitions, will control.

DESCRIPTION OF DRAWINGS

FIG. 1A is the amino acid sequence of the light chain of the mAb13.2 Fab (fragment antigen binding) fragment (SEQ ID NO:1).

FIG. 1B is the amino acid sequence of the heavy chain of mAb13.2 Fab fragment (SEQ ID NO:2).

FIG. 2A is the amino acid sequence of full-length human IL-13 (Swiss-Prot Accession No. P35225) (SEQ ID NO:3). The signal peptide cleavage site is indicated by a slash. Alpha helices A, B, C, and D are underlined. Helix A is defined by amino acids 25-42; helix B is defined by amino acids 62-71; helix C is defined by amino acids 78-89; and helix D is defined by amino acids 112-127.

FIG. 2B is the amino acid sequence of human IL-13 (SEQ ID NO:4) following cleavage of the signal peptide. Alpha helices A, B, C, and D are underlined. Helix A is defined by amino acids 6-23; helix B is defined by amino acids 43-52; helix C is defined by amino acids 59-70; helix D is defined by amino acids 93-108.

FIG. 3 is a ribbon diagram illustrating the crystal structure of mAb13.2 Fab fragment (left) with the processed form of human IL-13 (right) (see FIG. 2B). The light chain of mAb13.2 Fab fragment is shown in dark shading, and the heavy chain in light shading. Helices A, B, C, and D of the IL-13 structure are indicated.

FIG. 4 is a graph illustrating the kinetic parameters of three different anti-IL-13 antibodies (mAb13.2, mAb13.4, and mAb13.9) binding to human IL-13 as determined by Biacore analyses. Kinetic constants for mAb13.2 are also shown.

FIG. 5 is a graph illustrating the binding of biotinylated mAb13.2 to recombinant and native human IL-13. ELISA plates were coated with anti-FLAG M2 antibody. The binding of FLAG-human IL-13 was detected with biotinylated mAb13.2 and streptavidin-peroxidase. This binding could be competed with native human IL-13 isolated from mitogen activated, Th2-skewed, cord blood mononuclear cells (triangles); and recombinant human IL-13 (diamonds). There was no detectable binding of recombinant murine IL-13 (circles) to mAb13.2.

FIG. 6 is a graph illustrating the effect of mAb13.2 and the known inhibitor rhuIL-13Rα2 on the bioactivity of human IL-13. "cpm" is the measure of ^{3}H-thymidine taken up into TF1 cells grown in the presence of IL-13 and varying concentrations of mAb13.2 or rhuIL-13Rα2 (x-axis).

FIG. 7A is a graph illustrating the effect of recombinant human IL-13 and IL-4 on CD23 expression on CD11b+ monocytes. The monocytes were normal peripheral blood mononuclear cells (PBMCs) harvested from a healthy donor. The cells were treated overnight with 1 ng/mL recombinant human IL-13 or IL-4, then assayed for CD23 expression by flow cytometry.

FIG. 7B is a graph illustrating the effect of mAb13.2 on IL-13-induced CD23 expression on CD11b+ monocytes.

FIG. 7C is a graph illustrating the effect of mAb13.2 on IL-4 - induced CD23 expression on CD11b+ monocytes.

FIG. 8 is a graph illustrating the effect of mAb13.2 on IL-13-dependent IgE production by human B cells. PBMC from a healthy donor were stimulated with PHA and IL-13. After 3 weeks, each well was assayed for IgE concentrations by ELISA. PHA + IL-13 increased the frequency of IgE-producing B cell clones. This effect was inhibited by mAb13.2, but not by an IL-13 specific nonneutralizing antibody (mAb13.8) or by control mouse IgG (msIgG).

FIG. 9A is a Western blot detecting phosphorylated STAT6 protein from HT-29 human epithelial cells treated with the indicated concentration of IL-13 for 30 min at 37°C.

FIG. 9B is a histogram from flow cytometry experiments that measured the level of cellular phosphorylated STAT6 protein following treatment with IL-13. The shift in phospho-STAT6 staining intensity upon treatment with IL-13 is indicated by the lightly shaded trace.

FIG. 9C is a panel of histograms from flow cytometry experiments that measured the level of cellular phosphorylated STAT6 protein following treatment with a sub-optimal concentration of human IL-13 and the indicated antibody. Cells treated with IL-13 and antibody are indicated by the bold trace. Shaded histograms indicate untreated cells. In addition to mAb13.2, an IL-13 specific nonneutralizing antibody (mAb13.8) and a control mouse IgG1 were also tested.

FIG. 10 is a graph demonstrating the percentage of eosinophils detected in BAL from Cynomolgus monkeys sensitized to *Ascaris suum* following lung segmental challenge with *Ascaris* antigen. Twenty-four hours before challenge, animals had been administered mAb13.2 i.v. (diamonds) or left untreated (circles). Triangles represent mAb13-2-treated and re-challenged with Ascaris at three months

post-Ab administration. Eosinophils were detected by flow cytometry using depolarized side scatter analysis.

FIG. 11A is a graph showing that unlabeled mAb13.2 (diamonds) or mAb13.2 Fab fragments (circles) could compete for binding with biotinylated mAb13.2 in an ELISA assay. An "irrelevant antibody" (monoclonal antibody mAb13.8, which binds IL-13 but does not neutralize its activity) (asterisks) could not compete for binding. Competitor concentration is expressed as picomole (pM) antibody or Fab.

FIG. 11B is a graph showing that unlabeled mAb13.2 (diamonds) or mAb13.2 Fab fragment (circles) could compete for binding with biotinylated mAb13.2 in an ELISA assay. An "irrelevant antibody" (monoclonal antibody mAb13.8) (asterisks) could not compete for binding. Competitor concentration is expressed as picomole (pM) binding sites, assuming two binding sites per intact IgG and one binding site per Fab fragment.

FIG. 12A is a graph showing that mAb13.2 (diamonds) and mAb13.2 Fab fragment (circles) inhibited IL-13-dependent TF1 cell division. "Competitor concentration" is mAb13.2 and mAb13.2 Fab fragment concentration, and concentration is represented as pM competitor binding sites, assuming two binding sites per intact IgG and one binding site per Fab fragment.

FIG. 12B is a graph showing that mAb13.2 (diamonds) and mAb13.2 Fab fragment (circles) inhibited IL-13 CD23 expression on human PBMCs. Competitor concentration is mAb13.2 and mAb13.2 Fab fragment concentration, and the concentration is represented as pM competitor binding sites, assuming two binding sites per intact IgG and one binding site per Fab fragment.

FIG. 13 is the DNA sequence of the expression vector pAL-981 (SEQ ID NO:5), including a human IL-13 cDNA insert (hIL13coli). The cDNA sequence encoding IL-13 is underlined. Restriction sites Nde1 (nucleotide position 2722) and Xba1 (nucleotide position 3070) flank the cDNA sequence.

FIG. 14 is the amino acid sequence of human IL-13Rα1 (Swiss-Prot Accession No. P78552) (SEQ ID NO:12).

FIG. 15 is a ribbon diagram illustrating the structure of the mAb13.2 Fab/IL-13/IL-13Rα1 trimeric complex.

FIG. 16 is a ribbon diagram illustrating the interaction between IL-13 and Ig domain 1 of IL-13Rα1.

FIG. 17 is a ribbon diagram illustrating the interaction between IL-13 and Ig domain 3 of IL-13Rα1.

DETAILED DESCRIPTION

The structure of the antigen binding fragment (Fab) of a murine monoclonal anti-IL-13 antibody, mAb13.2, was discovered by X-ray crystallography (see Table 10 below). The crystal structures of human IL-13 complexed with the mAb13.2 Fab fragment, and of human IL-13 complexed with both the mAb13.2 Fab fragment and an IL-13Rα1 polypeptide fragment were also discovered by X-ray crystallography (See Tables 11 and 12 below, respectively).

FIGs. 1A and 1B provide amino acid sequence information for the light and heavy chain polypeptides of the mAb13.2 Fab fragment. FIGs. 2A and 2B provide amino acid sequence information for human IL-13. FIG. 3 provides structural information for a crystal of a human IL-13/mAb13.2 Fab fragment complex. The mAb13.2 Fab fragment binds to the IL-4R (IL-4Rα) binding domain of human IL-13, which includes the amino acids Ser7, Thr8, Ala9, Glu12, Leu48, Glu49, Ile52, Asn53, Arg65, Met66, Ser68, Gly69, Phe70, Cys71, Pro72, His73, Lys74, and Arg86 as defined by SEQ ID NO:4.

FIG. 14 provides amino acid sequence information for the human IL-13 receptor polypeptide, human IL-13Rα1. FIGs. 15, 16, and 17 provide structural information for a crystal of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. In addition to the interaction described above between human IL-13 and the mAb13.2 Fab fragment, human IL-13 forms two contacts with the human IL-13Rα1 polypeptide, one with Ig domain 1 of the human IL-13Rα1 polypeptide, and a second with the Ig domain 3 of the human IL-13Rα1 polypeptide. The interaction with Ig domain 1 involves residues Thr88, Lys89, Ile90, and Glu91 of human IL-13 as defined by SEQ ID NO:4, and residues Lys76, Lys77, Ile78, and Ala79 of the human IL-13Rα1 polypeptide, as defined by SEQ ID NO:12 (see FIG. 16). The interaction with Ig domain 3 involves residues Arg11, Glu12, Leu13, Ile14, Glu15, Lys104, Lys105, Leu106, Phe107, and Arg108 of human IL-13 as defined by SEQ ID NO:4, and residues Ile254, Ser255, Arg256, Lys318, Cys320, and Tyr321 of the human IL-13Rα1 polypeptide as defined by SEQ ID NO:12 (see FIG. 17).

In general, a crystal of the mAb13.2 Fab fragment can be prepared as desired. Typically, the process includes first isolating the mAb13.2 Fab fragment, and then

forming a crystal that contains that mAb13.2 Fab fragment. In some embodiments, a crystal containing the mAb13.2 Fab fragment can be prepared as follows. The intact antibody is cleaved with an appropriate proteolytic enzyme (*e.g.*, papain), and the mAb13.2 Fab fragment is isolated from the Fc (Fragment crystallizable) fragment. The isolated mAb13.2 Fab fragment is disposed in an appropriate solution, and the solution is crystallized. The solution can contain, for example, one or more polymers (*e.g.*, polyethylene glycol (PEG)), one or more salts (*e.g.*, potassium sulfate) and optionally one or more organic solvents. The crystals can be grown by various methods, such as, for example, sitting or hanging drop vapor diffusion. In general, crystallization can be performed at a temperature of from about 4°C to 60°C (*e.g.*, from about 4°C to about 45°C, such as at about 4°C, about 15°C, about 18°C, about 20°C, about 25°C, about 30°C, about 32°C, about 35°C, about 37°C). Structural data describing a crystal of the mAb13.2 Fab fragment can be obtained, for example, by X-ray diffraction. X-ray diffraction data can be collected using a variety of means in order to obtain structural coordinates. Suitable X-ray sources include rotating anodes and synchrotron sources (*e.g.*, Advanced Light Source (ALS), Berkeley, California; or Advanced Photon Source (APS), Argonne, Illinois). In certain embodiments, X-rays for generating diffraction data can have a wavelength of from about 0.5 Å to about 1.6 Å (*e.g.*, about 0.7 Å, about 0.9 Å, about 1.0 Å, about 1.1 Å, about 1.3 Å, about 1.4 Å, about 1.5 Å, about 1.6 Å). Suitable X-ray detectors include area detectors and/or charge-couple devices (CCDs) can be used as the detector(s).

In general, a crystal of the mAb13.2 Fab fragment can diffract X-rays to a resolution of about 3.5 Å or less (*e.g.*, about 3.2 Å or less, about 3.0 Å or less, about 2.8 Å or less, about 2.5 Å or less, about 2.4 Å or less, about 2.3 Å or less, about 2.2 Å or less, about 2.1 Å or less, about 2.0 Å or less, about 1.9 Å or less, about 1.8 Å or less, about 1.7 Å or less, about 1.6 Å or less, about 1.5 Å or less, about 1.4 Å or less). In some embodiments, a crystal of the mAb13.2 Fab fragment can diffract X-rays to a resolution of from about 1.6 Å to about 2.5 Å (*e.g.*, from about 1.8 Å to about 2.2 Å).

In certain embodiments, a crystal of the mAb13.2 Fab fragment can be orthorhombic with space group $P2_12_12_1$, and unit cell dimensions a= 54.4, b= 98.0, c=108.5, and $\alpha=\beta=\gamma=$ 90°C.

In general, a complex including human IL-13 and the mAb13.2 Fab fragment can be prepared and crystallized as desired. In some embodiments, the process is as

follows. Human IL-13 is expressed from a DNA plasmid. The expression can be driven by a promoter, such as an inducible promoter. Human IL-13 can be expressed as a fusion protein with a suitable tag (*e.g.*, to facilitate isolation of human IL-13 from cells), such as a glutathione-S-transferase (GST), myc, HA, hexahistidine, or FLAG tag. A fusion protein can be cleaved at a protease site engineered into the fusion protein, such as at or near the site of fusion between the polypeptide and the tag. Human IL-13 can be mixed with the mAb13.2 Fab fragment prior to purification (*e.g.*, prior to cleavage of a polypeptide tag), or human IL-13 can be mixed with the mAb13.2 Fab fragment after purification. In some embodiments, the mAb13.2 Fab fragment can be mixed with human IL-13 prior to purification and again following purification. In some embodiments, human IL-13 polypeptide and the mAb13.2 Fab fragment are combined in a solution for collecting spectral data for the complex, NMR data for the complex, or for growing a crystal of the complex. The solution can contain, for example, one or more salts (*e.g.*, a potassium salt), one or more polymers (*e.g.*, polyethylene glycol (PEG)), and/or one or more organic solvents. Crystals can be grown by various methods, such as, for example, sitting or hanging drop vapor diffusion. In general, crystallization can be performed at about 16°C to 24°C (*e.g.*, about 17°C to 23°C, or 18°C to 21°C).

Structural information for a crystal of a human IL-13/mAb13.2 Fab fragment complex can be obtained by X-ray diffraction. In general, a crystal of a human IL-13/mAb13.2 Fab fragment complex can diffract X-rays to a resolution of about 3.5 Å or less (*e.g.*, about 3.2 Å or less, about 3.0 Å or less, about 2.8 Å or less, about 2.5 Å or less, about 2.4 Å or less, about 2.3 Å or less, about 2.2 Å or less, about 2.1 Å or less, about 2.0 Å or less, about 1.9 Å or less, about 1.8 Å or less, about 1.7 Å or less, about 1.6 Å or less, about 1.5 Å or less, about 1.4 Å or less). In some embodiments, a crystal of a human IL-13/mAb13.2 Fab fragment complex can diffract X-rays to a resolution of from about 1.6 Å to about 2.5 Å (*e.g.*, from about 1.8 Å to about 2.2 Å).

In certain embodiments, a crystal of a human IL-13/mAb13.2 Fab fragment complex can be cubic with space group $P2_13$, and unit cell dimensions a= b= c= 125.3, and $\alpha=\beta=\gamma=$ 90°C. The structure of the complex can be solved to a resolution of 1.8 Å.

In general, a complex including human IL-13, the mAb13.2 Fab fragment, and a human IL-13Rα1 polypeptide can be prepared and crystallized as desired. In some

embodiments, the process is as follows. A human IL-13Rα1 polypeptide is expressed from a DNA plasmid in the yeast strain *Pichia pastoris*, such that the expressed polypeptide is glycosylated. Expression from the DNA plasmid can be driven by a promoter, such as an inducible promoter. The human IL-13Rα1 polypeptide can be expressed as a fusion protein with a suitable tag (*e.g.*, to facilitate isolation of the human IL-13Rα1 polypeptide from cells), such as a glutathione-S-transferase (GST), myc, HA, hexahistidine, or FLAG tag. A fusion protein can be cleaved at a protease site engineered into the fusion protein, such as at or near the site of fusion between the polypeptide and the tag. The human IL-13Rα1 polypeptide can be mixed with human IL-13 to form a complex, and then the polypeptides of the complex can be deglycosylated by treatment with an enzyme such as endoglycosidase H. The mAb13.2 Fab fragment can be added to the deglycosylated complex to form a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab complex.

In some embodiments, the human IL-13Rα1, human IL-13, and mAb13.2 Fab fragment are combined in a solution for collecting spectral data for the complex, NMR data for the complex, or for growing a crystal of the complex. The solution can contain, for example, one or more salts (*e.g.*, a potassium salt), one or more polymers (*e.g.*, polyethylene glycol (PEG)), and/or one or more organic solvents. Crystals can be grown by various methods, such as, for example, sitting or hanging drop vapor diffusion. In general, crystallization can be performed at about 16°C to 24°C (*e.g.*, about 17°C to 23°C, or 18°C to 21°C).

Structural information for a crystal of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex can be obtained by X-ray diffraction. In general, a crystal of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex can diffract X-rays to a resolution of about 3.5 Å or less (*e.g.*, about 3.2 Å or less, about 3.0 Å or less, about 2.8 Å or less, about 2.5 Å or less, about 2.4 Å or less, about 2.3 Å or less, about 2.2 Å or less, about 2.1 Å or less, about 2.0 Å or less, about 1.9 Å or less, about 1.8 Å or less, about 1.7 Å or less, about 1.6 Å or less, about 1.5 Å or less, about 1.4 Å or less). In some embodiments, a crystal of a human IL-13/mAb13.2 Fab fragment complex can diffract X-rays to a resolution of from about 1.6 Å to about 2.5 Å (*e.g.*, from about 1.8 Å to about 2.2 Å).

In certain embodiments, a crystal of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex can be cubic with space group I4, and unit cell

dimensions a= b=164.9 Å, c= 74.8 Å, and α=β=γ= 90°C. The structure of the complex can be solved to a resolution of 2.2 Å.

X-ray diffraction data of a crystal of the mAb13.2 Fab fragment, human IL-13/mAb13.2 Fab fragment complex, or human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex can be used to obtain the structural coordinates of the atoms in the antibody or the complex. The structural coordinates are Cartesian coordinates that describe the location of atoms in three-dimensional space in relation to other atoms in the complex. As an example, the structural coordinates listed in Table 10 are the structural coordinates of a crystalline mAb13.2 Fab fragment. These structural coordinates describe the location of atoms of the mAb13.2 Fab fragment in relation to each other. As another example, the structural coordinates listed in Table 11 are the structural coordinates of a crystalline human IL-13/mAb13.2 Fab fragment complex. These structural coordinates describe the location of atoms of the human IL-13 in relation to each other, the location of atoms in the human IL-13 in relation to the atoms in the mAb13.2 Fab fragment, and the location of atoms in the mAb13.2 Fab fragment in relation to each other. As yet another example, the structural coordinates listed in Table 12 are the structural coordinates of a crystalline human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. These structural coordinates describe the location of atoms of the IL-13Rα1 polypeptide in relation to each other, the location of atoms in the human IL-13Rα1 polypeptide in relation to the atoms in human IL-13, the location of atoms in human IL-13 in relation to each other, the location of atoms in human IL-13 in relation to the atoms in the mAb13.2 Fab fragment and the location of atoms in the mAb13.2 Fab fragment in relation to each other.

The structural coordinates of a crystal can be modified by mathematical manipulation, such as by inversion or integer additions or subtractions. As such, structural coordinates are relative coordinates. As an example, structural coordinates describing the location of atoms in the mAb13.2 Fab fragment are not specifically limited by the actual x, y, and z coordinates of Table 10. As another example, structural coordinates describing the location of atoms in the human IL-13 bound to the mAb13.2 Fab fragment are not specifically limited by the actual x, y, and z coordinates of Table 11. As yet another example, structural coordinates describing the location of atoms in the human IL-13 bound to both the mAb13.2 Fab fragment and

the human IL-13Rα1 polypeptide are not specifically limited by the actual x, y, and z coordinates of Table 12.

The structural coordinates of the mAb13.2 Fab fragment or human IL-13/mAb13.2 Fab fragment complex or human IL-Rα1 polypeptide/human IL-13/mAb 13.2 Fab fragment complex can be used to derive a representation (*e.g.*, a two dimensional representation or three dimensional representation) of the mAb13.2 Fab fragment, a fragment of the mAb13.2 Fab fragment, human IL-13, a fragment of human IL-13, the human IL-13Rα1 polypeptide, a fragment of the IL-13Rα1 polypeptide, the human IL-13/mAb13.2 Fab fragment complex or human IL-Rα1 polypeptide/human IL-13/mAb 13.2 Fab fragment complex, or a fragment of either complex. Such a representation can be useful for a number of applications, including, for example, the visualization, identification and characterization of an active site of the polypeptide. In certain embodiments, a three-dimensional representation can include the structural coordinates of the mAb13.2 fragment according to Table 10 ± a root mean square deviation from the alpha carbon atoms of amino acids of about 1.5 Å or less (*e.g.*, about 1.0 Å or less, or about 0.5 Å or less). In other embodiments, a three-dimensional representation can include the structural coordinates of a human IL-13/mAb13.2 Fab fragment complex according to Table 11 ± a root mean square deviation from the alpha carbon atoms of amino acids of not more than about 1.5 Å (*e.g.*, not more than about 1.0 Å, not more than about 0.5 Å or less). In yet other embodiments, a three-dimensional representation can include the structural coordinates of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex according to Table 12 ± a root mean square deviation from the alpha carbon atoms of amino acids of not more than about 1.5 Å (*e.g.*, not more than about 1.0 Å, not more than about 0.5 Å or less). Root mean square deviation (rms deviation, or rmsd) is the square root of the arithmetic mean of the squares of the deviations from the mean, and is a way of expressing deviation or variation from structural coordinates. Conservative substitutions of amino acids can result in a molecular representation having structural coordinates within the stated root mean square deviation. For example, two molecular models of polypeptides that differ from one another by conservative amino acid substitutions can have coordinates of backbone atoms within a stated rms deviation, such as less than about 1.5 Å (*e.g.*, less than about about 1.0 Å, less than about 0.5 Å). Backbone atoms of a polypeptide include

the alpha carbon (C_α or CA) atoms, carbonyl carbon (C) atoms, and amide nitrogen (N) atoms.

Various software programs allow for the graphical representation of a set of structural coordinates to obtain a representation of a molecule or molecular complex, such as the mAb13.2 Fab fragment or the human IL-13/mAb13.2 Fab fragment complex or the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. In general, such a representation should accurately reflect (relatively and/or absolutely) structural coordinates, or information derived from structural coordinates, such as distances or angles between features. The representation can be a two-dimensional figure, such as a stereoscopic two-dimensional figure, or an interactive two-dimensional display (*e.g.*, a computer display that can display different faces of the molecule or molecular complex), or an interactive stereoscopic two-dimensional display. An interactive two-dimensional display can be, for example, a computer display that can be rotated to show different faces of a polypeptide, a fragment of a polypeptide, a complex and/or a fragment of a complex. In some embodiments, the representation is a three-dimensional representation. As an example, a three-dimensional model can be a physical model of a molecular structure (*e.g.*, a ball-and-stick model). As another example, a three dimensional representation can be a graphical representation of a molecular structure (*e.g.*, a drawing or a figure presented on a computer display). A two-dimensional graphical representation (*e.g.*, a drawing) can correspond to a three-dimensional representation when the two-dimensional representation reflects three-dimensional information, for example, through the use of perspective, shading, or the obstruction of features more distant from the viewer by features closer to the viewer. In some embodiments, a representation can be modeled at more than one level. As an example, when the three-dimensional representation includes a polypeptide, such as human IL-13 bound to the mAb13.2 Fab fragment, the polypeptide can be represented at one or more different levels of structure, such as primary structure (amino acid sequence), secondary structure (*e.g.*, α-helices and β-sheets), tertiary structure (overall fold), and quaternary structure (oligomerization state). The heavy and light chain polypeptides of the mAb13.2 Fab fragment can also be represented at the one or more different structural levels. A representation can include different levels of detail. For example, the representation can include the relative locations of secondary structural features of a protein without specifying the

positions of atoms. A more detailed representation could, for example, include the positions of atoms.

In some embodiments, a representation can include information in addition to the structural coordinates of the atoms in the mAb13.2 Fab fragment, the human IL-13/mAb13.2 Fab fragment complex, or the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. For example, a representation can provide information regarding the shape of a solvent accessible surface, the van der Waals radii of the atoms of the model, and the van der Waals radius of a solvent (*e.g.*, water). Other features that can be derived from a representation include, for example, electrostatic potential, the location of voids or pockets within a macromolecular structure, and the location of hydrogen bonds and salt bridges.

An agent that interacts with the mAb13.2 Fab fragment, human IL-13, or the human IL-13Rα1 polypeptide can be identified or designed by a method that includes using a representation of the mAb13.2 Fab fragment, a human IL-13, a human IL-13Rα1 polypeptide, a human IL-13/mAb13.2 Fab fragment complex, or a human IL-13-Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. Exemplary types of representations include the representations discussed above. In some embodiments, the representation can be of an analog polypeptide, polypeptide fragment, complex or fragment of a complex. A candidate agent that interacts with the representation can be designed or identified by performing computer fitting analysis of the candidate agent with the representation. In general, an agent is a molecule. Examples of agents include polypeptides, nucleic acids (including DNA or RNA), or small molecules (*e.g.*, small organic molecules). An agent can be a ligand, and can act, for example, as an agonist or antagonist. An agent that interacts with a polypeptide (*e.g.*, human IL-13, human IL-13Rα1 polypeptide) can interact transiently or stably with the polypeptide. The interaction can be mediated by any of the forces noted herein, including, for example, hydrogen bonding, electrostatic forces, hydrophobic interactions, and van der Waals interactions.

As noted above, X-ray crystallography can be used to obtain structural coordinates of an mAb13.2 Fab fragment, a human IL-13/mAb13.2 Fab fragment complex, or a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. However, such structural coordinates can be obtained using other techniques including NMR techniques. Additional structural information can be

obtained from spectral techniques (*e.g.*, optical rotary dispersion (ORD), circular dichroism (CD)), homology modeling, and computational methods such as those that include data from molecular mechanics or from dynamics assays).

In some embodiments, the X-ray diffraction data can be used to construct an electron density map of the mAb13.2 Fab fragment, the human IL-13/mAb13.2 Fab fragment complex, or the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex. The electron density map can be used to derive a representation (*e.g.*, a two dimensional representation or a three dimensional representation) of the mAb13.2 Fab fragment, a fragment of the mAb13.2 Fab fragment, human IL-13 or a fragment of human IL-13, the human IL-13Rα1 polypeptide or a fragment of the human IL-13Rα1 polypeptide, the human IL-13/mAb13.2 Fab fragment complex, the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex, or a fragment of either complex. Creation of an electron density map typically involves using information regarding the phase of the X-ray scatter. Phase information can be extracted, for example, either from the diffraction data or from supplementing diffraction experiments to complete the construction of the electron density map. Methods for calculating phase from X-ray diffraction data include, without limitation, multiwavelength anomalous dispersion (MAD), multiple isomorphous replacement (MIR), multiple isomorphous replacement with anomalous scattering (MIRAS), single isomorphous replacement with anomalous scattering (SIRAS), reciprocal space solvent flattening, molecular replacement, or a combination thereof. These methods generate phase information by making isomorphous structural modifications to the native protein, such as by including a heavy atom or changing the scattering strength of a heavy atom already present, and then measuring the diffraction amplitudes for the native protein and each of the modified cases. If the position of the additional heavy atom or the change in its scattering strength is known, then the phase of each diffracted X-ray can be determined by solving a set of simultaneous phase equations. The location of heavy atom sites can be identified using a computer program, such as SHELXS (Sheldrick, Institut Anorg. Chemie, Göttingen, Germany), and diffraction data can be processed using computer programs such as MOSFLM, SCALA, SOLOMON, and SHARP ("The CCP4 Suite: Programs for Protein Crystallography," *Acta Crystallogr. Sect. D*, 54:905-921, 1997; deLa Fortelle and Brigogne, *Meth.*

Enzym. 276:472-494, 1997). Upon determination of the phase, an electron density map of the complex can be constructed.

The electron density map can be used to derive a representation of a polypeptide, a complex, or a fragment of a polypeptide or complex by aligning a three-dimensional model of a polypeptide or complex (*e.g.*, a complex containing a polypeptide bound to an antibody) with the electron density map. The alignment process results in a comparative model that shows the degree to which the calculated electron density map varies from the model of the previously known polypeptide or the previously known complex. The comparative model is then refined over one or more cycles (*e.g.*, two cycles, three cycles, four cycles, five cycles, six cycles, seven cycles, eight cycles, nine cycles, ten cycles) to generate a better fit with the electron density map. A software program such as CNS (Brunger *et al., Acta Crystallogr.* D54:905-921, 1998) can be used to refine the model. The quality of fit in the comparative model can be measured by, for example, an R_{work} or R_{free} value. A smaller value of R_{work} or R_{free} generally indicates a better fit. Misalignments in the comparative model can be adjusted to provide a modified comparative model and a lower R_{work} or R_{free} value. The adjustments can be based on information relating to human IL-13, human IL-13Rα1, the mAb13.2 Fab fragment, the previously known polypeptide and/or the previously known complex. Such information includes, for example, estimated helical or beta sheet content, hydrophobic and hydrophilic domains, and protein folding patterns, which can be derived, for example, from amino acid sequence, homology modeling, and spectral data. As an example, in embodiments in which a model of a previously known complex of a polypeptide bound to a ligand is used, an adjustment can include replacing the ligand in the previously known complex with the mAb13.2 fragment. As another example, in certain embodiments, an adjustment can include replacing an amino acid in the previously known polypeptide with the amino acid in the corresponding site of human IL-13. When adjustments to the modified comparative model satisfy a best fit to the electron density map, the resulting model is that which is determined to describe the antibody or polypeptide or complex from which the X-ray data was derived (*e.g.*, the human IL-13/mAb13.2 Fab fragment complex). Methods of such processes are disclosed, for example, in Carter and Sweet, eds., "Macromolecular Crystallography" in Methods in Enzymology, Vol. 277, Part B, New York: Academic Press, 1997, and

articles therein, *e.g.*, Jones and Kjeldgaard, "Electron-Density Map Interpretation," p. 173, and Kleywegt and Jones, "Model Building and Refinement Practice," p. 208.

In some embodiments, a representation of the mAb13.2 Fab fragment can be derived by aligning a previously determined structural model of a different (but similar) antibody Fab fragment (*e.g.*, a 2E8 Fab antibody fragment, Protein Databank Identification No. 12E8) with the electron density map of the mAb13.2 Fab fragment derived from X-ray diffraction data. A representation of a human IL-13/mAb13.2 Fab fragment complex can subsequently be derived by aligning the previously determined structural model of the mAb13.2 Fab fragment with the electron density map of the complex. A representation of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex can subsequently be derived by aligning the previously determined structural model of the human IL-13/mAb13.2 Fab fragment complex with the electron density map of the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex.

A machine, such as a computer, can be programmed in memory with the structural coordinates of the mAb13.2 Fab fragment, a human IL-13/mAb13.2 Fab fragment complex, or a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 Fab fragment complex together with a program capable of generating a three-dimensional graphical representation of the structural coordinates on a display connected to the machine. Alternatively or additionally, a software system can be designed and/or utilized to accept and store the structural coordinates. The software system can be capable of generating a graphical representation of the structural coordinates. The software system can also be capable of accessing external databases to identify compounds (*e.g.*, polypeptides) with similar structural features as human IL-13 or human IL-13Rα1, and/or to identify one or more candidate agents with characteristics that may render the candidate agent(s) likely to interact with human IL-13 or human IL-13Rα1. The software system can also be capable of accessing external databases to identify compounds that interact with human IL-13 or human IL-13Rα1 by virtue of the knowledge of the structure of the mAb13.2 Fab fragment, or human IL-13Rα1 polypeptide, and its interaction with human IL-13.

A machine having a memory containing structure data or a software system containing such data can aid in the rational design or selection of IL-13 ligands, such as agonists or antagonists. For example, such a machine or software system can aid in

the evaluation of the ability of an agent to associate with human IL-13, can aid in the modeling of compounds or proteins related by structural or sequence homology to human IL-13, or can aid in the evaluation of the ability of an agent to interfere with the bioactivity of human IL-13. A bioactivity of human IL-13can be any effect that the polypeptide elicits on or in a cell or tissue *in vivo* or *in vitro*. Exemplary bioactivities of human IL-13 are described herein, such as in Examples 1 and 2.

A machine having a memory containing structure data or a software system containing such data can aid in the rational design or selection of IL-13Rα1 ligands, such as agonists or antagonists. For example, such a machine or software system can aid in the evaluation of the ability of an agent to associate with a human IL-13Rα1 polypeptide, can aid in the modeling of compounds or proteins related by structural or sequence homology to a human IL-13Rα1 polypeptide, or can aid in the evaluation of the ability of an agent to interfere with the bioactivity of a human IL-13Rα1 polypeptide. A bioactivity of a human IL-13Rα1 polypeptide can be any affect that the polypeptide elicits on or in a cell or tissue *in vivo* or *in vitro*. Exemplary bioactivities of human IL-13Rα1 are described herein, such as in Example 3.

The machine can produce a representation (*e.g.*, a two dimensional representation or a three dimensional representation) of the mAb13.2 Fab fragment or a fragment of the mAb13.2 Fab fragment, human IL-13 or a fragment of human IL-13, a human IL-13Rα1 polypeptide or a fragment of a human IL-13Rα1 polypeptide, a human IL-13/mAb13.2 Fab fragment complex, a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 fab fragment complex, or a fragment of either complex. A software system, for example, can cause the machine to produce such information. The machine can include a machine-readable data storage medium including a data storage material encoded with machine-readable data. The machine-readable data can include structural coordinates of atoms of the mAb13.2 Fab fragment or atoms of a fragment of the mAb13.2 Fab fragment, atoms of human IL-13 or atoms of a fragment of human IL-13, atoms of a human IL-13/mAb13.2 Fab fragment complex, atoms of a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 fab fragment complex, or atoms of either complex. Machine-readable storage media including data storage material can include conventional computer hard drives, floppy disks, DAT tape, CD-ROM, DVD, and other magnetic, magneto-optical, optical, and other media which may be adapted for use with a computer. The machine can also

have a working memory for storing instructions for processing the machine-readable data, as well as a central processing unit (CPU) coupled to the working memory and to the machine-readable data storage medium for the purpose of processing the machine-readable data into the desired three-dimensional representation. Finally, a display can be connected to the CPU so that the three-dimensional representation may be visualized by the user. Accordingly, when used with a machine programmed with instructions for using the data (*e.g.*, a computer loaded with one or more programs of the sort described herein) the machine is capable of displaying a graphical representation (*e.g.*, a two dimensional graphical representation, a three-dimensional graphical representation) of any of the polypeptides, polypeptide fragments, complexes, or complex fragments described herein.

A display (*e.g.*, a computer display) can show a representation of the mAb13.2 Fab fragment or a fragment of the mAb13.2 Fab fragment, human IL-13 or a fragment of human IL-13, a human IL-13Rα1 polypeptide or a fragment of a human IL-13Rα1 polypeptide, a human IL-13/mAb13.2 Fab fragment complex, a human IL-13Rα1 polypeptide/human IL-13/mAb13.2 fab fragment complex, or a fragment of either complex. The representation can also include an agent bound to human IL-13 or the human IL-13Rα1 polypeptide, or the user can superimpose a three-dimensional model of an agent on the representation of human IL-13 or the human IL-13Rα1 polypeptide. The agent can be an agonist (*e.g.*, a candidate agonist) of human IL-13 or human IL-13Rα1, or an antagonist (*e.g.*, a candidate antagonist) of human IL-13 or human IL-13Rα1. In some embodiments, the agent can be a known compound or fragment of a compound. In certain embodiments, the agent can be a previously unknown compound, or a fragment of a previously unknown compound.

The user can inspect the resulting representation. A representation of the mAb13.2 Fab fragment or fragment of the mAb13.2 Fab fragment, human IL-13 or fragment of the human IL-13, the human IL-13Ra1 polypeptide or fragment of the human IL-13Ra1 polypeptide, the human IL-13/mAb13.2 Fab fragment complex, the human IL-13Rα1 polypeptide/human IL-13/mAb13.2 fab fragment complex, or the fragment of either complex can be generated, for example, by altering a previously existing representation of such polypeptides and polypeptide complexes. For example, there can be a preferred distance, or range of distances, between atoms of the antibody and atoms of the human IL-13 when considering a new representation of

a complex or fragment of a complex. In another example, there can be a preferred distance, or range of distances, between atoms of the human IL-13 and the human IL-13Rα1 polypeptide when considering a new representation of a complex or fragment of a complex. Distances longer than a preferred distance may be associated with a weak interaction between the agent and active site (*e.g.*, the site of IL-13 receptor binding (such as to an IL-13Rα1 receptor polypeptide or an IL-4 receptor polypeptide) on the IL-13 polypeptide). Distances shorter than a preferred distance may be associated with repulsive forces that can weaken the interaction between the agent and the polypeptide. A steric clash can occur when distances between atoms are too short. A steric clash occurs when the locations of two atoms are unreasonably close together, for example, when two atoms are separated by a distance less than the sum of their van der Waals radii. If a steric clash exists, the user can adjust the position of the agent relative to the human IL-13 (*e.g.*, a rigid body translation or rotation of the agent), until the steric clash is relieved. The user can adjust the conformation of the agent or of the human IL-13 in the vicinity of the agent in order to relieve a steric clash. Steric clashes can also be removed by altering the structure of the agent, for example, by changing a "bulky group," such as an aromatic ring, to a smaller group, such as to a methyl or hydroxyl group, or by changing a rigid group to a flexible group that can accommodate a conformation that does not produce a steric clash. Electrostatic forces can also influence an interaction between an agent and a polypeptide (such as the part of the polypeptide that interacts with a receptor polypeptide, *e.g.*, a human IL-13Rα1 polypeptide or a human IL-4R polypeptide). For example, electrostatic properties can be associated with repulsive forces that can weaken the interaction between the agent and the IL-13 polypeptide. Altering the charge of the agent, *e.g.*, by replacing a positively charged group with a neutral group can relieve electrostatic repulsion. Similar processes can be performed to design an agent that interacts with a human IL-13Rα1 polypeptide, such as in the vicinity of interaction between the human IL-13Rα1 polypeptide and human IL-13.

Forces that influence binding strength between the mAb13.2 Fab fragment and human IL-13 can be evaluated in the polypeptide/agent model. Likewise, forces that influence binding strength between human IL-13 and the human IL-13Rα1 polypeptide can be evaluated in the polypeptide/agent model. These can include, for example, hydrogen bonding, electrostatic forces, hydrophobic interactions, van der

Waals interactions, dipole-dipole interactions, π-stacking forces, and anion-π interactions. The user can evaluate these forces visually, for example by noting a hydrogen bond donor/acceptor pair arranged with a distance and angle suitable for a hydrogen bond. Based on the evaluation, the user can alter the model to find a more favorable interaction between the human IL-13, or human IL-13Rα1 polypeptide, and the agent. Altering the model can include changing the three-dimensional structure of the polypeptide without altering its chemical structure, for example by altering the conformation of amino acid side chains or backbone dihedral angles. Altering the model can include altering the position or conformation of the agent, as described above. Altering the model can also include altering the chemical structure of the agent, for example by substituting, adding, or removing groups. For example, if a hydrogen bond donor on the human IL-13 is located near a hydrogen bond donor on the agent, the user can replace the hydrogen bond donor on the agent with a hydrogen bond acceptor.

The relative locations of the agent and the human IL-13, or their conformations, can be adjusted to find an optimized binding geometry for a particular agent to the IL-13 polypeptide. Likewise, the relative locations of the agent and the human IL-13Rα1 polypeptide can be adjusted to find an optimized binding geometry for a particular agent to the human IL-13Rα1 polypeptide. An optimized binding geometry is characterized by, for example, favorable hydrogen bond distances and angles, maximal electrostatic attractions, minimal electrostatic repulsions, the sequestration of hydrophobic moieties away from an aqueous environment, and the absence of steric clashes. The optimized geometry can have the lowest calculated energy of a family of possible geometries for a human IL-13 /antibody complex, or a human IL-13/receptor complex. An optimized geometry can be determined, for example, through molecular mechanics or molecular dynamics calculations.

A series of representations of human IL-13 bound to different agents can be generated. Likewise, a series of representations of a human IL-13Rα1 polypeptide bound to different agents can be generated. A score can be calculated for each representation. The score can describe, for example, an expected strength of interaction between human IL-13 and the agent. The score can reflect one of the factors described above that influence binding strength. The score can be an

aggregate score that reflects more than one of the factors. The different agents can be ranked according to their scores.

Steps in the design of the agent can be carried out in an automated fashion by a machine (*e.g.*, a computer). For example, a representation of human IL-13, or a human IL-13Rα1 polypeptide can be programmed in the machine, along with representations of candidate agents. The machine can find an optimized binding geometry for each of the candidate agents to the site of receptor binding, and calculate a score to determine which of the agents in the series is likely to interact most strongly with human IL-13, or the human IL-13Rα1 polypeptide.

A software system can be designed and/or implemented to facilitate these steps. Software systems (*e.g.*, computer programs) used to generate representations or perform the necessary fitting analyses include, but are not limited to: MCSS, Ludi, QUANTA, Insight II, Cerius2, CHARMm, and Modeler from Accelrys, Inc. (San Diego, CA); SYBYL, Unity, FleXX, and LEAPFROG from TRIPOS, Inc. (St. Louis, MO); AUTODOCK (Scripps Research Institute, La Jolla, CA), GRID (Oxford University, Oxford, UK); DOCK (University of California, San Francisco, CA); and Flo$^+$ and Flo99 (Thistlesoft, Morris Township, NJ). Other useful programs include ROCS, ZAP, FRED, Vida, and Szybki from Openeye Scientific Software (Santa Fe, NM); Maestro, Macromodel, and Glide from Schrodinger, LLC (Portland, OR); MOE (Chemical Computing Group, Montreal, Quebec), Allegrow (Boston De Novo, Boston, MA), CNS (Brunger, *et al., Acta Crystall. Sect. D* 54:905-921, 1997) and GOLD (Jones *et al., J. Mol. Biol.* 245:43-53, 1995. The structural coordinates can also be used to visualize the three-dimensional structure of human IL-13 using MOLSCRIPT, RASTER3D, or PYMOL (Kraulis, *J. Appl. Crystallogr.* 24: 946-950, 1991; Bacon and Anderson, *J. Mol. Graph.* 6: 219-220, 1998; DeLano, The PYMOL Molecular Graphics System (2002) DeLano Scientific, San Carlos, CA).

The agent can, for example, be selected by screening an appropriate database, can be designed *de novo* by analyzing the steric configurations and charge potentials of an unbound human IL-13, or unbound human IL-13Rα1 polypeptide, in conjunction with the appropriate software systems, and/or can be designed using characteristics of known cytokine ligands. The agent can be tested for an ability to block binding of IL-13 to an IL-4R polypeptide, such as IL-4Rα, or an IL-Rα1 polypeptide. An agent can be designed for binding to human IL-13 or to the human

IL-13Rα1 polypeptide. The method can be used to design or select agonists or antagonists of human IL-13 or a human IL-Rα1 polypeptide. A software system can be designed and/or implemented to facilitate database searching, and/or agent selection and design.

Once an agent has been designed or identified, it can be obtained or synthesized and further evaluated for its affect on human IL-13 activity or on human IL-13Rα1 activity. The agent can be evaluated by contacting it with human IL-13 and assaying IL-13 bioactivity, or by contacting it with a human IL-13Rα1 polypeptide and assaying IL-13Rα1 bioactivity. A method for evaluating the agent can include an activity assay performed *in vitro* or *in vivo*. An activity assay can be a cell-based assay, for example. Depending upon the action of the agent on human IL-13 or the human IL-13Rα1 polypeptide, the agent can act either as an agonist or antagonist of human IL-13 or IL-13Rα1 activity. An agonist will cause human IL-13 or human IL-13Rα1 polypeptide to have the same or similar activity, and an antagonist will inhibit a normal function of human IL-13 or the human IL-13Rα1 polypeptide. An agent can be contacted with the human IL-13 in the presence of an anti-IL-13 antibody (*e.g.*, mAb13.2 or mAb13.2 Fab) or a human IL-13 receptor (*e.g.*, an IL-4R polypeptide, such as a human IL-4Rα polypeptide, or an IL-13R polypeptide, such as a human IL-13Rα1 polypeptide) to determine whether or not the agent inhibits binding of the antibody or the receptor to the human IL-13 polypeptide. In some embodiments, the agent will inhibit binding of one kind of receptor to human IL-13, but will not inhibit binding of another kind of receptor. For example, an agent can inhibit binding of a human IL-13 polypeptide to a human IL-4R polypeptide (*e.g.*, the IL-4Rα chain), but not a human IL-13Rα1 polypeptide. Likewise, a different agent can inhibit binding of human IL-13 to an IL-13Rα1 polypeptide but not to a human IL-4R polypeptide. In another embodiment, the agent will inhibit binding of the IL-13 polypeptide to a human IL 4R polypeptide (e.g., the IL-4Rα chain) and a human IL-13Rα1 polypeptide. A crystal containing human IL-13 bound to the identified agent can be grown and the structure determined by X-ray crystallography. A second agent can be designed or identified based on the interaction of the first agent with human IL-13. Various molecular analysis and rational drug design techniques are further disclosed in, for example, U.S. Patent Nos. 5,834,228, 5,939,528 and 5,856,116, as well as in PCT Application No. PCT/US98/16879, published as WO 99/09148.

While certain embodiments have been described, other embodiments are also contemplated.

As an example, while embodiments involving human IL-13, the mAb13.2 Fab fragment, and a human IL-13Rα1 polypeptide have been described, more generally, any IL-13 polypeptide, any IL-13Rα1 polypeptide, and/or any anti-IL-13 antibody can be used.

As an example, while embodiments have been described that involve human IL-13 and a human IL-13Rα1 polypeptide, more generally any IL-13 polypeptide and any IL-13Rα1 polypeptide can be used. For example, an IL-13 polypeptide or an IL-13Rα1 polypeptide can originate from a nonmammalian or mammalian species. Exemplary nonhuman mammals include, a nonhuman primate (such as a monkey or ape), a mouse, rat, goat, cow, bull, pig, horse, sheep, wild boar, sea otter, cat, or dog. Exemplary nonmammalian species include chicken, turkey, shrimp, alligator, or fish.

Further, an IL-13 polypeptide or an IL-13Rα1 polypeptide can generally be a full-length, mature polypeptide, including the full-length amino acid sequence of any isoform or processed form of an IL-13 polypeptide or IL-13Rα1 polypeptide. An isoform is any of several multiple forms of a protein that differ in their primary structure. Full-length IL-13 can be referred to as the precursor form of the protein. Full-length IL-13 has a signal peptide cleavage site. The IL-13 polypeptide can be the processed polypeptide, such as following cleavage of the signal peptide.

A human IL-13 polypeptide typically has at least one active site for interacting with a receptor polypeptide (*e.g.*, an IL-4R polypeptide, an IL-13α1 polypeptide). An IL-13 polypeptide can include three active sites for interacting with two different receptor polypeptides. An anti-IL-13 antibody can be capable of binding to at least one of the active sites. In general, an active site can include a site of receptor polypeptide binding, or a site of phosphorylation, glycosylation, alkylation, acylation, or other covalent modification. An active site can include accessory binding sites adjacent or proximal to the actual site of binding that may affect activity upon interaction with the ligand. An active site of a human IL-13 polypeptide can include amino acids of SEQ ID NO:4. For example, an active site of a human IL-13 polypeptide can include one or more of amino acids Ser7, Thr8, Ala9, Glu12, Leu48, Glu49, Ile52, Asn53, Arg65, Ser68, Gly69, Phe70, Cys71, Pro72, His73, Lys74, and Arg86 as defined by the amino acid sequence of SEQ ID NO:4 (FIG. 2B). In some

embodiments, an agent can interact to within about 2.0Å or less (*e.g.*, about 1.5Å or less, about 1.0Å or less) of one or more amino acids Glu49, Asn53, Gly69, Pro72, His73, Lys74, and Arg86 of IL-13, as defined by the amino acid sequence of SEQ ID NO:4. In one alternative, an active site of a human IL-13 polypeptide can include one or more of amino acids Arg11, Glu12, Leu13, Ile14, Glu15, Lys104, Lys105, Leu106, Phe107, and Arg108 as defined by the amino acid sequence of SEQ ID NO:4. In another alternative, an active site of a human IL-13 polypeptide can include one or more of amino acids Thr88, Lys89, Ile90, and Glu91 as defined by the amino acid sequence of SEQ ID NO:4. A human IL-13 polypeptide can include one, two, or all three of the active sites described above.

A human IL-13Rα1 polypeptide typically has at least one active site for interacting with a polypeptide ligand (*e.g.*, a human IL-13 polypeptide). An anti-IL-13Rα1 antibody can be capable of binding to at least one of the active sites. In general, an active site can include a site of polypeptide ligand binding, or a site of phosphorylation, glycosylation, alkylation, acylation, or other covalent modification. An active site can include accessory binding sites adjacent or proximal to the actual site of binding that may affect activity upon interaction with the ligand. An active site of a human IL-13Rα1 polypeptide can include amino acids of SEQ ID NO:12. For example, an active site of a human IL-13Rα1 polypeptide can include one or more of amino acid residues Ile254, Ser255, Arg256, Lys318, Cys320, and Tyr321 as defined by the amino acid sequence of SEQ ID NO:12. In one alternative, an active site of a human IL-13Rα1 polypeptide can include one or more of amino acid residues Lys76, Lys77, Ile78, and Ala79 as defined by the amino acid sequence of SEQ ID NO:12. A human IL-13Rα1 polypeptide can include one or both of these active sites.

The numbering of the amino acids of a human IL-13 polypeptide, a human IL-13Rα1 polypeptide, and the heavy and light chains of an anti-IL-13 antibody, such as mAb13.2 Fab, may be different than that set forth here, and may contain certain conservative amino acid substitutions, additions or deletions that yield the same three-dimensional structure as those defined by Table 10, ± an rmsd for backbone atoms of less than 1.5 Å, or by Table 11, ± an rmsd for backbone atoms of less than 1.5 Å, or by Table 12, ± an rmsd for backbone atoms of less than 1.5 Å. For example, the numbering of a human IL-13 processed polypeptide may be different than that set forth in FIG. 2B, and the sequence of the IL-13 may contain conservative amino acid

substitutions but yield the same structure as that defined by the coordinates of Table 11 and illustrated in FIG. 3 or the same structure as that defined by the coordinates of Table 12 and illustrated in FIGs. 15,16 and 17. Corresponding amino acids and conservative substitutions in other isoforms or analogs are easily identified by visual inspection of the relevant amino acid sequences or by using commercially available homology software programs (*e.g.*, MODELLAR, MSI, San Diego, CA).

An analog is a polypeptide having conservative amino acid substitutions. Conservative substitutions are amino acid substitutions that are functionally or structurally equivalent to the substituted amino acid. A conservative substitution can include switching one amino acid for another with similar polarity, or steric arrangement, or belonging to the same class (*e.g.*, hydrophobic, acidic or basic) as the substituted amino acid. Conservative substitutions include substitutions having an inconsequential effect on the three-dimensional structure of an anti-IL-13 antibody or a human IL-13 polypeptide/anti-IL-13 antibody complex or a human IL-13Rα1 polypeptide/human IL-13 polypeptide/anti-IL-13 antibody complex with respect to identification and design of agents that interact with the polypeptide (*e.g.*, an IL-13 polypeptide, an IL-13Rα1 polypeptide), as well as for molecular replacement analyses and/or for homology modeling.

While examples have been described in which an anti-IL-13 antibody is derived from a mouse, more generally any anti-IL-13 antibody can be used. For example, an anti-IL-13 antibody can originate from a human, mouse, rat, hamster, rabbit, goat, horse, or chicken.

As another example, while embodiments have been described in which an anti-IL-13 antibody is generated by a certain method, other methods may also be used. For example, an anti-IL-13 antibody can be generated by first preparing polyclonal antisera by immunization of female BALB/c mice with recombinant or native human IL-13. Sera can be screened for binding to human IL-13 by an assay such as ELISA. Splenocytes from a mouse demonstrating high serum antibody titers can be fused with a myeloma cell line, such as the P3X63_AG8.653 myeloma cell line (ATCC, Manassas, VA), and plated in selective media. Fusions can be isolated following multiple rounds of subcloning by limiting dilution and the fusions can be screened for the production of antibodies that have a binding affinity to human IL-13.

An anti-IL-13 antibody can be polyclonal or monoclonal. An antibody that binds IL-13 can be a fragment of an antibody, such as a Fab fragment.

In general, intact antibodies, also known as immunoglobulins, are tetrameric glycosylated proteins composed of two light (L) chains of approximately 25 kDa each and two heavy (H) chains of approximately 50 kDa each. Each light chain is composed of an N-terminal variable (V) domain (VL) and a constant (C) domain (CL). Each heavy chain is composed of an N-terminal V domain (VH), three or four C domains (CHs), and a hinge region. The CH domain most proximal to VH is designated as CH1. The VH and VL domain consist of four regions of relatively conserved sequence called framework regions, which form a scaffold for three regions of hypervariable sequence (complementarity determining regions, CDRs). The CDRs contain most of the residues responsible for specific interactions with the antigen. CDRs are referred to as CDR1, CDR2, and CDR3. Accordingly, CDR constituents on the heavy chain are referred to as H1, H2, and H3, while CDR constituents on the light chain are referred to as L1, L2, and L3 (see Table 4, for example). The subunit structures and three-dimensional configurations of different classes of immunoglobulins are well known in the art. For a review of antibody structure, see Antibodies: A Laboratory Manual, Cold Spring Harbor Laboratory, eds. Harlow *et al.* (1988). The smallest antigen-binding fragment is the Fv (Fragment variable), which consists of the VH and VL domains. The Fab (fragment antigen binding) fragment consists of the VH-CH1 and VL-CL domains covalently linked by a disulfide bond between the constant regions.

Accordingly, in one aspect, this application features an antibody or an antigen-binding fragment thereof, that binds to and/or neutralizes, IL-13. The antibody or fragment thereof can also be a human, humanized, chimeric, or *in vitro*-generated antibody. In one embodiment, the anti-IL-13 antibody or fragment thereof is a humanized antibody. The antibody includes one or more CDRs that has a backbone conformation of a CDR described in Table 10 ± a root mean square deviation (RMSD) of not more than 1.5, 1.2, 1.1, or 1.0 Angstroms, Table 11 ± an RMSD of not more than 1.5, 1.2, 1.1, or 1.0 Angstroms, or Table 12 ± an RMSD of not more than 1.5, 1.2, 1.1, or 1.0 Angstroms. For example, one, two, or three of the CDRs of the light chain variable domain (e.g., particularly in CDR1, or in at least two CDRs, e.g., CDR1 and CDR3, CDR1 and CDR2, or in all three CDRs) have an RMSD of not

more than 1.5, 1.2, 1.1, or 1.0 Angstroms, relative to those structures. In one embodiment, the antibody or antigen binding fragment thereof includes a variable domain that, as a whole, has a backbone conformation of a CDR described in Table 10 ± a root mean square deviation (RMSD) of not more than 1.5, 1.2, 1.1, or 1.0 Angstroms, Table 11 ± an RMSD of not more than 1.5, 1.2, 1.1, or 1.0 Angstroms, or Table 12 ± an RMSD of not more than 1.5, 1.2, 1.1, or 1.0 Angstroms. The variable domain can also be at least at least 70%, 80%, 85%, 87%, 90%, 92%, 93%, 95%, 96%, 97%, 98%, or 99% identical to an antibody described herein, e.g., in the CDR region and/or framework regions. The antibody can be used, e.g., in a method of treatment described herein.

Anti-IL-13 antibodies are disclosed, for example, in U.S. Provisional Patent Application No. 60/578,473, filed June 9, 2004, U.S. Provisional Patent Application No. 60/581,375 filed June 22, 2004, and U.S. Patent Application No. _____ [Attorney Docket: AM101493] (Kasaian *et al.*), filed on even date herewith, each of which is incorporated herein by reference.

The following examples are illustrative and are not intended as limiting.

EXAMPLES

Example 1. Generation and functional analysis of mAb13.2. To generate an antibody that recognizes IL-13, polyclonal antisera were prepared by immunization of female BALB/c mice with recombinant human IL-13 (R&D Systems, Minneapolis, MN). Sera were screened for binding to human IL-13 by ELISA. Splenocytes from a mouse demonstrating high serum antibody titers were fused with the P3X63_AG8.653 myeloma cell line (ATCC, Manassas, VA), and plated in selective media. Fusions were isolated with three rounds of subcloning by limiting dilution and screened for the production of antibodies that had a binding affinity to human IL-13. Three monoclonal antibodies were capable of binding IL-13 and neutralizing and/or inhibiting its bioactivity. The monoclonal antibody mAb13.2 (IgG1κ) was the subject of further analysis.

Several assays were performed to confirm that the murine monoclonal antibody mAb13.2 binds with high affinity and specificity to human IL-13. First, Biacore analysis confirmed that mAb13.2 had a rapid on-rate, slow off-rate, and high affinity for binding to human IL-13 (FIG. 4).

ELISA assays showed that mAb13.2 bound to all forms of human IL-13 tested, including native IL-13 derived from cord blood T cells (FIG. 5). To perform the assays with recombinant human IL-13, ELISA plates were coated with anti-FLAG M2 antibody. The binding of recombinant FLAG-tagged human IL-13 was detected with biotinylated mAb13.2 and streptavidin-peroxidase. This binding could be competed with native human IL-13 isolated from mitogen activated, TH2-skewed, cord blood mononuclear cells and with recombinant human IL-13 (FIG. 5). Recombinant murine IL-13 could not compete for binding with mAb13.2. Unlabeled mAb13.2 and unlabeled mAb13.2 Fab were also able to compete for binding to the flag-tagged IL-13 with biotinylated mAb13.2 (FIG. 11A). The IL-13 specific nonneutralizing monoclonal antibody mAb13.8 could not compete with biotinylated mAb13.2 binding.

The ability of mAb13.2 to neutralize IL-13 bioactivity *in vitro* was confirmed using a TF1 bioassay, human peripheral blood monocytes, and human peripheral blood B cells. In the presence of suboptimal concentrations of IL-13, the proliferation of cells of the human erythroleukemic TF1 cell line can be made IL-13-dependent. The TF1 cell line was starved for cytokine, then exposed to a suboptimal concentration (3 ng/mL) of recombinant human IL-13 in the presence of varying concentrations of purified mouse mAb13.2 or the soluble inhibitor rhuIL-13Rα2. Cells were incubated for three days, and ^{3}H-thymidine incorporation over the final four hours was determined by liquid scintillation counting. At suboptimal IL-13 concentrations (3 ng/mL), mAb13.2 caused a dose-dependant inhibition of TF1 proliferation (FIG. 6 and FIG. 12A). The IC_{50} for this effect, 250 pM, is comparable to the IC_{50} of rhuIL-13Rα2. The mAb13.2 Fab also inhibited CD23 expression human PBMCs.

Human PBMCs respond to IL-13 or IL-4 by increasing cell-surface expression of low affinity IgE receptor (CD23) in a dose-dependent manner (see FIG. 7A). Monocytes ($CD11b^{+}$) were therefore used to confirm the ability of mAb13.2 to neutralize IL-13 bioactivity. $CD11b^{+}$ monocytes were treated for 12 hours with 1 ng/mL recombinant human IL-13 (FIG. 7B) or IL-4 (FIG. 7C) in the presence of the indicated concentration of purified mouse mAb13.2. Cells were then harvested and stained with CyChrome-labeled anti-CD11b antibodies and PE-labeled anti-CD23 antibodies. Labeling was detected by flow cytometry. The mAb13.2 inhibited IL-13-

induced CD23 expression (FIG. 7B; see also FIG. 12B), but did not inhibit IL-4-induced CD23 expression (FIG. 7C).

The effects of mAb13.2 were also tested in a model of IL-13-induced IgE production by human peripheral blood B cells. In response to IL-13 and the T cell mitogen, phytohemaglutinin (PHA), human B cells undergo an Ig isotype switch recombination to IgE, resulting in higher IgE levels in culture. This effect can be seen as an increased frequency of IgE-producing B cells. To examine the effect of mAb13.2 on IL-13-dependent IgE production in B cells, PBMCs from a healthy donor were cultured in microtiter wells in the presence of autologous irradiated PBMC as feeders, and stimulated with PHA and IL-13. After 3 weeks, each well was assayed for IgE by ELISA. PHA + IL-13 increased the frequency of IgE-producing B cell clones. This effect was inhibited by mAb13.2, but not by mAb13.8 (binds IL-13 but does not neutralize), or by irrelevant mouse IgG.mAb13.2 efficiently blocked this effect of IL-13 on cultured B cells (FIG. 8).

Finally, the ability of mAb13.2 to block an early cellular response to IL-13 was tested by examining effects on signal transducer and activator of transcription (STAT) 6 phosphorylation. Upon IL-13 interaction with its cell surface receptor, STAT6 dimerizes, becomes phosphorylated, and translocates from the cytoplasm to the nucleus, where it activates transcription of cytokine-responsive genes (Murata *et al., J. Biol. Chem.* 270:30829-36, 1995). Specific antibodies against phosphorylated STAT6 can detect this activation by Western blot or flow cytometry within 30 min of IL-13 exposure. To test the effect of mAb13.2 on IL-13 dependent STAT6 phosphorylation, cells of the HT-29 human epithelial cell line were treated with the indicated concentration of IL-13 for 30 minutes at 37°C. Phospho-STAT6 was detected in cell lysates by Western blot (FIG. 9A) or by flow cytometry (FIGs. 9B and 9C). In the experiment illustrated in FIG. 9B, cells were treated with a saturating concentration of IL-13 for 30 minutes at 37°C and then fixed, permeabilized, and stained with an Alexa-Fluor 488-labeled mAb against phospho-STAT6. In the experiment illustrated in FIG. 9C, cells were treated with a suboptimal concentration of IL-13 in the presence or absence of an antibody, fixed and stained as described above. Flow cytometry results revealed that mAb13.2 blocked STAT6 phosphorylation, whereas mAb13.8 and the control mouse IgG1 had no effect.

Example 2: Murine monoclonal antibody mAb13.2 neutralizes IL-13 bioactivity *in vivo*. The ability of mouse mAb13.2 to neutralize IL-13 activity *in vivo* was tested using a model of antigen-induced airway inflammation in Cynomolgus monkeys naturally allergic to *Ascaris suum*. In this model, challenge of an allergic monkey with *Ascaris suum* antigen results in an influx of inflammatory cells, especially eosinophils, into the airways. To test the ability of mAb13.2 to prevent this influx of cells, the antibody was administered 24 hours prior to challenge with *Ascaris suum* antigen. On the day of challenge, a baseline lavage sample was taken from the left lung. The antigen was then instilled intratracheally into the right lung. Twenty-four hours later, the right lung was lavaged, and the bronchial alveolar lavage (BAL) fluid from animals treated intravenously with 8 mg/kg ascites purified mAb13.2 were compared to BAL fluid from untreated animals. Eosinophil counts increased in 4 of 5 untreated animals following challenge, as compared to 1 of 6 animals treated with mAb13.2 (FIG. 10). The percent BAL eosinophils was significantly increased for the untreated group ($p<0.02$), but not for the antibody-treated group. These results confirmed that mAb13.2 effectively prevents airway eosinophilia in allergic animals challenged with an allergen.

The average serum half-life of mouse mAb13.2 was less than one week in the monkeys. At the 3-month time point, when all traces of mAb13.2 would have been gone from the serum, mAb13.2-treated animals were rechallenged with *Ascaris suum* to confirm the *Ascaris* responsiveness of those individuals. Two of six monkeys in the treated group were found to be nonresponders.

Example 3: Murine monoclonal antibody mAb13.2 binds to a region of IL-13 that normally binds to IL-4Rα. IL-13 bioactivity is mediated through a receptor complex consisting of the IL-13Rα1 and IL-4Rα chains. The cytokine first undergoes a relatively low affinity interaction with IL-13Rα1 on the surface of cells. This complex then recruits IL-4Rα to form the high affinity receptor (Zurawski *et al.*, *EMBO J.* 12:2663, 1993; Zurawski *et al.*, *J. Biol. Chem.* 270:23869, 1995). Signaling through the IL-4Rα chain involves phosphorylation of STAT6, which can be monitored as one of the earliest cellular responses to IL-13 (Murata *et al.*, *J. Biol. Chem.* 270:30829-36, 1995). Several approaches, such as epitope mapping, X-ray crystallography, and further Biacore analysis, were used to elucidate the interaction

between murine mAb13.2 antibody and human IL-13, and further determine the basis for the IL-13 neutralizing effects of this antibody.

Epitope mapping and X-ray crystallography analysis indicated that mAb13.2 binds to the C-terminal region of IL-13 helix C, *i.e.*, the IL-4R binding region (see below). To confirm this analysis, the interaction between mAb13.2 and IL-13 was analyzed with a Biacore chip. This analysis was done in several formats. First, IL-4R was bound to the Biacore chip, and a complex of IL-13 prebound to IL-13Rα1 was flowed over the chip. In the absence of mAb13.2, formation of a tri-molecular complex could be demonstrated. However, addition of mAb13.2 to the mixture of IL-13 prebound to IL-13Rα1 prevented binding to IL-4R on the chip. Second, mAb13.2 was immobilized on the chip and bound IL-13 was added in solution phase. Although IL-13Rα1 was found to interact with the bound IL-13, no interaction of IL-4R with bound IL-13 was detected. Third, it was demonstrated that mAb13.2 could bind to IL-13 that was bound to IL-13Rα1-Fc or IL-13Rα1 monomer immobilized on the chip. These observations indicate that mAb13.2 does not inhibit IL-13 interaction with IL-13Rα1 but disrupts the interaction of IL-13Rα1 with IL-4Rα. This disruption is thought to prevent formation of the IL-13 signaling complex. These observations provided a model for the neutralization activity of this antibody.

The *in vitro* demonstration of a complex of mAb13.2 with IL-13 and IL-13Rα1 suggests that mAb13.2 could potentially be bound to receptor-associated IL-13 at the cell surface. In order to determine whether cell-bound mAb13.2 could be detected under conditions of saturating receptor-bound IL-13, the HT-29 human epithelial cell line was loaded with IL-13 at 4°C and tested for antibody binding. No cell-bound mAb could be detected by flow cytometry. This observation, together with the demonstration that mAb13.2 is a potent neutralizer of IL-13 bioactivity, indicated that normal functioning of the IL-13 receptor is disrupted by mAb13.2.

Example 4: Crystal structure of anti-IL-13 antibody mAb13.2 Fab fragment.

Monoclonal antibody mAb13.2 from mouse ascites was purified using a Protein A affinity column. The mouse ascites was diluted 2X with Protein A binding buffer (50mM Tris-HCl, 500mM NaCl, pH 8.0) and filtered through a 0.2 mm filter unit. The filtered solution was applied to a Poros Protein A column (Applied Biosystems, Framingham, MA) equilibrated with the binding buffer at 4°C. The column was

washed with the binding buffer, and the IgG was eluted using 100 mM Glycine (pH 3.0). The eluted IgG was neutralized immediately with 1M Tris-HCl at pH 8.0.

The Fab fragment was prepared by digesting the IL-13 monoclonal IgG with activated papain (Sigma, St. Louis, MO). Papain was activated by diluting the stock enzyme solution with the digestion buffer (50mM Tris-HCl, 50mM NaCl, 20mM EDTA and 20 mM Cysteine, pH 7.5) on ice to give a final papain concentration of 1mg/mL. Cleavage of IgG was performed by incubation with activated papain at a ratio of 100:1 w/w in papain digestion buffer for 7-8 hours at 37°C. The reaction was stopped by dialysis in 50 mM Tris-HCl (pH 7.5) overnight at 4°C. The dialyzed solution was loaded onto a tandem Poros HS/Protein A column equilibrated with 50 mM Tris-HCl (pH 7.5) at 4°C to remove the papain and the Fc fragment. The flow-through of the tandem columns containing the Fab fragment was then loaded onto a hydroxylapatite column (Bio-Rad, Hercules, CA) equilibrated with 1 mM Sodium Phosphate and 20 mM Tris-HCl, pH 7.5, and eluted with a 1 mM to 125 mM Sodium Phosphate gradient at 25°C. The eluted Fab fragment solution was dialyzed overnight in 50 mM Tris-HCl (pH 8.0) at 4°C. After dialysis, the solution was loaded onto a Poros HQ column equilibrated with 50 mM Tris-HCl (pH 8.0). The flow-through was collected and ammonium sulfate was adjusted to a final concentration of 1.5 M before loading onto a Polypropyl Aspartamide column (Nest Group, Southborough, MA). The Fab fragment was eluted from the column with a 1.5 to 0 M ammonium sulfate gradient at 25°C. The protein was dialyzed in 50 mM Tris-HCl (pH 8.0) at 4°C.

The isolated mAb13.2 antibody and mAb13.2 Fab fragment were tested for their ability to inhibit IL-13 bioactivity. In one assay, purified mAb13.2 and mAb13.2 Fab fragment were tested for their ability to compete for binding with biotinylated mAb13.2 in an ELISA assay. ELISA plates were coated with anti-FLAG M2 antibody. The binding of FLAG-human IL-13 was detected with biotinylated mAb13.2 and streptavidin-peroxidase. Both the intact antibody and the Fab fragment were able to compete for binding, while the IL-13-specific nonneutralizing antibody mAb13.8 could not compete for binding (FIGs. 11A and 11B).

In other assays, purified mAb13.2 and mAb13.2 Fab fragment were tested for their ability to inhibit IL-13-dependent TF1 cell proliferation and IL-13-dependent CD23 expression on PBMCs. TF1 cells were incubated with 3 ng/mL recombinant human IL-13 as described in Example 1. The cells were treated with increasing

concentrations of purified mAb13.2 or mAb13.2 Fab, and cell proliferation was monitored as described. Both the intact antibody and the Fab fragment inhibited IL-13-dependent TF1 cell proliferation (FIG. 12A). To test the effect of the isolated proteins on CD23 expression, PBMCs were incubated with 1 ng/mL recombinant human IL-13 as described in Example 1. The monocytes were treated with increasing concentrations of mAb13.2 or mAb13.2 Fab, and CD23 expression was monitored by flow cytometry as described above. The purified intact antibody and the purified Fab fragment were each capable of inhibiting IL-13-dependent CD23 expression (FIG. 12B).

For crystallization, purified mAb13.2 Fab was prepared at a concentration of 12.6 mg/mL in a solution of 50 mM Tris (pH 8.0) and 50 mM NaCl. One microliter of protein solution was mixed with 1 µl of crystallization solution (20% PEG 3350, 200 mM K_2SO_4) (Hampton Research, Aliso Viejo, CA), and the crystals formed at about 18°C by the hanging drop method of vapor diffusion.

Data from crystals for the mAb13.2 Fab fragment were collected on beamline 5.0.2 at the Advanced Light Source (ALS) (Berkley, CA) using an ADSC Quantum-4 CCD detector. A single crystal, vitrified at -180°C, was used for each data set. The data were processed using DENZO and Scalepack (Otwinowski and Minor, *Methods Enzymol.* 276: 307-326, 1997) and the statistics from data collection and data refinement are shown in Tables 1 and 2 below, respectively.

Table 1. Statistics for Data Collection and Phase Determination

Data Collection	mAb13.2 Fab	mAb13.2/IL-13 Fab
Crystal system	Orthorhombic	Cubic
Space group	$P2_12_12_1$	$P2_13$
Unit cell dimensions	a=54.442, b=97.961, c=108.469, α=β=γ=90.0°	a=b=c=125.261, α=β=γ=90.0°
Data collection temperature	-180°C	-180°C
Number of crystals	1	1
Radiation Source	ALS, Berkeley, CA	ALS, Berkeley, CA
Wavelength (Å)	λ = 1.0 Å	λ = 1.0 Å
Resolution range(Å)	50-2.8 Å	50-1.8 Å
Maximum resolution (Å)	2.8 Å	1.8 Å
R_{merge}[a](%)	8.2% (38.4%)	6.7% (48.6%)
% complete	100% (100%)	99.9% (99.0%)
total reflections	98,254	561,539
unique reflections	14,903	57,656
I/σ(I)	23.3 (4.8)	26.6 (2.8)

[a] $R_{merge} = \sum |I_h - \langle I_h \rangle| / \sum I_h$, where $\langle I_h \rangle$ is the average intensity over symmetry equivalents. Number in parentheses reflects statistics for the last shell.

Table 2. Structure Refinement Statistics

Data Collection	mAb13.2Fab	mAb13.2 Fab/IL-13
Model for molecular replacement	2E8 Fab (12E8.pdb)	mAb13.2 Fab; soln. structure of IL-13[b]
Maximum Resolution (Å)	2.8 Å	1.8 Å
R_{work}[a] (%)	25.9 %	20.3 %
R_{free} (%)	30.7 %	23.5 %

[a] $R_{work} = \sum ||F_{obs}| - |F_{calc}|| / \sum |F_{obs}|$, R_{free} is equivalent to R_{work}, but calculated for a randomly chosen 5% of reflections that are omitted from the refinement process.
[b] Moy *et al., J. Mol. Biol.* 310:219-230, 2001.

The structure of mAb13.2 Fab was solved by molecular replacement using the program AMORE (Navaza, *Acta Crystallogr.* A50:157-163, 1994). The structure of the monoclonal 2E8 Fab antibody fragment (PDB code 12E8) was used as the probe. Prior to refinement, 5% of the data were randomly selected and designated as an R_{free} test set to monitor the progress of the refinement. The structure of the mAb13.2 Fab was then rebuilt within QUANTA (Accelrys, San Diego, CA) utilizing a series of omit maps. Following six cycles of refinement with CNS (Brunger *et al., Acta Crystallogr.* D54: 905-921, 1998) and rebuilding using QUANTA, the refinement converged with a model that contained the mAb13.2 Fab and 41 water molecules at

an R_{cryst} of 25.9% and an R_{free} of 30.7%. The structure refinement statistics are shown in Table 2. The crystal structure coordinates are shown in Table 10.

Example 5. Crystal structure of mAb13.2 Fab/IL-13 Complex. Recombinant IL-13 (Swiss-Prot Accession Number P35225) and mAb13.2 Fab were purified for crystallization. Recombinant IL-13 was purified as follows. *E. coli* K12 strain GI934 was used for expression of Human IL-13. GI934 is an *ilv*G derivative of GI724 (LaVallie *et al.*, *Bio/Technology* 11:187-193, 1993) that contains specific deletions in the two *E. coli* proteases *omp*T and *omp*P. Specifically, this strain contains the bacteriophage l repressor (cI) gene stably integrated into the chromosomal ampC locus. The cI gene is transcriptionally regulated by a synthetic *Salmonella typhimurium* trp promoter. *E.coli* expression vector pAL-981, a derivative of pAL-781 (Collins-Racie, *et al.*, *Bio/Technology* 13:982-987, 1995), was used as the basis for construction of a Human IL-13 expression vector.

A cDNA of the human IL-13 gene was generated from synthetic oligonucleotide duplexes designed to possess silent changes from human IL-13 cDNA (Accession number NM_002188) that was optimized for *E.coli* codon usage and increased AT content at the 5′ end of the gene. Three sets of complementary duplexes of synthetic oligonucleotides corresponding to amino acids Gly21 to Asn132 of the human IL-13 amino acid (SEQ ID NO:3) (FIG. 2A) were used to construct the mature region of human IL-13, which is the amino acid sequence of processed IL-13 (SEQ ID NO:4). The *E. coli* optimized complementary oligonucleotides of duplex 1 were
5′-TATGGGTCCAGTTCCACCATCTACTGCTCTGCGTGAACTGATTGAAGAACTGGT
TAACATCACCCAGAACCAGAAAGCTCCGCTGTGTAACGGTTCCATGGTTTGGTCCAT
CAACCTG-3′ (SEQ ID NO:6) with complement
5'-CAGCGGTCAGGTTGATGGACCAAACCATGGAACCGTTACACAGCGGAGCTTTCTG
GTTCTGGGTGATGTTAACCAGTTCTTCAATCAGTTCACGCAGAGCAGTAGATGGTGG
AACTGGACCCA-3 (SEQ ID NO:7); duplex 2 were
5′-ACCGCTGGTATGTACTGTGCAGCTCTGGAATCCCTGATCAACGTTTCTGGTTGC
TCTGCTATCGAAAAAACCCAGCGTATGCTGTCTGGTTTCTGCCCGCACAAAGTTTCC
GCTGGTCAG-3′ (SEQ ID NO:8) with complement
5′-GAGGAGAACTGACCAGCGGAAACTTTGTGCGGGCAGAAACCAGACAGCATACGC
TGGGTTTTTTCGATAGCAGAGCAACCAGAAACGTTGATCAGGGATTCCAGAGCTGCA
CAGTACATAC-3′ (SEQ ID NO:9); and duplex 3 were

5'-TTCTCCTCTCTGCACGTTCGTGACACCAAAATCGAAGTTGCTCAGTTCGTAAAA
GACCTGCTGCTGCACCTGAAAAAACTGTTCCGTGAAGGTCGTTTCAACTAATAAT-
3' (SEQ ID NO:10) with complement
5'-CTAGATTATTAGTTGAAACGACCTTCACGGAACAGTTTTTTCAGGTGCAGCAGC
AGGTCTTTTACGAACTGAGCAACTTCGATTTTGGTGTCACGAACGTGCAGA-3'
(SEQ ID NO:11).

The complement (bottom) strand of the first and second duplexes and the top strand of the second and third duplexes were phosphorylated independently. The complementary strands were combined, and each duplex mix was heated to 90°C and then slowly cooled to allow annealing of the duplexes. The first and last duplexes respectively encoded the restriction endonucleases NdeI and XbaI to allow for cloning into an NdeI, XbaI digested and gel purified expression vector pAL-981. All restriction digests, enzymatic phosphorylation of oligonucleotides, DNA fragment isolations and ligations were carried out as described in Sambrook *et al.*, 1989. "Molecular Cloning, a Laboratory Manual, second edition," Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York. Ligation mixtures were transformed into electrocompetent GI934 as described (LaVallie *et al., Methods Mol Biol.* 205:119-140, 2003). Ligation of the three sets of oligonucleotide duplexes into pAL-981 created plasmid pALHIL13-981. All synthetic oligonucleotides were sequence confirmed after cloning into the expression vector.

The resulting plasmid pALHIL13-981 was transformed into GI934. Optimal growth temperature of the culture for production of human IL-13 from plasmid pALHIL13-981 was determined empirically. Fermentor medium consisted of 1% casamino-acids, 1.75% w/v glucose, 50mM KH_2PO_4, 15mM $(NH_4)_2SO_4$, 30mM Na_3.citrate.$2H_20$, 20mM $MgSO_4$, 100μg/ml ampicillin, DM trace metals (300μM $FeCl_3$, 29μM $ZnCl_3$, 36μM $CoCl_2$, 25μM Na_2MoO_4, 20μM $CaCl_2$, 22μM $CuCl_2$, 24μM H_3BO_3), and was adjusted to pH 7 with NH_4OH. A 10L fermentor was inoculated to A_{550} 0.00005 with a fresh culture of GI934 containing pALHIL13-981 grown in Fermentor medium at 30°C. The fermentor culture was grown at 30°C to A_{550} of 1.2, then the temperature was adjusted to 37°C, and the culture was allowed to grow to A_{550} of 7.5. Induction of protein synthesis from the pL promoter was initiated and the culture with the addition of tryptophan to 500μg/ml. The culture was grown at

37°C for 4.25 hours before harvesting the cells by centrifugation. The sequence of the expression vector is shown in FIG. 13 (SEQ ID NO:5).

The protein was essentially completely insoluble. Cells were broken with a microfluidizer and insoluble IL-13 was collected and dissolved at about 2 mg/mL in 50 mM Ches (pH 9), 6 M Guanidine-HCl, 1 mM EDTA, 20 mM DTT. The solution was diluted 20-fold into 50 mM Ches (pH 9), 3 M guanidine-HCl, 100 mM NaCl, 1 mM oxidized glutathione, and dialyzed twice against ten volumes of 20 mM Mes (pH 6). Following clarification by centrifugation, IL-13 was adsorbed to SP-Sepharose and eluted with a gradient of NaCl in Mes buffer. Final purification was by size-exclusion chromatography in 40 mM sodium phosphate, 40 mM NaCl on Superdex 75.

The mAb13.2 Fab was purified as described in Example 4.

The Fab:IL-13 complex was prepared by combining the two in a molar ratio of about 1:1. IL-13 (50 μM in 40 mM MES and 40 mM NaCl, pH 6.0) and mAb13.2 Fab (50 μM in 50 mM Tris.HCl, pH 8.0) were mixed together to give a final complex concentration of 50 μM. The complex was further purified by a Superdex 75 size exclusion column (Amersham Biosciences, Piscataway, NJ) equilibrated with 50 mM Tris-HCl and 300 mM NaCl, pH 8.0, at 25°C. The purified complex was dialyzed in 50 mM Tris-HCl and 50 mM NaCl, pH 8.0, before setting up the crystallization.

For crystallization, purified mAb13.2 Fab/Il-13 complex was prepared at a concentration of 11.3 mg/mL in a solution of 50 mM Tris (pH 8.0) and 50 mM NaCl. One microliter of protein solution was mixed with 1 μl of crystallization solution (20% PEG 3350, 50 mM ZnOAc) (Hampton Research, Aliso Viejo, CA). The crystals formed at 18°C by vapor diffusion by the hanging drop method.

Data from the crystal of the mAb13.2 Fab/IL-13 complex were collected on beamline 5.0.2 at the ALS (Berkley, CA) using an ADSC Quantum-4 CCD detector. A single crystal, vitrified at -180°C, was used for the data set. The data were processed using DENZO and Scalepack (Otwinowski and Minor, *Methods Enzymol.* 276: 307-326, 1997). The statistics from data refinement are shown in Table 2. The crystal sructure coordinates are shown in Table 11.

Crystals of the binary mAb13.2Fab/IL-13 complex diffracted to 1.8 Å using synchrotron radiation. The structure of the complex was solved by molecular replacement using the program AMORE, and using the crystal structure of the

mAb13.2 Fab (described in Example 4) as the probe. Prior to refinement, 5% of the data were randomly selected and designated as an R_{free} test to monitor the progress of the refinement. This structure of the mAb13.2 Fab was then rebuilt within QUANTA using a series of omit maps. During this process, extra density was observed near the hypervariable regions, and these regions sharpened after each cycle of rebuilding. After the Fab fragment had been rebuilt, the NMR structure of IL-13 (Moy *et al., J. Mol. Biol.* 310:219-230, 2001) was rotated into the density adjacent to the hypervariable regions. Following three cycles of refinement with CNS (Accelrys, San Diego, CA) and rebuilding within QUANTA, the refinement converged with a model that contained one molecule of the mAb13.2 Fab, one molecule of IL-13, one acetate molecule, three zinc ions, and 465 water molecules at an R_{cryst} of 20.3% and R_{free} of 23.5%. The refinement statistics are shown in Table 2.

In the mAb13.2/IL-13 crystalline complex, residues 1-211 of the Fab light chain were visible, while residues 212, 213, and 214 were not observed in the density. For the heavy chain, residues 1-127 and 133-210 were modeled into the density, and no density was observed for residues 128 to 132. For IL-13, residues 7-21, 26-78, and 81-109 were visible and residues 1-6, 22-25, 79, and 80 were disordered. Several residues modeled as smaller residues due to inadequate electron density X-ray experiments (see Table 5).

There were three zinc molecules from the crystallization buffer that were found bound in this structure. None of them were involved in interactions between the IL-13 and Fab molecules. Two of the zinc molecules were involved in contacts between molecules in the asymmetric unit and symmetry related copies of the proteins, and thus they were important for crystallization of this complex. Zinc1 was coordinated to Fab light chain residues Glu27 and Glu97, and residues Glu189 and His193 of a symmetry related copy of the light chain (amino acids numbered according to SEQ ID NO:1 (FIG. 1A)). Zinc2 was coordinated to IL-13 residues His84 and Asp87, and residues Asp98 and His102 of a symmetry related copy of IL-13. Zinc3 was coordinated to IL-13 residues Glu12 and Glu15 with water molecules as other ligands (amino acids numbered according to SEQ ID NO:4 (FIG. 2B)).

The residues of IL-13 interacting with the mAb13.2 Fab fragment were located at

the C-terminal end of helix C (residues 68-74). FIG. 3 illustrates the interaction of the C alpha helix of IL-13 with the CDR loops of the antibody. Hydrogen bond interactions were observed to exist between the Fab and IL-13 residues Glu49, Asn53, Gly69, Pro72, His73, Lys74, and Arg86. The N-terminal tip of helix A was within van der Waals distances of the Fab fragment. These interactions are summarized in Tables 3 and 4.

Table 3. H-bond Interactions between IL-13 and Fab 13.2

IL-13[a]			Fab 13.2				
Residue		atom	Residue	Chothia[b]	SEQ ID[c]	Atom	Distance
Glu	49I	OE1	Asn	30AL	31L	ND2	2.87Å
Glu	49I	OE2	Tyr	98H	101H	OH	2.69
Glu	49I	OE2	Tyr	99H	102H	OH	2.54
Asn	53I	OD1	Lys	30DL	34L	NZ	2.74
Gly	69I	O	Ser	53H	53H	N	2.91
Pro	72I	O	Tyr	98H	101H	N	3.10
His	73I	ND1	Asp	94L	98L	OD1	2.87
His	73I	NE2	Ser	50H	50H	OG	2.75
Lys	74I	NZ	Asn	30AL	31L	OD1	2.95
Lys	74I	NZ	Asn	92L	96L	OD1	2.61
Arg	86I	NH1	Tyr	30BL	32L	OH	3.16
Arg	86I	NH2	Tyr	30BL	32L	OH	2.93

[a]Amino acid residues are numbered according to the processed form of IL-13 (SEQ ID NO:4). "I" indicates amino acid of IL-13.

[b]Amino acid residues correspond to SEQ ID NO:1 (for light chain residues, "L") or SEQ ID NO:2 (for heavy chain residues, "H"), and are numbered according to the Chothia numbering system (Al-Lazikani *et al., Jour. Mol. Biol.* 273:927-948, 1997).

[c]Amino acid residues are numbered according to the numbering of SEQ ID NO:1 (for light chain residues, "L") or SEQ ID NO:2 (for heavy chain residues, "H").

Table 4. van der Waals Type Interactions between IL-13 and Fab 13.2

IL-13 Residue[a]		Fab 13.2 Residue		Chothia[b]	SEQ ID[c]	CDR
Ser	7I	Ile		30H	30H	CDR-H1
Thr	8I	Ile		30H	30H	CDR-H1
Ala	9I	Ile		30H	30H	CDR-H1
Ala	9I	Ser		53H	53H	CDR-H2
Glu	12I	Ile		30H	30H	CDR-H1
Glu	12I	Ser		31H	31H	CDR-H1
Leu	48I	Tyr		98H	101H	CDR-H3
Glu	49I	Tyr		98H	101H	CDR-H3
Glu	49I	Asn		30AL	31L	CDR-L1
Glu	49I	Tyr		99H	102H	CDR-H3
Ile	52I	Tyr		99H	102H	CDR-H3
Ile	52I	Tyr		99H	102H	CDR-H3
Ile	52I	Tyr		99H	102H	CDR-H3
Ile	52I	Arg		50L	54L	CDR-L2
Ile	52I	Tyr		99H	102H	CDR-H3
Ile	52I	Lys		30DL	34L	CDR-L1
Asn	53I	Lys		30DL	34L	CDR-L1
Asn	53I	Lys		30DL	34L	CDR-L1
Asn	53I	Lys		30DL	34L	CDR-L1
Arg	65I	Phe		100H	103H	CDR-H3
Arg	65I	Asp		96H	99H	CDR-H3
Met	66I	Ser		31H	31H	CDR-H1
Ser	68I	Asp		96H	99H	CDR-H3
Ser	68I	Phe		100H	103H	CDR-H3
Gly	69I	Ser		31H	31H	CDR-H1
Gly	69I	Ala		33H	33H	CDR-H1
Gly	69I	Ser		53H	53H	CDR-H2
Gly	69I	Ser		52H	52H	CDR-H2
Phe	70I	Ser		53H	53H	CDR-H2
Phe	70I	Ser		52H	52H	CDR-H2
Cys	71I	Tyr		98H	101H	CDR-H3
Pro	72I	Ala		33H	33H	CDR-H1
Pro	72I	Leu		95H	98H	CDR-H3
Pro	72I	Ser		52H	52H	CDR-H2
Pro	72I	Tyr		58H	58H	CDR-H2
Pro	72I	Tyr		98H	101H	CDR-H3
Pro	72I	Gly		97H	100H	CDR-H3
Pro	72I	Trp		96L	100L	CDR-L3
His	73I	Asp		94L	98L	CDR-L3
His	73I	Trp		96L	100L	CDR-L3
His	73I	Trp		47H	47H	
His	73I	Leu		95H	98H	CDR-H3
His	73I	Tyr	58H		58H	CDR-H2
His	73I	Ser	50H		50H	CDR-H2
His	73I	Tyr	98H		101H	CDR-H3

Lys	74I	Tyr	98H	101H	CDR-H3
Lys	74I	Asn	30AL	31L	CDR-L1
Lys	74I	Asn	92L	96L	CDR-L3
Arg	86I	Tyr	30BL	32L	CDR-L1

[a]Amino acid residues are numbered according to the processed form of IL-13 (SEQ ID NO:4). "I" indicates amino acid of IL-13.

[b]Amino acid residues correspond to SEQ ID NO:1 (for light chain residues, "L") or SEQ ID NO:2 (for heavy chain residues, "H"), and are numbered according to the Chothia numbering system (Al-Lazikani *et al., Jour. Mol. Biol.* 273:927-948, 1997). See Tables 6 and 7.

[c]Amino acid residues are numbered according to the numbering of SEQ ID NO:1 (for light chain residues, "L") or SEQ ID NO:2 (for heavy chain residues, "H").

Table 5. Residues mis-modeled due to inadequate electron density

Coordinates	Protein[a]	Chothia[b]	SEQ ID[c]	Sequence[c]	Modeled As
Table 11	LC	45	49	Lys	Ala
Table 11	HC	3	3	Lys	Ala
Table 11	HC	105	110	Gln	Ala
Table 11	HC	171	176	Glu	Ala
Table 11	HC	177	182	Leu	Ala
Table 11	HC	205	210	Lys	Ala
Table 11	I		89	Lys	Ala
Table 11	I		94	Gln	Ala
Table 11	I		97	Lys	Ala
Table 11	I		105	Lys	Ala
Table 11	I		108	Arg	Ala
Table 11	I		109	Glu	Ala

[a] "HC" is heavy chain (SEQ ID NO:2); "LC"is light chain (SEQ ID NO:1); "I" is IL-13 processed (SEQ ID NO:4).

[b]Amino acid residues correspond to SEQ ID NO:1 (for light chain residues, "LC") or SEQ ID NO:2 (for heavy chain residues, "HC"), and are numbered according to the Chothia numbering system (Al-Lazikani *et al., Jour. Mol. Biol.* 273:927-948, 1997). See Tables 6 and 7.

[c]Amino acid residues are numbered and identified according to the numbering of SEQ ID NO:1 (for light chain residues, "LC"), SEQ ID NO:2 (for heavy chain residues, "HC"), or SEQ ID NO:4 (for residues of the IL-13 processed polypeptide, "I").

FIG. 3 is a ribbon diagram illustrating the co-crystal structure of mAb13.2 Fab with human IL-13. The light chain of mAb13.2 Fab is shown in dark shading, and the heavy chain in light shading. The IL-13 structure is shown at right. The figure depicts the interaction of the C alpha helix of IL-13 with the CDR loops of the antibody. The major residues of mAb13.2 heavy chain that make hydrogen bond contacts with IL-13 are SER50 (CDR2), SER53 (CDR2), TYR101 (CDR3), and

TYR102 (CDR3). The major residues of mAb13.2 heavy chain that make van der Waals contacts with IL-13 are ILE30 (CDR1), SER31 (CDR1), ALA33 (CDR1), TRP47, SER50 (CDR2), SER52 (CDR2), SER53 (CDR2), TYR58 (CDR2), LEU98 (CDR3), ASP99 (CDR3), GLY100 (CDR3), TYR101 (CDR3), TYR102 (CDR3), and PHE103 (CDR3) (see Table 4; amino acids numbered according the numbering of SEQ ID NO:2 (FIG. 1B)).

According to the amino acid numbering of SEQ ID NO:1 (FIG. 1A), the major residues of mAb13.2 light chain that make hydrogen bond contacts with IL-13 are ASN31 (CDR1), TYR32 (CDR1), LYS34 (CDR1), ASN96 (CDR3), and ASP98 (CDR3). The major residues of mAb13.2 light chain that make van der Waals contacts with IL-13 are ASN31 (CDR1), TYR32 (CDR1), LYS34 (CDR1), ARG54 (CDR2), ASN96 (CDR3), ASP98 (CDR3), and TRP100 (CDR3) (see Table 4).

Various numbering schemes have evolved to describe the amino acid residues of the heavy and light chain polypeptides of an antibody. The Kabat and Chothia schemes number the amino acid residues linearly accept in the defined CDR region of the polypeptide, where insertions are noted. The Kabat system (Kabat *et al.*, NIH Publ. No. 91-3242, 5th ed., vols. 1-3, Dept. of Health and Human Services, 1991) defines the location of the heavy and light chain CDRs by sequence variability, while the Chothia system (Al-Lazikani *et al., Jour. Mol. Biol.* 273:927-948, 1997) defines the location structurally by loop regions. Because of the different placement of the CDR insertions, the numbering of the amino acids in the heavy chain and light chain can vary between the two systems. The notation of amino acid insertions causes each of these numbering systems to deviate from the linear numbering. Tables 6 and 7 align the amino acid sequences of the light and heavy chains, respectively, of mAb13.2Fab according to these three different numbering schemes (Kabat, Chothia, and linear numbering).

Table 6. Amino acid sequence of the light chain of mAb13.2Fab according to the linear (SEQ ID NO:1), Chothia and Kabat numbering systems.[a]

Residue	Linear Sequence Number	Chothia Structure Number	Kabat Sequence Number
D	1	1	1
I	2	2	2
V	3	3	3
L	4	4	4
T	5	5	5
Q	6	6	6
S	7	7	7
P	8	8	8
A	9	9	9
S	10	10	10
L	11	11	11
A	12	12	12
V	13	13	13
S	14	14	14
L	15	15	15
G	16	16	16
Q	17	17	17
R	18	18	18
A	19	19	19
T	20	20	20
I	21	21	21
S	22	22	22
C	23	23	23
K	24	24	24
A	25	25	25
S	26	26	26
E	27	27	27
S	28	28	**27A**
V	29	29	**27B**
D	30	30	**27C**
N	**31**	**30A**	**27D**
Y	**32**	**30B**	28
G	**33**	**30C**	29
K	**34**	**30D**	30
S	35	31	31
L	36	32	32

M	37	33	33
H	38	34	34
W	39	35	35
Y	40	36	36
Q	41	37	37
Q	42	38	38
K	43	39	39
P	44	40	40
G	45	41	41
Q	46	42	42
S	47	43	43
P	48	44	44
K	49	45	45
L	50	46	46
L	51	47	47
I	52	48	48
Y	53	49	49
R	54	50	50
A	55	51	51
S	56	52	52
N	57	53	53
L	58	54	54
E	59	55	55
S	60	56	56
G	61	57	57
I	62	58	58
P	63	59	59
A	64	60	60
R	65	61	61
F	66	62	62
S	67	63	63
G	68	64	64
S	69	65	65
G	70	66	66
S	71	67	67
R	72	68	68
T	73	69	69
D	74	70	70
F	75	71	71
T	76	72	72
L	77	73	73
T	78	74	74
I	79	75	75
N	80	76	76

P	81	77	77
V	82	78	78
E	83	79	79
A	84	80	80
D	85	81	81
D	86	82	82
V	87	83	83
A	88	84	84
T	89	85	85
Y	90	86	86
Y	91	87	87
C	92	88	88
Q	93	89	89
Q	94	90	90
S	95	91	91
N	96	92	92
E	97	93	93
D	98	94	94
P	99	95	95
W	100	96	96
T	101	97	97
F	102	98	98
G	103	99	99
G	104	100	100
G	105	101	101
T	106	102	102
K	107	103	103
L	108	104	104
E	109	105	105
I	110	106	106
K	111	107	107
R	**112**	**108**	**108**
A	113	109	109
D	114	110	110
A	115	111	111
A	116	112	112
P	117	113	113
T	118	114	114
V	119	115	115
S	120	116	116
I	121	117	117
F	122	118	118
P	123	119	119
P	124	120	120

S	125	121	121
S	126	122	122
E	127	123	123
Q	128	124	124
L	129	125	125
T	130	126	126
S	131	127	127
G	132	128	128
G	133	129	129
A	134	130	130
S	135	131	131
V	136	132	132
V	137	133	133
C	138	134	134
F	139	135	135
L	140	136	136
N	141	137	137
N	142	138	138
F	143	139	139
Y	144	140	140
P	145	141	141
K	146	142	142
D	147	143	143
I	148	144	144
N	149	145	145
V	150	146	146
K	151	147	147
W	152	148	148
K	153	149	149
I	154	150	150
D	155	151	151
G	156	152	152
S	157	153	153
E	158	154	154
R	159	155	155
Q	160	156	156
N	161	157	157
G	162	158	158
V	163	159	159
L	164	160	160
N	165	161	161
S	166	162	162
W	167	163	163
T	168	164	164

D	169	165	165
Q	170	166	166
D	171	167	167
S	172	168	168
K	173	169	169
D	174	170	170
S	175	171	171
T	176	172	172
Y	177	173	173
S	178	174	174
M	179	175	175
S	180	176	176
S	181	177	177
T	182	178	178
L	183	179	179
T	184	180	180
L	185	181	181
T	186	182	182
K	187	183	183
D	188	184	184
E	189	185	185
Y	190	186	186
E	191	187	187
R	192	188	188
H	193	189	189
N	194	190	190
S	195	191	191
Y	196	192	192
T	197	193	193
C	198	194	194
E	199	195	195
A	200	196	196
T	201	197	197
H	202	198	198
K	203	199	199
T	204	200	200
S	205	201	201
T	206	202	202
S	207	203	203
P	208	204	204
I	209	205	205
V	210	206	206
K	211	207	207
S	212	208	208

F	213	209	209
N	214	210	210
R	215	211	211
N	216	212	212
E	217	213	213
C	218	214	214

[a]Bold font indicates an insertion in the linear sequence according to the Chothia or Kabat numbering system. Bold and underlined residue indicates an insertion as determined by X-ray data.

Table 7. Amino acid sequence of the heavy chain of mAb13.2Fab according to the linear (SEQ ID NO:2), Chothia and Kabat numbering systems.[a]

Residue	Linear Sequence Number	Chothia Structure Number	Kabat Sequence Number
E	1	1	1
V	2	2	2
K	3	3	3
L	4	4	4
V	5	5	5
E	6	6	6
S	7	7	7
G	8	8	8
G	9	9	9
G	10	10	10
L	11	11	11
V	12	12	12
K	13	13	13
P	14	14	14
G	15	15	15
G	16	16	16
S	17	17	17
L	18	18	18
K	19	19	19
L	20	20	20
S	21	21	21
C	22	22	22
A	23	23	23
A	24	24	24
S	25	25	25
G	26	26	26
F	27	27	27
T	28	28	28
F	29	29	29
I	30	30	30
S	31	31	31
Y	32	32	32
A	33	33	33
M	34	34	34
S	35	35	35

W	36	36	36
V	37	37	37
R	38	38	38
Q	39	39	39
T	40	40	40
P	41	41	41
E	42	42	42
K	43	43	43
R	44	44	44
L	45	45	45
E	46	46	46
W	47	47	47
V	48	48	48
A	49	49	49
S	50	50	50
I	51	51	51
S	52	52	52
S	53	53	53
G	54	54	54
G	55	55	55
N	56	56	56
T	57	57	57
Y	58	58	58
Y	59	59	59
P	60	60	60
D	61	61	61
S	62	62	62
V	63	63	63
K	64	64	64
G	65	65	65
R	66	66	66
F	67	67	67
T	68	68	68
I	69	69	69
S	70	70	70
R	71	71	71
D	72	72	72

N	73	73	73
A	74	74	74
R	75	75	75
N	76	76	76
I	77	77	77
L	78	78	78
Y	79	79	79
L	80	80	80
Q	81	81	81
M	82	82	82
S	**83**	**82A**	**82A**
S	**84**	**82B**	**82B**
L	**85**	**82C**	**82C**
R	86	83	83
S	87	84	84
E	88	85	85
D	89	86	86
T	90	87	87
A	91	88	88
M	92	89	89
Y	93	90	90
Y	94	91	91
C	95	92	92
A	96	93	93
R	97	94	94
L	98	95	95
D	99	96	96
G	100	97	97
Y	101	98	98
Y	102	99	99
F	103	100	100
G	**104**	**100A**	**100A**
F	**105**	**100B**	**100B**
A	106	101	101
Y	107	102	102
W	108	103	103
G	109	104	104

Q	110	105	105
G	111	106	106
T	112	107	107
L	113	108	108
V	114	109	109
A	115	110	110
V	116	111	111
S	117	112	112
A	118	113	113
A	119	114	114
K	**120**	**115**	**115**
T	121	116	116
T	122	117	117
P	123	118	118
P	124	119	119
S	125	120	120
V	126	121	121
Y	127	122	122
P	128	123	123
L	129	124	124
A	130	125	125
P	131	126	126
G	132	127	127
S	133	128	128
A	134	129	129
A	135	130	130
Q	136	131	131
T	137	132	132
N	138	133	133
S	139	134	134
M	140	135	135
V	141	136	136
T	142	137	137
L	143	138	138
G	144	139	139
C	145	140	140
L	146	141	141

V	147	142	142
K	148	143	143
G	149	144	144
Y	150	145	145
F	151	146	146
P	152	147	147
E	153	148	148
P	154	149	149
V	155	150	150
T	156	151	151
V	157	152	152
T	158	153	153
W	159	154	154
N	160	155	155
S	161	156	156
G	162	157	157
S	163	158	158
L	164	159	159
S	165	160	160
S	166	161	161
G	167	162	162
V	168	163	163
H	169	164	164
T	170	165	165
F	171	166	166
P	172	167	167
A	173	168	168
V	174	169	169
L	175	170	170
E	176	171	171
S	177	172	172
D	178	173	173
L	179	174	174
Y	180	175	175
T	181	176	176
L	182	177	177
S	183	178	178

S	184	179	179
S	185	180	180
V	186	181	181
T	187	182	182
V	188	183	183
P	189	184	184
S	190	185	185
S	191	186	186
P	192	187	187
R	193	188	188
P	194	189	189
S	195	190	190
E	196	191	191
T	197	192	192
V	198	193	193
T	199	194	194
C	200	195	195
N	201	196	196
V	202	197	197
A	203	198	198
H	204	199	199
P	205	200	200
A	206	201	201
S	207	202	202
S	208	203	203
T	209	204	204
K	210	205	205
V	211	206	206
D	212	207	207
K	213	208	208
K	214	209	209
I	215	210	210

[a]Bold font indicates an insertion in the linear sequence according to the Chothia or Kabat numbering system. Bold and underlined residue indicates an insertion as determined by X-ray data.

5

Example 6. Crystal Structure of the Trimeric Complex of Interleukin-13, Il-13 receptor α1, and the Binding Domain of the Inhibitory antibody mAb13.2 Fab.

The extracellular domain (residues 27-342; see FIG. 14) of IL-13Rα1 was expressed with a 6xHis tag fused at the C-terminus (Aman *et al., J. Biol. Chem.* 271:29265-29270, 1996). Expression was performed in the yeast *Pichia pastoris*. The recombinant protein was purified to homogeneity by affinity chromatography over NiNTA-agarose (Qiagen) followed by anion exchange chromatography over HiTrap Q Sepharose HP (Pharmacia, Amersham Pharmacia Biotech, UK) and gel filtration chromatography over Superdex-75 (Pharmacia).

The human IL-13 (amino acid residues 1 to 113) (SEQ ID NO:4) was expressed and purified as described in example 5.

A complex containing IL-13 and IL-13Rα1 was was formed by mixing the receptor with a slight excess of IL-13. Following confirmation of complex formation by analytical size-exclusion chromatography, the complex was treated with endoglycosidase Hf (endoHf) (25,000 units/mL) for 90 minutes at 37°C. The deglycosylated complexes were applied to a concanavalin A (conA)-Sepharose column to remove protein with uncleaved oligosaccharides, and the remaining complexes were applied to a NiNTA column to remove EndoHf. The purified complexes were purified to homogeneity by gel filtration chromatography over Superdex-200 (GE Healthcare, formerly Amersham Biosciences, Piscatway, NJ). Formation of 1:1 complexes of IL-13 and IL-13Rα1 was confirmed by native polyacrylamide gel electrophoresis and size exclusion chromatography prior to crystal screening.

mAb13.2 Fab was purified as described in example 4.

Crystals of a complex of IL-13, IL-13Rα1, and mAb13.2 Fab were grown at 18°C by vapor diffusion in hanging drops containing 10 mg/ml protein complex, 13% PEG-MME 2000 and 100 mM HEPES (pH 7.0). Crystals appeared in several weeks, but did not reach maximal size for several months. The crystals had the symmetry of space group I4 with unit cell dimensions a = 164.9 Å, b = 164.9 Å, and c = 74.8 Å. Prior to data collection, crystals were briefly transferred to 10% ethylene glycol plus mother liquor and flash cooled in liquid nitrogen. Throughout data collection, the crystal was maintained at 100K. Data were collected at the 5.0.1 beam line at the Advanced Light Source, Berkeley, California. Intensities were integrated and scaled

using DENZO (Otwinowski and Minor, Methods Enzymol. 276:307-326, 1997) and SCALA ("CCP4," Acta Cryst D50:760-763, 1994).

The structure was solved by molecular replacement using the coordinates of the mAb13.2 Fab/IL-13 complex (Table 11). Initial phases were improved by solvent flattening using Solomon as implemented in CCP4 ("CCP4," Acta Cryst D50:760-763, 1994). Rigid body refinement within CCP4 was used to obtain an initial model. Experimental maps with continuous density were obtained, and an initial model was constructed using QUANTA (Accelrys, Inc., San Diego, CA) and refined against data from 30 to 2.2 Å with CNS (Brunger *et al., Acta Cryst.* D54:905-921, 1998). The final refined model, which includes polypeptide chains of IL-13Rα1 (residues 6-314), mAb13.2 Fab (light chain residues 1-213 and heavy chain residues 1-213) and IL-13 (residues 6-112), as well as 123 water molecules, has a working R-value of 24.4% and a free R-value of 27.2%. Statistics for data collection and refinement are shown in Tables 8 and 9. There were no backbone torsion angles outside of the allowed regions of the Ramachandran plot. Structural figures were generated using PYMOL (DeLano, "The PYMOL Molecular Graphics System" (2002) DeLano Scientific, San Carlos, CA) and Ribbons (Carson, *J.Appl.Cryst.* 24:958-961, 1991). The structural coordinates are provided in Table 12. The following residues of IL-13Rα1 had no density beyond the C-beta atom and the coordinates for each were truncated to reflect that ambiguity: 81E, 93R, 104T, 105N, 111S, 112I, 122E, 124D, 150R, 151T, 157N, 165R, 168E, 169K, 174E, 195S, 196S, 197F, 305D, 306T, 339K, 110P, 200Q, 203Q, 204I, 209N, 212K, 213I, 214K, 240N, 279E, 284N, and 293N.

Table 8. Statistics for Data Collection and Phase Determination

Data Collection	IL-13/mAb13.2 Fab/IL-13Rα1
Crystal system	Tetragonal
Space group	I4
Unit cell dimensions	a=b=164.9 Å, c = 74.8 Å, α=β=γ=90.0°
Data collection temperature	100K
Number of crystals	1
Radiation Source	ALS, Berkeley, CA
Wavelength (Å)	λ = 1.0 Å
Resolution range(Å)	30-2.2 Å
Maximum resolution (Å)	2.2 Å
R_{merge}[a](%)	6.7% (48.6%)
% complete	99.9% (99.0%)
total reflections (free)	42298 (2110)
unique reflections	40188
I/σ(I)	26.6 (2.8)

[a] $R_{merge} = \sum |I_h - \langle I_h \rangle| / \sum I_h$, where $\langle I_h \rangle$ is the average intensity over symmetry equivalents. Number in parentheses reflects statistics for the last resolution shell (2.8 Å -2.7 Å).

Table 9. Structure Refinement Statistics

Data Collection	IL-13/mAb13.2 Fab/IL-13Rα1
Model for molecular replacement	mAb13.2 Fab/IL-13
Maximum Resolution (Å)	2.2 Å
R_{work}[a] (%)	24.4 %
R_{free} (%)	27.2 %

[a] $R_{work} = \sum ||F_{obs}| - |F_{calc}|| / \sum |F_{obs}|$, R_{free} is equivalent to R_{work}, but calculated for a randomly chosen 6.4% of reflections that are omitted from the refinement process.

There are two points of substantial interaction between IL-13 and IL-13Rα1. One interaction is between Ig domain 1 and a portion of the loop connecting helices C and D of the cytokine while the other interaction is between Ig domain 3 of the receptor and helices A and D of IL-13 (see FIG. 15).

The interaction between Ig domain 1 of IL-13Rα1 and IL-13 results in the formation of an extended beta sheet spanning the two molecules. Residues Thr88, Lys89, Ile90 and Glu91 of IL-13 (SEQ ID NO:4) form a beta strand that interacts with residues Lys76, Lys77, Ile78 and Ala79 of the receptor (SEQ ID NO:12) (See FIG. 16). Additionally, the side chain of Met33 of IL-13 extends into a hydrophobic pocket that is created by the side chains of these adjoining strands.

The predominant feature of the interaction with Ig domain 3 is the insertion of a hydrophobic residue (Phe107) of IL-13 into a hydrophobic pocket in Ig domain 3 of

the receptor IL-13Rα1. The hydrophobic pocket of IL-13Rα1 is formed by the side chains of residues Leu319, Cys257, Arg256 and Cys320 (FIG. 17). The interaction with Phe107 of IL-13 results in an extensive set of Van der Waals interactions between amino acid residues Ile254, Ser255, Arg256, Lys318, Cys320, and Tyr321 of IL-13Rα1 (SEQ ID NO:12) and amino acid residues Arg11, Glu12, Leu13, Ile14, Glu15, Lys104, Lys105, Leu106, Phe107 and Arg108 of IL-13 (SEQ ID NO:4) (See FIG. 17).

Table 10. Structure coordinates of mAb13.2 Fab[a, b]

	#	Name	Res.	Chain	Res #	X	Y	Z	occ	B	SegID	Ele
ATOM	1	N	ASP	L	1	5.849	-2.062	0.182	1.00	66.67	L	N
ATOM	2	CA	ASP	L	1	5.758	-0.620	0.381	1.00	65.86	L	C
ATOM	3	C	ASP	L	1	7.071	0.081	0.023	1.00	58.91	L	C
ATOM	4	O	ASP	L	1	8.115	-0.534	-0.151	1.00	57.75	L	O
ATOM	5	CB	ASP	L	1	5.413	-0.362	1.849	1.00	70.47	L	C
ATOM	6	CG	ASP	L	1	6.620	-0.695	2.715	1.00	75.61	L	C
ATOM	7	OD1	ASP	L	1	7.623	-1.136	2.154	1.00	80.71	L	O
ATOM	8	OD2	ASP	L	1	6.547	-0.509	3.927	1.00	87.49	L	O
ATOM	9	N	ILE	L	2	6.981	1.415	-0.125	1.00	52.10	L	N
ATOM	10	CA	ILE	L	2	8.171	2.181	-0.476	1.00	40.08	L	C
ATOM	11	C	ILE	L	2	8.900	2.695	0.767	1.00	42.02	L	C
ATOM	12	O	ILE	L	2	8.355	3.411	1.598	1.00	48.63	L	O
ATOM	13	CB	ILE	L	2	7.740	3.360	-1.351	1.00	42.36	L	C
ATOM	14	CG1	ILE	L	2	7.395	2.872	-2.761	1.00	38.52	L	C
ATOM	15	CG2	ILE	L	2	8.895	4.371	-1.472	1.00	36.85	L	C
ATOM	16	CD1	ILE	L	2	7.183	4.027	-3.741	1.00	31.90	L	C
ATOM	17	N	VAL	L	3	10.170	2.268	0.899	1.00	43.87	L	N
ATOM	18	CA	VAL	L	3	10.965	2.713	2.037	1.00	41.50	L	C
ATOM	19	C	VAL	L	3	11.652	4.052	1.752	1.00	39.10	L	C
ATOM	20	O	VAL	L	3	12.512	4.166	0.888	1.00	45.89	L	O
ATOM	21	CB	VAL	L	3	12.016	1.642	2.333	1.00	42.05	L	C
ATOM	22	CG1	VAL	L	3	12.810	2.022	3.582	1.00	44.42	L	C
ATOM	23	CG2	VAL	L	3	11.342	0.302	2.559	1.00	39.67	L	C
ATOM	24	N	LEU	L	4	11.341	4.998	2.628	1.00	40.82	L	N
ATOM	25	CA	LEU	L	4	12.027	6.277	2.650	1.00	39.96	L	C
ATOM	26	C	LEU	L	4	12.991	6.250	3.819	1.00	40.04	L	C
ATOM	27	O	LEU	L	4	12.615	5.894	4.936	1.00	41.74	L	O
ATOM	28	CB	LEU	L	4	11.036	7.412	2.857	1.00	38.52	L	C
ATOM	29	CG	LEU	L	4	9.763	7.348	2.031	1.00	38.66	L	C
ATOM	30	CD1	LEU	L	4	9.007	8.640	2.245	1.00	50.64	L	C
ATOM	31	CD2	LEU	L	4	10.094	7.164	0.562	1.00	46.26	L	C
ATOM	32	N	THR	L	5	14.234	6.630	3.567	1.00	38.94	L	N
ATOM	33	CA	THR	L	5	15.233	6.639	4.622	1.00	41.89	L	C
ATOM	34	C	THR	L	5	15.751	8.050	4.829	1.00	46.14	L	C
ATOM	35	O	THR	L	5	16.433	8.595	3.962	1.00	53.43	L	O
ATOM	36	CB	THR	L	5	16.397	5.730	4.243	1.00	39.78	L	C
ATOM	37	OG1	THR	L	5	15.896	4.411	3.995	1.00	53.91	L	O
ATOM	38	CG2	THR	L	5	17.430	5.688	5.347	1.00	41.58	L	C
ATOM	39	N	GLN	L	6	15.429	8.664	5.959	1.00	43.43	L	N
ATOM	40	CA	GLN	L	6	15.925	10.015	6.179	1.00	44.62	L	C
ATOM	41	C	GLN	L	6	17.355	9.954	6.681	1.00	46.70	L	C
ATOM	42	O	GLN	L	6	17.758	8.989	7.326	1.00	45.08	L	O
ATOM	43	CB	GLN	L	6	15.052	10.780	7.179	1.00	44.41	L	C
ATOM	44	CG	GLN	L	6	13.596	10.849	6.764	1.00	37.31	L	C
ATOM	45	CD	GLN	L	6	12.796	11.858	7.553	1.00	27.04	L	C
ATOM	46	OE1	GLN	L	6	11.606	11.679	7.762	1.00	41.69	L	O
ATOM	47	NE2	GLN	L	6	13.441	12.929	7.979	1.00	38.94	L	N
ATOM	48	N	SER	L	7	18.117	10.993	6.364	1.00	49.55	L	N
ATOM	49	CA	SER	L	7	19.511	11.091	6.763	1.00	49.16	L	C
ATOM	50	C	SER	L	7	19.823	12.568	6.912	1.00	44.38	L	C
ATOM	51	O	SER	L	7	19.517	13.358	6.033	1.00	48.04	L	O
ATOM	52	CB	SER	L	7	20.399	10.483	5.676	1.00	51.89	L	C
ATOM	53	OG	SER	L	7	21.712	10.254	6.152	1.00	68.31	L	O
ATOM	54	N	PRO	L	8	20.426	12.960	8.037	1.00	44.47	L	N
ATOM	55	CA	PRO	L	8	20.799	12.057	9.120	1.00	47.06	L	C
ATOM	56	C	PRO	L	8	19.607	11.777	10.028	1.00	50.00	L	C
ATOM	57	O	PRO	L	8	18.452	11.965	9.640	1.00	56.56	L	O
ATOM	58	CB	PRO	L	8	21.883	12.838	9.841	1.00	44.60	L	C
ATOM	59	CG	PRO	L	8	21.358	14.219	9.760	1.00	39.02	L	C
ATOM	60	CD	PRO	L	8	20.911	14.323	8.317	1.00	44.32	L	C
ATOM	61	N	ALA	L	9	19.905	11.341	11.244	1.00	42.76	L	N
ATOM	62	CA	ALA	L	9	18.883	11.033	12.215	1.00	30.84	L	C
ATOM	63	C	ALA	L	9	18.728	12.221	13.136	1.00	34.02	L	C
ATOM	64	O	ALA	L	9	17.619	12.564	13.539	1.00	34.10	L	O
ATOM	65	CB	ALA	L	9	19.289	9.824	12.993	1.00	36.31	L	C

ATOM	66	N	SER	L	10	19.856	12.841	13.471	1.00	33.73	L	N
ATOM	67	CA	SER	L	10	19.885	14.006	14.345	1.00	34.21	L	C
ATOM	68	C	SER	L	10	20.660	15.103	13.656	1.00	30.61	L	C
ATOM	69	O	SER	L	10	21.478	14.840	12.786	1.00	37.19	L	O
ATOM	70	CB	SER	L	10	20.562	13.673	15.663	1.00	39.85	L	C
ATOM	71	OG	SER	L	10	19.863	12.647	16.323	1.00	58.43	L	O
ATOM	72	N	LEU	L	11	20.428	16.335	14.069	1.00	29.18	L	N
ATOM	73	CA	LEU	L	11	21.094	17.449	13.441	1.00	29.44	L	C
ATOM	74	C	LEU	L	11	21.199	18.558	14.468	1.00	34.45	L	C
ATOM	75	O	LEU	L	11	20.206	18.914	15.099	1.00	38.49	L	O
ATOM	76	CB	LEU	L	11	20.245	17.919	12.270	1.00	38.78	L	C
ATOM	77	CG	LEU	L	11	20.735	19.031	11.368	1.00	34.38	L	C
ATOM	78	CD1	LEU	L	11	22.005	18.572	10.671	1.00	54.90	L	C
ATOM	79	CD2	LEU	L	11	19.669	19.346	10.345	1.00	44.63	L	C
ATOM	80	N	ALA	L	12	22.394	19.110	14.643	1.00	39.63	L	N
ATOM	81	CA	ALA	L	12	22.798	20.159	15.575	1.00	36.46	L	C
ATOM	82	C	ALA	L	12	23.247	21.418	14.832	1.00	35.24	L	C
ATOM	83	O	ALA	L	12	24.322	21.485	14.251	1.00	40.47	L	O
ATOM	84	CB	ALA	L	12	23.946	19.620	16.429	1.00	39.40	L	C
ATOM	85	N	VAL	L	13	22.357	22.428	14.831	1.00	33.94	L	N
ATOM	86	CA	VAL	L	13	22.652	23.673	14.132	1.00	44.79	L	C
ATOM	87	C	VAL	L	13	22.485	24.889	15.047	1.00	43.03	L	C
ATOM	88	O	VAL	L	13	21.747	24.879	16.023	1.00	42.07	L	O
ATOM	89	CB	VAL	L	13	21.698	23.787	12.942	1.00	42.44	L	C
ATOM	90	CG1	VAL	L	13	21.877	25.143	12.258	1.00	42.25	L	C
ATOM	91	CG2	VAL	L	13	21.977	22.680	11.942	1.00	56.66	L	C
ATOM	92	N	SER	L	14	23.242	25.953	14.719	1.00	46.49	L	N
ATOM	93	CA	SER	L	14	23.145	27.177	15.505	1.00	50.99	L	C
ATOM	94	C	SER	L	14	22.219	28.196	14.839	1.00	46.51	L	C
ATOM	95	O	SER	L	14	22.091	28.269	13.624	1.00	51.52	L	O
ATOM	96	CB	SER	L	14	24.549	27.765	15.650	1.00	51.18	L	C
ATOM	97	OG	SER	L	14	25.514	26.791	15.246	1.00	60.81	L	O
ATOM	98	N	LEU	L	15	21.527	28.976	15.688	1.00	41.47	L	N
ATOM	99	CA	LEU	L	15	20.600	29.971	15.160	1.00	43.66	L	C
ATOM	100	C	LEU	L	15	21.164	30.669	13.918	1.00	43.12	L	C
ATOM	101	O	LEU	L	15	22.350	30.953	13.816	1.00	50.89	L	O
ATOM	102	CB	LEU	L	15	20.325	30.998	16.261	1.00	45.45	L	C
ATOM	103	CG	LEU	L	15	19.470	30.425	17.394	1.00	39.74	L	C
ATOM	104	CD1	LEU	L	15	19.079	31.484	18.428	1.00	50.28	L	C
ATOM	105	CD2	LEU	L	15	18.162	29.810	16.896	1.00	48.82	L	C
ATOM	106	N	GLY	L	16	20.308	31.017	12.967	1.00	39.34	L	N
ATOM	107	CA	GLY	L	16	20.763	31.757	11.807	1.00	37.83	L	C
ATOM	108	C	GLY	L	16	21.510	30.955	10.764	1.00	36.32	L	C
ATOM	109	O	GLY	L	16	21.802	31.473	9.683	1.00	45.28	L	O
ATOM	110	N	GLN	L	17	21.826	29.702	11.068	1.00	30.61	L	N
ATOM	111	CA	GLN	L	17	22.537	28.872	10.111	1.00	33.76	L	C
ATOM	112	C	GLN	L	17	21.545	28.158	9.215	1.00	32.65	L	C
ATOM	113	O	GLN	L	17	20.361	28.471	9.220	1.00	33.30	L	O
ATOM	114	CB	GLN	L	17	23.417	27.851	10.833	1.00	34.75	L	C
ATOM	115	CG	GLN	L	17	24.397	28.480	11.798	1.00	50.05	L	C
ATOM	116	CD	GLN	L	17	25.314	29.478	11.117	1.00	50.98	L	C
ATOM	117	OE1	GLN	L	17	25.594	30.556	11.658	1.00	48.45	L	O
ATOM	118	NE2	GLN	L	17	25.793	29.125	9.927	1.00	32.88	L	N
ATOM	119	N	ARG	L	18	22.034	27.197	8.440	1.00	34.50	L	N
ATOM	120	CA	ARG	L	18	21.179	26.442	7.543	1.00	29.75	L	C
ATOM	121	C	ARG	L	18	21.281	24.969	7.864	1.00	33.92	L	C
ATOM	122	O	ARG	L	18	22.350	24.464	8.186	1.00	40.96	L	O
ATOM	123	CB	ARG	L	18	21.586	26.678	6.094	1.00	32.75	L	C
ATOM	124	CG	ARG	L	18	20.989	25.701	5.105	1.00	27.81	L	C
ATOM	125	CD	ARG	L	18	21.450	26.041	3.706	1.00	37.23	L	C
ATOM	126	NE	ARG	L	18	22.909	26.054	3.575	1.00	56.95	L	N
ATOM	127	CZ	ARG	L	18	23.569	26.457	2.488	1.00	52.86	L	C
ATOM	128	NH1	ARG	L	18	22.909	26.891	1.419	1.00	48.42	L	N
ATOM	129	NH2	ARG	L	18	24.898	26.415	2.465	1.00	46.66	L	N
ATOM	130	N	ALA	L	19	20.148	24.287	7.787	1.00	34.89	L	N
ATOM	131	CA	ALA	L	19	20.080	22.869	8.054	1.00	31.86	L	C
ATOM	132	C	ALA	L	19	19.525	22.234	6.799	1.00	32.59	L	C
ATOM	133	O	ALA	L	19	18.621	22.781	6.185	1.00	37.78	L	O
ATOM	134	CB	ALA	L	19	19.156	22.605	9.222	1.00	26.13	L	C

ATOM	135	N	THR	L	20	20.074	21.093	6.405	1.00	36.27	L	N
ATOM	136	CA	THR	L	20	19.577	20.410	5.228	1.00	41.54	L	C
ATOM	137	C	THR	L	20	19.269	18.979	5.602	1.00	44.55	L	C
ATOM	138	O	THR	L	20	20.070	18.313	6.237	1.00	58.65	L	O
ATOM	139	CB	THR	L	20	20.595	20.402	4.063	1.00	39.53	L	C
ATOM	140	OG1	THR	L	20	20.875	21.745	3.657	1.00	50.92	L	O
ATOM	141	CG2	THR	L	20	20.021	19.672	2.874	1.00	37.47	L	C
ATOM	142	N	ILE	L	21	18.090	18.512	5.222	1.00	45.42	L	N
ATOM	143	CA	ILE	L	21	17.700	17.151	5.516	1.00	38.44	L	C
ATOM	144	C	ILE	L	21	17.582	16.407	4.195	1.00	38.28	L	C
ATOM	145	O	ILE	L	21	17.236	16.989	3.157	1.00	39.74	L	O
ATOM	146	CB	ILE	L	21	16.348	17.103	6.291	1.00	43.11	L	C
ATOM	147	CG1	ILE	L	21	16.521	17.747	7.666	1.00	44.22	L	C
ATOM	148	CG2	ILE	L	21	15.886	15.653	6.483	1.00	47.73	L	C
ATOM	149	CD1	ILE	L	21	15.320	17.550	8.582	1.00	56.67	L	C
ATOM	150	N	SER	L	22	17.885	15.115	4.251	1.00	33.33	L	N
ATOM	151	CA	SER	L	22	17.834	14.257	3.083	1.00	32.47	L	C
ATOM	152	C	SER	L	22	16.856	13.114	3.290	1.00	27.07	L	C
ATOM	153	O	SER	L	22	16.629	12.685	4.419	1.00	32.17	L	O
ATOM	154	CB	SER	L	22	19.235	13.703	2.783	1.00	30.96	L	C
ATOM	155	OG	SER	L	22	19.185	12.604	1.886	1.00	38.42	L	O
ATOM	156	N	CYS	L	23	16.278	12.647	2.184	1.00	19.51	L	N
ATOM	157	CA	CYS	L	23	15.327	11.538	2.177	1.00	32.07	L	C
ATOM	158	C	CYS	L	23	15.568	10.763	0.892	1.00	33.68	L	C
ATOM	159	O	CYS	L	23	15.552	11.328	-0.198	1.00	34.61	L	O
ATOM	160	CB	CYS	L	23	13.881	12.066	2.201	1.00	34.20	L	C
ATOM	161	SG	CYS	L	23	12.480	10.881	2.134	1.00	42.49	L	S
ATOM	162	N	LYS	L	24	15.838	9.473	1.021	1.00	32.63	L	N
ATOM	163	CA	LYS	L	24	16.029	8.646	-0.154	1.00	35.47	L	C
ATOM	164	C	LYS	L	24	14.977	7.548	-0.163	1.00	38.09	L	C
ATOM	165	O	LYS	L	24	14.765	6.858	0.839	1.00	41.45	L	O
ATOM	166	CB	LYS	L	24	17.431	8.040	-0.184	1.00	39.20	L	C
ATOM	167	CG	LYS	L	24	18.489	8.954	-0.787	1.00	58.69	L	C
ATOM	168	CD	LYS	L	24	18.571	10.293	-0.064	1.00	73.72	L	C
ATOM	169	CE	LYS	L	24	19.889	11.004	-0.356	1.00	82.49	L	C
ATOM	170	NZ	LYS	L	24	21.089	10.292	0.216	1.00	65.38	L	N
ATOM	171	N	ALA	L	25	14.308	7.409	-1.298	1.00	34.05	L	N
ATOM	172	CA	ALA	L	25	13.275	6.407	-1.455	1.00	36.52	L	C
ATOM	173	C	ALA	L	25	13.775	5.221	-2.274	1.00	37.06	L	C
ATOM	174	O	ALA	L	25	14.534	5.379	-3.224	1.00	40.67	L	O
ATOM	175	CB	ALA	L	25	12.049	7.023	-2.121	1.00	32.09	L	C
ATOM	176	N	SER	L	26	13.334	4.034	-1.886	1.00	36.30	L	N
ATOM	177	CA	SER	L	26	13.698	2.804	-2.556	1.00	39.67	L	C
ATOM	178	C	SER	L	26	13.130	2.728	-3.973	1.00	44.72	L	C
ATOM	179	O	SER	L	26	13.625	1.969	-4.798	1.00	51.00	L	O
ATOM	180	CB	SER	L	26	13.165	1.630	-1.756	1.00	45.86	L	C
ATOM	181	OG	SER	L	26	11.749	1.670	-1.717	1.00	46.37	L	O
ATOM	182	N	GLU	L	27	12.088	3.508	-4.248	1.00	42.93	L	N
ATOM	183	CA	GLU	L	27	11.449	3.510	-5.562	1.00	36.19	L	C
ATOM	184	C	GLU	L	27	11.029	4.915	-5.964	1.00	35.89	L	C
ATOM	185	O	GLU	L	27	10.712	5.737	-5.113	1.00	44.15	L	O
ATOM	186	CB	GLU	L	27	10.215	2.602	-5.549	1.00	33.03	L	C
ATOM	187	CG	GLU	L	27	10.513	1.112	-5.429	1.00	38.92	L	C
ATOM	188	CD	GLU	L	27	9.253	0.263	-5.329	1.00	34.14	L	C
ATOM	189	OE1	GLU	L	27	8.952	-0.214	-4.217	1.00	56.00	L	O
ATOM	190	OE2	GLU	L	27	8.556	0.070	-6.354	1.00	49.04	L	O
ATOM	191	N	SER	L	28	11.016	5.184	-7.266	1.00	42.57	L	N
ATOM	192	CA	SER	L	28	10.659	6.527	-7.708	1.00	44.76	L	C
ATOM	193	C	SER	L	28	9.234	6.901	-7.290	1.00	49.62	L	C
ATOM	194	O	SER	L	28	8.288	6.144	-7.465	1.00	45.16	L	O
ATOM	195	CB	SER	L	28	10.784	6.578	-9.232	1.00	45.04	L	C
ATOM	196	OG	SER	L	28	10.814	7.940	-9.657	1.00	43.90	L	O
ATOM	197	N	VAL	L	29	9.161	8.098	-6.720	1.00	51.26	L	N
ATOM	198	CA	VAL	L	29	7.875	8.643	-6.291	1.00	48.35	L	C
ATOM	199	C	VAL	L	29	7.302	9.645	-7.303	1.00	49.03	L	C
ATOM	200	O	VAL	L	29	6.536	10.541	-6.971	1.00	53.81	L	O
ATOM	201	CB	VAL	L	29	8.080	9.339	-4.945	1.00	45.09	L	C
ATOM	202	CG1	VAL	L	29	8.959	8.479	-4.041	1.00	45.73	L	C
ATOM	203	CG2	VAL	L	29	8.743	10.687	-5.153	1.00	39.01	L	C

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ATOM    204  N   ASP L  30       7.725   9.490  -8.572  1.00 50.49      L    N
ATOM    205  CA  ASP L  30       7.314  10.482  -9.561  1.00 51.89      L    C
ATOM    206  C   ASP L  30       6.050  10.052 -10.314  1.00 55.22      L    C
ATOM    207  O   ASP L  30       5.895   8.914 -10.735  1.00 56.81      L    O
ATOM    208  CB  ASP L  30       8.466  10.674 -10.547  1.00 58.57      L    C
ATOM    209  CG  ASP L  30       9.368  11.794 -10.050  1.00 71.03      L    C
ATOM    210  OD1 ASP L  30       9.806  12.590 -10.882  1.00 85.53      L    O
ATOM    211  OD2 ASP L  30       9.613  11.864  -8.849  1.00 70.16      L    O
ATOM    212  N   ASN L 30A       5.107  11.007 -10.446  1.00 62.31      L    N
ATOM    213  CA  ASN L 30A       3.880  10.701 -11.174  1.00 66.21      L    C
ATOM    214  C   ASN L 30A       3.739  11.546 -12.440  1.00 72.19      L    C
ATOM    215  O   ASN L 30A       3.151  12.619 -12.450  1.00 71.91      L    O
ATOM    216  CB  ASN L 30A       2.684  10.949 -10.255  1.00 71.89      L    C
ATOM    217  CG  ASN L 30A       1.425  10.503 -10.956  1.00 77.18      L    C
ATOM    218  OD1 ASN L 30A       0.716  11.287 -11.583  1.00 79.23      L    O
ATOM    219  ND2 ASN L 30A       1.172   9.185 -10.878  1.00 82.39      L    N
ATOM    220  N   TYR L 30B       4.340  11.038 -13.532  1.00 79.09      L    N
ATOM    221  CA  TYR L 30B       4.180  11.735 -14.806  1.00 84.64      L    C
ATOM    222  C   TYR L 30B       4.879  13.099 -14.807  1.00 80.89      L    C
ATOM    223  O   TYR L 30B       4.403  14.070 -15.380  1.00 78.21      L    O
ATOM    224  CB  TYR L 30B       2.684  11.917 -15.066  1.00 92.55      L    C
ATOM    225  CG  TYR L 30B       2.049  10.595 -15.306  1.00106.94      L    C
ATOM    226  CD1 TYR L 30B       1.960   9.669 -14.270  1.00124.67      L    C
ATOM    227  CD2 TYR L 30B       1.530  10.277 -16.562  1.00117.46      L    C
ATOM    228  CE1 TYR L 30B       1.349   8.442 -14.482  1.00130.56      L    C
ATOM    229  CE2 TYR L 30B       0.928   9.046 -16.777  1.00130.84      L    C
ATOM    230  CZ  TYR L 30B       0.839   8.130 -15.744  1.00132.90      L    C
ATOM    231  OH  TYR L 30B       0.224   6.910 -15.945  1.00133.30      L    O
ATOM    232  N   GLY L 30C       6.015  13.182 -14.087  1.00 77.39      L    N
ATOM    233  CA  GLY L 30C       6.790  14.419 -14.111  1.00 76.49      L    C
ATOM    234  C   GLY L 30C       6.823  15.119 -12.749  1.00 75.11      L    C
ATOM    235  O   GLY L 30C       7.533  16.093 -12.535  1.00 77.14      L    O
ATOM    236  N   LYS L 30D       5.991  14.619 -11.818  1.00 67.87      L    N
ATOM    237  CA  LYS L 30D       5.920  15.263 -10.510  1.00 58.91      L    C
ATOM    238  C   LYS L 30D       6.254  14.295  -9.367  1.00 54.18      L    C
ATOM    239  O   LYS L 30D       5.840  13.143  -9.350  1.00 53.39      L    O
ATOM    240  CB  LYS L 30D       4.509  15.831 -10.333  1.00 59.26      L    C
ATOM    241  CG  LYS L 30D       4.209  16.960 -11.324  1.00 63.98      L    C
ATOM    242  CD  LYS L 30D       3.211  17.978 -10.767  1.00 82.67      L    C
ATOM    243  CE  LYS L 30D       3.066  19.212 -11.664  1.00 98.60      L    C
ATOM    244  NZ  LYS L 30D       2.785  18.794 -13.035  1.00108.42      L    N
ATOM    245  N   SER L  31       7.027  14.777  -8.402  1.00 48.70      L    N
ATOM    246  CA  SER L  31       7.420  13.961  -7.261  1.00 48.64      L    C
ATOM    247  C   SER L  31       6.407  14.075  -6.127  1.00 46.46      L    C
ATOM    248  O   SER L  31       6.195  15.156  -5.571  1.00 46.13      L    O
ATOM    249  CB  SER L  31       8.798  14.391  -6.760  1.00 44.76      L    C
ATOM    250  OG  SER L  31       9.734  14.408  -7.818  1.00 48.15      L    O
ATOM    251  N   LEU L  32       5.777  12.956  -5.788  1.00 40.47      L    N
ATOM    252  CA  LEU L  32       4.796  12.950  -4.717  1.00 36.96      L    C
ATOM    253  C   LEU L  32       5.501  12.689  -3.393  1.00 38.57      L    C
ATOM    254  O   LEU L  32       5.338  11.645  -2.772  1.00 40.41      L    O
ATOM    255  CB  LEU L  32       3.734  11.895  -5.002  1.00 37.94      L    C
ATOM    256  CG  LEU L  32       3.205  12.103  -6.424  1.00 38.09      L    C
ATOM    257  CD1 LEU L  32       1.975  11.241  -6.665  1.00 40.08      L    C
ATOM    258  CD2 LEU L  32       2.883  13.574  -6.625  1.00 18.30      L    C
ATOM    259  N   MET L  33       6.288  13.675  -2.982  1.00 39.42      L    N
ATOM    260  CA  MET L  33       7.069  13.631  -1.756  1.00 35.69      L    C
ATOM    261  C   MET L  33       6.618  14.837  -0.949  1.00 36.17      L    C
ATOM    262  O   MET L  33       6.480  15.921  -1.503  1.00 39.26      L    O
ATOM    263  CB  MET L  33       8.567  13.741  -2.109  1.00 35.25      L    C
ATOM    264  CG  MET L  33       9.519  13.699  -0.937  1.00 29.04      L    C
ATOM    265  SD  MET L  33       9.186  12.324   0.219  1.00 63.78      L    S
ATOM    266  CE  MET L  33       9.514  10.867  -0.802  1.00 61.41      L    C
ATOM    267  N   HIS L  34       6.383  14.659   0.347  1.00 32.55      L    N
ATOM    268  CA  HIS L  34       5.930  15.773   1.181  1.00 30.96      L    C
ATOM    269  C   HIS L  34       6.689  15.799   2.506  1.00 32.27      L    C
ATOM    270  O   HIS L  34       7.011  14.747   3.052  1.00 37.96      L    O
ATOM    271  CB  HIS L  34       4.426  15.649   1.485  1.00 31.51      L    C
ATOM    272  CG  HIS L  34       3.588  15.261   0.307  1.00 13.71      L    C
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ATOM	273	ND1	HIS	L	34	3.397	16.087	-0.780	1.00	26.36	L	N
ATOM	274	CD2	HIS	L	34	2.882	14.137	0.051	1.00	18.42	L	C
ATOM	275	CE1	HIS	L	34	2.609	15.489	-1.654	1.00	16.76	L	C
ATOM	276	NE2	HIS	L	34	2.282	14.304	-1.173	1.00	28.77	L	N
ATOM	277	N	TRP	L	35	6.958	16.992	3.030	1.00	30.35	L	N
ATOM	278	CA	TRP	L	35	7.665	17.110	4.299	1.00	28.13	L	C
ATOM	279	C	TRP	L	35	6.826	17.615	5.487	1.00	30.86	L	C
ATOM	280	O	TRP	L	35	6.030	18.548	5.367	1.00	31.74	L	O
ATOM	281	CB	TRP	L	35	8.877	18.023	4.145	1.00	25.50	L	C
ATOM	282	CG	TRP	L	35	9.953	17.475	3.293	1.00	33.54	L	C
ATOM	283	CD1	TRP	L	35	10.085	17.629	1.954	1.00	22.15	L	C
ATOM	284	CD2	TRP	L	35	11.064	16.676	3.722	1.00	41.05	L	C
ATOM	285	NE1	TRP	L	35	11.211	16.981	1.513	1.00	39.93	L	N
ATOM	286	CE2	TRP	L	35	11.833	16.386	2.579	1.00	39.83	L	C
ATOM	287	CE3	TRP	L	35	11.483	16.176	4.960	1.00	37.32	L	C
ATOM	288	CZ2	TRP	L	35	13.004	15.613	2.633	1.00	34.89	L	C
ATOM	289	CZ3	TRP	L	35	12.648	15.406	5.010	1.00	39.53	L	C
ATOM	290	CH2	TRP	L	35	13.391	15.134	3.856	1.00	25.23	L	C
ATOM	291	N	TYR	L	36	7.023	17.006	6.650	1.00	26.93	L	N
ATOM	292	CA	TYR	L	36	6.299	17.433	7.823	1.00	24.56	L	C
ATOM	293	C	TYR	L	36	7.218	17.809	8.968	1.00	27.73	L	C
ATOM	294	O	TYR	L	36	8.359	17.355	9.054	1.00	29.41	L	O
ATOM	295	CB	TYR	L	36	5.338	16.353	8.281	1.00	27.13	L	C
ATOM	296	CG	TYR	L	36	4.349	15.958	7.222	1.00	28.84	L	C
ATOM	297	CD1	TYR	L	36	4.703	15.072	6.206	1.00	32.70	L	C
ATOM	298	CD2	TYR	L	36	3.060	16.470	7.230	1.00	29.19	L	C
ATOM	299	CE1	TYR	L	36	3.800	14.706	5.233	1.00	29.50	L	C
ATOM	300	CE2	TYR	L	36	2.146	16.112	6.262	1.00	32.05	L	C
ATOM	301	CZ	TYR	L	36	2.516	15.230	5.269	1.00	28.90	L	C
ATOM	302	OH	TYR	L	36	1.587	14.852	4.331	1.00	31.16	L	O
ATOM	303	N	GLN	L	37	6.703	18.674	9.832	1.00	25.72	L	N
ATOM	304	CA	GLN	L	37	7.419	19.131	11.003	1.00	29.42	L	C
ATOM	305	C	GLN	L	37	6.540	18.825	12.198	1.00	27.20	L	C
ATOM	306	O	GLN	L	37	5.335	19.042	12.169	1.00	30.38	L	O
ATOM	307	CB	GLN	L	37	7.671	20.633	10.950	1.00	30.13	L	C
ATOM	308	CG	GLN	L	37	8.155	21.194	12.281	1.00	39.28	L	C
ATOM	309	CD	GLN	L	37	8.177	22.707	12.306	1.00	36.66	L	C
ATOM	310	OE1	GLN	L	37	7.154	23.349	12.088	1.00	38.84	L	O
ATOM	311	NE2	GLN	L	37	9.340	23.285	12.581	1.00	29.96	L	N
ATOM	312	N	GLN	L	38	7.145	18.290	13.245	1.00	27.64	L	N
ATOM	313	CA	GLN	L	38	6.405	17.982	14.437	1.00	26.94	L	C
ATOM	314	C	GLN	L	38	7.194	18.490	15.623	1.00	27.28	L	C
ATOM	315	O	GLN	L	38	8.193	17.898	16.021	1.00	29.54	L	O
ATOM	316	CB	GLN	L	38	6.152	16.481	14.549	1.00	22.51	L	C
ATOM	317	CG	GLN	L	38	5.437	16.082	15.834	1.00	29.24	L	C
ATOM	318	CD	GLN	L	38	5.113	14.604	15.891	1.00	29.24	L	C
ATOM	319	OE1	GLN	L	38	5.880	13.760	15.419	1.00	32.49	L	O
ATOM	320	NE2	GLN	L	38	3.974	14.277	16.486	1.00	39.87	L	N
ATOM	321	N	LYS	L	39	6.737	19.614	16.166	1.00	28.43	L	N
ATOM	322	CA	LYS	L	39	7.363	20.232	17.324	1.00	26.31	L	C
ATOM	323	C	LYS	L	39	7.019	19.403	18.546	1.00	31.47	L	C
ATOM	324	O	LYS	L	39	5.937	18.810	18.634	1.00	32.57	L	O
ATOM	325	CB	LYS	L	39	6.848	21.660	17.495	1.00	25.15	L	C
ATOM	326	CG	LYS	L	39	7.064	22.527	16.277	1.00	21.42	L	C
ATOM	327	CD	LYS	L	39	6.510	23.887	16.515	1.00	25.95	L	C
ATOM	328	CE	LYS	L	39	6.913	24.841	15.418	1.00	25.49	L	C
ATOM	329	NZ	LYS	L	39	6.500	26.226	15.764	1.00	41.94	L	N
ATOM	330	N	PRO	L	40	7.938	19.351	19.513	1.00	33.67	L	N
ATOM	331	CA	PRO	L	40	7.732	18.575	20.737	1.00	37.29	L	C
ATOM	332	C	PRO	L	40	6.400	18.859	21.429	1.00	42.79	L	C
ATOM	333	O	PRO	L	40	6.055	20.011	21.724	1.00	40.43	L	O
ATOM	334	CB	PRO	L	40	8.939	18.950	21.587	1.00	42.86	L	C
ATOM	335	CG	PRO	L	40	9.983	19.257	20.560	1.00	39.77	L	C
ATOM	336	CD	PRO	L	40	9.222	20.062	19.553	1.00	29.92	L	C
ATOM	337	N	GLY	L	41	5.648	17.790	21.668	1.00	43.78	L	N
ATOM	338	CA	GLY	L	41	4.367	17.929	22.326	1.00	46.56	L	C
ATOM	339	C	GLY	L	41	3.223	18.220	21.383	1.00	43.68	L	C
ATOM	340	O	GLY	L	41	2.105	18.424	21.834	1.00	49.55	L	O
ATOM	341	N	GLN	L	42	3.483	18.235	20.080	1.00	41.00	L	N

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ATOM    342  CA  GLN L  42       2.429  18.509  19.113  1.00 40.68      L    C
ATOM    343  C   GLN L  42       2.301  17.439  18.031  1.00 42.38      L    C
ATOM    344  O   GLN L  42       2.975  16.410  18.059  1.00 40.20      L    O
ATOM    345  CB  GLN L  42       2.674  19.858  18.449  1.00 44.01      L    C
ATOM    346  CG  GLN L  42       2.908  20.997  19.419  1.00 53.32      L    C
ATOM    347  CD  GLN L  42       3.214  22.303  18.716  1.00 47.80      L    C
ATOM    348  OE1 GLN L  42       3.430  23.330  19.351  1.00 82.52      L    O
ATOM    349  NE2 GLN L  42       3.234  22.267  17.387  1.00 57.98      L    N
ATOM    350  N   SER L  43       1.420  17.689  17.071  1.00 41.14      L    N
ATOM    351  CA  SER L  43       1.211  16.757  15.972  1.00 42.56      L    C
ATOM    352  C   SER L  43       1.930  17.230  14.710  1.00 40.84      L    C
ATOM    353  O   SER L  43       2.415  18.359  14.633  1.00 43.67      L    O
ATOM    354  CB  SER L  43      -0.280  16.609  15.699  1.00 40.59      L    C
ATOM    355  OG  SER L  43      -0.907  17.872  15.663  1.00 47.28      L    O
ATOM    356  N   PRO L  44       2.018  16.367  13.702  1.00 35.42      L    N
ATOM    357  CA  PRO L  44       2.705  16.792  12.484  1.00 36.10      L    C
ATOM    358  C   PRO L  44       2.094  18.026  11.826  1.00 33.06      L    C
ATOM    359  O   PRO L  44       0.923  18.322  12.007  1.00 41.89      L    O
ATOM    360  CB  PRO L  44       2.623  15.550  11.601  1.00 34.17      L    C
ATOM    361  CG  PRO L  44       2.704  14.448  12.595  1.00 33.70      L    C
ATOM    362  CD  PRO L  44       1.734  14.925  13.662  1.00 33.48      L    C
ATOM    363  N   LYS L  45       2.912  18.747  11.071  1.00 37.41      L    N
ATOM    364  CA  LYS L  45       2.661  20.000  10.405  1.00 32.25      L    C
ATOM    365  C   LYS L  45       3.136  19.899   8.972  1.00 36.14      L    C
ATOM    366  O   LYS L  45       4.278  19.559   8.691  1.00 43.37      L    O
ATOM    367  CB  LYS L  45       3.438  21.096  11.136  1.00 36.87      L    C
ATOM    368  CG  LYS L  45       2.712  22.442  11.101  1.00 30.75      L    C
ATOM    369  CD  LYS L  45       3.574  23.580  11.651  1.00 63.53      L    C
ATOM    370  CE  LYS L  45       2.736  24.707  12.264  1.00 73.22      L    C
ATOM    371  NZ  LYS L  45       3.328  25.128  13.533  1.00 86.98      L    N
ATOM    372  N   LEU L  46       2.387  20.252   7.929  1.00 38.47      L    N
ATOM    373  CA  LEU L  46       2.905  20.250   6.558  1.00 31.56      L    C
ATOM    374  C   LEU L  46       3.715  21.512   6.282  1.00 27.56      L    C
ATOM    375  O   LEU L  46       3.325  22.604   6.679  1.00 30.41      L    O
ATOM    376  CB  LEU L  46       1.745  20.151   5.561  1.00 30.51      L    C
ATOM    377  CG  LEU L  46       2.062  20.048   4.063  1.00 32.20      L    C
ATOM    378  CD1 LEU L  46       2.843  18.751   3.752  1.00 33.50      L    C
ATOM    379  CD2 LEU L  46       0.750  20.068   3.305  1.00 23.20      L    C
ATOM    380  N   LEU L  47       4.848  21.354   5.610  1.00 28.53      L    N
ATOM    381  CA  LEU L  47       5.721  22.482   5.288  1.00 28.04      L    C
ATOM    382  C   LEU L  47       5.890  22.620   3.776  1.00 28.70      L    C
ATOM    383  O   LEU L  47       5.701  23.694   3.195  1.00 29.81      L    O
ATOM    384  CB  LEU L  47       7.100  22.267   5.894  1.00 25.65      L    C
ATOM    385  CG  LEU L  47       7.289  21.941   7.367  1.00 27.87      L    C
ATOM    386  CD1 LEU L  47       8.738  21.534   7.578  1.00 38.37      L    C
ATOM    387  CD2 LEU L  47       6.923  23.136   8.223  1.00 32.83      L    C
ATOM    388  N   ILE L  48       6.274  21.517   3.148  1.00 28.34      L    N
ATOM    389  CA  ILE L  48       6.479  21.499   1.716  1.00 27.51      L    C
ATOM    390  C   ILE L  48       5.664  20.340   1.225  1.00 26.97      L    C
ATOM    391  O   ILE L  48       5.583  19.325   1.916  1.00 23.95      L    O
ATOM    392  CB  ILE L  48       7.981  21.227   1.336  1.00 30.58      L    C
ATOM    393  CG1 ILE L  48       8.896  22.342   1.865  1.00 16.40      L    C
ATOM    394  CG2 ILE L  48       8.112  21.058  -0.173  1.00 30.40      L    C
ATOM    395  CD1 ILE L  48       8.731  23.661   1.216  1.00 27.58      L    C
ATOM    396  N   TYR L  49       5.047  20.499   0.052  1.00 26.36      L    N
ATOM    397  CA  TYR L  49       4.260  19.424  -0.568  1.00 28.37      L    C
ATOM    398  C   TYR L  49       4.706  19.327  -2.021  1.00 31.64      L    C
ATOM    399  O   TYR L  49       5.155  20.318  -2.604  1.00 27.84      L    O
ATOM    400  CB  TYR L  49       2.752  19.692  -0.488  1.00 26.55      L    C
ATOM    401  CG  TYR L  49       2.286  20.901  -1.257  1.00 28.05      L    C
ATOM    402  CD1 TYR L  49       1.996  20.824  -2.614  1.00 26.50      L    C
ATOM    403  CD2 TYR L  49       2.134  22.127  -0.625  1.00 31.29      L    C
ATOM    404  CE1 TYR L  49       1.570  21.921  -3.308  1.00  9.37      L    C
ATOM    405  CE2 TYR L  49       1.711  23.225  -1.317  1.00 22.71      L    C
ATOM    406  CZ  TYR L  49       1.429  23.121  -2.656  1.00 21.56      L    C
ATOM    407  OH  TYR L  49       1.009  24.244  -3.339  1.00 29.15      L    O
ATOM    408  N   ARG L  50       4.586  18.121  -2.580  1.00 31.18      L    N
ATOM    409  CA  ARG L  50       4.996  17.807  -3.944  1.00 31.83      L    C
ATOM    410  C   ARG L  50       6.452  18.210  -4.163  1.00 30.16      L    C
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ATOM    411  O   ARG L  50       6.785  18.943  -5.091  1.00 36.35      L    O
ATOM    412  CB  ARG L  50       4.075  18.489  -4.965  1.00 35.34      L    C
ATOM    413  CG  ARG L  50       3.869  17.654  -6.233  1.00 38.86      L    C
ATOM    414  CD  ARG L  50       2.570  18.007  -6.937  1.00 42.11      L    C
ATOM    415  NE  ARG L  50       2.621  19.309  -7.604  1.00 47.83      L    N
ATOM    416  CZ  ARG L  50       1.635  20.202  -7.586  1.00 61.81      L    C
ATOM    417  NH1 ARG L  50       0.508  19.948  -6.929  1.00 75.42      L    N
ATOM    418  NH2 ARG L  50       1.777  21.357  -8.225  1.00 59.09      L    N
ATOM    419  N   ALA L  51       7.316  17.735  -3.278  1.00 24.07      L    N
ATOM    420  CA  ALA L  51       8.735  18.019  -3.357  1.00 26.98      L    C
ATOM    421  C   ALA L  51       9.225  19.452  -3.079  1.00 32.99      L    C
ATOM    422  O   ALA L  51      10.230  19.621  -2.383  1.00 32.33      L    O
ATOM    423  CB  ALA L  51       9.264  17.566  -4.698  1.00 23.60      L    C
ATOM    424  N   SER L  52       8.560  20.483  -3.600  1.00 32.36      L    N
ATOM    425  CA  SER L  52       9.084  21.821  -3.346  1.00 30.41      L    C
ATOM    426  C   SER L  52       8.137  23.006  -3.194  1.00 31.91      L    C
ATOM    427  O   SER L  52       8.527  24.139  -3.433  1.00 34.94      L    O
ATOM    428  CB  SER L  52      10.106  22.167  -4.422  1.00 31.84      L    C
ATOM    429  OG  SER L  52       9.479  22.322  -5.677  1.00 37.85      L    O
ATOM    430  N   ASN L  53       6.906  22.760  -2.779  1.00 32.30      L    N
ATOM    431  CA  ASN L  53       5.944  23.838  -2.609  1.00 24.50      L    C
ATOM    432  C   ASN L  53       5.791  24.229  -1.153  1.00 28.28      L    C
ATOM    433  O   ASN L  53       5.620  23.362  -0.289  1.00 37.53      L    O
ATOM    434  CB  ASN L  53       4.602  23.395  -3.140  1.00 13.31      L    C
ATOM    435  CG  ASN L  53       4.596  23.255  -4.622  1.00 19.61      L    C
ATOM    436  OD1 ASN L  53       4.408  24.233  -5.336  1.00 39.42      L    O
ATOM    437  ND2 ASN L  53       4.813  22.040  -5.110  1.00 18.53      L    N
ATOM    438  N   LEU L  54       5.839  25.525  -0.869  1.00 23.59      L    N
ATOM    439  CA  LEU L  54       5.650  25.916   0.519  1.00 19.73      L    C
ATOM    440  C   LEU L  54       4.169  25.939   0.896  1.00 31.23      L    C
ATOM    441  O   LEU L  54       3.338  26.555   0.242  1.00 34.46      L    O
ATOM    442  CB  LEU L  54       6.253  27.310   0.700  1.00 11.46      L    C
ATOM    443  CG  LEU L  54       6.195  27.789   2.150  1.00 10.41      L    C
ATOM    444  CD1 LEU L  54       7.125  26.991   3.065  1.00 23.59      L    C
ATOM    445  CD2 LEU L  54       6.595  29.256   2.306  1.00 20.82      L    C
ATOM    446  N   GLU L  55       3.840  25.195   1.966  1.00 32.72      L    N
ATOM    447  CA  GLU L  55       2.450  25.231   2.379  1.00 36.54      L    C
ATOM    448  C   GLU L  55       2.042  26.636   2.808  1.00 44.62      L    C
ATOM    449  O   GLU L  55       2.860  27.482   3.137  1.00 50.47      L    O
ATOM    450  CB  GLU L  55       2.289  24.273   3.555  1.00 33.98      L    C
ATOM    451  CG  GLU L  55       0.883  24.310   4.148  1.00 41.02      L    C
ATOM    452  CD  GLU L  55      -0.096  23.783   3.130  1.00 41.65      L    C
ATOM    453  OE1 GLU L  55       0.148  23.949   1.945  1.00 54.51      L    O
ATOM    454  OE2 GLU L  55      -1.080  23.168   3.533  1.00 61.09      L    O
ATOM    455  N   SER L  56       0.728  26.885   2.752  1.00 48.75      L    N
ATOM    456  CA  SER L  56       0.259  28.168   3.246  1.00 41.16      L    C
ATOM    457  C   SER L  56       0.432  28.262   4.758  1.00 39.72      L    C
ATOM    458  O   SER L  56       0.403  27.270   5.475  1.00 47.94      L    O
ATOM    459  CB  SER L  56      -1.214  28.307   2.875  1.00 40.01      L    C
ATOM    460  OG  SER L  56      -1.453  27.637   1.636  1.00 57.19      L    O
ATOM    461  N   GLY L  57       0.576  29.464   5.298  1.00 37.39      L    N
ATOM    462  CA  GLY L  57       0.690  29.617   6.733  1.00 38.10      L    C
ATOM    463  C   GLY L  57       2.056  29.256   7.280  1.00 37.90      L    C
ATOM    464  O   GLY L  57       2.280  29.322   8.487  1.00 48.99      L    O
ATOM    465  N   ILE L  58       2.981  28.867   6.411  1.00 41.88      L    N
ATOM    466  CA  ILE L  58       4.312  28.507   6.869  1.00 33.29      L    C
ATOM    467  C   ILE L  58       5.290  29.584   6.452  1.00 36.39      L    C
ATOM    468  O   ILE L  58       5.241  30.064   5.327  1.00 40.95      L    O
ATOM    469  CB  ILE L  58       4.761  27.151   6.280  1.00 33.81      L    C
ATOM    470  CG1 ILE L  58       3.809  26.051   6.745  1.00 22.67      L    C
ATOM    471  CG2 ILE L  58       6.191  26.817   6.748  1.00 28.57      L    C
ATOM    472  CD1 ILE L  58       3.785  25.886   8.238  1.00 23.54      L    C
ATOM    473  N   PRO L  59       6.197  29.974   7.361  1.00 35.74      L    N
ATOM    474  CA  PRO L  59       7.214  31.007   7.114  1.00 37.66      L    C
ATOM    475  C   PRO L  59       8.000  30.700   5.835  1.00 41.02      L    C
ATOM    476  O   PRO L  59       8.257  29.530   5.525  1.00 39.78      L    O
ATOM    477  CB  PRO L  59       8.107  30.927   8.353  1.00 31.36      L    C
ATOM    478  CG  PRO L  59       7.221  30.346   9.394  1.00 35.70      L    C
ATOM    479  CD  PRO L  59       6.436  29.304   8.649  1.00 32.20      L    C
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ATOM	480	N	ALA	L	60	8.393	31.736	5.095	1.00	44.34	L	N
ATOM	481	CA	ALA	L	60	9.138	31.493	3.868	1.00	41.55	L	C
ATOM	482	C	ALA	L	60	10.609	31.228	4.141	1.00	39.49	L	C
ATOM	483	O	ALA	L	60	11.470	31.852	3.546	1.00	42.78	L	O
ATOM	484	CB	ALA	L	60	8.987	32.655	2.895	1.00	42.73	L	C
ATOM	485	N	ARG	L	61	10.892	30.314	5.065	1.00	41.36	L	N
ATOM	486	CA	ARG	L	61	12.270	29.941	5.350	1.00	36.65	L	C
ATOM	487	C	ARG	L	61	12.397	28.428	5.355	1.00	30.32	L	C
ATOM	488	O	ARG	L	61	13.152	27.848	6.127	1.00	32.09	L	O
ATOM	489	CB	ARG	L	61	12.774	30.563	6.664	1.00	35.38	L	C
ATOM	490	CG	ARG	L	61	11.819	30.552	7.806	1.00	39.45	L	C
ATOM	491	CD	ARG	L	61	12.451	31.161	9.057	1.00	42.92	L	C
ATOM	492	NE	ARG	L	61	11.723	30.730	10.249	1.00	55.59	L	N
ATOM	493	CZ	ARG	L	61	11.822	29.512	10.774	1.00	47.56	L	C
ATOM	494	NH1	ARG	L	61	12.725	28.668	10.312	1.00	50.56	L	N
ATOM	495	NH2	ARG	L	61	10.997	29.127	11.734	1.00	51.77	L	N
ATOM	496	N	PHE	L	62	11.638	27.810	4.453	1.00	28.28	L	N
ATOM	497	CA	PHE	L	62	11.614	26.365	4.260	1.00	25.29	L	C
ATOM	498	C	PHE	L	62	11.638	26.072	2.755	1.00	22.96	L	C
ATOM	499	O	PHE	L	62	11.133	26.860	1.970	1.00	33.28	L	O
ATOM	500	CB	PHE	L	62	10.343	25.784	4.883	1.00	31.62	L	C
ATOM	501	CG	PHE	L	62	10.393	25.672	6.379	1.00	25.29	L	C
ATOM	502	CD1	PHE	L	62	11.066	24.623	6.983	1.00	22.72	L	C
ATOM	503	CD2	PHE	L	62	9.767	26.617	7.182	1.00	24.93	L	C
ATOM	504	CE1	PHE	L	62	11.110	24.526	8.365	1.00	41.78	L	C
ATOM	505	CE2	PHE	L	62	9.809	26.522	8.561	1.00	30.52	L	C
ATOM	506	CZ	PHE	L	62	10.478	25.483	9.154	1.00	23.52	L	C
ATOM	507	N	SER	L	63	12.205	24.953	2.333	1.00	23.17	L	N
ATOM	508	CA	SER	L	63	12.238	24.676	0.902	1.00	30.22	L	C
ATOM	509	C	SER	L	63	12.633	23.247	0.612	1.00	27.52	L	C
ATOM	510	O	SER	L	63	13.326	22.629	1.402	1.00	33.38	L	O
ATOM	511	CB	SER	L	63	13.227	25.617	0.198	1.00	38.88	L	C
ATOM	512	OG	SER	L	63	14.579	25.316	0.539	1.00	46.56	L	O
ATOM	513	N	GLY	L	64	12.212	22.724	-0.531	1.00	24.58	L	N
ATOM	514	CA	GLY	L	64	12.563	21.357	-0.861	1.00	30.22	L	C
ATOM	515	C	GLY	L	64	12.896	21.134	-2.328	1.00	33.27	L	C
ATOM	516	O	GLY	L	64	12.524	21.935	-3.180	1.00	36.12	L	O
ATOM	517	N	SER	L	65	13.610	20.050	-2.624	1.00	33.35	L	N
ATOM	518	CA	SER	L	65	13.961	19.728	-4.000	1.00	38.52	L	C
ATOM	519	C	SER	L	65	14.327	18.256	-4.147	1.00	36.43	L	C
ATOM	520	O	SER	L	65	14.558	17.561	-3.160	1.00	42.08	L	O
ATOM	521	CB	SER	L	65	15.120	20.601	-4.487	1.00	37.34	L	C
ATOM	522	OG	SER	L	65	16.285	20.339	-3.742	1.00	50.72	L	O
ATOM	523	N	GLY	L	66	14.366	17.798	-5.395	1.00	33.13	L	N
ATOM	524	CA	GLY	L	66	14.684	16.421	-5.690	1.00	31.58	L	C
ATOM	525	C	GLY	L	66	13.681	15.847	-6.671	1.00	36.03	L	C
ATOM	526	O	GLY	L	66	12.821	16.550	-7.178	1.00	37.03	L	O
ATOM	527	N	SER	L	67	13.801	14.563	-6.954	1.00	39.41	L	N
ATOM	528	CA	SER	L	67	12.885	13.900	-7.855	1.00	44.59	L	C
ATOM	529	C	SER	L	67	13.192	12.420	-7.790	1.00	49.82	L	C
ATOM	530	O	SER	L	67	14.104	12.000	-7.076	1.00	48.37	L	O
ATOM	531	CB	SER	L	67	13.042	14.423	-9.284	1.00	48.35	L	C
ATOM	532	OG	SER	L	67	14.309	14.105	-9.835	1.00	56.59	L	O
ATOM	533	N	ARG	L	68	12.421	11.636	-8.531	1.00	52.66	L	N
ATOM	534	CA	ARG	L	68	12.605	10.183	-8.578	1.00	54.25	L	C
ATOM	535	C	ARG	L	68	12.825	9.569	-7.185	1.00	47.35	L	C
ATOM	536	O	ARG	L	68	11.904	9.098	-6.533	1.00	45.82	L	O
ATOM	537	CB	ARG	L	68	13.806	9.887	-9.475	1.00	61.56	L	C
ATOM	538	CG	ARG	L	68	13.389	9.548	-10.906	1.00	72.12	L	C
ATOM	539	CD	ARG	L	68	13.851	8.145	-11.319	1.00	89.41	L	C
ATOM	540	NE	ARG	L	68	14.580	7.503	-10.223	1.00	103.03	L	N
ATOM	541	CZ	ARG	L	68	14.446	6.171	-10.089	1.00	112.09	L	C
ATOM	542	NH1	ARG	L	68	13.684	5.491	-10.928	1.00	118.70	L	N
ATOM	543	NH2	ARG	L	68	15.095	5.537	-9.107	1.00	113.31	L	N
ATOM	544	N	THR	L	69	14.068	9.569	-6.708	1.00	39.62	L	N
ATOM	545	CA	THR	L	69	14.349	8.946	-5.419	1.00	40.58	L	C
ATOM	546	C	THR	L	69	15.110	9.743	-4.364	1.00	40.89	L	C
ATOM	547	O	THR	L	69	15.193	9.316	-3.217	1.00	39.24	L	O
ATOM	548	CB	THR	L	69	15.099	7.629	-5.618	1.00	46.72	L	C

ATOM	549	OG1	THR	L	69	16.296	7.873	-6.375	1.00	58.12	L	O
ATOM	550	CG2	THR	L	69	14.218	6.631	-6.357	1.00	45.58	L	C
ATOM	551	N	ASP	L	70	15.678	10.882	-4.736	1.00	44.06	L	N
ATOM	552	CA	ASP	L	70	16.414	11.687	-3.767	1.00	44.09	L	C
ATOM	553	C	ASP	L	70	15.686	12.997	-3.548	1.00	42.38	L	C
ATOM	554	O	ASP	L	70	15.227	13.618	-4.507	1.00	41.69	L	O
ATOM	555	CB	ASP	L	70	17.829	12.014	-4.258	1.00	52.55	L	C
ATOM	556	CG	ASP	L	70	18.757	10.821	-4.248	1.00	58.23	L	C
ATOM	557	OD1	ASP	L	70	19.971	11.055	-4.428	1.00	72.20	L	O
ATOM	558	OD2	ASP	L	70	18.296	9.670	-4.073	1.00	56.43	L	O
ATOM	559	N	PHE	L	71	15.599	13.417	-2.286	1.00	31.65	L	N
ATOM	560	CA	PHE	L	71	14.999	14.688	-1.908	1.00	28.67	L	C
ATOM	561	C	PHE	L	71	15.713	15.299	-0.705	1.00	28.28	L	C
ATOM	562	O	PHE	L	71	16.458	14.650	0.018	1.00	33.98	L	O
ATOM	563	CB	PHE	L	71	13.526	14.449	-1.567	1.00	25.73	L	C
ATOM	564	CG	PHE	L	71	12.839	13.782	-2.718	1.00	32.61	L	C
ATOM	565	CD1	PHE	L	71	12.658	12.404	-2.703	1.00	28.95	L	C
ATOM	566	CD2	PHE	L	71	12.364	14.540	-3.776	1.00	22.54	L	C
ATOM	567	CE1	PHE	L	71	11.994	11.786	-3.752	1.00	43.28	L	C
ATOM	568	CE2	PHE	L	71	11.696	13.912	-4.823	1.00	33.39	L	C
ATOM	569	CZ	PHE	L	71	11.510	12.535	-4.816	1.00	23.28	L	C
ATOM	570	N	THR	L	72	15.490	16.609	-0.532	1.00	23.10	L	N
ATOM	571	CA	THR	L	72	16.108	17.295	0.591	1.00	30.26	L	C
ATOM	572	C	THR	L	72	15.271	18.488	1.041	1.00	28.38	L	C
ATOM	573	O	THR	L	72	14.699	19.228	0.249	1.00	37.55	L	O
ATOM	574	CB	THR	L	72	17.496	17.769	0.155	1.00	25.36	L	C
ATOM	575	OG1	THR	L	72	17.355	18.682	-0.936	1.00	51.91	L	O
ATOM	576	CG2	THR	L	72	18.335	16.574	-0.303	1.00	41.87	L	C
ATOM	577	N	LEU	L	73	15.178	18.634	2.372	1.00	31.36	L	N
ATOM	578	CA	LEU	L	73	14.474	19.780	2.920	1.00	30.10	L	C
ATOM	579	C	LEU	L	73	15.456	20.784	3.522	1.00	28.13	L	C
ATOM	580	O	LEU	L	73	16.310	20.454	4.334	1.00	30.08	L	O
ATOM	581	CB	LEU	L	73	13.509	19.274	3.996	1.00	37.24	L	C
ATOM	582	CG	LEU	L	73	13.010	20.393	4.915	1.00	24.15	L	C
ATOM	583	CD1	LEU	L	73	11.826	21.151	4.313	1.00	21.16	L	C
ATOM	584	CD2	LEU	L	73	12.540	19.880	6.277	1.00	25.70	L	C
ATOM	585	N	THR	L	74	15.395	22.054	3.158	1.00	34.02	L	N
ATOM	586	CA	THR	L	74	16.418	23.013	3.610	1.00	29.77	L	C
ATOM	587	C	THR	L	74	15.816	24.170	4.400	1.00	31.14	L	C
ATOM	588	O	THR	L	74	14.888	24.828	3.978	1.00	43.23	L	O
ATOM	589	CB	THR	L	74	17.016	23.586	2.382	1.00	29.59	L	C
ATOM	590	OG1	THR	L	74	17.206	22.556	1.474	1.00	42.71	L	O
ATOM	591	CG2	THR	L	74	18.371	24.266	2.641	1.00	10.54	L	C
ATOM	592	N	ILE	L	75	16.364	24.361	5.587	1.00	34.45	L	N
ATOM	593	CA	ILE	L	75	15.775	25.436	6.333	1.00	41.45	L	C
ATOM	594	C	ILE	L	75	16.807	26.527	6.632	1.00	41.83	L	C
ATOM	595	O	ILE	L	75	17.713	26.346	7.402	1.00	43.17	L	O
ATOM	596	CB	ILE	L	75	15.112	24.818	7.549	1.00	44.27	L	C
ATOM	597	CG1	ILE	L	75	15.596	25.432	8.817	1.00	44.83	L	C
ATOM	598	CG2	ILE	L	75	15.370	23.303	7.635	1.00	49.07	L	C
ATOM	599	CD1	ILE	L	75	14.424	25.873	9.656	1.00	34.16	L	C
ATOM	600	N	ASN	L	76	16.646	27.635	5.919	1.00	40.24	L	N
ATOM	601	CA	ASN	L	76	17.489	28.819	5.986	1.00	35.58	L	C
ATOM	602	C	ASN	L	76	16.652	30.087	6.164	1.00	39.86	L	C
ATOM	603	O	ASN	L	76	15.850	30.465	5.317	1.00	46.58	L	O
ATOM	604	CB	ASN	L	76	18.282	28.894	4.679	1.00	36.33	L	C
ATOM	605	CG	ASN	L	76	19.497	29.764	4.867	1.00	39.90	L	C
ATOM	606	OD1	ASN	L	76	19.789	30.248	5.957	1.00	40.70	L	O
ATOM	607	ND2	ASN	L	76	20.225	29.964	3.756	1.00	38.22	L	N
ATOM	608	N	PRO	L	77	16.833	30.740	7.330	1.00	38.97	L	N
ATOM	609	CA	PRO	L	77	17.746	30.270	8.355	1.00	42.09	L	C
ATOM	610	C	PRO	L	77	17.024	29.423	9.410	1.00	41.44	L	C
ATOM	611	O	PRO	L	77	15.813	29.239	9.389	1.00	46.26	L	O
ATOM	612	CB	PRO	L	77	18.294	31.528	9.020	1.00	43.72	L	C
ATOM	613	CG	PRO	L	77	17.252	32.636	8.840	1.00	34.23	L	C
ATOM	614	CD	PRO	L	77	16.244	31.990	7.769	1.00	40.31	L	C
ATOM	615	N	VAL	L	78	17.828	28.875	10.340	1.00	38.94	L	N
ATOM	616	CA	VAL	L	78	17.249	28.098	11.432	1.00	32.51	L	C
ATOM	617	C	VAL	L	78	16.892	29.001	12.617	1.00	37.03	L	C

ATOM	618	O	VAL	L	78	17.467	30.059	12.828	1.00	39.75	L	O
ATOM	619	CB	VAL	L	78	18.276	27.052	11.871	1.00	28.69	L	C
ATOM	620	CG1	VAL	L	78	17.923	26.534	13.267	1.00	19.40	L	C
ATOM	621	CG2	VAL	L	78	18.292	25.890	10.894	1.00	29.97	L	C
ATOM	622	N	GLU	L	79	15.874	28.566	13.386	1.00	38.02	L	N
ATOM	623	CA	GLU	L	79	15.482	29.378	14.537	1.00	27.34	L	C
ATOM	624	C	GLU	L	79	15.120	28.517	15.754	1.00	34.89	L	C
ATOM	625	O	GLU	L	79	14.910	27.315	15.657	1.00	38.06	L	O
ATOM	626	CB	GLU	L	79	14.282	30.235	14.130	1.00	16.08	L	C
ATOM	627	CG	GLU	L	79	14.702	31.568	13.507	1.00	50.15	L	C
ATOM	628	CD	GLU	L	79	13.474	32.414	13.257	1.00	65.88	L	C
ATOM	629	OE1	GLU	L	79	13.604	33.478	12.669	1.00	80.47	L	O
ATOM	630	OE2	GLU	L	79	12.388	31.997	13.658	1.00	78.67	L	O
ATOM	631	N	ALA	L	80	15.115	29.190	16.923	1.00	39.01	L	N
ATOM	632	CA	ALA	L	80	14.912	28.483	18.188	1.00	34.33	L	C
ATOM	633	C	ALA	L	80	13.650	27.611	18.188	1.00	39.68	L	C
ATOM	634	O	ALA	L	80	13.626	26.506	18.717	1.00	52.15	L	O
ATOM	635	CB	ALA	L	80	14.823	29.530	19.299	1.00	28.88	L	C
ATOM	636	N	ASP	L	81	12.588	28.135	17.590	1.00	38.66	L	N
ATOM	637	CA	ASP	L	81	11.303	27.455	17.561	1.00	40.47	L	C
ATOM	638	C	ASP	L	81	11.194	26.376	16.478	1.00	36.22	L	C
ATOM	639	O	ASP	L	81	10.126	25.821	16.228	1.00	41.23	L	O
ATOM	640	CB	ASP	L	81	10.196	28.505	17.410	1.00	42.43	L	C
ATOM	641	CG	ASP	L	81	8.824	27.892	17.263	1.00	57.83	L	C
ATOM	642	OD1	ASP	L	81	8.398	27.135	18.170	1.00	69.72	L	O
ATOM	643	OD2	ASP	L	81	8.173	28.172	16.231	1.00	68.60	L	O
ATOM	644	N	ASP	L	82	12.305	26.064	15.838	1.00	30.22	L	N
ATOM	645	CA	ASP	L	82	12.273	25.043	14.817	1.00	28.43	L	C
ATOM	646	C	ASP	L	82	12.670	23.660	15.349	1.00	29.30	L	C
ATOM	647	O	ASP	L	82	12.728	22.691	14.589	1.00	27.94	L	O
ATOM	648	CB	ASP	L	82	13.165	25.454	13.643	1.00	31.74	L	C
ATOM	649	CG	ASP	L	82	12.662	26.704	12.950	1.00	31.05	L	C
ATOM	650	OD1	ASP	L	82	11.432	26.853	12.823	1.00	45.58	L	O
ATOM	651	OD2	ASP	L	82	13.488	27.533	12.521	1.00	50.64	L	O
ATOM	652	N	VAL	L	83	12.952	23.562	16.646	1.00	28.22	L	N
ATOM	653	CA	VAL	L	83	13.293	22.263	17.201	1.00	33.72	L	C
ATOM	654	C	VAL	L	83	12.097	21.348	16.997	1.00	28.29	L	C
ATOM	655	O	VAL	L	83	10.978	21.655	17.417	1.00	20.55	L	O
ATOM	656	CB	VAL	L	83	13.637	22.313	18.717	1.00	34.51	L	C
ATOM	657	CG1	VAL	L	83	14.877	23.162	18.932	1.00	57.28	L	C
ATOM	658	CG2	VAL	L	83	12.471	22.856	19.516	1.00	38.24	L	C
ATOM	659	N	ALA	L	84	12.348	20.225	16.337	1.00	27.89	L	N
ATOM	660	CA	ALA	L	84	11.303	19.274	16.033	1.00	19.99	L	C
ATOM	661	C	ALA	L	84	11.903	18.093	15.293	1.00	25.39	L	C
ATOM	662	O	ALA	L	84	13.117	18.001	15.103	1.00	25.68	L	O
ATOM	663	CB	ALA	L	84	10.265	19.940	15.150	1.00	22.54	L	C
ATOM	664	N	THR	L	85	11.042	17.171	14.893	1.00	34.15	L	N
ATOM	665	CA	THR	L	85	11.492	16.045	14.104	1.00	37.68	L	C
ATOM	666	C	THR	L	85	10.798	16.295	12.773	1.00	36.49	L	C
ATOM	667	O	THR	L	85	9.630	16.689	12.740	1.00	36.43	L	O
ATOM	668	CB	THR	L	85	11.065	14.685	14.705	1.00	36.97	L	C
ATOM	669	OG1	THR	L	85	11.703	14.518	15.974	1.00	43.47	L	O
ATOM	670	CG2	THR	L	85	11.483	13.540	13.799	1.00	18.61	L	C
ATOM	671	N	TYR	L	86	11.531	16.094	11.685	1.00	29.71	L	N
ATOM	672	CA	TYR	L	86	11.001	16.324	10.362	1.00	19.30	L	C
ATOM	673	C	TYR	L	86	10.879	15.017	9.616	1.00	22.60	L	C
ATOM	674	O	TYR	L	86	11.814	14.226	9.588	1.00	26.94	L	O
ATOM	675	CB	TYR	L	86	11.917	17.306	9.621	1.00	20.29	L	C
ATOM	676	CG	TYR	L	86	11.931	18.678	10.264	1.00	17.43	L	C
ATOM	677	CD1	TYR	L	86	12.627	18.908	11.430	1.00	9.96	L	C
ATOM	678	CD2	TYR	L	86	11.183	19.726	9.734	1.00	18.42	L	C
ATOM	679	CE1	TYR	L	86	12.574	20.136	12.054	1.00	25.73	L	C
ATOM	680	CE2	TYR	L	86	11.126	20.951	10.347	1.00	10.31	L	C
ATOM	681	CZ	TYR	L	86	11.823	21.153	11.509	1.00	24.98	L	C
ATOM	682	OH	TYR	L	86	11.772	22.378	12.137	1.00	26.22	L	O
ATOM	683	N	TYR	L	87	9.721	14.787	9.012	1.00	25.84	L	N
ATOM	684	CA	TYR	L	87	9.495	13.550	8.275	1.00	29.22	L	C
ATOM	685	C	TYR	L	87	9.097	13.742	6.828	1.00	29.46	L	C
ATOM	686	O	TYR	L	87	8.299	14.619	6.513	1.00	34.41	L	O

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ATOM    687  CB  TYR L  87       8.370  12.715   8.897  1.00 30.13      L    C
ATOM    688  CG  TYR L  87       8.442  12.448  10.381  1.00 37.49      L    C
ATOM    689  CD1 TYR L  87       8.122  13.440  11.304  1.00 23.56      L    C
ATOM    690  CD2 TYR L  87       8.755  11.180  10.857  1.00 20.61      L    C
ATOM    691  CE1 TYR L  87       8.108  13.168  12.651  1.00 30.25      L    C
ATOM    692  CE2 TYR L  87       8.742  10.900  12.201  1.00 29.15      L    C
ATOM    693  CZ  TYR L  87       8.418  11.894  13.093  1.00 38.77      L    C
ATOM    694  OH  TYR L  87       8.411  11.612  14.438  1.00 53.01      L    O
ATOM    695  N   CYS L  88       9.646  12.909   5.949  1.00 36.95      L    N
ATOM    696  CA  CYS L  88       9.243  12.950   4.555  1.00 36.03      L    C
ATOM    697  C   CYS L  88       8.105  11.924   4.423  1.00 34.89      L    C
ATOM    698  O   CYS L  88       7.938  11.047   5.271  1.00 39.85      L    O
ATOM    699  CB  CYS L  88      10.407  12.624   3.600  1.00 32.83      L    C
ATOM    700  SG  CYS L  88      11.475  11.173   3.916  1.00 43.40      L    S
ATOM    701  N   GLN L  89       7.302  12.058   3.380  1.00 30.65      L    N
ATOM    702  CA  GLN L  89       6.192  11.151   3.167  1.00 30.50      L    C
ATOM    703  C   GLN L  89       5.920  11.109   1.675  1.00 32.47      L    C
ATOM    704  O   GLN L  89       5.987  12.129   0.995  1.00 32.80      L    O
ATOM    705  CB  GLN L  89       4.961  11.652   3.945  1.00 30.53      L    C
ATOM    706  CG  GLN L  89       3.695  10.818   3.821  1.00 22.52      L    C
ATOM    707  CD  GLN L  89       2.779  11.312   2.724  1.00 21.93      L    C
ATOM    708  OE1 GLN L  89       2.455  12.494   2.670  1.00 30.39      L    O
ATOM    709  NE2 GLN L  89       2.349  10.408   1.843  1.00 37.87      L    N
ATOM    710  N   GLN L  90       5.647   9.921   1.159  1.00 31.97      L    N
ATOM    711  CA  GLN L  90       5.364   9.794  -0.260  1.00 38.12      L    C
ATOM    712  C   GLN L  90       3.872   9.464  -0.365  1.00 39.89      L    C
ATOM    713  O   GLN L  90       3.246   8.993   0.575  1.00 41.18      L    O
ATOM    714  CB  GLN L  90       6.352   8.823  -0.923  1.00 31.71      L    C
ATOM    715  CG  GLN L  90       6.391   7.458  -0.303  1.00 40.36      L    C
ATOM    716  CD  GLN L  90       5.263   6.565  -0.773  1.00 39.74      L    C
ATOM    717  OE1 GLN L  90       4.831   6.655  -1.921  1.00 36.34      L    O
ATOM    718  NE2 GLN L  90       4.765   5.711   0.116  1.00 46.02      L    N
ATOM    719  N   SER L  91       3.353   9.760  -1.570  1.00 36.91      L    N
ATOM    720  CA  SER L  91       1.948   9.472  -1.784  1.00 41.30      L    C
ATOM    721  C   SER L  91       1.791   8.953  -3.225  1.00 39.89      L    C
ATOM    722  O   SER L  91       0.731   9.043  -3.842  1.00 44.63      L    O
ATOM    723  CB  SER L  91       1.013  10.688  -1.596  1.00 40.49      L    C
ATOM    724  OG  SER L  91       1.407  11.742  -2.446  1.00 44.85      L    O
ATOM    725  N   ASN L  92       2.877   8.390  -3.735  1.00 40.08      L    N
ATOM    726  CA  ASN L  92       2.896   7.879  -5.091  1.00 40.12      L    C
ATOM    727  C   ASN L  92       2.465   6.427  -5.208  1.00 41.27      L    C
ATOM    728  O   ASN L  92       1.930   6.019  -6.234  1.00 39.94      L    O
ATOM    729  CB  ASN L  92       4.291   8.044  -5.676  1.00 42.77      L    C
ATOM    730  CG  ASN L  92       4.349   7.649  -7.118  1.00 45.02      L    C
ATOM    731  OD1 ASN L  92       3.502   8.057  -7.911  1.00 47.49      L    O
ATOM    732  ND2 ASN L  92       5.344   6.842  -7.473  1.00 58.39      L    N
ATOM    733  N   GLU L  93       2.711   5.644  -4.166  1.00 41.39      L    N
ATOM    734  CA  GLU L  93       2.326   4.236  -4.167  1.00 48.66      L    C
ATOM    735  C   GLU L  93       1.677   3.914  -2.829  1.00 48.42      L    C
ATOM    736  O   GLU L  93       1.986   4.537  -1.821  1.00 50.64      L    O
ATOM    737  CB  GLU L  93       3.553   3.328  -4.338  1.00 55.59      L    C
ATOM    738  CG  GLU L  93       4.476   3.649  -5.515  1.00 62.95      L    C
ATOM    739  CD  GLU L  93       3.974   3.106  -6.838  1.00 78.92      L    C
ATOM    740  OE1 GLU L  93       4.737   3.164  -7.832  1.00 84.87      L    O
ATOM    741  OE2 GLU L  93       2.821   2.623  -6.887  1.00 81.56      L    O
ATOM    742  N   ASP L  94       0.774   2.943  -2.822  1.00 49.35      L    N
ATOM    743  CA  ASP L  94       0.121   2.531  -1.588  1.00 51.37      L    C
ATOM    744  C   ASP L  94       0.883   1.323  -1.053  1.00 50.25      L    C
ATOM    745  O   ASP L  94       1.332   0.473  -1.823  1.00 50.31      L    O
ATOM    746  CB  ASP L  94      -1.334   2.158  -1.856  1.00 49.09      L    C
ATOM    747  CG  ASP L  94      -2.158   3.346  -2.316  1.00 69.28      L    C
ATOM    748  OD1 ASP L  94      -1.734   4.029  -3.280  1.00 79.28      L    O
ATOM    749  OD2 ASP L  94      -3.229   3.597  -1.717  1.00 83.48      L    O
ATOM    750  N   PRO L  95       1.047   1.234   0.275  1.00 46.17      L    N
ATOM    751  CA  PRO L  95       0.553   2.202   1.255  1.00 45.81      L    C
ATOM    752  C   PRO L  95       1.474   3.404   1.368  1.00 44.56      L    C
ATOM    753  O   PRO L  95       2.689   3.244   1.381  1.00 49.31      L    O
ATOM    754  CB  PRO L  95       0.532   1.389   2.535  1.00 49.20      L    C
ATOM    755  CG  PRO L  95       1.764   0.558   2.379  1.00 42.46      L    C
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ATOM    756  CD  PRO L  95       1.691   0.095   0.950  1.00 44.07      L    C
ATOM    757  N   TRP L  96       0.898   4.600   1.446  1.00 39.90      L    N
ATOM    758  CA  TRP L  96       1.692   5.814   1.575  1.00 33.94      L    C
ATOM    759  C   TRP L  96       2.572   5.666   2.798  1.00 32.06      L    C
ATOM    760  O   TRP L  96       2.085   5.410   3.898  1.00 34.49      L    O
ATOM    761  CB  TRP L  96       0.783   7.032   1.716  1.00 33.74      L    C
ATOM    762  CG  TRP L  96       0.087   7.384   0.438  1.00 40.68      L    C
ATOM    763  CD1 TRP L  96       0.093   6.667  -0.717  1.00 32.69      L    C
ATOM    764  CD2 TRP L  96      -0.764   8.515   0.202  1.00 45.95      L    C
ATOM    765  NE1 TRP L  96      -0.702   7.273  -1.654  1.00 35.93      L    N
ATOM    766  CE2 TRP L  96      -1.239   8.411  -1.115  1.00 35.73      L    C
ATOM    767  CE3 TRP L  96      -1.169   9.605   0.978  1.00 46.81      L    C
ATOM    768  CZ2 TRP L  96      -2.094   9.346  -1.674  1.00 44.57      L    C
ATOM    769  CZ3 TRP L  96      -2.022  10.538   0.416  1.00 41.43      L    C
ATOM    770  CH2 TRP L  96      -2.473  10.401  -0.897  1.00 42.28      L    C
ATOM    771  N   THR L  97       3.874   5.830   2.605  1.00 22.72      L    N
ATOM    772  CA  THR L  97       4.810   5.661   3.702  1.00 20.77      L    C
ATOM    773  C   THR L  97       5.530   6.928   4.159  1.00 25.09      L    C
ATOM    774  O   THR L  97       5.689   7.888   3.400  1.00 34.55      L    O
ATOM    775  CB  THR L  97       5.821   4.568   3.350  1.00 12.22      L    C
ATOM    776  OG1 THR L  97       6.443   4.876   2.106  1.00 27.43      L    O
ATOM    777  CG2 THR L  97       5.123   3.263   3.179  1.00 16.82      L    C
ATOM    778  N   PHE L  98       5.934   6.931   5.423  1.00 23.17      L    N
ATOM    779  CA  PHE L  98       6.630   8.067   6.002  1.00 26.77      L    C
ATOM    780  C   PHE L  98       8.092   7.744   6.256  1.00 34.08      L    C
ATOM    781  O   PHE L  98       8.446   6.612   6.588  1.00 40.23      L    O
ATOM    782  CB  PHE L  98       6.026   8.457   7.350  1.00 26.01      L    C
ATOM    783  CG  PHE L  98       4.716   9.169   7.263  1.00 23.16      L    C
ATOM    784  CD1 PHE L  98       3.546   8.471   7.010  1.00 21.59      L    C
ATOM    785  CD2 PHE L  98       4.648  10.534   7.506  1.00 22.33      L    C
ATOM    786  CE1 PHE L  98       2.331   9.109   7.009  1.00 17.66      L    C
ATOM    787  CE2 PHE L  98       3.428  11.192   7.506  1.00 30.19      L    C
ATOM    788  CZ  PHE L  98       2.263  10.476   7.260  1.00 36.03      L    C
ATOM    789  N   GLY L  99       8.944   8.748   6.112  1.00 37.98      L    N
ATOM    790  CA  GLY L  99      10.346   8.532   6.389  1.00 37.48      L    C
ATOM    791  C   GLY L  99      10.449   8.396   7.895  1.00 34.91      L    C
ATOM    792  O   GLY L  99       9.557   8.831   8.622  1.00 38.68      L    O
ATOM    793  N   GLY L 100      11.532   7.792   8.362  1.00 36.84      L    N
ATOM    794  CA  GLY L 100      11.726   7.594   9.784  1.00 36.30      L    C
ATOM    795  C   GLY L 100      11.894   8.862  10.587  1.00 34.70      L    C
ATOM    796  O   GLY L 100      11.850   8.808  11.809  1.00 37.11      L    O
ATOM    797  N   GLY L 101      12.096   9.993   9.914  1.00 37.37      L    N
ATOM    798  CA  GLY L 101      12.244  11.267  10.611  1.00 34.43      L    C
ATOM    799  C   GLY L 101      13.650  11.761  10.964  1.00 31.97      L    C
ATOM    800  O   GLY L 101      14.584  10.981  11.156  1.00 31.95      L    O
ATOM    801  N   THR L 102      13.809  13.075  11.045  1.00 26.36      L    N
ATOM    802  CA  THR L 102      15.099  13.630  11.447  1.00 26.88      L    C
ATOM    803  C   THR L 102      14.966  14.643  12.590  1.00 33.12      L    C
ATOM    804  O   THR L 102      14.243  15.628  12.513  1.00 43.00      L    O
ATOM    805  CB  THR L 102      15.736  14.302  10.231  1.00 27.40      L    C
ATOM    806  OG1 THR L 102      16.027  13.300   9.256  1.00 42.19      L    O
ATOM    807  CG2 THR L 102      17.044  14.985  10.641  1.00 27.02      L    C
ATOM    808  N   LYS L 103      15.680  14.344  13.691  1.00 34.75      L    N
ATOM    809  CA  LYS L 103      15.643  15.234  14.845  1.00 37.63      L    C
ATOM    810  C   LYS L 103      16.573  16.435  14.655  1.00 34.36      L    C
ATOM    811  O   LYS L 103      17.748  16.307  14.345  1.00 42.52      L    O
ATOM    812  CB  LYS L 103      16.069  14.433  16.075  1.00 39.61      L    C
ATOM    813  CG  LYS L 103      14.997  14.419  17.165  1.00 60.51      L    C
ATOM    814  CD  LYS L 103      15.610  14.460  18.567  1.00 81.15      L    C
ATOM    815  CE  LYS L 103      14.873  13.561  19.566  1.00 89.92      L    C
ATOM    816  NZ  LYS L 103      15.498  13.689  20.882  1.00 87.84      L    N
ATOM    817  N   LEU L 104      15.990  17.639  14.815  1.00 35.10      L    N
ATOM    818  CA  LEU L 104      16.781  18.856  14.684  1.00 36.62      L    C
ATOM    819  C   LEU L 104      16.987  19.533  16.045  1.00 33.72      L    C
ATOM    820  O   LEU L 104      16.046  19.828  16.770  1.00 39.22      L    O
ATOM    821  CB  LEU L 104      16.027  19.791  13.731  1.00 40.97      L    C
ATOM    822  CG  LEU L 104      16.698  21.156  13.559  1.00 36.66      L    C
ATOM    823  CD1 LEU L 104      18.031  21.069  12.812  1.00 43.72      L    C
ATOM    824  CD2 LEU L 104      15.830  22.140  12.772  1.00 37.07      L    C
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ATOM	825	N	GLU	L	105	18.238	19.751	16.437	1.00	41.16	L N
ATOM	826	CA	GLU	L	105	18.596	20.461	17.664	1.00	40.54	L C
ATOM	827	C	GLU	L	105	19.421	21.719	17.371	1.00	37.89	L C
ATOM	828	O	GLU	L	105	20.169	21.804	16.404	1.00	40.95	L O
ATOM	829	CB	GLU	L	105	19.387	19.507	18.564	1.00	42.35	L C
ATOM	830	CG	GLU	L	105	20.901	19.663	18.407	1.00	73.68	L C
ATOM	831	CD	GLU	L	105	21.554	19.582	19.768	1.00	84.81	L C
ATOM	832	OE1	GLU	L	105	21.525	20.570	20.491	1.00	80.17	L O
ATOM	833	OE2	GLU	L	105	22.080	18.519	20.101	1.00	87.53	L O
ATOM	834	N	ILE	L	106	19.229	22.737	18.229	1.00	36.04	L N
ATOM	835	CA	ILE	L	106	19.880	24.019	17.981	1.00	42.09	L C
ATOM	836	C	ILE	L	106	21.054	24.258	18.933	1.00	43.14	L C
ATOM	837	O	ILE	L	106	20.938	24.188	20.148	1.00	41.05	L O
ATOM	838	CB	ILE	L	106	18.833	25.123	18.154	1.00	37.55	L C
ATOM	839	CG1	ILE	L	106	18.110	25.383	16.829	1.00	47.08	L C
ATOM	840	CG2	ILE	L	106	19.520	26.432	18.579	1.00	49.18	L C
ATOM	841	CD1	ILE	L	106	16.795	24.610	16.726	1.00	53.81	L C
ATOM	842	N	LYS	L	107	22.235	24.505	18.331	1.00	43.16	L N
ATOM	843	CA	LYS	L	107	23.426	24.732	19.142	1.00	42.21	L C
ATOM	844	C	LYS	L	107	23.359	26.065	19.892	1.00	45.78	L C
ATOM	845	O	LYS	L	107	23.424	27.140	19.311	1.00	52.84	L O
ATOM	846	CB	LYS	L	107	24.645	24.716	18.219	1.00	43.56	L C
ATOM	847	CG	LYS	L	107	24.960	23.313	17.696	1.00	41.44	L C
ATOM	848	CD	LYS	L	107	26.185	23.302	16.778	1.00	36.40	L C
ATOM	849	CE	LYS	L	107	26.513	21.899	16.261	1.00	60.78	L C
ATOM	850	NZ	LYS	L	107	27.650	21.965	15.344	1.00	61.58	L N
ATOM	851	N	LYS	L	108	23.271	25.992	21.213	1.00	51.53	L N
ATOM	852	CA	LYS	L	108	23.241	27.168	22.068	1.00	46.01	L C
ATOM	853	C	LYS	L	108	24.585	27.279	22.779	1.00	51.04	L C
ATOM	854	O	LYS	L	108	25.443	26.395	22.653	1.00	52.80	L O
ATOM	855	CB	LYS	L	108	22.125	27.015	23.106	1.00	40.77	L C
ATOM	856	CG	LYS	L	108	22.058	28.136	24.099	1.00	40.59	L C
ATOM	857	CD	LYS	L	108	21.059	27.871	25.178	1.00	24.84	L C
ATOM	858	CE	LYS	L	108	21.135	28.956	26.237	1.00	44.44	L C
ATOM	859	NZ	LYS	L	108	22.525	29.139	26.754	1.00	37.04	L N
ATOM	860	N	ALA	L	109	24.774	28.370	23.513	1.00	52.73	L N
ATOM	861	CA	ALA	L	109	26.000	28.567	24.273	1.00	52.89	L C
ATOM	862	C	ALA	L	109	25.841	27.746	25.539	1.00	52.68	L C
ATOM	863	O	ALA	L	109	24.728	27.608	26.052	1.00	47.67	L O
ATOM	864	CB	ALA	L	109	26.177	30.033	24.626	1.00	55.47	L C
ATOM	865	N	ASP	L	110	26.944	27.200	26.039	1.00	52.11	L N
ATOM	866	CA	ASP	L	110	26.902	26.392	27.252	1.00	48.45	L C
ATOM	867	C	ASP	L	110	26.142	27.082	28.385	1.00	47.36	L C
ATOM	868	O	ASP	L	110	26.241	28.294	28.580	1.00	43.93	L O
ATOM	869	CB	ASP	L	110	28.320	26.060	27.715	1.00	43.82	L C
ATOM	870	CG	ASP	L	110	29.003	25.027	26.829	1.00	58.57	L C
ATOM	871	OD1	ASP	L	110	28.396	24.574	25.826	1.00	54.58	L O
ATOM	872	OD2	ASP	L	110	30.160	24.663	27.147	1.00	62.28	L O
ATOM	873	N	ALA	L	111	25.368	26.294	29.120	1.00	44.56	L N
ATOM	874	CA	ALA	L	111	24.592	26.797	30.246	1.00	39.67	L C
ATOM	875	C	ALA	L	111	24.644	25.726	31.315	1.00	44.68	L C
ATOM	876	O	ALA	L	111	24.586	24.530	31.005	1.00	49.08	L O
ATOM	877	CB	ALA	L	111	23.148	27.052	29.832	1.00	31.81	L C
ATOM	878	N	ALA	L	112	24.773	26.152	32.569	1.00	46.60	L N
ATOM	879	CA	ALA	L	112	24.825	25.227	33.694	1.00	39.75	L C
ATOM	880	C	ALA	L	112	23.429	25.074	34.249	1.00	41.14	L C
ATOM	881	O	ALA	L	112	22.647	26.029	34.276	1.00	43.49	L O
ATOM	882	CB	ALA	L	112	25.758	25.749	34.772	1.00	36.82	L C
ATOM	883	N	PRO	L	113	23.090	23.862	34.696	1.00	38.43	L N
ATOM	884	CA	PRO	L	113	21.778	23.549	35.265	1.00	39.80	L C
ATOM	885	C	PRO	L	113	21.460	24.318	36.542	1.00	37.82	L C
ATOM	886	O	PRO	L	113	22.357	24.745	37.263	1.00	39.66	L O
ATOM	887	CB	PRO	L	113	21.868	22.054	35.527	1.00	42.00	L C
ATOM	888	CG	PRO	L	113	23.329	21.868	35.833	1.00	35.81	L C
ATOM	889	CD	PRO	L	113	23.973	22.689	34.749	1.00	40.04	L C
ATOM	890	N	THR	L	114	20.168	24.487	36.793	1.00	35.18	L N
ATOM	891	CA	THR	L	114	19.667	25.151	37.983	1.00	38.10	L C
ATOM	892	C	THR	L	114	19.180	23.966	38.801	1.00	40.59	L C
ATOM	893	O	THR	L	114	18.103	23.426	38.539	1.00	39.73	L O

ATOM	894	CB	THR	L	114	18.476	26.033	37.650	1.00	40.42	L	C
ATOM	895	OG1	THR	L	114	18.814	26.882	36.555	1.00	56.04	L	O
ATOM	896	CG2	THR	L	114	18.088	26.872	38.835	1.00	39.90	L	C
ATOM	897	N	VAL	L	115	19.966	23.555	39.787	1.00	40.86	L	N
ATOM	898	CA	VAL	L	115	19.604	22.388	40.574	1.00	38.07	L	C
ATOM	899	C	VAL	L	115	18.839	22.704	41.840	1.00	40.05	L	C
ATOM	900	O	VAL	L	115	19.175	23.638	42.557	1.00	49.01	L	O
ATOM	901	CB	VAL	L	115	20.855	21.587	40.936	1.00	34.55	L	C
ATOM	902	CG1	VAL	L	115	20.461	20.220	41.428	1.00	34.99	L	C
ATOM	903	CG2	VAL	L	115	21.767	21.478	39.724	1.00	34.50	L	C
ATOM	904	N	SER	L	116	17.797	21.926	42.110	1.00	42.26	L	N
ATOM	905	CA	SER	L	116	16.997	22.124	43.314	1.00	46.33	L	C
ATOM	906	C	SER	L	116	16.432	20.781	43.768	1.00	44.24	L	C
ATOM	907	O	SER	L	116	15.787	20.071	42.994	1.00	43.64	L	O
ATOM	908	CB	SER	L	116	15.867	23.137	43.063	1.00	44.71	L	C
ATOM	909	OG	SER	L	116	14.936	22.668	42.114	1.00	40.38	L	O
ATOM	910	N	ILE	L	117	16.690	20.445	45.030	1.00	45.42	L	N
ATOM	911	CA	ILE	L	117	16.259	19.178	45.611	1.00	43.53	L	C
ATOM	912	C	ILE	L	117	14.991	19.319	46.444	1.00	42.44	L	C
ATOM	913	O	ILE	L	117	14.690	20.395	46.934	1.00	49.26	L	O
ATOM	914	CB	ILE	L	117	17.390	18.586	46.475	1.00	41.50	L	C
ATOM	915	CG1	ILE	L	117	17.039	17.160	46.902	1.00	42.52	L	C
ATOM	916	CG2	ILE	L	117	17.645	19.484	47.658	1.00	33.29	L	C
ATOM	917	CD1	ILE	L	117	18.205	16.384	47.448	1.00	24.02	L	C
ATOM	918	N	PHE	L	118	14.250	18.225	46.598	1.00	41.56	L	N
ATOM	919	CA	PHE	L	118	13.001	18.247	47.347	1.00	39.93	L	C
ATOM	920	C	PHE	L	118	12.783	17.035	48.247	1.00	42.69	L	C
ATOM	921	O	PHE	L	118	12.931	15.895	47.812	1.00	40.72	L	O
ATOM	922	CB	PHE	L	118	11.814	18.355	46.387	1.00	35.48	L	C
ATOM	923	CG	PHE	L	118	11.817	19.600	45.553	1.00	34.50	L	C
ATOM	924	CD1	PHE	L	118	12.716	19.753	44.514	1.00	18.82	L	C
ATOM	925	CD2	PHE	L	118	10.912	20.621	45.806	1.00	30.76	L	C
ATOM	926	CE1	PHE	L	118	12.717	20.894	43.741	1.00	32.17	L	C
ATOM	927	CE2	PHE	L	118	10.909	21.771	45.031	1.00	31.22	L	C
ATOM	928	CZ	PHE	L	118	11.815	21.905	43.995	1.00	25.14	L	C
ATOM	929	N	PRO	L	119	12.421	17.278	49.523	1.00	47.96	L	N
ATOM	930	CA	PRO	L	119	12.169	16.224	50.512	1.00	47.94	L	C
ATOM	931	C	PRO	L	119	10.819	15.591	50.208	1.00	48.29	L	C
ATOM	932	O	PRO	L	119	10.000	16.180	49.507	1.00	54.12	L	O
ATOM	933	CB	PRO	L	119	12.151	16.985	51.840	1.00	48.85	L	C
ATOM	934	CG	PRO	L	119	12.940	18.236	51.547	1.00	44.73	L	C
ATOM	935	CD	PRO	L	119	12.467	18.597	50.180	1.00	43.82	L	C
ATOM	936	N	PRO	L	120	10.570	14.385	50.738	1.00	45.71	L	N
ATOM	937	CA	PRO	L	120	9.312	13.665	50.524	1.00	42.24	L	C
ATOM	938	C	PRO	L	120	8.133	14.384	51.149	1.00	45.17	L	C
ATOM	939	O	PRO	L	120	8.243	14.972	52.224	1.00	41.74	L	O
ATOM	940	CB	PRO	L	120	9.552	12.322	51.206	1.00	42.91	L	C
ATOM	941	CG	PRO	L	120	11.046	12.173	51.177	1.00	53.99	L	C
ATOM	942	CD	PRO	L	120	11.516	13.562	51.506	1.00	48.06	L	C
ATOM	943	N	SER	L	121	7.000	14.333	50.464	1.00	51.37	L	N
ATOM	944	CA	SER	L	121	5.783	14.941	50.970	1.00	52.60	L	C
ATOM	945	C	SER	L	121	5.304	14.072	52.132	1.00	54.31	L	C
ATOM	946	O	SER	L	121	5.426	12.842	52.102	1.00	56.78	L	O
ATOM	947	CB	SER	L	121	4.714	14.972	49.878	1.00	47.45	L	C
ATOM	948	OG	SER	L	121	4.352	13.655	49.491	1.00	54.16	L	O
ATOM	949	N	SER	L	122	4.775	14.711	53.168	1.00	60.00	L	N
ATOM	950	CA	SER	L	122	4.270	13.971	54.317	1.00	59.80	L	C
ATOM	951	C	SER	L	122	3.155	13.072	53.802	1.00	56.68	L	C
ATOM	952	O	SER	L	122	2.985	11.939	54.251	1.00	61.42	L	O
ATOM	953	CB	SER	L	122	3.710	14.938	55.351	1.00	64.43	L	C
ATOM	954	OG	SER	L	122	2.595	15.630	54.816	1.00	74.50	L	O
ATOM	955	N	GLU	L	123	2.407	13.597	52.838	1.00	52.91	L	N
ATOM	956	CA	GLU	L	123	1.298	12.884	52.225	1.00	54.30	L	C
ATOM	957	C	GLU	L	123	1.745	11.552	51.657	1.00	54.59	L	C
ATOM	958	O	GLU	L	123	1.092	10.532	51.858	1.00	57.02	L	O
ATOM	959	CB	GLU	L	123	0.691	13.745	51.129	1.00	56.56	L	C
ATOM	960	CG	GLU	L	123	0.287	15.109	51.631	1.00	70.52	L	C
ATOM	961	CD	GLU	L	123	-0.272	15.981	50.545	1.00	89.26	L	C
ATOM	962	OE1	GLU	L	123	-1.246	15.550	49.890	1.00	82.90	L	O

ATOM	963	OE2	GLU	L	123	0.266	17.095	50.351	1.00	95.75	L	O
ATOM	964	N	GLN	L	124	2.856	11.556	50.935	1.00	55.07	L	N
ATOM	965	CA	GLN	L	124	3.357	10.311	50.384	1.00	54.12	L	C
ATOM	966	C	GLN	L	124	3.868	9.459	51.532	1.00	52.45	L	C
ATOM	967	O	GLN	L	124	3.770	8.229	51.505	1.00	49.04	L	O
ATOM	968	CB	GLN	L	124	4.490	10.568	49.401	1.00	55.78	L	C
ATOM	969	CG	GLN	L	124	5.223	9.297	49.028	1.00	56.57	L	C
ATOM	970	CD	GLN	L	124	6.372	9.546	48.103	1.00	50.07	L	C
ATOM	971	OE1	GLN	L	124	6.949	10.636	48.087	1.00	46.99	L	O
ATOM	972	NE2	GLN	L	124	6.730	8.534	47.329	1.00	51.34	L	N
ATOM	973	N	LEU	L	125	4.421	10.131	52.537	1.00	52.12	L	N
ATOM	974	CA	LEU	L	125	4.955	9.455	53.708	1.00	55.42	L	C
ATOM	975	C	LEU	L	125	3.856	8.732	54.463	1.00	62.18	L	C
ATOM	976	O	LEU	L	125	4.020	7.573	54.852	1.00	63.10	L	O
ATOM	977	CB	LEU	L	125	5.655	10.456	54.626	1.00	51.50	L	C
ATOM	978	CG	LEU	L	125	7.041	10.877	54.130	1.00	58.49	L	C
ATOM	979	CD1	LEU	L	125	7.614	11.993	54.997	1.00	55.80	L	C
ATOM	980	CD2	LEU	L	125	7.955	9.657	54.132	1.00	41.53	L	C
ATOM	981	N	THR	L	126	2.728	9.405	54.666	1.00	67.91	L	N
ATOM	982	CA	THR	L	126	1.625	8.772	55.374	1.00	74.12	L	C
ATOM	983	C	THR	L	126	1.338	7.457	54.665	1.00	72.07	L	C
ATOM	984	O	THR	L	126	0.825	6.519	55.259	1.00	74.16	L	O
ATOM	985	CB	THR	L	126	0.341	9.643	55.362	1.00	74.87	L	C
ATOM	986	OG1	THR	L	126	-0.109	9.818	54.015	1.00	89.50	L	O
ATOM	987	CG2	THR	L	126	0.604	11.004	55.982	1.00	77.06	L	C
ATOM	988	N	SER	L	127	1.690	7.401	53.386	1.00	73.54	L	N
ATOM	989	CA	SER	L	127	1.476	6.210	52.574	1.00	74.09	L	C
ATOM	990	C	SER	L	127	2.543	5.136	52.794	1.00	71.41	L	C
ATOM	991	O	SER	L	127	2.361	3.990	52.400	1.00	68.13	L	O
ATOM	992	CB	SER	L	127	1.434	6.597	51.093	1.00	75.35	L	C
ATOM	993	OG	SER	L	127	1.480	5.449	50.265	1.00	79.24	L	O
ATOM	994	N	GLY	L	128	3.655	5.508	53.417	1.00	67.28	L	N
ATOM	995	CA	GLY	L	128	4.709	4.542	53.670	1.00	63.17	L	C
ATOM	996	C	GLY	L	128	5.868	4.598	52.670	1.00	61.71	L	C
ATOM	997	O	GLY	L	128	6.795	3.799	52.708	1.00	55.67	L	O
ATOM	998	N	GLY	L	129	5.776	5.630	51.815	1.00	60.01	L	N
ATOM	999	CA	GLY	L	129	6.789	5.742	50.784	1.00	51.52	L	C
ATOM	1000	C	GLY	L	129	7.540	7.051	50.994	1.00	54.47	L	C
ATOM	1001	O	GLY	L	129	7.077	7.936	51.711	1.00	56.91	L	O
ATOM	1002	N	ALA	L	130	8.711	7.162	50.390	1.00	49.98	L	N
ATOM	1003	CA	ALA	L	130	9.509	8.360	50.512	1.00	43.26	L	C
ATOM	1004	C	ALA	L	130	10.162	8.574	49.169	1.00	44.36	L	C
ATOM	1005	O	ALA	L	130	10.851	7.697	48.658	1.00	44.31	L	O
ATOM	1006	CB	ALA	L	130	10.563	8.188	51.586	1.00	51.51	L	C
ATOM	1007	N	SER	L	131	9.915	9.733	48.581	1.00	44.50	L	N
ATOM	1008	CA	SER	L	131	10.498	10.057	47.297	1.00	40.37	L	C
ATOM	1009	C	SER	L	131	11.226	11.385	47.391	1.00	43.32	L	C
ATOM	1010	O	SER	L	131	10.664	12.402	47.807	1.00	48.95	L	O
ATOM	1011	CB	SER	L	131	9.419	10.114	46.214	1.00	38.70	L	C
ATOM	1012	OG	SER	L	131	8.904	8.820	45.949	1.00	36.52	L	O
ATOM	1013	N	VAL	L	132	12.497	11.354	47.032	1.00	38.46	L	N
ATOM	1014	CA	VAL	L	132	13.311	12.543	47.049	1.00	34.22	L	C
ATOM	1015	C	VAL	L	132	13.461	12.881	45.579	1.00	39.02	L	C
ATOM	1016	O	VAL	L	132	13.935	12.066	44.797	1.00	42.97	L	O
ATOM	1017	CB	VAL	L	132	14.666	12.237	47.658	1.00	38.34	L	C
ATOM	1018	CG1	VAL	L	132	15.373	13.520	48.062	1.00	35.88	L	C
ATOM	1019	CG2	VAL	L	132	14.473	11.310	48.833	1.00	45.84	L	C
ATOM	1020	N	VAL	L	133	13.023	14.070	45.191	1.00	35.71	L	N
ATOM	1021	CA	VAL	L	133	13.118	14.457	43.799	1.00	35.51	L	C
ATOM	1022	C	VAL	L	133	14.107	15.610	43.629	1.00	35.39	L	C
ATOM	1023	O	VAL	L	133	14.332	16.406	44.537	1.00	32.94	L	O
ATOM	1024	CB	VAL	L	133	11.716	14.809	43.225	1.00	23.82	L	C
ATOM	1025	CG1	VAL	L	133	11.857	15.359	41.830	1.00	27.79	L	C
ATOM	1026	CG2	VAL	L	133	10.822	13.581	43.226	1.00	38.91	L	C
ATOM	1027	N	CYS	L	134	14.724	15.667	42.460	1.00	38.30	L	N
ATOM	1028	CA	CYS	L	134	15.705	16.689	42.189	1.00	41.29	L	C
ATOM	1029	C	CYS	L	134	15.527	17.183	40.758	1.00	42.64	L	C
ATOM	1030	O	CYS	L	134	15.368	16.388	39.829	1.00	43.51	L	O
ATOM	1031	CB	CYS	L	134	17.102	16.104	42.397	1.00	38.37	L	C

ATOM	1032	SG	CYS	L	134	18.395	17.355	42.642	1.00	65.37	L	S
ATOM	1033	N	PHE	L	135	15.519	18.502	40.590	1.00	42.83	L	N
ATOM	1034	CA	PHE	L	135	15.365	19.106	39.270	1.00	38.04	L	C
ATOM	1035	C	PHE	L	135	16.669	19.732	38.820	1.00	35.38	L	C
ATOM	1036	O	PHE	L	135	17.424	20.277	39.616	1.00	38.80	L	O
ATOM	1037	CB	PHE	L	135	14.276	20.193	39.268	1.00	34.74	L	C
ATOM	1038	CG	PHE	L	135	12.878	19.664	39.381	1.00	31.55	L	C
ATOM	1039	CD1	PHE	L	135	12.434	18.652	38.546	1.00	32.18	L	C
ATOM	1040	CD2	PHE	L	135	11.995	20.197	40.313	1.00	35.76	L	C
ATOM	1041	CE1	PHE	L	135	11.132	18.177	38.635	1.00	31.56	L	C
ATOM	1042	CE2	PHE	L	135	10.690	19.726	40.408	1.00	27.93	L	C
ATOM	1043	CZ	PHE	L	135	10.261	18.711	39.563	1.00	30.83	L	C
ATOM	1044	N	LEU	L	136	16.926	19.620	37.530	1.00	31.81	L	N
ATOM	1045	CA	LEU	L	136	18.103	20.184	36.907	1.00	31.58	L	C
ATOM	1046	C	LEU	L	136	17.500	20.856	35.680	1.00	35.59	L	C
ATOM	1047	O	LEU	L	136	17.302	20.232	34.638	1.00	34.85	L	O
ATOM	1048	CB	LEU	L	136	19.096	19.076	36.522	1.00	29.55	L	C
ATOM	1049	CG	LEU	L	136	19.940	18.497	37.674	1.00	39.59	L	C
ATOM	1050	CD1	LEU	L	136	19.073	17.684	38.639	1.00	28.48	L	C
ATOM	1051	CD2	LEU	L	136	21.050	17.626	37.114	1.00	33.08	L	C
ATOM	1052	N	ASN	L	137	17.183	22.134	35.815	1.00	35.66	L	N
ATOM	1053	CA	ASN	L	137	16.554	22.851	34.723	1.00	35.50	L	C
ATOM	1054	C	ASN	L	137	17.380	23.822	33.891	1.00	30.57	L	C
ATOM	1055	O	ASN	L	137	18.269	24.511	34.382	1.00	31.68	L	O
ATOM	1056	CB	ASN	L	137	15.321	23.563	35.260	1.00	39.89	L	C
ATOM	1057	CG	ASN	L	137	14.334	22.601	35.894	1.00	35.35	L	C
ATOM	1058	OD1	ASN	L	137	13.480	23.001	36.681	1.00	34.80	L	O
ATOM	1059	ND2	ASN	L	137	14.444	21.328	35.545	1.00	34.00	L	N
ATOM	1060	N	ASN	L	138	17.042	23.843	32.609	1.00	33.92	L	N
ATOM	1061	CA	ASN	L	138	17.607	24.760	31.601	1.00	38.60	L	C
ATOM	1062	C	ASN	L	138	19.153	24.748	31.533	1.00	41.40	L	C
ATOM	1063	O	ASN	L	138	19.819	25.738	31.809	1.00	48.42	L	O
ATOM	1064	CB	ASN	L	138	17.111	26.173	31.913	1.00	36.37	L	C
ATOM	1065	CG	ASN	L	138	15.615	26.150	32.093	1.00	34.07	L	C
ATOM	1066	OD1	ASN	L	138	15.095	26.138	33.205	1.00	52.45	L	O
ATOM	1067	ND2	ASN	L	138	14.906	26.139	30.951	1.00	45.49	L	N
ATOM	1068	N	PHE	L	139	19.758	23.640	31.136	1.00	36.88	L	N
ATOM	1069	CA	PHE	L	139	21.208	23.590	31.028	1.00	36.96	L	C
ATOM	1070	C	PHE	L	139	21.584	23.275	29.577	1.00	38.99	L	C
ATOM	1071	O	PHE	L	139	20.727	22.950	28.756	1.00	31.96	L	O
ATOM	1072	CB	PHE	L	139	21.777	22.529	31.992	1.00	34.96	L	C
ATOM	1073	CG	PHE	L	139	21.177	21.174	31.814	1.00	22.71	L	C
ATOM	1074	CD1	PHE	L	139	21.545	20.373	30.746	1.00	28.85	L	C
ATOM	1075	CD2	PHE	L	139	20.192	20.726	32.677	1.00	30.19	L	C
ATOM	1076	CE1	PHE	L	139	20.941	19.152	30.533	1.00	26.26	L	C
ATOM	1077	CE2	PHE	L	139	19.579	19.504	32.476	1.00	29.02	L	C
ATOM	1078	CZ	PHE	L	139	19.952	18.712	31.401	1.00	29.39	L	C
ATOM	1079	N	TYR	L	140	22.865	23.389	29.257	1.00	44.67	L	N
ATOM	1080	CA	TYR	L	140	23.308	23.105	27.908	1.00	42.78	L	C
ATOM	1081	C	TYR	L	140	24.811	22.904	27.884	1.00	42.60	L	C
ATOM	1082	O	TYR	L	140	25.560	23.667	28.495	1.00	40.34	L	O
ATOM	1083	CB	TYR	L	140	22.903	24.244	26.960	1.00	39.66	L	C
ATOM	1084	CG	TYR	L	140	23.239	23.950	25.519	1.00	38.62	L	C
ATOM	1085	CD1	TYR	L	140	24.538	24.074	25.057	1.00	38.52	L	C
ATOM	1086	CD2	TYR	L	140	22.274	23.465	24.645	1.00	41.68	L	C
ATOM	1087	CE1	TYR	L	140	24.875	23.722	23.780	1.00	40.62	L	C
ATOM	1088	CE2	TYR	L	140	22.600	23.104	23.353	1.00	42.88	L	C
ATOM	1089	CZ	TYR	L	140	23.910	23.233	22.927	1.00	48.74	L	C
ATOM	1090	OH	TYR	L	140	24.273	22.864	21.651	1.00	52.93	L	O
ATOM	1091	N	PRO	L	141	25.274	21.883	27.148	1.00	43.92	L	N
ATOM	1092	CA	PRO	L	141	24.451	20.950	26.365	1.00	46.65	L	C
ATOM	1093	C	PRO	L	141	23.688	19.903	27.185	1.00	49.80	L	C
ATOM	1094	O	PRO	L	141	23.702	19.934	28.414	1.00	56.01	L	O
ATOM	1095	CB	PRO	L	141	25.466	20.325	25.414	1.00	45.66	L	C
ATOM	1096	CG	PRO	L	141	26.689	20.271	26.256	1.00	41.16	L	C
ATOM	1097	CD	PRO	L	141	26.706	21.618	26.937	1.00	45.29	L	C
ATOM	1098	N	LYS	L	142	23.037	18.968	26.494	1.00	47.16	L	N
ATOM	1099	CA	LYS	L	142	22.055	18.059	27.073	1.00	50.49	L	C
ATOM	1100	C	LYS	L	142	22.714	16.954	27.908	1.00	49.27	L	C

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ATOM   1101  O   LYS L 142      22.068  16.216  28.642  1.00 52.27      L    O
ATOM   1102  CB  LYS L 142      21.248  17.439  25.931  1.00 47.73      L    C
ATOM   1103  CG  LYS L 142      22.141  16.757  24.892  1.00 63.02      L    C
ATOM   1104  CD  LYS L 142      21.345  15.845  23.957  1.00 58.35      L    C
ATOM   1105  CE  LYS L 142      21.853  15.899  22.512  1.00 73.15      L    C
ATOM   1106  NZ  LYS L 142      23.168  15.269  22.427  1.00 96.24      L    N
ATOM   1107  N   ASP L 143      24.044  16.825  27.745  1.00 50.43      L    N
ATOM   1108  CA  ASP L 143      24.763  15.768  28.453  1.00 55.24      L    C
ATOM   1109  C   ASP L 143      25.076  16.163  29.902  1.00 53.06      L    C
ATOM   1110  O   ASP L 143      25.811  17.102  30.180  1.00 60.12      L    O
ATOM   1111  CB  ASP L 143      26.070  15.493  27.705  1.00 58.45      L    C
ATOM   1112  CG  ASP L 143      25.787  14.678  26.452  1.00 74.50      L    C
ATOM   1113  OD1 ASP L 143      25.958  15.224  25.362  1.00 87.12      L    O
ATOM   1114  OD2 ASP L 143      25.432  13.507  26.575  1.00 96.79      L    O
ATOM   1115  N   ILE L 144      24.460  15.425  30.845  1.00 49.84      L    N
ATOM   1116  CA  ILE L 144      24.740  15.678  32.255  1.00 43.94      L    C
ATOM   1117  C   ILE L 144      24.481  14.437  33.110  1.00 44.67      L    C
ATOM   1118  O   ILE L 144      23.746  13.529  32.743  1.00 46.34      L    O
ATOM   1119  CB  ILE L 144      23.852  16.828  32.730  1.00 47.26      L    C
ATOM   1120  CG1 ILE L 144      24.187  17.188  34.181  1.00 39.55      L    C
ATOM   1121  CG2 ILE L 144      22.377  16.390  32.685  1.00 27.85      L    C
ATOM   1122  CD1 ILE L 144      23.503  18.480  34.636  1.00 37.00      L    C
ATOM   1123  N   ASN L 145      25.153  14.402  34.274  1.00 47.86      L    N
ATOM   1124  CA  ASN L 145      24.977  13.263  35.167  1.00 56.19      L    C
ATOM   1125  C   ASN L 145      24.543  13.703  36.565  1.00 48.41      L    C
ATOM   1126  O   ASN L 145      24.971  14.722  37.097  1.00 51.90      L    O
ATOM   1127  CB  ASN L 145      26.308  12.514  35.257  1.00 58.17      L    C
ATOM   1128  CG  ASN L 145      26.692  11.994  33.896  1.00 79.58      L    C
ATOM   1129  OD1 ASN L 145      25.875  11.463  33.148  1.00 74.98      L    O
ATOM   1130  ND2 ASN L 145      27.992  12.137  33.582  1.00 99.92      L    N
ATOM   1131  N   VAL L 146      23.627  12.907  37.144  1.00 47.14      L    N
ATOM   1132  CA  VAL L 146      23.220  13.153  38.521  1.00 41.80      L    C
ATOM   1133  C   VAL L 146      23.646  12.000  39.432  1.00 41.27      L    C
ATOM   1134  O   VAL L 146      23.665  10.840  39.043  1.00 41.13      L    O
ATOM   1135  CB  VAL L 146      21.700  13.305  38.550  1.00 38.57      L    C
ATOM   1136  CG1 VAL L 146      21.222  13.420  39.996  1.00 48.70      L    C
ATOM   1137  CG2 VAL L 146      21.291  14.552  37.788  1.00 52.23      L    C
ATOM   1138  N   LYS L 147      24.019  12.322  40.657  1.00 39.29      L    N
ATOM   1139  CA  LYS L 147      24.434  11.308  41.580  1.00 43.68      L    C
ATOM   1140  C   LYS L 147      23.757  11.587  42.893  1.00 43.43      L    C
ATOM   1141  O   LYS L 147      23.829  12.680  43.439  1.00 47.08      L    O
ATOM   1142  CB  LYS L 147      25.952  11.402  41.744  1.00 43.41      L    C
ATOM   1143  CG  LYS L 147      26.521  10.238  42.559  1.00 49.00      L    C
ATOM   1144  CD  LYS L 147      27.994  10.448  42.918  1.00 69.56      L    C
ATOM   1145  CE  LYS L 147      28.883  10.597  41.679  1.00 79.19      L    C
ATOM   1146  NZ  LYS L 147      29.949  11.561  41.950  1.00 85.36      L    N
ATOM   1147  N   TRP L 148      23.051  10.591  43.410  1.00 49.19      L    N
ATOM   1148  CA  TRP L 148      22.371  10.756  44.682  1.00 45.19      L    C
ATOM   1149  C   TRP L 148      23.305  10.250  45.751  1.00 45.91      L    C
ATOM   1150  O   TRP L 148      24.076   9.322  45.529  1.00 43.97      L    O
ATOM   1151  CB  TRP L 148      21.065   9.964  44.727  1.00 39.66      L    C
ATOM   1152  CG  TRP L 148      19.940  10.601  43.968  1.00 42.61      L    C
ATOM   1153  CD1 TRP L 148      19.564  10.346  42.677  1.00 33.06      L    C
ATOM   1154  CD2 TRP L 148      19.029  11.586  44.464  1.00 42.82      L    C
ATOM   1155  NE1 TRP L 148      18.469  11.107  42.344  1.00 30.84      L    N
ATOM   1156  CE2 TRP L 148      18.121  11.879  43.422  1.00 35.66      L    C
ATOM   1157  CE3 TRP L 148      18.887  12.247  45.687  1.00 32.84      L    C
ATOM   1158  CZ2 TRP L 148      17.086  12.807  43.570  1.00 29.88      L    C
ATOM   1159  CZ3 TRP L 148      17.858  13.162  45.831  1.00 40.22      L    C
ATOM   1160  CH2 TRP L 148      16.971  13.434  44.778  1.00 26.01      L    C
ATOM   1161  N   LYS L 149      23.241  10.883  46.911  1.00 47.40      L    N
ATOM   1162  CA  LYS L 149      24.072  10.504  48.036  1.00 41.22      L    C
ATOM   1163  C   LYS L 149      23.260  10.572  49.313  1.00 39.97      L    C
ATOM   1164  O   LYS L 149      22.582  11.560  49.554  1.00 49.04      L    O
ATOM   1165  CB  LYS L 149      25.267  11.454  48.162  1.00 39.19      L    C
ATOM   1166  CG  LYS L 149      26.501  11.060  47.373  1.00 35.97      L    C
ATOM   1167  CD  LYS L 149      27.679  11.917  47.817  1.00 45.37      L    C
ATOM   1168  CE  LYS L 149      28.982  11.466  47.181  1.00 70.51      L    C
ATOM   1169  NZ  LYS L 149      30.156  12.182  47.759  1.00 67.81      L    N
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ATOM   1170  N   ILE L 150      23.309   9.524  50.122  1.00 38.16      L    N
ATOM   1171  CA  ILE L 150      22.606   9.544  51.396  1.00 38.62      L    C
ATOM   1172  C   ILE L 150      23.624   9.285  52.498  1.00 39.38      L    C
ATOM   1173  O   ILE L 150      24.240   8.227  52.546  1.00 42.34      L    O
ATOM   1174  CB  ILE L 150      21.501   8.485  51.476  1.00 35.52      L    C
ATOM   1175  CG1 ILE L 150      20.483   8.700  50.351  1.00 34.00      L    C
ATOM   1176  CG2 ILE L 150      20.834   8.565  52.845  1.00 30.49      L    C
ATOM   1177  CD1 ILE L 150      19.319   7.730  50.350  1.00 21.56      L    C
ATOM   1178  N   ASP L 151      23.799  10.263  53.379  1.00 42.16      L    N
ATOM   1179  CA  ASP L 151      24.763  10.162  54.468  1.00 43.08      L    C
ATOM   1180  C   ASP L 151      26.175   9.985  53.920  1.00 47.39      L    C
ATOM   1181  O   ASP L 151      26.964   9.180  54.422  1.00 55.21      L    O
ATOM   1182  CB  ASP L 151      24.408   9.001  55.395  1.00 38.76      L    C
ATOM   1183  CG  ASP L 151      23.255   9.328  56.307  1.00 41.76      L    C
ATOM   1184  OD1 ASP L 151      22.800  10.490  56.289  1.00 53.05      L    O
ATOM   1185  OD2 ASP L 151      22.806   8.434  57.048  1.00 49.41      L    O
ATOM   1186  N   GLY L 152      26.477  10.744  52.873  1.00 48.87      L    N
ATOM   1187  CA  GLY L 152      27.819  10.665  52.287  1.00 46.37      L    C
ATOM   1188  C   GLY L 152      27.938   9.582  51.203  1.00 49.77      L    C
ATOM   1189  O   GLY L 152      28.783   9.629  50.322  1.00 58.18      L    O
ATOM   1190  N   SER L 153      27.077   8.554  51.312  1.00 48.01      L    N
ATOM   1191  CA  SER L 153      27.163   7.440  50.371  1.00 52.83      L    C
ATOM   1192  C   SER L 153      26.357   7.694  49.095  1.00 45.68      L    C
ATOM   1193  O   SER L 153      25.294   8.299  49.106  1.00 49.11      L    O
ATOM   1194  CB  SER L 153      26.634   6.189  51.082  1.00 54.79      L    C
ATOM   1195  OG  SER L 153      27.612   5.715  52.009  1.00 69.58      L    O
ATOM   1196  N   GLU L 154      26.929   7.245  47.963  1.00 43.38      L    N
ATOM   1197  CA  GLU L 154      26.197   7.333  46.703  1.00 50.29      L    C
ATOM   1198  C   GLU L 154      25.117   6.253  46.615  1.00 49.87      L    C
ATOM   1199  O   GLU L 154      25.273   5.136  47.088  1.00 56.57      L    O
ATOM   1200  CB  GLU L 154      27.194   7.167  45.553  1.00 45.67      L    C
ATOM   1201  CG  GLU L 154      26.582   6.459  44.340  1.00 53.31      L    C
ATOM   1202  CD  GLU L 154      27.464   6.677  43.126  1.00 72.03      L    C
ATOM   1203  OE1 GLU L 154      28.674   6.584  43.252  1.00 56.01      L    O
ATOM   1204  OE2 GLU L 154      26.928   6.957  42.059  1.00 70.34      L    O
ATOM   1205  N   ARG L 155      23.977   6.589  46.019  1.00 49.27      L    N
ATOM   1206  CA  ARG L 155      22.910   5.615  45.804  1.00 47.42      L    C
ATOM   1207  C   ARG L 155      22.739   5.463  44.293  1.00 48.15      L    C
ATOM   1208  O   ARG L 155      22.790   6.446  43.554  1.00 49.72      L    O
ATOM   1209  CB  ARG L 155      21.584   6.075  46.418  1.00 45.78      L    C
ATOM   1210  CG  ARG L 155      21.489   5.965  47.938  1.00 46.29      L    C
ATOM   1211  CD  ARG L 155      21.711   4.544  48.452  1.00 44.74      L    C
ATOM   1212  NE  ARG L 155      21.593   4.481  49.908  1.00 46.03      L    N
ATOM   1213  CZ  ARG L 155      20.450   4.313  50.565  1.00 47.68      L    C
ATOM   1214  NH1 ARG L 155      19.314   4.173  49.902  1.00 57.00      L    N
ATOM   1215  NH2 ARG L 155      20.434   4.323  51.888  1.00 44.35      L    N
ATOM   1216  N   GLN L 156      22.559   4.230  43.836  1.00 47.00      L    N
ATOM   1217  CA  GLN L 156      22.375   3.956  42.416  1.00 50.50      L    C
ATOM   1218  C   GLN L 156      21.002   3.359  42.205  1.00 48.51      L    C
ATOM   1219  O   GLN L 156      20.343   3.585  41.197  1.00 47.82      L    O
ATOM   1220  CB  GLN L 156      23.392   2.933  41.914  1.00 57.57      L    C
ATOM   1221  CG  GLN L 156      24.813   3.404  41.730  1.00 69.42      L    C
ATOM   1222  CD  GLN L 156      25.459   2.736  40.522  1.00 87.97      L    C
ATOM   1223  OE1 GLN L 156      25.401   1.514  40.364  1.00 94.85      L    O
ATOM   1224  NE2 GLN L 156      26.072   3.541  39.658  1.00 96.03      L    N
ATOM   1225  N   ASN L 157      20.584   2.583  43.188  1.00 50.75      L    N
ATOM   1226  CA  ASN L 157      19.323   1.881  43.134  1.00 56.06      L    C
ATOM   1227  C   ASN L 157      18.104   2.729  43.475  1.00 51.01      L    C
ATOM   1228  O   ASN L 157      18.185   3.662  44.263  1.00 54.53      L    O
ATOM   1229  CB  ASN L 157      19.434   0.668  44.060  1.00 63.75      L    C
ATOM   1230  CG  ASN L 157      20.754  -0.097  43.856  1.00 77.57      L    C
ATOM   1231  OD1 ASN L 157      20.935  -0.797  42.852  1.00 83.50      L    O
ATOM   1232  ND2 ASN L 157      21.689   0.060  44.800  1.00 79.77      L    N
ATOM   1233  N   GLY L 158      16.978   2.402  42.852  1.00 46.82      L    N
ATOM   1234  CA  GLY L 158      15.743   3.113  43.113  1.00 36.61      L    C
ATOM   1235  C   GLY L 158      15.631   4.514  42.556  1.00 33.11      L    C
ATOM   1236  O   GLY L 158      14.882   5.328  43.086  1.00 37.66      L    O
ATOM   1237  N   VAL L 159      16.364   4.818  41.496  1.00 33.40      L    N
ATOM   1238  CA  VAL L 159      16.278   6.143  40.921  1.00 37.20      L    C
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ATOM	1239	C	VAL	L	159	15.794	6.096	39.489	1.00	39.79	L	C
ATOM	1240	O	VAL	L	159	16.196	5.238	38.717	1.00	50.88	L	O
ATOM	1241	CB	VAL	L	159	17.631	6.855	40.954	1.00	37.60	L	C
ATOM	1242	CG1	VAL	L	159	18.728	5.839	41.060	1.00	41.29	L	C
ATOM	1243	CG2	VAL	L	159	17.804	7.709	39.689	1.00	35.05	L	C
ATOM	1244	N	LEU	L	160	14.903	7.012	39.142	1.00	40.63	L	N
ATOM	1245	CA	LEU	L	160	14.381	7.088	37.792	1.00	40.01	L	C
ATOM	1246	C	LEU	L	160	14.539	8.525	37.298	1.00	35.48	L	C
ATOM	1247	O	LEU	L	160	14.189	9.473	37.996	1.00	35.80	L	O
ATOM	1248	CB	LEU	L	160	12.920	6.621	37.755	1.00	41.10	L	C
ATOM	1249	CG	LEU	L	160	12.712	5.138	38.108	1.00	47.84	L	C
ATOM	1250	CD1	LEU	L	160	11.223	4.831	38.132	1.00	64.80	L	C
ATOM	1251	CD2	LEU	L	160	13.380	4.229	37.103	1.00	43.08	L	C
ATOM	1252	N	ASN	L	161	15.110	8.661	36.104	1.00	33.90	L	N
ATOM	1253	CA	ASN	L	161	15.383	9.949	35.479	1.00	32.64	L	C
ATOM	1254	C	ASN	L	161	14.524	10.192	34.260	1.00	33.50	L	C
ATOM	1255	O	ASN	L	161	14.149	9.265	33.559	1.00	38.43	L	O
ATOM	1256	CB	ASN	L	161	16.828	10.007	35.003	1.00	38.36	L	C
ATOM	1257	CG	ASN	L	161	17.823	9.762	36.101	1.00	37.26	L	C
ATOM	1258	OD1	ASN	L	161	17.839	10.463	37.111	1.00	40.06	L	O
ATOM	1259	ND2	ASN	L	161	18.678	8.769	35.902	1.00	32.15	L	N
ATOM	1260	N	SER	L	162	14.249	11.452	33.976	1.00	31.12	L	N
ATOM	1261	CA	SER	L	162	13.462	11.777	32.800	1.00	26.43	L	C
ATOM	1262	C	SER	L	162	14.027	13.040	32.153	1.00	28.89	L	C
ATOM	1263	O	SER	L	162	14.447	13.956	32.845	1.00	33.59	L	O
ATOM	1264	CB	SER	L	162	12.006	11.972	33.194	1.00	22.50	L	C
ATOM	1265	OG	SER	L	162	11.191	11.991	32.046	1.00	37.37	L	O
ATOM	1266	N	TRP	L	163	14.054	13.088	30.829	1.00	33.44	L	N
ATOM	1267	CA	TRP	L	163	14.586	14.262	30.131	1.00	28.63	L	C
ATOM	1268	C	TRP	L	163	13.556	14.875	29.206	1.00	27.81	L	C
ATOM	1269	O	TRP	L	163	12.871	14.167	28.468	1.00	33.25	L	O
ATOM	1270	CB	TRP	L	163	15.817	13.888	29.293	1.00	28.11	L	C
ATOM	1271	CG	TRP	L	163	16.950	13.331	30.084	1.00	30.72	L	C
ATOM	1272	CD1	TRP	L	163	18.060	13.999	30.514	1.00	34.81	L	C
ATOM	1273	CD2	TRP	L	163	17.093	11.981	30.534	1.00	37.12	L	C
ATOM	1274	NE1	TRP	L	163	18.886	13.146	31.201	1.00	31.24	L	N
ATOM	1275	CE2	TRP	L	163	18.317	11.899	31.227	1.00	36.59	L	C
ATOM	1276	CE3	TRP	L	163	16.304	10.829	30.419	1.00	42.13	L	C
ATOM	1277	CZ2	TRP	L	163	18.774	10.712	31.801	1.00	44.40	L	C
ATOM	1278	CZ3	TRP	L	163	16.761	9.644	30.996	1.00	49.83	L	C
ATOM	1279	CH2	TRP	L	163	17.983	9.598	31.675	1.00	29.31	L	C
ATOM	1280	N	THR	L	164	13.463	16.199	29.235	1.00	27.83	L	N
ATOM	1281	CA	THR	L	164	12.531	16.916	28.377	1.00	29.47	L	C
ATOM	1282	C	THR	L	164	13.180	17.119	27.013	1.00	27.57	L	C
ATOM	1283	O	THR	L	164	14.379	16.911	26.867	1.00	32.97	L	O
ATOM	1284	CB	THR	L	164	12.215	18.292	28.955	1.00	29.66	L	C
ATOM	1285	OG1	THR	L	164	13.429	19.023	29.111	1.00	25.23	L	O
ATOM	1286	CG2	THR	L	164	11.549	18.165	30.299	1.00	33.20	L	C
ATOM	1287	N	ASP	L	165	12.393	17.499	26.009	1.00	32.30	L	N
ATOM	1288	CA	ASP	L	165	12.966	17.780	24.690	1.00	37.75	L	C
ATOM	1289	C	ASP	L	165	13.614	19.155	24.807	1.00	34.76	L	C
ATOM	1290	O	ASP	L	165	13.493	19.815	25.832	1.00	41.05	L	O
ATOM	1291	CB	ASP	L	165	11.890	17.835	23.597	1.00	44.29	L	C
ATOM	1292	CG	ASP	L	165	11.479	16.464	23.105	1.00	45.32	L	C
ATOM	1293	OD1	ASP	L	165	10.645	15.818	23.769	1.00	54.61	L	O
ATOM	1294	OD2	ASP	L	165	11.998	16.033	22.052	1.00	65.66	L	O
ATOM	1295	N	GLN	L	166	14.294	19.615	23.772	1.00	34.89	L	N
ATOM	1296	CA	GLN	L	166	14.921	20.923	23.884	1.00	33.11	L	C
ATOM	1297	C	GLN	L	166	13.882	22.031	23.890	1.00	34.33	L	C
ATOM	1298	O	GLN	L	166	12.917	22.001	23.126	1.00	40.73	L	O
ATOM	1299	CB	GLN	L	166	15.927	21.130	22.754	1.00	32.34	L	C
ATOM	1300	CG	GLN	L	166	16.566	22.492	22.716	1.00	25.94	L	C
ATOM	1301	CD	GLN	L	166	17.735	22.524	21.767	1.00	24.29	L	C
ATOM	1302	OE1	GLN	L	166	17.691	21.915	20.703	1.00	29.03	L	O
ATOM	1303	NE2	GLN	L	166	18.789	23.234	22.141	1.00	39.54	L	N
ATOM	1304	N	ASP	L	167	14.084	23.000	24.775	1.00	36.26	L	N
ATOM	1305	CA	ASP	L	167	13.244	24.183	24.911	1.00	37.77	L	C
ATOM	1306	C	ASP	L	167	13.133	24.919	23.578	1.00	38.98	L	C
ATOM	1307	O	ASP	L	167	14.089	25.044	22.826	1.00	45.84	L	O

ATOM	1308	CB	ASP	L	167	13.869	25.102	25.965	1.00	39.01	L C
ATOM	1309	CG	ASP	L	167	12.825	26.104	26.438	1.00	50.62	L C
ATOM	1310	OD1	ASP	L	167	11.843	25.665	27.041	1.00	61.30	L O
ATOM	1311	OD2	ASP	L	167	13.003	27.301	26.214	1.00	65.60	L O
ATOM	1312	N	SER	L	168	11.907	25.373	23.265	1.00	39.91	L N
ATOM	1313	CA	SER	L	168	11.711	26.041	21.985	1.00	36.41	L C
ATOM	1314	C	SER	L	168	12.002	27.542	22.067	1.00	36.74	L C
ATOM	1315	O	SER	L	168	11.965	28.267	21.082	1.00	42.82	L O
ATOM	1316	CB	SER	L	168	10.268	25.802	21.535	1.00	34.55	L C
ATOM	1317	OG	SER	L	168	10.172	24.514	20.922	1.00	38.70	L O
ATOM	1318	N	LYS	L	169	12.279	28.009	23.301	1.00	41.00	L N
ATOM	1319	CA	LYS	L	169	12.476	29.440	23.491	1.00	40.71	L C
ATOM	1320	C	LYS	L	169	13.938	29.810	23.746	1.00	44.31	L C
ATOM	1321	O	LYS	L	169	14.524	30.641	23.065	1.00	47.38	L O
ATOM	1322	CB	LYS	L	169	11.596	29.896	24.654	1.00	50.40	L C
ATOM	1323	CG	LYS	L	169	10.226	30.371	24.164	1.00	64.25	L C
ATOM	1324	CD	LYS	L	169	9.232	30.585	25.307	1.00	92.37	L C
ATOM	1325	CE	LYS	L	169	7.980	31.351	24.858	1.00	99.86	L C
ATOM	1326	NZ	LYS	L	169	7.425	32.101	25.987	1.00	94.60	L N
ATOM	1327	N	ASP	L	170	14.514	29.200	24.799	1.00	45.97	L N
ATOM	1328	CA	ASP	L	170	15.922	29.466	25.091	1.00	46.90	L C
ATOM	1329	C	ASP	L	170	16.813	28.255	24.790	1.00	43.28	L C
ATOM	1330	O	ASP	L	170	17.967	28.170	25.193	1.00	47.78	L O
ATOM	1331	CB	ASP	L	170	16.053	29.878	26.560	1.00	48.00	L C
ATOM	1332	CG	ASP	L	170	15.574	28.743	27.455	1.00	48.03	L C
ATOM	1333	OD1	ASP	L	170	15.499	27.620	26.962	1.00	51.45	L O
ATOM	1334	OD2	ASP	L	170	15.296	28.988	28.627	1.00	84.97	L O
ATOM	1335	N	SER	L	171	16.209	27.271	24.096	1.00	46.86	L N
ATOM	1336	CA	SER	L	171	16.983	26.133	23.607	1.00	48.35	L C
ATOM	1337	C	SER	L	171	17.845	25.485	24.692	1.00	48.37	L C
ATOM	1338	O	SER	L	171	19.057	25.351	24.563	1.00	55.99	L O
ATOM	1339	CB	SER	L	171	17.872	26.628	22.467	1.00	45.20	L C
ATOM	1340	OG	SER	L	171	17.053	26.974	21.348	1.00	60.97	L O
ATOM	1341	N	THR	L	172	17.189	25.100	25.803	1.00	51.34	L N
ATOM	1342	CA	THR	L	172	17.921	24.407	26.856	1.00	44.78	L C
ATOM	1343	C	THR	L	172	17.399	22.982	27.059	1.00	42.17	L C
ATOM	1344	O	THR	L	172	16.466	22.535	26.405	1.00	45.97	L O
ATOM	1345	CB	THR	L	172	17.783	25.207	28.152	1.00	37.85	L C
ATOM	1346	OG1	THR	L	172	16.404	25.512	28.370	1.00	57.23	L O
ATOM	1347	CG2	THR	L	172	18.577	26.517	28.050	1.00	33.68	L C
ATOM	1348	N	TYR	L	173	17.892	22.288	28.069	1.00	44.08	L N
ATOM	1349	CA	TYR	L	173	17.364	20.993	28.442	1.00	40.50	L C
ATOM	1350	C	TYR	L	173	17.228	20.919	29.947	1.00	40.14	L C
ATOM	1351	O	TYR	L	173	18.070	21.432	30.679	1.00	40.88	L O
ATOM	1352	CB	TYR	L	173	18.299	19.877	28.014	1.00	32.40	L C
ATOM	1353	CG	TYR	L	173	18.551	19.773	26.544	1.00	38.44	L C
ATOM	1354	CD1	TYR	L	173	19.528	20.542	25.931	1.00	23.34	L C
ATOM	1355	CD2	TYR	L	173	17.886	18.818	25.781	1.00	30.45	L C
ATOM	1356	CE1	TYR	L	173	19.847	20.347	24.605	1.00	23.64	L C
ATOM	1357	CE2	TYR	L	173	18.194	18.623	24.468	1.00	23.61	L C
ATOM	1358	CZ	TYR	L	173	19.179	19.382	23.884	1.00	31.64	L C
ATOM	1359	OH	TYR	L	173	19.533	19.124	22.587	1.00	50.61	L O
ATOM	1360	N	SER	L	174	16.172	20.261	30.396	1.00	32.25	L N
ATOM	1361	CA	SER	L	174	15.932	20.103	31.810	1.00	33.25	L C
ATOM	1362	C	SER	L	174	15.820	18.624	32.103	1.00	31.14	L C
ATOM	1363	O	SER	L	174	15.363	17.840	31.270	1.00	35.74	L O
ATOM	1364	CB	SER	L	174	14.644	20.817	32.210	1.00	34.96	L C
ATOM	1365	OG	SER	L	174	14.723	22.191	31.872	1.00	44.21	L O
ATOM	1366	N	MET	L	175	16.264	18.235	33.283	1.00	32.45	L N
ATOM	1367	CA	MET	L	175	16.185	16.848	33.665	1.00	33.65	L C
ATOM	1368	C	MET	L	175	15.658	16.798	35.083	1.00	36.03	L C
ATOM	1369	O	MET	L	175	15.931	17.675	35.895	1.00	37.60	L O
ATOM	1370	CB	MET	L	175	17.555	16.169	33.576	1.00	34.51	L C
ATOM	1371	CG	MET	L	175	18.065	15.622	34.890	1.00	33.17	L C
ATOM	1372	SD	MET	L	175	18.885	14.022	34.685	1.00	50.79	L S
ATOM	1373	CE	MET	L	175	17.718	12.956	35.395	1.00	51.77	L C
ATOM	1374	N	SER	L	176	14.872	15.769	35.352	1.00	38.28	L N
ATOM	1375	CA	SER	L	176	14.285	15.553	36.650	1.00	30.79	L C
ATOM	1376	C	SER	L	176	14.794	14.211	37.167	1.00	33.00	L C

ATOM	1377	O	SER	L	176	14.968	13.256	36.388	1.00	36.35	L	O
ATOM	1378	CB	SER	L	176	12.766	15.526	36.510	1.00	29.60	L	C
ATOM	1379	OG	SER	L	176	12.140	15.055	37.680	1.00	25.85	L	O
ATOM	1380	N	SER	L	177	15.044	14.137	38.473	1.00	34.20	L	N
ATOM	1381	CA	SER	L	177	15.509	12.887	39.060	1.00	31.30	L	C
ATOM	1382	C	SER	L	177	14.787	12.492	40.349	1.00	30.60	L	C
ATOM	1383	O	SER	L	177	14.511	13.325	41.216	1.00	34.61	L	O
ATOM	1384	CB	SER	L	177	17.004	12.939	39.306	1.00	22.17	L	C
ATOM	1385	OG	SER	L	177	17.480	11.618	39.257	1.00	35.64	L	O
ATOM	1386	N	THR	L	178	14.500	11.205	40.480	1.00	28.83	L	N
ATOM	1387	CA	THR	L	178	13.783	10.744	41.646	1.00	28.12	L	C
ATOM	1388	C	THR	L	178	14.378	9.497	42.287	1.00	33.56	L	C
ATOM	1389	O	THR	L	178	14.527	8.460	41.644	1.00	34.19	L	O
ATOM	1390	CB	THR	L	178	12.303	10.452	41.288	1.00	29.07	L	C
ATOM	1391	OG1	THR	L	178	11.700	11.620	40.726	1.00	34.69	L	O
ATOM	1392	CG2	THR	L	178	11.526	10.050	42.520	1.00	38.66	L	C
ATOM	1393	N	LEU	L	179	14.717	9.609	43.565	1.00	37.13	L	N
ATOM	1394	CA	LEU	L	179	15.238	8.478	44.313	1.00	37.36	L	C
ATOM	1395	C	LEU	L	179	14.133	8.072	45.294	1.00	38.67	L	C
ATOM	1396	O	LEU	L	179	13.803	8.813	46.219	1.00	46.22	L	O
ATOM	1397	CB	LEU	L	179	16.513	8.852	45.076	1.00	38.33	L	C
ATOM	1398	CG	LEU	L	179	16.937	7.711	46.013	1.00	39.81	L	C
ATOM	1399	CD1	LEU	L	179	16.877	6.398	45.265	1.00	36.12	L	C
ATOM	1400	CD2	LEU	L	179	18.331	7.964	46.568	1.00	42.75	L	C
ATOM	1401	N	THR	L	180	13.549	6.905	45.083	1.00	35.66	L	N
ATOM	1402	CA	THR	L	180	12.478	6.453	45.947	1.00	40.70	L	C
ATOM	1403	C	THR	L	180	13.017	5.573	47.059	1.00	46.91	L	C
ATOM	1404	O	THR	L	180	13.874	4.712	46.828	1.00	55.35	L	O
ATOM	1405	CB	THR	L	180	11.420	5.660	45.155	1.00	42.81	L	C
ATOM	1406	OG1	THR	L	180	10.983	6.437	44.033	1.00	53.11	L	O
ATOM	1407	CG2	THR	L	180	10.227	5.338	46.032	1.00	40.36	L	C
ATOM	1408	N	LEU	L	181	12.502	5.796	48.264	1.00	44.68	L	N
ATOM	1409	CA	LEU	L	181	12.896	5.043	49.440	1.00	38.18	L	C
ATOM	1410	C	LEU	L	181	11.626	4.660	50.161	1.00	42.65	L	C
ATOM	1411	O	LEU	L	181	10.580	5.241	49.917	1.00	47.04	L	O
ATOM	1412	CB	LEU	L	181	13.720	5.920	50.375	1.00	36.56	L	C
ATOM	1413	CG	LEU	L	181	14.854	6.721	49.750	1.00	35.79	L	C
ATOM	1414	CD1	LEU	L	181	15.411	7.699	50.772	1.00	23.79	L	C
ATOM	1415	CD2	LEU	L	181	15.929	5.772	49.243	1.00	48.44	L	C
ATOM	1416	N	THR	L	182	11.716	3.675	51.044	1.00	49.61	L	N
ATOM	1417	CA	THR	L	182	10.571	3.276	51.857	1.00	45.22	L	C
ATOM	1418	C	THR	L	182	10.639	4.266	53.023	1.00	40.89	L	C
ATOM	1419	O	THR	L	182	11.717	4.776	53.336	1.00	41.00	L	O
ATOM	1420	CB	THR	L	182	10.733	1.838	52.423	1.00	47.80	L	C
ATOM	1421	OG1	THR	L	182	11.879	1.786	53.287	1.00	53.75	L	O
ATOM	1422	CG2	THR	L	182	10.914	0.832	51.308	1.00	50.23	L	C
ATOM	1423	N	LYS	L	183	9.507	4.540	53.662	1.00	45.54	L	N
ATOM	1424	CA	LYS	L	183	9.465	5.472	54.793	1.00	48.11	L	C
ATOM	1425	C	LYS	L	183	10.481	5.104	55.898	1.00	51.20	L	C
ATOM	1426	O	LYS	L	183	10.869	5.951	56.711	1.00	49.30	L	O
ATOM	1427	CB	LYS	L	183	8.049	5.521	55.387	1.00	43.28	L	C
ATOM	1428	CG	LYS	L	183	7.840	6.643	56.385	1.00	40.50	L	C
ATOM	1429	CD	LYS	L	183	6.617	6.417	57.255	1.00	66.92	L	C
ATOM	1430	CE	LYS	L	183	6.771	5.152	58.089	1.00	77.94	L	C
ATOM	1431	NZ	LYS	L	183	5.654	4.941	59.056	1.00	73.24	L	N
ATOM	1432	N	ASP	L	184	10.913	3.843	55.917	1.00	52.45	L	N
ATOM	1433	CA	ASP	L	184	11.811	3.416	56.984	1.00	53.02	L	C
ATOM	1434	C	ASP	L	184	13.237	3.930	56.763	1.00	48.73	L	C
ATOM	1435	O	ASP	L	184	13.807	4.649	57.573	1.00	51.85	L	O
ATOM	1436	CB	ASP	L	184	11.809	1.885	57.027	1.00	57.50	L	C
ATOM	1437	CG	ASP	L	184	10.705	1.407	57.960	1.00	71.44	L	C
ATOM	1438	OD1	ASP	L	184	10.099	2.257	58.612	1.00	66.16	L	O
ATOM	1439	OD2	ASP	L	184	10.460	0.205	58.021	1.00	81.91	L	O
ATOM	1440	N	GLU	L	185	13.832	3.497	55.635	1.00	43.10	L	N
ATOM	1441	CA	GLU	L	185	15.185	3.944	55.323	1.00	42.13	L	C
ATOM	1442	C	GLU	L	185	15.286	5.470	55.334	1.00	45.22	L	C
ATOM	1443	O	GLU	L	185	16.246	6.060	55.813	1.00	50.22	L	O
ATOM	1444	CB	GLU	L	185	15.566	3.406	53.943	1.00	43.08	L	C
ATOM	1445	CG	GLU	L	185	16.945	3.889	53.492	1.00	22.88	L	C

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ATOM   1446  CD  GLU L 185      18.015   3.077  54.186  1.00 39.62      L    C
ATOM   1447  OE1 GLU L 185      17.699   2.384  55.144  1.00 47.97      L    O
ATOM   1448  OE2 GLU L 185      19.166   3.140  53.756  1.00 53.07      L    O
ATOM   1449  N   TYR L 186      14.262   6.113  54.741  1.00 42.12      L    N
ATOM   1450  CA  TYR L 186      14.233   7.570  54.754  1.00 40.44      L    C
ATOM   1451  C   TYR L 186      14.366   8.112  56.179  1.00 40.33      L    C
ATOM   1452  O   TYR L 186      15.068   9.081  56.442  1.00 46.64      L    O
ATOM   1453  CB  TYR L 186      12.909   8.028  54.140  1.00 41.32      L    C
ATOM   1454  CG  TYR L 186      12.823   9.514  54.177  1.00 38.85      L    C
ATOM   1455  CD1 TYR L 186      13.822  10.281  53.582  1.00 29.72      L    C
ATOM   1456  CD2 TYR L 186      11.778  10.146  54.851  1.00 37.41      L    C
ATOM   1457  CE1 TYR L 186      13.779  11.665  53.663  1.00 28.90      L    C
ATOM   1458  CE2 TYR L 186      11.740  11.529  54.940  1.00 32.41      L    C
ATOM   1459  CZ  TYR L 186      12.739  12.287  54.358  1.00 30.10      L    C
ATOM   1460  OH  TYR L 186      12.710  13.665  54.446  1.00 42.62      L    O
ATOM   1461  N   GLU L 187      13.695   7.510  57.147  1.00 44.49      L    N
ATOM   1462  CA  GLU L 187      13.790   7.981  58.520  1.00 46.87      L    C
ATOM   1463  C   GLU L 187      15.085   7.549  59.202  1.00 48.70      L    C
ATOM   1464  O   GLU L 187      15.510   8.156  60.176  1.00 50.91      L    O
ATOM   1465  CB  GLU L 187      12.573   7.503  59.306  1.00 42.22      L    C
ATOM   1466  CG  GLU L 187      11.368   8.395  59.085  1.00 62.96      L    C
ATOM   1467  CD  GLU L 187      10.044   7.666  59.223  1.00 86.23      L    C
ATOM   1468  OE1 GLU L 187       9.906   6.832  60.150  1.00 80.19      L    O
ATOM   1469  OE2 GLU L 187       9.135   7.943  58.405  1.00 94.40      L    O
ATOM   1470  N   ARG L 188      15.725   6.512  58.675  1.00 46.28      L    N
ATOM   1471  CA  ARG L 188      16.965   6.029  59.252  1.00 44.52      L    C
ATOM   1472  C   ARG L 188      18.131   6.934  58.890  1.00 46.66      L    C
ATOM   1473  O   ARG L 188      19.235   6.767  59.406  1.00 52.73      L    O
ATOM   1474  CB  ARG L 188      17.269   4.623  58.754  1.00 48.29      L    C
ATOM   1475  CG  ARG L 188      16.216   3.585  59.050  1.00 58.26      L    C
ATOM   1476  CD  ARG L 188      16.723   2.255  58.545  1.00 65.07      L    C
ATOM   1477  NE  ARG L 188      18.049   2.009  59.098  1.00 63.58      L    N
ATOM   1478  CZ  ARG L 188      18.257   1.507  60.307  1.00 66.13      L    C
ATOM   1479  NH1 ARG L 188      17.220   1.187  61.069  1.00 54.33      L    N
ATOM   1480  NH2 ARG L 188      19.496   1.357  60.761  1.00 56.10      L    N
ATOM   1481  N   HIS L 189      17.890   7.882  57.993  1.00 44.20      L    N
ATOM   1482  CA  HIS L 189      18.897   8.764  57.427  1.00 42.62      L    C
ATOM   1483  C   HIS L 189      18.505  10.231  57.645  1.00 45.89      L    C
ATOM   1484  O   HIS L 189      17.414  10.556  58.093  1.00 46.26      L    O
ATOM   1485  CB  HIS L 189      19.037   8.429  55.935  1.00 45.73      L    C
ATOM   1486  CG  HIS L 189      19.693   7.071  55.785  1.00 40.19      L    C
ATOM   1487  ND1 HIS L 189      20.953   6.813  56.208  1.00 51.00      L    N
ATOM   1488  CD2 HIS L 189      19.093   5.857  55.443  1.00 59.83      L    C
ATOM   1489  CE1 HIS L 189      21.100   5.477  56.140  1.00 47.50      L    C
ATOM   1490  NE2 HIS L 189      20.000   4.877  55.685  1.00 61.66      L    N
ATOM   1491  N   ASN L 190      19.455  11.138  57.354  1.00 50.73      L    N
ATOM   1492  CA  ASN L 190      19.221  12.519  57.748  1.00 55.47      L    C
ATOM   1493  C   ASN L 190      19.747  13.531  56.728  1.00 53.43      L    C
ATOM   1494  O   ASN L 190      19.229  14.627  56.573  1.00 62.98      L    O
ATOM   1495  CB  ASN L 190      19.865  12.710  59.122  1.00 57.60      L    C
ATOM   1496  CG  ASN L 190      20.194  14.160  59.395  1.00 71.59      L    C
ATOM   1497  OD1 ASN L 190      19.343  14.991  59.710  1.00 84.26      L    O
ATOM   1498  ND2 ASN L 190      21.512  14.435  59.365  1.00 74.56      L    N
ATOM   1499  N   SER L 191      20.835  13.144  56.039  1.00 48.57      L    N
ATOM   1500  CA  SER L 191      21.348  13.985  54.965  1.00 48.43      L    C
ATOM   1501  C   SER L 191      21.082  13.358  53.597  1.00 48.76      L    C
ATOM   1502  O   SER L 191      21.648  12.330  53.245  1.00 49.95      L    O
ATOM   1503  CB  SER L 191      22.855  14.138  55.160  1.00 48.79      L    C
ATOM   1504  OG  SER L 191      23.356  15.077  54.204  1.00 58.59      L    O
ATOM   1505  N   TYR L 192      20.292  14.056  52.790  1.00 48.13      L    N
ATOM   1506  CA  TYR L 192      20.040  13.643  51.414  1.00 45.11      L    C
ATOM   1507  C   TYR L 192      20.650  14.655  50.465  1.00 42.96      L    C
ATOM   1508  O   TYR L 192      20.321  15.835  50.508  1.00 38.34      L    O
ATOM   1509  CB  TYR L 192      18.537  13.507  51.187  1.00 45.18      L    C
ATOM   1510  CG  TYR L 192      17.948  12.438  52.077  1.00 42.77      L    C
ATOM   1511  CD1 TYR L 192      17.896  12.600  53.459  1.00 22.56      L    C
ATOM   1512  CD2 TYR L 192      17.518  11.239  51.546  1.00 38.31      L    C
ATOM   1513  CE1 TYR L 192      17.442  11.597  54.275  1.00 25.40      L    C
ATOM   1514  CE2 TYR L 192      17.061  10.231  52.357  1.00 44.54      L    C
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ATOM	1515	CZ	TYR	L	192	17.026	10.412	53.718	1.00	37.89	L C
ATOM	1516	OH	TYR	L	192	16.567	9.387	54.500	1.00	32.01	L O
ATOM	1517	N	THR	L	193	21.551	14.175	49.614	1.00	45.21	L N
ATOM	1518	CA	THR	L	193	22.250	15.023	48.673	1.00	45.18	L C
ATOM	1519	C	THR	L	193	22.083	14.665	47.212	1.00	44.18	L C
ATOM	1520	O	THR	L	193	22.091	13.501	46.824	1.00	45.22	L O
ATOM	1521	CB	THR	L	193	23.756	15.056	48.993	1.00	47.97	L C
ATOM	1522	OG1	THR	L	193	24.036	16.172	49.837	1.00	49.86	L O
ATOM	1523	CG2	THR	L	193	24.587	15.168	47.717	1.00	56.55	L C
ATOM	1524	N	CYS	L	194	21.958	15.708	46.407	1.00	45.78	L N
ATOM	1525	CA	CYS	L	194	21.804	15.595	44.971	1.00	45.45	L C
ATOM	1526	C	CYS	L	194	22.924	16.422	44.319	1.00	41.02	L C
ATOM	1527	O	CYS	L	194	23.002	17.627	44.525	1.00	44.64	L O
ATOM	1528	CB	CYS	L	194	20.411	16.118	44.584	1.00	45.40	L C
ATOM	1529	SG	CYS	L	194	20.133	16.300	42.804	1.00	69.21	L S
ATOM	1530	N	GLU	L	195	23.798	15.772	43.551	1.00	39.80	L N
ATOM	1531	CA	GLU	L	195	24.909	16.467	42.893	1.00	42.67	L C
ATOM	1532	C	GLU	L	195	24.837	16.414	41.366	1.00	41.70	L C
ATOM	1533	O	GLU	L	195	24.670	15.347	40.782	1.00	36.42	L O
ATOM	1534	CB	GLU	L	195	26.246	15.869	43.326	1.00	46.01	L C
ATOM	1535	CG	GLU	L	195	26.367	15.583	44.810	1.00	64.77	L C
ATOM	1536	CD	GLU	L	195	27.797	15.282	45.221	1.00	73.00	L C
ATOM	1537	OE1	GLU	L	195	28.569	14.796	44.364	1.00	56.32	L O
ATOM	1538	OE2	GLU	L	195	28.145	15.522	46.401	1.00	72.72	L O
ATOM	1539	N	ALA	L	196	24.990	17.568	40.723	1.00	40.13	L N
ATOM	1540	CA	ALA	L	196	24.938	17.639	39.267	1.00	42.38	L C
ATOM	1541	C	ALA	L	196	26.315	17.873	38.670	1.00	47.42	L C
ATOM	1542	O	ALA	L	196	27.060	18.740	39.123	1.00	45.43	L O
ATOM	1543	CB	ALA	L	196	23.990	18.747	38.827	1.00	40.85	L C
ATOM	1544	N	THR	L	197	26.644	17.096	37.642	1.00	54.27	L N
ATOM	1545	CA	THR	L	197	27.938	17.210	36.976	1.00	56.97	L C
ATOM	1546	C	THR	L	197	27.707	17.576	35.519	1.00	52.12	L C
ATOM	1547	O	THR	L	197	27.154	16.795	34.756	1.00	54.86	L O
ATOM	1548	CB	THR	L	197	28.723	15.879	37.032	1.00	60.44	L C
ATOM	1549	OG1	THR	L	197	28.656	15.329	38.357	1.00	55.79	L O
ATOM	1550	CG2	THR	L	197	30.177	16.113	36.668	1.00	66.98	L C
ATOM	1551	N	HIS	L	198	28.135	18.770	35.141	1.00	52.54	L N
ATOM	1552	CA	HIS	L	198	27.958	19.255	33.783	1.00	49.05	L C
ATOM	1553	C	HIS	L	198	29.244	19.944	33.327	1.00	50.31	L C
ATOM	1554	O	HIS	L	198	29.992	20.490	34.143	1.00	51.38	L O
ATOM	1555	CB	HIS	L	198	26.769	20.226	33.750	1.00	48.32	L C
ATOM	1556	CG	HIS	L	198	26.396	20.692	32.376	1.00	55.90	L C
ATOM	1557	ND1	HIS	L	198	26.284	19.834	31.302	1.00	61.36	L N
ATOM	1558	CD2	HIS	L	198	26.068	21.921	31.912	1.00	45.28	L C
ATOM	1559	CE1	HIS	L	198	25.904	20.515	30.236	1.00	64.72	L C
ATOM	1560	NE2	HIS	L	198	25.764	21.783	30.579	1.00	54.41	L N
ATOM	1561	N	LYS	L	199	29.501	19.917	32.025	1.00	54.03	L N
ATOM	1562	CA	LYS	L	199	30.708	20.526	31.484	1.00	53.00	L C
ATOM	1563	C	LYS	L	199	30.883	21.998	31.851	1.00	55.09	L C
ATOM	1564	O	LYS	L	199	31.990	22.529	31.768	1.00	59.80	L O
ATOM	1565	CB	LYS	L	199	30.735	20.383	29.965	1.00	51.53	L C
ATOM	1566	CG	LYS	L	199	29.631	21.136	29.262	1.00	54.50	L C
ATOM	1567	CD	LYS	L	199	29.886	21.211	27.768	1.00	69.27	L C
ATOM	1568	CE	LYS	L	199	31.152	21.991	27.463	1.00	89.21	L C
ATOM	1569	NZ	LYS	L	199	31.310	22.208	25.993	1.00	98.42	L N
ATOM	1570	N	THR	L	200	29.807	22.662	32.256	1.00	52.50	L N
ATOM	1571	CA	THR	L	200	29.900	24.074	32.613	1.00	55.94	L C
ATOM	1572	C	THR	L	200	30.727	24.351	33.871	1.00	59.72	L C
ATOM	1573	O	THR	L	200	30.788	25.486	34.347	1.00	66.15	L O
ATOM	1574	CB	THR	L	200	28.513	24.686	32.803	1.00	48.37	L C
ATOM	1575	OG1	THR	L	200	27.731	23.834	33.643	1.00	59.04	L O
ATOM	1576	CG2	THR	L	200	27.830	24.864	31.473	1.00	53.65	L C
ATOM	1577	N	SER	L	201	31.359	23.313	34.407	1.00	62.13	L N
ATOM	1578	CA	SER	L	201	32.188	23.453	35.599	1.00	63.39	L C
ATOM	1579	C	SER	L	201	32.916	22.159	35.938	1.00	61.33	L C
ATOM	1580	O	SER	L	201	32.604	21.089	35.409	1.00	60.64	L O
ATOM	1581	CB	SER	L	201	31.341	23.885	36.792	1.00	61.74	L C
ATOM	1582	OG	SER	L	201	30.356	22.917	37.086	1.00	76.78	L O
ATOM	1583	N	THR	L	202	33.892	22.273	36.828	1.00	63.77	L N

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ATOM   1584  CA  THR L 202      34.687  21.131  37.267  1.00 68.80      L    C
ATOM   1585  C   THR L 202      34.141  20.557  38.568  1.00 69.42      L    C
ATOM   1586  O   THR L 202      34.216  19.353  38.808  1.00 69.26      L    O
ATOM   1587  CB  THR L 202      36.158  21.536  37.473  1.00 72.06      L    C
ATOM   1588  OG1 THR L 202      36.217  22.783  38.188  1.00 66.18      L    O
ATOM   1589  CG2 THR L 202      36.861  21.665  36.123  1.00 68.77      L    C
ATOM   1590  N   SER L 203      33.599  21.427  39.409  1.00 71.13      L    N
ATOM   1591  CA  SER L 203      33.020  20.997  40.673  1.00 74.47      L    C
ATOM   1592  C   SER L 203      31.526  20.732  40.462  1.00 71.15      L    C
ATOM   1593  O   SER L 203      30.829  21.524  39.832  1.00 69.36      L    O
ATOM   1594  CB  SER L 203      33.229  22.078  41.743  1.00 76.75      L    C
ATOM   1595  OG  SER L 203      32.825  23.358  41.274  1.00 81.99      L    O
ATOM   1596  N   PRO L 204      31.018  19.605  40.979  1.00 67.69      L    N
ATOM   1597  CA  PRO L 204      29.595  19.297  40.808  1.00 62.61      L    C
ATOM   1598  C   PRO L 204      28.712  20.237  41.606  1.00 56.97      L    C
ATOM   1599  O   PRO L 204      29.052  20.610  42.722  1.00 62.74      L    O
ATOM   1600  CB  PRO L 204      29.493  17.853  41.296  1.00 56.97      L    C
ATOM   1601  CG  PRO L 204      30.502  17.821  42.393  1.00 66.29      L    C
ATOM   1602  CD  PRO L 204      31.687  18.554  41.765  1.00 70.41      L    C
ATOM   1603  N   ILE L 205      27.588  20.627  41.016  1.00 51.68      L    N
ATOM   1604  CA  ILE L 205      26.640  21.509  41.678  1.00 46.32      L    C
ATOM   1605  C   ILE L 205      25.886  20.662  42.696  1.00 45.80      L    C
ATOM   1606  O   ILE L 205      25.086  19.801  42.333  1.00 40.05      L    O
ATOM   1607  CB  ILE L 205      25.656  22.094  40.672  1.00 45.71      L    C
ATOM   1608  CG1 ILE L 205      26.431  22.817  39.578  1.00 42.60      L    C
ATOM   1609  CG2 ILE L 205      24.694  23.039  41.371  1.00 48.15      L    C
ATOM   1610  CD1 ILE L 205      25.549  23.579  38.620  1.00 57.30      L    C
ATOM   1611  N   VAL L 206      26.147  20.909  43.972  1.00 42.27      L    N
ATOM   1612  CA  VAL L 206      25.525  20.118  45.017  1.00 45.01      L    C
ATOM   1613  C   VAL L 206      24.378  20.803  45.743  1.00 43.48      L    C
ATOM   1614  O   VAL L 206      24.465  21.965  46.114  1.00 54.37      L    O
ATOM   1615  CB  VAL L 206      26.584  19.666  46.058  1.00 42.29      L    C
ATOM   1616  CG1 VAL L 206      25.967  18.715  47.046  1.00 48.63      L    C
ATOM   1617  CG2 VAL L 206      27.750  18.992  45.358  1.00 38.47      L    C
ATOM   1618  N   LYS L 207      23.296  20.064  45.931  1.00 41.43      L    N
ATOM   1619  CA  LYS L 207      22.130  20.569  46.631  1.00 45.71      L    C
ATOM   1620  C   LYS L 207      21.689  19.478  47.584  1.00 45.03      L    C
ATOM   1621  O   LYS L 207      21.695  18.302  47.238  1.00 46.04      L    O
ATOM   1622  CB  LYS L 207      21.003  20.886  45.654  1.00 49.37      L    C
ATOM   1623  CG  LYS L 207      21.283  22.063  44.750  1.00 55.07      L    C
ATOM   1624  CD  LYS L 207      21.395  23.357  45.532  1.00 64.96      L    C
ATOM   1625  CE  LYS L 207      21.738  24.505  44.598  1.00 71.81      L    C
ATOM   1626  NZ  LYS L 207      21.872  25.798  45.310  1.00 78.53      L    N
ATOM   1627  N   SER L 208      21.296  19.859  48.787  1.00 44.02      L    N
ATOM   1628  CA  SER L 208      20.889  18.856  49.747  1.00 49.80      L    C
ATOM   1629  C   SER L 208      20.149  19.432  50.931  1.00 50.94      L    C
ATOM   1630  O   SER L 208      20.203  20.627  51.198  1.00 53.70      L    O
ATOM   1631  CB  SER L 208      22.117  18.103  50.243  1.00 53.51      L    C
ATOM   1632  OG  SER L 208      23.078  19.005  50.763  1.00 59.07      L    O
ATOM   1633  N   PHE L 209      19.466  18.550  51.646  1.00 51.91      L    N
ATOM   1634  CA  PHE L 209      18.711  18.933  52.822  1.00 51.34      L    C
ATOM   1635  C   PHE L 209      18.914  17.894  53.923  1.00 49.64      L    C
ATOM   1636  O   PHE L 209      19.453  16.815  53.688  1.00 54.59      L    O
ATOM   1637  CB  PHE L 209      17.227  19.038  52.464  1.00 49.20      L    C
ATOM   1638  CG  PHE L 209      16.602  17.728  52.091  1.00 46.90      L    C
ATOM   1639  CD1 PHE L 209      16.194  16.836  53.064  1.00 37.57      L    C
ATOM   1640  CD2 PHE L 209      16.434  17.380  50.761  1.00 53.34      L    C
ATOM   1641  CE1 PHE L 209      15.630  15.625  52.714  1.00 47.31      L    C
ATOM   1642  CE2 PHE L 209      15.870  16.172  50.411  1.00 36.37      L    C
ATOM   1643  CZ  PHE L 209      15.469  15.296  51.386  1.00 34.65      L    C
ATOM   1644  N   ASN L 210      18.487  18.228  55.131  1.00 49.60      L    N
ATOM   1645  CA  ASN L 210      18.588  17.302  56.242  1.00 46.61      L    C
ATOM   1646  C   ASN L 210      17.193  17.008  56.761  1.00 48.63      L    C
ATOM   1647  O   ASN L 210      16.450  17.912  57.130  1.00 43.72      L    O
ATOM   1648  CB  ASN L 210      19.462  17.888  57.343  1.00 42.76      L    C
ATOM   1649  CG  ASN L 210      20.935  17.681  57.073  1.00 60.02      L    C
ATOM   1650  OD1 ASN L 210      21.635  17.059  57.864  1.00 69.23      L    O
ATOM   1651  ND2 ASN L 210      21.410  18.185  55.935  1.00 75.72      L    N
ATOM   1652  N   ARG L 211      16.835  15.732  56.762  1.00 50.53      L    N
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ATOM   1653  CA  ARG L 211      15.531  15.302  57.231  1.00 54.11      L    C
ATOM   1654  C   ARG L 211      15.280  15.835  58.631  1.00 62.11      L    C
ATOM   1655  O   ARG L 211      14.147  16.169  58.983  1.00 63.88      L    O
ATOM   1656  CB  ARG L 211      15.468  13.781  57.247  1.00 53.56      L    C
ATOM   1657  CG  ARG L 211      14.114  13.211  57.586  1.00 44.47      L    C
ATOM   1658  CD  ARG L 211      14.210  11.713  57.614  1.00 54.91      L    C
ATOM   1659  NE  ARG L 211      15.231  11.291  58.565  1.00 58.23      L    N
ATOM   1660  CZ  ARG L 211      15.003  11.066  59.855  1.00 72.82      L    C
ATOM   1661  NH1 ARG L 211      13.779  11.217  60.349  1.00 73.06      L    N
ATOM   1662  NH2 ARG L 211      16.001  10.703  60.653  1.00 62.59      L    N
ATOM   1663  OXT ARG L 211      16.349  15.915  59.421  1.00 69.05      L    O
TER    1664       ARG L 211
ATOM   1665  N   GLU H   1    -11.229  28.751  10.621  1.00 71.36      H    N
ATOM   1666  CA  GLU H   1    -10.037  28.156  11.214  1.00 65.32      H    C
ATOM   1667  C   GLU H   1    -10.186  26.642  11.378  1.00 58.26      H    C
ATOM   1668  O   GLU H   1    -10.717  26.147  12.364  1.00 57.65      H    O
ATOM   1669  CB  GLU H   1     -9.807  28.808  12.578  1.00 63.19      H    C
ATOM   1670  CG  GLU H   1     -9.166  27.849  13.582  1.00 71.03      H    C
ATOM   1671  CD  GLU H   1     -9.800  28.047  14.940  1.00 87.73      H    C
ATOM   1672  OE1 GLU H   1     -9.507  29.044  15.584  1.00 95.88      H    O
ATOM   1673  OE2 GLU H   1    -10.586  27.192  15.346  1.00 96.84      H    O
ATOM   1674  N   VAL H   2     -9.728  25.874  10.404  1.00 56.34      H    N
ATOM   1675  CA  VAL H   2     -9.825  24.427  10.381  1.00 45.11      H    C
ATOM   1676  C   VAL H   2     -9.533  23.838  11.759  1.00 40.35      H    C
ATOM   1677  O   VAL H   2     -8.616  24.234  12.465  1.00 44.32      H    O
ATOM   1678  CB  VAL H   2     -8.839  23.903   9.338  1.00 46.79      H    C
ATOM   1679  CG1 VAL H   2     -8.720  22.384   9.446  1.00 37.72      H    C
ATOM   1680  CG2 VAL H   2     -9.339  24.265   7.948  1.00 32.94      H    C
ATOM   1681  N   LYS H   3    -10.391  22.889  12.155  1.00 39.63      H    N
ATOM   1682  CA  LYS H   3    -10.299  22.350  13.496  1.00 40.75      H    C
ATOM   1683  C   LYS H   3    -10.578  20.850  13.492  1.00 38.29      H    C
ATOM   1684  O   LYS H   3    -11.632  20.381  13.091  1.00 46.18      H    O
ATOM   1685  CB  LYS H   3    -11.363  23.068  14.323  1.00 42.35      H    C
ATOM   1686  CG  LYS H   3    -11.099  23.026  15.829  1.00 53.48      H    C
ATOM   1687  CD  LYS H   3    -12.072  23.935  16.584  1.00 97.53      H    C
ATOM   1688  CE  LYS H   3    -12.025  23.731  18.102  1.00126.21      H    C
ATOM   1689  NZ  LYS H   3    -12.982  24.629  18.743  1.00139.14      H    N
ATOM   1690  N   LEU H   4     -9.564  20.084  13.906  1.00 36.69      H    N
ATOM   1691  CA  LEU H   4     -9.766  18.650  13.973  1.00 31.82      H    C
ATOM   1692  C   LEU H   4     -9.672  18.147  15.411  1.00 36.95      H    C
ATOM   1693  O   LEU H   4     -8.625  18.185  16.044  1.00 35.06      H    O
ATOM   1694  CB  LEU H   4     -8.723  17.970  13.083  1.00 27.41      H    C
ATOM   1695  CG  LEU H   4     -8.916  18.323  11.603  1.00 23.69      H    C
ATOM   1696  CD1 LEU H   4     -7.819  17.725  10.718  1.00 29.88      H    C
ATOM   1697  CD2 LEU H   4    -10.246  17.817  11.041  1.00 23.22      H    C
ATOM   1698  N   VAL H   5    -10.765  17.696  16.007  1.00 43.69      H    N
ATOM   1699  CA  VAL H   5    -10.733  17.251  17.385  1.00 41.35      H    C
ATOM   1700  C   VAL H   5    -11.037  15.772  17.453  1.00 38.94      H    C
ATOM   1701  O   VAL H   5    -12.140  15.350  17.142  1.00 42.95      H    O
ATOM   1702  CB  VAL H   5    -11.757  18.027  18.225  1.00 37.98      H    C
ATOM   1703  CG1 VAL H   5    -11.835  17.437  19.607  1.00 40.24      H    C
ATOM   1704  CG2 VAL H   5    -11.357  19.487  18.296  1.00 32.84      H    C
ATOM   1705  N   GLU H   6    -10.044  14.987  17.842  1.00 38.45      H    N
ATOM   1706  CA  GLU H   6    -10.251  13.552  18.025  1.00 43.30      H    C
ATOM   1707  C   GLU H   6    -10.849  13.238  19.398  1.00 47.18      H    C
ATOM   1708  O   GLU H   6    -11.081  14.111  20.225  1.00 53.60      H    O
ATOM   1709  CB  GLU H   6     -8.899  12.855  17.872  1.00 38.50      H    C
ATOM   1710  CG  GLU H   6     -8.397  12.874  16.428  1.00 34.54      H    C
ATOM   1711  CD  GLU H   6     -7.318  13.922  16.284  1.00 28.64      H    C
ATOM   1712  OE1 GLU H   6     -6.427  13.847  15.454  1.00 39.15      H    O
ATOM   1713  OE2 GLU H   6     -7.420  14.934  17.168  1.00 29.23      H    O
ATOM   1714  N   SER H   7    -11.141  11.940  19.613  1.00 51.21      H    N
ATOM   1715  CA  SER H   7    -11.734  11.542  20.886  1.00 53.01      H    C
ATOM   1716  C   SER H   7    -12.123  10.061  20.902  1.00 53.06      H    C
ATOM   1717  O   SER H   7    -12.030   9.347  19.912  1.00 44.63      H    O
ATOM   1718  CB  SER H   7    -12.975  12.403  21.122  1.00 54.35      H    C
ATOM   1719  OG  SER H   7    -13.927  12.149  20.088  1.00 45.65      H    O
ATOM   1720  N   GLY H   8    -12.533   9.597  22.098  1.00 55.02      H    N
ATOM   1721  CA  GLY H   8    -12.996   8.217  22.227  1.00 56.76      H    C
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ATOM   1722  C   GLY H   8     -11.834   7.227  22.355  1.00 53.98      H    C
ATOM   1723  O   GLY H   8     -11.927   6.062  21.992  1.00 55.04      H    O
ATOM   1724  N   GLY H   9     -10.697   7.741  22.861  1.00 48.90      H    N
ATOM   1725  CA  GLY H   9      -9.519   6.888  22.992  1.00 49.84      H    C
ATOM   1726  C   GLY H   9      -9.206   6.567  24.456  1.00 53.72      H    C
ATOM   1727  O   GLY H   9      -9.129   7.434  25.316  1.00 60.05      H    O
ATOM   1728  N   GLY H  10      -9.060   5.256  24.731  1.00 47.72      H    N
ATOM   1729  CA  GLY H  10      -8.739   4.834  26.090  1.00 52.62      H    C
ATOM   1730  C   GLY H  10      -7.985   3.502  26.101  1.00 53.34      H    C
ATOM   1731  O   GLY H  10      -7.434   3.054  25.105  1.00 53.79      H    O
ATOM   1732  N   LEU H  11      -7.938   2.883  27.295  1.00 51.02      H    N
ATOM   1733  CA  LEU H  11      -7.249   1.610  27.428  1.00 42.34      H    C
ATOM   1734  C   LEU H  11      -8.119   0.453  26.940  1.00 43.65      H    C
ATOM   1735  O   LEU H  11      -9.337   0.448  27.066  1.00 44.21      H    O
ATOM   1736  CB  LEU H  11      -6.895   1.413  28.903  1.00 50.20      H    C
ATOM   1737  CG  LEU H  11      -6.087   0.137  29.144  1.00 36.24      H    C
ATOM   1738  CD1 LEU H  11      -4.725   0.166  28.443  1.00 43.75      H    C
ATOM   1739  CD2 LEU H  11      -5.801  -0.113  30.625  1.00 59.31      H    C
ATOM   1740  N   VAL H  12      -7.453  -0.533  26.324  1.00 42.94      H    N
ATOM   1741  CA  VAL H  12      -8.179  -1.712  25.883  1.00 43.16      H    C
ATOM   1742  C   VAL H  12      -7.340  -2.973  26.063  1.00 47.66      H    C
ATOM   1743  O   VAL H  12      -6.127  -2.931  26.226  1.00 57.83      H    O
ATOM   1744  CB  VAL H  12      -8.535  -1.535  24.407  1.00 40.29      H    C
ATOM   1745  CG1 VAL H  12      -9.134  -2.832  23.862  1.00 46.80      H    C
ATOM   1746  CG2 VAL H  12      -9.542  -0.414  24.245  1.00 49.39      H    C
ATOM   1747  N   LYS H  13      -8.035  -4.121  26.078  1.00 45.71      H    N
ATOM   1748  CA  LYS H  13      -7.316  -5.381  26.174  1.00 43.89      H    C
ATOM   1749  C   LYS H  13      -7.121  -6.008  24.793  1.00 40.39      H    C
ATOM   1750  O   LYS H  13      -7.975  -5.934  23.920  1.00 46.98      H    O
ATOM   1751  CB  LYS H  13      -8.117  -6.324  27.071  1.00 45.28      H    C
ATOM   1752  CG  LYS H  13      -7.818  -6.100  28.554  1.00 67.37      H    C
ATOM   1753  CD  LYS H  13      -8.511  -4.851  29.102  1.00 88.33      H    C
ATOM   1754  CE  LYS H  13      -7.655  -4.105  30.133  1.00 80.99      H    C
ATOM   1755  NZ  LYS H  13      -6.458  -3.569  29.486  1.00 58.40      H    N
ATOM   1756  N   PRO H  14      -5.976  -6.651  24.544  1.00 38.88      H    N
ATOM   1757  CA  PRO H  14      -5.784  -7.265  23.231  1.00 38.32      H    C
ATOM   1758  C   PRO H  14      -6.971  -8.123  22.837  1.00 44.46      H    C
ATOM   1759  O   PRO H  14      -7.434  -8.952  23.617  1.00 52.99      H    O
ATOM   1760  CB  PRO H  14      -4.496  -8.076  23.401  1.00 37.38      H    C
ATOM   1761  CG  PRO H  14      -4.370  -8.249  24.877  1.00 40.42      H    C
ATOM   1762  CD  PRO H  14      -4.849  -6.948  25.435  1.00 35.01      H    C
ATOM   1763  N   GLY H  15      -7.466  -7.903  21.624  1.00 45.67      H    N
ATOM   1764  CA  GLY H  15      -8.601  -8.653  21.119  1.00 39.69      H    C
ATOM   1765  C   GLY H  15      -9.828  -7.770  21.103  1.00 42.73      H    C
ATOM   1766  O   GLY H  15     -10.789  -8.044  20.389  1.00 43.42      H    O
ATOM   1767  N   GLY H  16      -9.782  -6.688  21.875  1.00 44.16      H    N
ATOM   1768  CA  GLY H  16     -10.913  -5.781  21.952  1.00 43.39      H    C
ATOM   1769  C   GLY H  16     -11.219  -4.862  20.775  1.00 45.04      H    C
ATOM   1770  O   GLY H  16     -10.566  -4.890  19.721  1.00 34.85      H    O
ATOM   1771  N   SER H  17     -12.238  -4.030  20.986  1.00 45.85      H    N
ATOM   1772  CA  SER H  17     -12.700  -3.076  19.994  1.00 44.23      H    C
ATOM   1773  C   SER H  17     -12.735  -1.670  20.566  1.00 42.88      H    C
ATOM   1774  O   SER H  17     -12.910  -1.477  21.762  1.00 43.45      H    O
ATOM   1775  CB  SER H  17     -14.090  -3.463  19.513  1.00 44.97      H    C
ATOM   1776  OG  SER H  17     -14.056  -4.768  18.969  1.00 64.66      H    O
ATOM   1777  N   LEU H  18     -12.582  -0.690  19.688  1.00 43.61      H    N
ATOM   1778  CA  LEU H  18     -12.573   0.704  20.084  1.00 42.03      H    C
ATOM   1779  C   LEU H  18     -13.007   1.516  18.861  1.00 39.52      H    C
ATOM   1780  O   LEU H  18     -12.778   1.094  17.721  1.00 39.63      H    O
ATOM   1781  CB  LEU H  18     -11.155   1.083  20.512  1.00 43.41      H    C
ATOM   1782  CG  LEU H  18     -10.925   2.488  21.051  1.00 42.39      H    C
ATOM   1783  CD1 LEU H  18     -11.722   2.666  22.321  1.00 43.36      H    C
ATOM   1784  CD2 LEU H  18      -9.449   2.701  21.308  1.00 59.30      H    C
ATOM   1785  N   LYS H  19     -13.640   2.665  19.090  1.00 36.47      H    N
ATOM   1786  CA  LYS H  19     -13.988   3.483  17.933  1.00 42.76      H    C
ATOM   1787  C   LYS H  19     -13.744   4.971  18.198  1.00 40.99      H    C
ATOM   1788  O   LYS H  19     -14.288   5.562  19.121  1.00 42.24      H    O
ATOM   1789  CB  LYS H  19     -15.465   3.247  17.608  1.00 43.96      H    C
ATOM   1790  CG  LYS H  19     -15.854   3.803  16.236  1.00 56.00      H    C
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ATOM   1791  CD  LYS H  19     -17.256   4.416  16.235  1.00 45.68      H    C
ATOM   1792  CE  LYS H  19     -18.247   3.614  15.384  1.00 59.48      H    C
ATOM   1793  NZ  LYS H  19     -19.100   4.529  14.629  1.00 51.55      H    N
ATOM   1794  N   LEU H  20     -13.082   5.326  17.249  1.00 39.79      H    N
ATOM   1795  CA  LEU H  20     -12.538   6.662  17.450  1.00 36.68      H    C
ATOM   1796  C   LEU H  20     -13.376   7.653  16.679  1.00 34.74      H    C
ATOM   1797  O   LEU H  20     -14.020   7.303  15.694  1.00 33.37      H    O
ATOM   1798  CB  LEU H  20     -11.096   6.779  16.945  1.00 40.64      H    C
ATOM   1799  CG  LEU H  20      -9.905   6.022  17.535  1.00 41.11      H    C
ATOM   1800  CD1 LEU H  20      -8.614   6.271  16.759  1.00 61.71      H    C
ATOM   1801  CD2 LEU H  20      -9.778   6.454  18.977  1.00 35.59      H    C
ATOM   1802  N   SER H  21     -13.497   9.005  16.927  1.00 33.19      H    N
ATOM   1803  CA  SER H  21     -14.281   9.919  16.122  1.00 40.56      H    C
ATOM   1804  C   SER H  21     -13.489  11.202  15.983  1.00 42.41      H    C
ATOM   1805  O   SER H  21     -12.563  11.461  16.753  1.00 44.66      H    O
ATOM   1806  CB  SER H  21     -15.634  10.204  16.768  1.00 34.42      H    C
ATOM   1807  OG  SER H  21     -15.449  10.839  18.008  1.00 46.92      H    O
ATOM   1808  N   CYS H  22     -13.846  11.997  14.988  1.00 37.06      H    N
ATOM   1809  CA  CYS H  22     -13.155  13.242  14.739  1.00 38.14      H    C
ATOM   1810  C   CYS H  22     -14.158  14.285  14.346  1.00 31.54      H    C
ATOM   1811  O   CYS H  22     -14.810  14.172  13.318  1.00 30.64      H    O
ATOM   1812  CB  CYS H  22     -12.135  13.057  13.612  1.00 43.73      H    C
ATOM   1813  SG  CYS H  22     -11.198  14.513  13.004  1.00 55.55      H    S
ATOM   1814  N   ALA H  23     -14.284  15.298  15.190  1.00 32.03      H    N
ATOM   1815  CA  ALA H  23     -15.187  16.402  14.926  1.00 31.56      H    C
ATOM   1816  C   ALA H  23     -14.445  17.364  14.002  1.00 39.56      H    C
ATOM   1817  O   ALA H  23     -13.378  17.893  14.348  1.00 37.69      H    O
ATOM   1818  CB  ALA H  23     -15.552  17.089  16.220  1.00 38.17      H    C
ATOM   1819  N   ALA H  24     -14.992  17.572  12.814  1.00 36.81      H    N
ATOM   1820  CA  ALA H  24     -14.362  18.465  11.867  1.00 31.76      H    C
ATOM   1821  C   ALA H  24     -15.091  19.800  11.857  1.00 34.30      H    C
ATOM   1822  O   ALA H  24     -16.200  19.910  12.368  1.00 42.66      H    O
ATOM   1823  CB  ALA H  24     -14.379  17.836  10.481  1.00 29.25      H    C
ATOM   1824  N   SER H  25     -14.456  20.811  11.275  1.00 45.22      H    N
ATOM   1825  CA  SER H  25     -15.040  22.146  11.173  1.00 45.48      H    C
ATOM   1826  C   SER H  25     -14.022  23.142  10.638  1.00 45.04      H    C
ATOM   1827  O   SER H  25     -12.823  22.995  10.862  1.00 48.34      H    O
ATOM   1828  CB  SER H  25     -15.509  22.637  12.535  1.00 45.05      H    C
ATOM   1829  OG  SER H  25     -14.401  22.994  13.327  1.00 38.97      H    O
ATOM   1830  N   GLY H  26     -14.510  24.163   9.943  1.00 43.04      H    N
ATOM   1831  CA  GLY H  26     -13.627  25.181   9.417  1.00 36.80      H    C
ATOM   1832  C   GLY H  26     -13.361  24.980   7.951  1.00 38.49      H    C
ATOM   1833  O   GLY H  26     -12.549  25.684   7.362  1.00 52.85      H    O
ATOM   1834  N   PHE H  27     -14.035  24.007   7.356  1.00 37.93      H    N
ATOM   1835  CA  PHE H  27     -13.856  23.745   5.946  1.00 34.05      H    C
ATOM   1836  C   PHE H  27     -15.015  22.930   5.427  1.00 36.91      H    C
ATOM   1837  O   PHE H  27     -15.759  22.343   6.206  1.00 39.00      H    O
ATOM   1838  CB  PHE H  27     -12.522  23.017   5.670  1.00 33.34      H    C
ATOM   1839  CG  PHE H  27     -12.394  21.675   6.329  1.00 17.41      H    C
ATOM   1840  CD1 PHE H  27     -12.133  21.570   7.691  1.00 25.29      H    C
ATOM   1841  CD2 PHE H  27     -12.547  20.512   5.586  1.00 15.22      H    C
ATOM   1842  CE1 PHE H  27     -12.030  20.319   8.304  1.00 21.74      H    C
ATOM   1843  CE2 PHE H  27     -12.447  19.265   6.188  1.00  8.67      H    C
ATOM   1844  CZ  PHE H  27     -12.188  19.167   7.547  1.00 16.97      H    C
ATOM   1845  N   THR H  28     -15.168  22.907   4.108  1.00 38.20      H    N
ATOM   1846  CA  THR H  28     -16.238  22.176   3.457  1.00 35.35      H    C
ATOM   1847  C   THR H  28     -15.956  20.675   3.520  1.00 35.62      H    C
ATOM   1848  O   THR H  28     -15.657  20.042   2.510  1.00 41.35      H    O
ATOM   1849  CB  THR H  28     -16.349  22.645   2.007  1.00 37.46      H    C
ATOM   1850  OG1 THR H  28     -16.428  24.074   1.989  1.00 41.29      H    O
ATOM   1851  CG2 THR H  28     -17.575  22.066   1.340  1.00 44.03      H    C
ATOM   1852  N   PHE H  29     -16.063  20.130   4.728  1.00 34.25      H    N
ATOM   1853  CA  PHE H  29     -15.818  18.721   5.042  1.00 34.22      H    C
ATOM   1854  C   PHE H  29     -16.163  17.674   3.979  1.00 34.25      H    C
ATOM   1855  O   PHE H  29     -15.391  16.755   3.730  1.00 47.37      H    O
ATOM   1856  CB  PHE H  29     -16.530  18.390   6.356  1.00 33.13      H    C
ATOM   1857  CG  PHE H  29     -16.417  16.954   6.771  1.00 30.33      H    C
ATOM   1858  CD1 PHE H  29     -17.427  16.055   6.481  1.00 33.76      H    C
ATOM   1859  CD2 PHE H  29     -15.298  16.505   7.462  1.00 38.72      H    C
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ATOM   1860  CE1 PHE H  29     -17.325  14.740   6.872  1.00 41.24      H    C
ATOM   1861  CE2 PHE H  29     -15.189  15.193   7.855  1.00 25.21      H    C
ATOM   1862  CZ  PHE H  29     -16.205  14.307   7.560  1.00 31.25      H    C
ATOM   1863  N   ILE H  30     -17.316  17.813   3.347  1.00 35.57      H    N
ATOM   1864  CA  ILE H  30     -17.752  16.875   2.324  1.00 36.50      H    C
ATOM   1865  C   ILE H  30     -16.860  16.824   1.080  1.00 38.95      H    C
ATOM   1866  O   ILE H  30     -16.809  15.809   0.376  1.00 40.39      H    O
ATOM   1867  CB  ILE H  30     -19.182  17.220   1.867  1.00 36.84      H    C
ATOM   1868  CG1 ILE H  30     -19.637  16.259   0.770  1.00 35.17      H    C
ATOM   1869  CG2 ILE H  30     -19.225  18.663   1.356  1.00 36.84      H    C
ATOM   1870  CD1 ILE H  30     -21.038  16.515   0.308  1.00 43.88      H    C
ATOM   1871  N   SER H  31     -16.153  17.907   0.795  1.00 33.28      H    N
ATOM   1872  CA  SER H  31     -15.332  17.915  -0.403  1.00 37.16      H    C
ATOM   1873  C   SER H  31     -13.914  17.386  -0.236  1.00 38.76      H    C
ATOM   1874  O   SER H  31     -13.159  17.306  -1.208  1.00 39.05      H    O
ATOM   1875  CB  SER H  31     -15.304  19.319  -1.010  1.00 33.72      H    C
ATOM   1876  OG  SER H  31     -16.600  19.717  -1.417  1.00 41.28      H    O
ATOM   1877  N   TYR H  32     -13.570  17.001   0.988  1.00 37.10      H    N
ATOM   1878  CA  TYR H  32     -12.240  16.483   1.273  1.00 35.92      H    C
ATOM   1879  C   TYR H  32     -12.172  14.998   1.621  1.00 35.75      H    C
ATOM   1880  O   TYR H  32     -13.125  14.414   2.126  1.00 35.07      H    O
ATOM   1881  CB  TYR H  32     -11.622  17.265   2.419  1.00 31.81      H    C
ATOM   1882  CG  TYR H  32     -11.220  18.657   2.056  1.00 31.67      H    C
ATOM   1883  CD1 TYR H  32     -10.063  18.895   1.343  1.00 40.11      H    C
ATOM   1884  CD2 TYR H  32     -11.997  19.735   2.418  1.00 27.93      H    C
ATOM   1885  CE1 TYR H  32      -9.692  20.165   0.998  1.00 30.26      H    C
ATOM   1886  CE2 TYR H  32     -11.633  21.001   2.082  1.00 43.25      H    C
ATOM   1887  CZ  TYR H  32     -10.475  21.214   1.368  1.00 39.71      H    C
ATOM   1888  OH  TYR H  32     -10.103  22.493   1.026  1.00 65.73      H    O
ATOM   1889  N   ALA H  33     -11.024  14.399   1.326  1.00 33.25      H    N
ATOM   1890  CA  ALA H  33     -10.781  13.010   1.657  1.00 35.61      H    C
ATOM   1891  C   ALA H  33     -10.282  13.125   3.084  1.00 36.27      H    C
ATOM   1892  O   ALA H  33      -9.672  14.131   3.446  1.00 31.77      H    O
ATOM   1893  CB  ALA H  33      -9.707  12.433   0.779  1.00 28.41      H    C
ATOM   1894  N   MET H  34     -10.556  12.116   3.899  1.00 33.27      H    N
ATOM   1895  CA  MET H  34     -10.120  12.147   5.283  1.00 28.49      H    C
ATOM   1896  C   MET H  34      -9.231  10.958   5.555  1.00 28.00      H    C
ATOM   1897  O   MET H  34      -9.373   9.917   4.921  1.00 27.81      H    O
ATOM   1898  CB  MET H  34     -11.324  12.147   6.226  1.00 31.24      H    C
ATOM   1899  CG  MET H  34     -12.122  13.436   6.180  1.00 30.32      H    C
ATOM   1900  SD  MET H  34     -11.099  14.933   6.419  1.00 39.20      H    S
ATOM   1901  CE  MET H  34     -10.854  14.939   8.175  1.00 17.55      H    C
ATOM   1902  N   SER H  35      -8.308  11.113   6.497  1.00 28.90      H    N
ATOM   1903  CA  SER H  35      -7.391  10.035   6.808  1.00 24.89      H    C
ATOM   1904  C   SER H  35      -7.009   9.890   8.265  1.00 33.44      H    C
ATOM   1905  O   SER H  35      -7.102  10.828   9.045  1.00 35.02      H    O
ATOM   1906  CB  SER H  35      -6.118  10.200   5.990  1.00 21.68      H    C
ATOM   1907  OG  SER H  35      -6.378  10.012   4.612  1.00 32.05      H    O
ATOM   1908  N   TRP H  36      -6.591   8.686   8.631  1.00 34.43      H    N
ATOM   1909  CA  TRP H  36      -6.130   8.441   9.980  1.00 31.01      H    C
ATOM   1910  C   TRP H  36      -4.651   8.041   9.863  1.00 33.80      H    C
ATOM   1911  O   TRP H  36      -4.286   7.210   9.029  1.00 38.52      H    O
ATOM   1912  CB  TRP H  36      -6.945   7.324  10.643  1.00 30.03      H    C
ATOM   1913  CG  TRP H  36      -8.340   7.724  11.080  1.00 24.72      H    C
ATOM   1914  CD1 TRP H  36      -9.498   7.546  10.386  1.00 25.13      H    C
ATOM   1915  CD2 TRP H  36      -8.710   8.348  12.319  1.00 27.37      H    C
ATOM   1916  NE1 TRP H  36     -10.565   8.016  11.112  1.00 29.30      H    N
ATOM   1917  CE2 TRP H  36     -10.109   8.512  12.303  1.00 25.16      H    C
ATOM   1918  CE3 TRP H  36      -7.994   8.780  13.443  1.00 32.09      H    C
ATOM   1919  CZ2 TRP H  36     -10.809   9.089  13.365  1.00 22.18      H    C
ATOM   1920  CZ3 TRP H  36      -8.687   9.355  14.501  1.00 17.43      H    C
ATOM   1921  CH2 TRP H  36     -10.081   9.502  14.454  1.00 18.64      H    C
ATOM   1922  N   VAL H  37      -3.802   8.664  10.670  1.00 28.90      H    N
ATOM   1923  CA  VAL H  37      -2.369   8.367  10.672  1.00 28.13      H    C
ATOM   1924  C   VAL H  37      -1.922   8.214  12.115  1.00 27.45      H    C
ATOM   1925  O   VAL H  37      -2.258   9.032  12.968  1.00 32.69      H    O
ATOM   1926  CB  VAL H  37      -1.537   9.507  10.052  1.00 23.26      H    C
ATOM   1927  CG1 VAL H  37      -0.087   9.102   9.998  1.00 29.09      H    C
ATOM   1928  CG2 VAL H  37      -2.043   9.846   8.670  1.00 31.03      H    C
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ATOM   1929  N   ARG H  38      -1.164   7.178  12.414  1.00 26.98      H    N
ATOM   1930  CA  ARG H  38      -0.736   7.018  13.796  1.00 31.26      H    C
ATOM   1931  C   ARG H  38       0.766   7.128  13.979  1.00 34.92      H    C
ATOM   1932  O   ARG H  38       1.539   7.100  13.011  1.00 36.42      H    O
ATOM   1933  CB  ARG H  38      -1.218   5.685  14.357  1.00 30.82      H    C
ATOM   1934  CG  ARG H  38      -0.548   4.505  13.732  1.00 32.29      H    C
ATOM   1935  CD  ARG H  38      -1.297   3.253  14.078  1.00 31.61      H    C
ATOM   1936  NE  ARG H  38      -0.684   2.082  13.471  1.00 45.30      H    N
ATOM   1937  CZ  ARG H  38      -1.174   0.855  13.568  1.00 49.14      H    C
ATOM   1938  NH1 ARG H  38      -2.288   0.648  14.256  1.00 44.29      H    N
ATOM   1939  NH2 ARG H  38      -0.556  -0.155  12.971  1.00 39.29      H    N
ATOM   1940  N   GLN H  39       1.161   7.297  15.237  1.00 34.35      H    N
ATOM   1941  CA  GLN H  39       2.564   7.394  15.600  1.00 36.21      H    C
ATOM   1942  C   GLN H  39       2.768   6.396  16.714  1.00 32.94      H    C
ATOM   1943  O   GLN H  39       2.097   6.442  17.739  1.00 36.86      H    O
ATOM   1944  CB  GLN H  39       2.902   8.804  16.073  1.00 35.48      H    C
ATOM   1945  CG  GLN H  39       4.375   9.038  16.273  1.00 40.46      H    C
ATOM   1946  CD  GLN H  39       4.718  10.507  16.381  1.00 30.97      H    C
ATOM   1947  OE1 GLN H  39       4.023  11.276  17.039  1.00 46.87      H    O
ATOM   1948  NE2 GLN H  39       5.798  10.903  15.742  1.00 39.13      H    N
ATOM   1949  N   THR H  40       3.681   5.468  16.498  1.00 32.21      H    N
ATOM   1950  CA  THR H  40       3.951   4.444  17.485  1.00 26.95      H    C
ATOM   1951  C   THR H  40       4.794   5.034  18.596  1.00 36.27      H    C
ATOM   1952  O   THR H  40       5.338   6.131  18.466  1.00 33.90      H    O
ATOM   1953  CB  THR H  40       4.707   3.278  16.860  1.00 25.60      H    C
ATOM   1954  OG1 THR H  40       6.056   3.676  16.592  1.00 30.95      H    O
ATOM   1955  CG2 THR H  40       4.049   2.867  15.552  1.00 19.81      H    C
ATOM   1956  N   PRO H  41       4.891   4.319  19.721  1.00 43.34      H    N
ATOM   1957  CA  PRO H  41       5.674   4.853  20.826  1.00 42.33      H    C
ATOM   1958  C   PRO H  41       7.119   5.054  20.383  1.00 40.47      H    C
ATOM   1959  O   PRO H  41       7.882   5.837  20.938  1.00 46.17      H    O
ATOM   1960  CB  PRO H  41       5.609   3.858  21.983  1.00 46.00      H    C
ATOM   1961  CG  PRO H  41       4.463   2.890  21.713  1.00 44.54      H    C
ATOM   1962  CD  PRO H  41       4.124   3.171  20.174  1.00 37.36      H    C
ATOM   1963  N   GLU H  42       7.491   4.257  19.367  1.00 39.84      H    N
ATOM   1964  CA  GLU H  42       8.779   4.449  18.727  1.00 39.67      H    C
ATOM   1965  C   GLU H  42       8.724   5.653  17.788  1.00 39.72      H    C
ATOM   1966  O   GLU H  42       9.627   5.927  17.009  1.00 38.24      H    O
ATOM   1967  CB  GLU H  42       9.119   3.172  17.953  1.00 43.69      H    C
ATOM   1968  CG  GLU H  42       9.167   1.932  18.853  1.00 59.11      H    C
ATOM   1969  CD  GLU H  42       7.786   1.324  18.945  1.00 78.32      H    C
ATOM   1970  OE1 GLU H  42       7.323   0.767  17.959  1.00 71.16      H    O
ATOM   1971  OE2 GLU H  42       7.189   1.394  20.020  1.00 93.36      H    O
ATOM   1972  N   LYS H  43       7.571   6.354  17.856  1.00 37.86      H    N
ATOM   1973  CA  LYS H  43       7.470   7.658  17.210  1.00 31.78      H    C
ATOM   1974  C   LYS H  43       7.569   7.568  15.691  1.00 30.82      H    C
ATOM   1975  O   LYS H  43       7.922   8.523  15.010  1.00 34.06      H    O
ATOM   1976  CB  LYS H  43       8.596   8.534  17.748  1.00 30.63      H    C
ATOM   1977  CG  LYS H  43       8.330   8.971  19.189  1.00 45.46      H    C
ATOM   1978  CD  LYS H  43       9.247  10.113  19.627  1.00 83.82      H    C
ATOM   1979  CE  LYS H  43      10.474   9.615  20.395  1.00 96.13      H    C
ATOM   1980  NZ  LYS H  43      10.052   9.064  21.680  1.00 87.58      H    N
ATOM   1981  N   ARG H  44       7.156   6.442  15.122  1.00 29.41      H    N
ATOM   1982  CA  ARG H  44       7.087   6.323  13.668  1.00 29.46      H    C
ATOM   1983  C   ARG H  44       5.640   6.520  13.204  1.00 33.48      H    C
ATOM   1984  O   ARG H  44       4.710   5.953  13.787  1.00 37.98      H    O
ATOM   1985  CB  ARG H  44       7.574   4.951  13.197  1.00 31.50      H    C
ATOM   1986  CG  ARG H  44       9.044   4.701  13.379  1.00 35.58      H    C
ATOM   1987  CD  ARG H  44       9.456   3.351  12.802  1.00 56.91      H    C
ATOM   1988  NE  ARG H  44       9.904   3.439  11.412  1.00 71.87      H    N
ATOM   1989  CZ  ARG H  44      10.966   4.139  11.007  1.00 70.52      H    C
ATOM   1990  NH1 ARG H  44      11.989   4.322  11.832  1.00 72.59      H    N
ATOM   1991  NH2 ARG H  44      10.995   4.672   9.785  1.00 65.12      H    N
ATOM   1992  N   LEU H  45       5.457   7.315  12.150  1.00 30.81      H    N
ATOM   1993  CA  LEU H  45       4.131   7.577  11.597  1.00 23.62      H    C
ATOM   1994  C   LEU H  45       3.688   6.488  10.611  1.00 28.24      H    C
ATOM   1995  O   LEU H  45       4.461   6.058   9.767  1.00 26.20      H    O
ATOM   1996  CB  LEU H  45       4.131   8.938  10.898  1.00 18.00      H    C
ATOM   1997  CG  LEU H  45       4.392  10.152  11.794  1.00 19.88      H    C
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ATOM	1998	CD1	LEU	H	45	4.867	11.310	10.938	1.00	24.54	H	C
ATOM	1999	CD2	LEU	H	45	3.131	10.522	12.590	1.00	14.97	H	C
ATOM	2000	N	GLU	H	46	2.445	6.038	10.725	1.00	28.38	H	N
ATOM	2001	CA	GLU	H	46	1.924	5.022	9.818	1.00	26.32	H	C
ATOM	2002	C	GLU	H	46	0.508	5.374	9.344	1.00	26.58	H	C
ATOM	2003	O	GLU	H	46	-0.411	5.473	10.152	1.00	33.14	H	O
ATOM	2004	CB	GLU	H	46	1.874	3.638	10.496	1.00	35.21	H	C
ATOM	2005	CG	GLU	H	46	2.847	3.393	11.668	1.00	49.18	H	C
ATOM	2006	CD	GLU	H	46	2.785	1.943	12.231	1.00	64.81	H	C
ATOM	2007	OE1	GLU	H	46	1.691	1.473	12.630	1.00	67.38	H	O
ATOM	2008	OE2	GLU	H	46	3.844	1.269	12.280	1.00	52.21	H	O
ATOM	2009	N	TRP	H	47	0.327	5.577	8.045	1.00	30.57	H	N
ATOM	2010	CA	TRP	H	47	-1.012	5.751	7.500	1.00	25.48	H	C
ATOM	2011	C	TRP	H	47	-1.886	4.524	7.770	1.00	30.87	H	C
ATOM	2012	O	TRP	H	47	-1.548	3.393	7.443	1.00	32.26	H	O
ATOM	2013	CB	TRP	H	47	-0.885	5.991	5.996	1.00	25.25	H	C
ATOM	2014	CG	TRP	H	47	-2.202	5.841	5.341	1.00	23.75	H	C
ATOM	2015	CD1	TRP	H	47	-3.297	6.729	5.426	1.00	36.84	H	C
ATOM	2016	CD2	TRP	H	47	-2.617	4.754	4.481	1.00	23.08	H	C
ATOM	2017	NE1	TRP	H	47	-4.364	6.308	4.697	1.00	39.41	H	N
ATOM	2018	CE2	TRP	H	47	-3.948	5.025	4.078	1.00	27.40	H	C
ATOM	2019	CE3	TRP	H	47	-1.989	3.594	4.036	1.00	23.52	H	C
ATOM	2020	CZ2	TRP	H	47	-4.609	4.142	3.240	1.00	16.46	H	C
ATOM	2021	CZ3	TRP	H	47	-2.651	2.710	3.200	1.00	22.42	H	C
ATOM	2022	CH2	TRP	H	47	-3.972	2.986	2.803	1.00	27.75	H	C
ATOM	2023	N	VAL	H	48	-3.034	4.778	8.426	1.00	35.93	H	N
ATOM	2024	CA	VAL	H	48	-3.887	3.671	8.844	1.00	32.96	H	C
ATOM	2025	C	VAL	H	48	-5.099	3.492	7.925	1.00	31.29	H	C
ATOM	2026	O	VAL	H	48	-5.503	2.386	7.586	1.00	34.83	H	O
ATOM	2027	CB	VAL	H	48	-4.355	3.947	10.273	1.00	31.31	H	C
ATOM	2028	CG1	VAL	H	48	-5.379	2.896	10.698	1.00	45.32	H	C
ATOM	2029	CG2	VAL	H	48	-3.171	3.907	11.221	1.00	40.07	H	C
ATOM	2030	N	ALA	H	49	-5.715	4.632	7.555	1.00	32.57	H	N
ATOM	2031	CA	ALA	H	49	-6.900	4.560	6.706	1.00	30.97	H	C
ATOM	2032	C	ALA	H	49	-7.176	5.889	5.996	1.00	31.41	H	C
ATOM	2033	O	ALA	H	49	-6.710	6.947	6.399	1.00	35.89	H	O
ATOM	2034	CB	ALA	H	49	-8.093	4.181	7.585	1.00	27.71	H	C
ATOM	2035	N	SER	H	50	-7.942	5.801	4.915	1.00	28.70	H	N
ATOM	2036	CA	SER	H	50	-8.289	6.962	4.113	1.00	31.27	H	C
ATOM	2037	C	SER	H	50	-9.629	6.737	3.442	1.00	33.01	H	C
ATOM	2038	O	SER	H	50	-9.863	5.703	2.820	1.00	33.77	H	O
ATOM	2039	CB	SER	H	50	-7.229	7.220	3.036	1.00	29.77	H	C
ATOM	2040	OG	SER	H	50	-6.021	7.678	3.604	1.00	36.87	H	O
ATOM	2041	N	ILE	H	51	-10.508	7.717	3.575	1.00	31.73	H	N
ATOM	2042	CA	ILE	H	51	-11.828	7.646	2.978	1.00	30.25	H	C
ATOM	2043	C	ILE	H	51	-11.958	8.838	2.032	1.00	33.02	H	C
ATOM	2044	O	ILE	H	51	-11.591	9.966	2.380	1.00	35.69	H	O
ATOM	2045	CB	ILE	H	51	-12.919	7.695	4.079	1.00	29.54	H	C
ATOM	2046	CG1	ILE	H	51	-14.287	7.379	3.479	1.00	26.92	H	C
ATOM	2047	CG2	ILE	H	51	-12.925	9.051	4.754	1.00	23.38	H	C
ATOM	2048	CD1	ILE	H	51	-15.356	7.192	4.510	1.00	38.16	H	C
ATOM	2049	N	SER	H	52	-12.450	8.600	0.828	1.00	32.29	H	N
ATOM	2050	CA	SER	H	52	-12.533	9.725	-0.096	1.00	37.72	H	C
ATOM	2051	C	SER	H	52	-13.920	10.368	-0.060	1.00	40.73	H	C
ATOM	2052	O	SER	H	52	-14.793	9.998	0.712	1.00	35.28	H	O
ATOM	2053	CB	SER	H	52	-12.218	9.216	-1.504	1.00	41.62	H	C
ATOM	2054	OG	SER	H	52	-13.410	8.701	-2.095	1.00	45.13	H	O
ATOM	2055	N	SER	H	53	-14.093	11.396	-0.908	1.00	47.25	H	N
ATOM	2056	CA	SER	H	53	-15.357	12.121	-0.908	1.00	50.61	H	C
ATOM	2057	C	SER	H	53	-16.543	11.198	-1.204	1.00	49.75	H	C
ATOM	2058	O	SER	H	53	-17.655	11.384	-0.725	1.00	53.91	H	O
ATOM	2059	CB	SER	H	53	-15.271	13.217	-1.969	1.00	52.83	H	C
ATOM	2060	OG	SER	H	53	-14.297	14.184	-1.575	1.00	58.40	H	O
ATOM	2061	N	GLY	H	54	-16.279	10.189	-2.056	1.00	45.24	H	N
ATOM	2062	CA	GLY	H	54	-17.355	9.296	-2.474	1.00	53.16	H	C
ATOM	2063	C	GLY	H	54	-17.537	8.118	-1.512	1.00	55.63	H	C
ATOM	2064	O	GLY	H	54	-18.380	7.250	-1.697	1.00	61.25	H	O
ATOM	2065	N	GLY	H	55	-16.673	8.082	-0.479	1.00	53.22	H	N
ATOM	2066	CA	GLY	H	55	-16.775	7.009	0.505	1.00	54.51	H	C

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ATOM   2067  C   GLY H  55     -16.009   5.760   0.062  1.00 55.03      H    C
ATOM   2068  O   GLY H  55     -16.062   4.710   0.688  1.00 63.61      H    O
ATOM   2069  N   ASN H  56     -15.076   5.866  -0.905  1.00 50.20      H    N
ATOM   2070  CA  ASN H  56     -14.132   4.775  -1.117  1.00 53.18      H    C
ATOM   2071  C   ASN H  56     -13.066   4.733  -0.020  1.00 51.97      H    C
ATOM   2072  O   ASN H  56     -12.441   5.729   0.321  1.00 52.37      H    O
ATOM   2073  CB  ASN H  56     -13.471   4.973  -2.482  1.00 61.77      H    C
ATOM   2074  CG  ASN H  56     -14.484   4.728  -3.571  1.00 70.16      H    C
ATOM   2075  OD1 ASN H  56     -14.773   5.591  -4.395  1.00 79.19      H    O
ATOM   2076  ND2 ASN H  56     -15.032   3.501  -3.570  1.00 83.81      H    N
ATOM   2077  N   THR H  57     -12.896   3.534   0.568  1.00 48.61      H    N
ATOM   2078  CA  THR H  57     -11.950   3.401   1.670  1.00 40.92      H    C
ATOM   2079  C   THR H  57     -10.671   2.672   1.248  1.00 38.31      H    C
ATOM   2080  O   THR H  57     -10.627   1.959   0.254  1.00 40.67      H    O
ATOM   2081  CB  THR H  57     -12.638   2.631   2.801  1.00 40.83      H    C
ATOM   2082  OG1 THR H  57     -13.012   1.335   2.329  1.00 42.11      H    O
ATOM   2083  CG2 THR H  57     -13.899   3.379   3.251  1.00 23.85      H    C
ATOM   2084  N   TYR H  58      -9.590   2.906   1.978  1.00 40.21      H    N
ATOM   2085  CA  TYR H  58      -8.307   2.302   1.653  1.00 38.47      H    C
ATOM   2086  C   TYR H  58      -7.600   2.013   2.962  1.00 37.26      H    C
ATOM   2087  O   TYR H  58      -7.653   2.816   3.888  1.00 39.78      H    O
ATOM   2088  CB  TYR H  58      -7.448   3.246   0.803  1.00 37.94      H    C
ATOM   2089  CG  TYR H  58      -8.165   3.856  -0.374  1.00 45.00      H    C
ATOM   2090  CD1 TYR H  58      -9.022   4.937  -0.200  1.00 38.69      H    C
ATOM   2091  CD2 TYR H  58      -7.996   3.350  -1.661  1.00 42.28      H    C
ATOM   2092  CE1 TYR H  58      -9.688   5.497  -1.265  1.00 48.56      H    C
ATOM   2093  CE2 TYR H  58      -8.664   3.904  -2.737  1.00 45.82      H    C
ATOM   2094  CZ  TYR H  58      -9.510   4.979  -2.531  1.00 50.99      H    C
ATOM   2095  OH  TYR H  58     -10.205   5.537  -3.582  1.00 45.05      H    O
ATOM   2096  N   TYR H  59      -6.923   0.871   3.023  1.00 38.15      H    N
ATOM   2097  CA  TYR H  59      -6.228   0.448   4.229  1.00 36.23      H    C
ATOM   2098  C   TYR H  59      -4.923  -0.272   3.956  1.00 35.97      H    C
ATOM   2099  O   TYR H  59      -4.744  -0.877   2.910  1.00 41.66      H    O
ATOM   2100  CB  TYR H  59      -7.114  -0.521   4.990  1.00 32.92      H    C
ATOM   2101  CG  TYR H  59      -8.483   0.001   5.308  1.00 33.05      H    C
ATOM   2102  CD1 TYR H  59      -8.692   0.811   6.410  1.00 26.16      H    C
ATOM   2103  CD2 TYR H  59      -9.578  -0.351   4.531  1.00 21.88      H    C
ATOM   2104  CE1 TYR H  59      -9.949   1.248   6.738  1.00 28.20      H    C
ATOM   2105  CE2 TYR H  59     -10.839   0.087   4.851  1.00 30.66      H    C
ATOM   2106  CZ  TYR H  59     -11.018   0.883   5.961  1.00 27.82      H    C
ATOM   2107  OH  TYR H  59     -12.274   1.296   6.325  1.00 47.49      H    O
ATOM   2108  N   PRO H  60      -3.983  -0.209   4.901  1.00 42.07      H    N
ATOM   2109  CA  PRO H  60      -2.717  -0.912   4.691  1.00 42.47      H    C
ATOM   2110  C   PRO H  60      -3.021  -2.380   5.039  1.00 42.12      H    C
ATOM   2111  O   PRO H  60      -3.990  -2.667   5.748  1.00 34.35      H    O
ATOM   2112  CB  PRO H  60      -1.787  -0.282   5.728  1.00 37.68      H    C
ATOM   2113  CG  PRO H  60      -2.423   0.998   6.070  1.00 38.55      H    C
ATOM   2114  CD  PRO H  60      -3.881   0.718   6.039  1.00 41.23      H    C
ATOM   2115  N   ASP H  61      -2.213  -3.314   4.556  1.00 46.33      H    N
ATOM   2116  CA  ASP H  61      -2.466  -4.702   4.904  1.00 53.50      H    C
ATOM   2117  C   ASP H  61      -2.319  -4.842   6.415  1.00 52.80      H    C
ATOM   2118  O   ASP H  61      -2.773  -5.818   7.006  1.00 60.24      H    O
ATOM   2119  CB  ASP H  61      -1.467  -5.625   4.219  1.00 56.53      H    C
ATOM   2120  CG  ASP H  61      -1.512  -5.513   2.722  1.00 72.07      H    C
ATOM   2121  OD1 ASP H  61      -2.632  -5.429   2.161  1.00 70.71      H    O
ATOM   2122  OD2 ASP H  61      -0.421  -5.524   2.110  1.00 91.21      H    O
ATOM   2123  N   SER H  62      -1.672  -3.849   7.016  1.00 52.97      H    N
ATOM   2124  CA  SER H  62      -1.359  -3.808   8.438  1.00 48.81      H    C
ATOM   2125  C   SER H  62      -2.619  -3.866   9.309  1.00 49.13      H    C
ATOM   2126  O   SER H  62      -2.612  -4.355  10.431  1.00 48.28      H    O
ATOM   2127  CB  SER H  62      -0.589  -2.516   8.718  1.00 50.55      H    C
ATOM   2128  OG  SER H  62      -0.528  -2.299  10.127  1.00 60.82      H    O
ATOM   2129  N   VAL H  63      -3.723  -3.309   8.770  1.00 45.57      H    N
ATOM   2130  CA  VAL H  63      -4.947  -3.243   9.562  1.00 39.30      H    C
ATOM   2131  C   VAL H  63      -6.183  -3.685   8.770  1.00 37.75      H    C
ATOM   2132  O   VAL H  63      -7.301  -3.711   9.267  1.00 37.52      H    O
ATOM   2133  CB  VAL H  63      -5.128  -1.800  10.039  1.00 42.39      H    C
ATOM   2134  CG1 VAL H  63      -3.887  -1.349  10.809  1.00 34.90      H    C
ATOM   2135  CG2 VAL H  63      -5.337  -0.882   8.849  1.00 31.97      H    C
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ATOM   2136  N   LYS H  64      -5.959   -4.004    7.482  1.00 40.88      H    N
ATOM   2137  CA  LYS H  64      -7.068   -4.431    6.636  1.00 47.29      H    C
ATOM   2138  C   LYS H  64      -7.836   -5.603    7.254  1.00 47.68      H    C
ATOM   2139  O   LYS H  64      -7.266   -6.604    7.666  1.00 46.11      H    O
ATOM   2140  CB  LYS H  64      -6.501   -4.839    5.275  1.00 49.64      H    C
ATOM   2141  CG  LYS H  64      -7.097   -4.021    4.128  1.00 59.25      H    C
ATOM   2142  CD  LYS H  64      -6.884   -4.688    2.768  1.00 71.56      H    C
ATOM   2143  CE  LYS H  64      -5.402   -4.805    2.398  1.00 81.53      H    C
ATOM   2144  NZ  LYS H  64      -4.916   -3.520    1.899  1.00 49.44      H    N
ATOM   2145  N   GLY H  65      -9.165   -5.387    7.295  1.00 47.28      H    N
ATOM   2146  CA  GLY H  65     -10.047   -6.409    7.845  1.00 42.18      H    C
ATOM   2147  C   GLY H  65     -10.249   -6.226    9.351  1.00 42.83      H    C
ATOM   2148  O   GLY H  65     -11.115   -6.832    9.971  1.00 50.95      H    O
ATOM   2149  N   ARG H  66      -9.381   -5.381    9.942  1.00 43.96      H    N
ATOM   2150  CA  ARG H  66      -9.459   -5.142   11.380  1.00 44.05      H    C
ATOM   2151  C   ARG H  66      -9.991   -3.739   11.703  1.00 43.62      H    C
ATOM   2152  O   ARG H  66     -10.440   -3.458   12.806  1.00 49.65      H    O
ATOM   2153  CB  ARG H  66      -8.054   -5.306   11.960  1.00 46.94      H    C
ATOM   2154  CG  ARG H  66      -7.998   -6.360   13.065  1.00 35.48      H    C
ATOM   2155  CD  ARG H  66      -6.616   -7.012   13.160  1.00 36.46      H    C
ATOM   2156  NE  ARG H  66      -5.577   -6.084   12.704  1.00 43.95      H    N
ATOM   2157  CZ  ARG H  66      -5.142   -5.162   13.584  1.00 50.13      H    C
ATOM   2158  NH1 ARG H  66      -5.650   -5.116   14.802  1.00 43.60      H    N
ATOM   2159  NH2 ARG H  66      -4.169   -4.317   13.229  1.00 44.39      H    N
ATOM   2160  N   PHE H  67      -9.864   -2.799   10.773  1.00 44.77      H    N
ATOM   2161  CA  PHE H  67     -10.226   -1.396   10.999  1.00 40.21      H    C
ATOM   2162  C   PHE H  67     -11.197   -0.910    9.919  1.00 41.98      H    C
ATOM   2163  O   PHE H  67     -11.115   -1.327    8.755  1.00 40.85      H    O
ATOM   2164  CB  PHE H  67      -8.972   -0.505   10.932  1.00 35.58      H    C
ATOM   2165  CG  PHE H  67      -8.052   -0.631   12.101  1.00 34.08      H    C
ATOM   2166  CD1 PHE H  67      -7.966   -1.803   12.826  1.00 46.65      H    C
ATOM   2167  CD2 PHE H  67      -7.234    0.428   12.457  1.00 34.35      H    C
ATOM   2168  CE1 PHE H  67      -7.074   -1.916   13.890  1.00 47.26      H    C
ATOM   2169  CE2 PHE H  67      -6.344    0.327   13.512  1.00 28.12      H    C
ATOM   2170  CZ  PHE H  67      -6.263   -0.847   14.231  1.00 36.89      H    C
ATOM   2171  N   THR H  68     -12.103   -0.015   10.294  1.00 36.98      H    N
ATOM   2172  CA  THR H  68     -12.990    0.490    9.266  1.00 39.60      H    C
ATOM   2173  C   THR H  68     -13.142    1.991    9.400  1.00 37.70      H    C
ATOM   2174  O   THR H  68     -13.517    2.515   10.441  1.00 33.56      H    O
ATOM   2175  CB  THR H  68     -14.353   -0.178    9.438  1.00 38.69      H    C
ATOM   2176  OG1 THR H  68     -14.194   -1.595    9.356  1.00 38.20      H    O
ATOM   2177  CG2 THR H  68     -15.300    0.271    8.319  1.00 40.05      H    C
ATOM   2178  N   ILE H  69     -12.783    2.695    8.317  1.00 35.22      H    N
ATOM   2179  CA  ILE H  69     -12.986    4.133    8.310  1.00 33.39      H    C
ATOM   2180  C   ILE H  69     -14.365    4.494    7.763  1.00 29.12      H    C
ATOM   2181  O   ILE H  69     -14.922    3.843    6.887  1.00 35.88      H    O
ATOM   2182  CB  ILE H  69     -11.907    4.772    7.441  1.00 27.05      H    C
ATOM   2183  CG1 ILE H  69     -12.088    6.295    7.426  1.00 28.35      H    C
ATOM   2184  CG2 ILE H  69     -12.050    4.263    5.996  1.00 39.66      H    C
ATOM   2185  CD1 ILE H  69     -10.819    7.041    7.837  1.00 19.70      H    C
ATOM   2186  N   SER H  70     -14.928    5.556    8.356  1.00 30.01      H    N
ATOM   2187  CA  SER H  70     -16.200    6.073    7.882  1.00 32.13      H    C
ATOM   2188  C   SER H  70     -16.299    7.561    8.199  1.00 36.01      H    C
ATOM   2189  O   SER H  70     -15.622    8.076    9.079  1.00 41.38      H    O
ATOM   2190  CB  SER H  70     -17.325    5.310    8.588  1.00 25.57      H    C
ATOM   2191  OG  SER H  70     -17.077    5.312    9.995  1.00 41.99      H    O
ATOM   2192  N   ARG H  71     -17.245    8.171    7.500  1.00 35.84      H    N
ATOM   2193  CA  ARG H  71     -17.510    9.585    7.679  1.00 34.27      H    C
ATOM   2194  C   ARG H  71     -18.987    9.900    7.764  1.00 33.22      H    C
ATOM   2195  O   ARG H  71     -19.806    9.240    7.142  1.00 36.66      H    O
ATOM   2196  CB  ARG H  71     -16.894   10.356    6.508  1.00 31.22      H    C
ATOM   2197  CG  ARG H  71     -17.360    9.860    5.147  1.00 24.64      H    C
ATOM   2198  CD  ARG H  71     -16.570   10.499    4.049  1.00 24.11      H    C
ATOM   2199  NE  ARG H  71     -16.406   11.925    4.319  1.00 39.13      H    N
ATOM   2200  CZ  ARG H  71     -15.497   12.703    3.739  1.00 13.51      H    C
ATOM   2201  NH1 ARG H  71     -14.654   12.209    2.838  1.00 21.43      H    N
ATOM   2202  NH2 ARG H  71     -15.416   13.972    4.090  1.00 32.61      H    N
ATOM   2203  N   ASP H  72     -19.324   10.907    8.556  1.00 37.54      H    N
ATOM   2204  CA  ASP H  72     -20.700   11.355    8.676  1.00 37.74      H    C
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ATOM	2205	C	ASP	H	72	-20.669	12.790	8.141	1.00	36.70	H	C
ATOM	2206	O	ASP	H	72	-20.260	13.724	8.842	1.00	29.75	H	O
ATOM	2207	CB	ASP	H	72	-21.150	11.342	10.129	1.00	41.57	H	C
ATOM	2208	CG	ASP	H	72	-22.622	11.677	10.284	1.00	48.19	H	C
ATOM	2209	OD1	ASP	H	72	-23.145	12.522	9.518	1.00	49.97	H	O
ATOM	2210	OD2	ASP	H	72	-23.257	11.103	11.194	1.00	56.29	H	O
ATOM	2211	N	ASN	H	73	-21.077	12.950	6.884	1.00	36.00	H	N
ATOM	2212	CA	ASN	H	73	-21.075	14.252	6.237	1.00	34.23	H	C
ATOM	2213	C	ASN	H	73	-22.025	15.261	6.837	1.00	38.06	H	C
ATOM	2214	O	ASN	H	73	-21.655	16.419	7.034	1.00	42.98	H	O
ATOM	2215	CB	ASN	H	73	-21.341	14.098	4.748	1.00	35.94	H	C
ATOM	2216	CG	ASN	H	73	-20.148	13.534	4.017	1.00	28.67	H	C
ATOM	2217	OD1	ASN	H	73	-19.034	13.567	4.523	1.00	38.30	H	O
ATOM	2218	ND2	ASN	H	73	-20.369	13.027	2.817	1.00	40.69	H	N
ATOM	2219	N	ALA	H	74	-23.246	14.837	7.135	1.00	40.21	H	N
ATOM	2220	CA	ALA	H	74	-24.205	15.747	7.736	1.00	39.70	H	C
ATOM	2221	C	ALA	H	74	-23.633	16.275	9.046	1.00	43.05	H	C
ATOM	2222	O	ALA	H	74	-23.592	17.484	9.275	1.00	44.60	H	O
ATOM	2223	CB	ALA	H	74	-25.509	15.038	7.988	1.00	42.51	H	C
ATOM	2224	N	ARG	H	75	-23.173	15.364	9.900	1.00	43.49	H	N
ATOM	2225	CA	ARG	H	75	-22.618	15.759	11.190	1.00	40.90	H	C
ATOM	2226	C	ARG	H	75	-21.177	16.231	11.119	1.00	37.75	H	C
ATOM	2227	O	ARG	H	75	-20.691	16.835	12.072	1.00	33.26	H	O
ATOM	2228	CB	ARG	H	75	-22.701	14.607	12.201	1.00	45.03	H	C
ATOM	2229	CG	ARG	H	75	-24.098	14.287	12.709	1.00	61.37	H	C
ATOM	2230	CD	ARG	H	75	-24.062	13.295	13.873	1.00	60.10	H	C
ATOM	2231	NE	ARG	H	75	-23.498	13.905	15.074	1.00	78.94	H	N
ATOM	2232	CZ	ARG	H	75	-23.312	13.272	16.232	1.00	84.66	H	C
ATOM	2233	NH1	ARG	H	75	-22.787	13.929	17.268	1.00	58.25	H	N
ATOM	2234	NH2	ARG	H	75	-23.647	11.988	16.357	1.00	80.63	H	N
ATOM	2235	N	ASN	H	76	-20.504	15.964	9.999	1.00	35.22	H	N
ATOM	2236	CA	ASN	H	76	-19.094	16.334	9.829	1.00	33.97	H	C
ATOM	2237	C	ASN	H	76	-18.212	15.584	10.823	1.00	36.07	H	C
ATOM	2238	O	ASN	H	76	-17.391	16.184	11.516	1.00	35.74	H	O
ATOM	2239	CB	ASN	H	76	-18.884	17.834	10.030	1.00	32.35	H	C
ATOM	2240	CG	ASN	H	76	-19.332	18.642	8.847	1.00	38.66	H	C
ATOM	2241	OD1	ASN	H	76	-18.695	19.630	8.474	1.00	45.80	H	O
ATOM	2242	ND2	ASN	H	76	-20.423	18.221	8.231	1.00	48.96	H	N
ATOM	2243	N	ILE	H	77	-18.390	14.272	10.898	1.00	36.71	H	N
ATOM	2244	CA	ILE	H	77	-17.600	13.476	11.804	1.00	32.46	H	C
ATOM	2245	C	ILE	H	77	-16.944	12.340	11.050	1.00	35.64	H	C
ATOM	2246	O	ILE	H	77	-17.548	11.725	10.174	1.00	35.33	H	O
ATOM	2247	CB	ILE	H	77	-18.464	12.901	12.946	1.00	40.83	H	C
ATOM	2248	CG1	ILE	H	77	-19.212	14.038	13.651	1.00	44.32	H	C
ATOM	2249	CG2	ILE	H	77	-17.578	12.170	13.962	1.00	40.40	H	C
ATOM	2250	CD1	ILE	H	77	-20.069	13.586	14.813	1.00	46.94	H	C
ATOM	2251	N	LEU	H	78	-15.692	12.079	11.406	1.00	40.62	H	N
ATOM	2252	CA	LEU	H	78	-14.882	11.020	10.806	1.00	37.20	H	C
ATOM	2253	C	LEU	H	78	-14.783	9.910	11.854	1.00	36.25	H	C
ATOM	2254	O	LEU	H	78	-14.611	10.187	13.039	1.00	41.81	H	O
ATOM	2255	CB	LEU	H	78	-13.486	11.575	10.478	1.00	30.31	H	C
ATOM	2256	CG	LEU	H	78	-12.471	10.688	9.765	1.00	14.90	H	C
ATOM	2257	CD1	LEU	H	78	-12.957	10.314	8.404	1.00	28.76	H	C
ATOM	2258	CD2	LEU	H	78	-11.163	11.414	9.673	1.00	31.63	H	C
ATOM	2259	N	TYR	H	79	-14.885	8.658	11.426	1.00	35.10	H	N
ATOM	2260	CA	TYR	H	79	-14.814	7.539	12.364	1.00	29.30	H	C
ATOM	2261	C	TYR	H	79	-13.764	6.504	12.031	1.00	29.91	H	C
ATOM	2262	O	TYR	H	79	-13.455	6.258	10.864	1.00	32.26	H	O
ATOM	2263	CB	TYR	H	79	-16.155	6.803	12.428	1.00	28.95	H	C
ATOM	2264	CG	TYR	H	79	-17.303	7.636	12.910	1.00	37.13	H	C
ATOM	2265	CD1	TYR	H	79	-17.389	8.038	14.236	1.00	19.81	H	C
ATOM	2266	CD2	TYR	H	79	-18.290	8.047	12.030	1.00	36.50	H	C
ATOM	2267	CE1	TYR	H	79	-18.426	8.830	14.668	1.00	44.55	H	C
ATOM	2268	CE2	TYR	H	79	-19.333	8.841	12.453	1.00	35.59	H	C
ATOM	2269	CZ	TYR	H	79	-19.401	9.230	13.769	1.00	40.18	H	C
ATOM	2270	OH	TYR	H	79	-20.456	10.014	14.181	1.00	44.04	H	O
ATOM	2271	N	LEU	H	80	-13.221	5.897	13.076	1.00	32.78	H	N
ATOM	2272	CA	LEU	H	80	-12.272	4.816	12.911	1.00	33.37	H	C
ATOM	2273	C	LEU	H	80	-12.681	3.719	13.889	1.00	39.11	H	C

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ATOM   2274  O   LEU H  80    -12.510   3.861  15.100  1.00 42.27      H    O
ATOM   2275  CB  LEU H  80    -10.833   5.248  13.202  1.00 27.32      H    C
ATOM   2276  CG  LEU H  80     -9.905   4.066  12.850  1.00 29.89      H    C
ATOM   2277  CD1 LEU H  80    -10.141   3.684  11.396  1.00 29.23      H    C
ATOM   2278  CD2 LEU H  80     -8.445   4.396  13.096  1.00 21.87      H    C
ATOM   2279  N   GLN H  81    -13.261   2.641  13.368  1.00 37.58      H    N
ATOM   2280  CA  GLN H  81    -13.588   1.586  14.268  1.00 35.42      H    C
ATOM   2281  C   GLN H  81    -12.477   0.589  14.176  1.00 35.75      H    C
ATOM   2282  O   GLN H  81    -11.955   0.295  13.108  1.00 38.97      H    O
ATOM   2283  CB  GLN H  81    -14.898   0.949  13.804  1.00 32.22      H    C
ATOM   2284  CG  GLN H  81    -15.181  -0.381  14.504  1.00 46.99      H    C
ATOM   2285  CD  GLN H  81    -16.017  -0.128  15.737  1.00 63.73      H    C
ATOM   2286  OE1 GLN H  81    -16.772   0.824  15.842  1.00 73.22      H    O
ATOM   2287  NE2 GLN H  81    -15.848  -1.048  16.707  1.00 54.60      H    N
ATOM   2288  N   MET H  82    -12.046   0.146  15.350  1.00 38.89      H    N
ATOM   2289  CA  MET H  82    -10.916  -0.759  15.462  1.00 38.00      H    C
ATOM   2290  C   MET H  82    -11.369  -2.034  16.171  1.00 41.10      H    C
ATOM   2291  O   MET H  82    -12.060  -1.982  17.192  1.00 42.49      H    O
ATOM   2292  CB  MET H  82     -9.786  -0.079  16.236  1.00 40.92      H    C
ATOM   2293  CG  MET H  82     -9.219   1.170  15.554  1.00 40.95      H    C
ATOM   2294  SD  MET H  82     -7.917   1.992  16.522  1.00 43.01      H    S
ATOM   2295  CE  MET H  82     -8.890   2.540  17.888  1.00 36.86      H    C
ATOM   2296  N   SER H 82A   -10.994  -3.182  15.621  1.00 39.35      H    N
ATOM   2297  CA  SER H 82A   -11.395  -4.446  16.214  1.00 42.12      H    C
ATOM   2298  C   SER H 82A   -10.238  -5.431  16.242  1.00 43.14      H    C
ATOM   2299  O   SER H 82A    -9.323  -5.335  15.431  1.00 41.79      H    O
ATOM   2300  CB  SER H 82A   -12.561  -5.052  15.428  1.00 42.50      H    C
ATOM   2301  OG  SER H 82A   -12.101  -5.716  14.258  1.00 50.18      H    O
ATOM   2302  N   SER H 82B   -10.293  -6.381  17.173  1.00 40.74      H    N
ATOM   2303  CA  SER H 82B    -9.247  -7.383  17.304  1.00 45.65      H    C
ATOM   2304  C   SER H 82B    -7.940  -6.652  17.535  1.00 44.33      H    C
ATOM   2305  O   SER H 82B    -6.946  -6.935  16.866  1.00 51.78      H    O
ATOM   2306  CB  SER H 82B    -9.129  -8.213  16.018  1.00 44.47      H    C
ATOM   2307  OG  SER H 82B   -10.320  -8.914  15.721  1.00 53.60      H    O
ATOM   2308  N   LEU H 82C    -7.934  -5.717  18.480  1.00 40.37      H    N
ATOM   2309  CA  LEU H 82C    -6.730  -4.932  18.739  1.00 44.23      H    C
ATOM   2310  C   LEU H 82C    -5.498  -5.720  19.171  1.00 42.91      H    C
ATOM   2311  O   LEU H 82C    -5.581  -6.625  19.992  1.00 48.40      H    O
ATOM   2312  CB  LEU H 82C    -7.032  -3.824  19.756  1.00 47.83      H    C
ATOM   2313  CG  LEU H 82C    -7.982  -2.753  19.194  1.00 48.91      H    C
ATOM   2314  CD1 LEU H 82C    -8.308  -1.699  20.243  1.00 42.50      H    C
ATOM   2315  CD2 LEU H 82C    -7.340  -2.116  17.969  1.00 41.96      H    C
ATOM   2316  N   ARG H  83     -4.354  -5.361  18.590  1.00 40.80      H    N
ATOM   2317  CA  ARG H  83     -3.055  -5.936  18.895  1.00 36.37      H    C
ATOM   2318  C   ARG H  83     -2.213  -4.938  19.694  1.00 35.99      H    C
ATOM   2319  O   ARG H  83     -2.434  -3.735  19.663  1.00 47.57      H    O
ATOM   2320  CB  ARG H  83     -2.359  -6.300  17.577  1.00 36.69      H    C
ATOM   2321  CG  ARG H  83     -3.236  -7.145  16.646  1.00 40.16      H    C
ATOM   2322  CD  ARG H  83     -2.544  -7.435  15.304  1.00 34.89      H    C
ATOM   2323  NE  ARG H  83     -3.470  -8.063  14.349  1.00 58.83      H    N
ATOM   2324  CZ  ARG H  83     -3.033  -8.224  13.083  1.00 64.19      H    C
ATOM   2325  NH1 ARG H  83     -1.820  -7.821  12.741  1.00 74.93      H    N
ATOM   2326  NH2 ARG H  83     -3.825  -8.810  12.177  1.00 64.50      H    N
ATOM   2327  N   SER H  84     -1.201  -5.519  20.361  1.00 41.54      H    N
ATOM   2328  CA  SER H  84     -0.376  -4.674  21.201  1.00 46.15      H    C
ATOM   2329  C   SER H  84      0.260  -3.585  20.332  1.00 43.60      H    C
ATOM   2330  O   SER H  84      0.646  -2.511  20.774  1.00 47.14      H    O
ATOM   2331  CB  SER H  84      0.759  -5.531  21.817  1.00 41.31      H    C
ATOM   2332  OG  SER H  84      0.202  -6.382  22.817  1.00 61.14      H    O
ATOM   2333  N   GLU H  85      0.378  -3.916  19.031  1.00 45.78      H    N
ATOM   2334  CA  GLU H  85      1.098  -3.027  18.121  1.00 44.02      H    C
ATOM   2335  C   GLU H  85      0.219  -1.927  17.521  1.00 41.37      H    C
ATOM   2336  O   GLU H  85      0.678  -1.027  16.823  1.00 47.91      H    O
ATOM   2337  CB  GLU H  85      1.709  -3.873  17.006  1.00 47.56      H    C
ATOM   2338  CG  GLU H  85      1.944  -5.318  17.438  1.00 66.27      H    C
ATOM   2339  CD  GLU H  85      0.951  -6.200  16.728  1.00 83.88      H    C
ATOM   2340  OE1 GLU H  85      0.500  -7.173  17.318  1.00 92.64      H    O
ATOM   2341  OE2 GLU H  85      0.597  -5.873  15.599  1.00 78.20      H    O
ATOM   2342  N   ASP H  86     -1.099  -2.034  17.767  1.00 34.93      H    N
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ATOM	2343	CA	ASP	H	86	-1.967	-0.935	17.373	1.00	35.04	H	C
ATOM	2344	C	ASP	H	86	-1.996	0.141	18.461	1.00	31.78	H	C
ATOM	2345	O	ASP	H	86	-2.856	1.008	18.516	1.00	39.38	H	O
ATOM	2346	CB	ASP	H	86	-3.369	-1.484	17.111	1.00	31.18	H	C
ATOM	2347	CG	ASP	H	86	-3.287	-2.541	16.020	1.00	48.61	H	C
ATOM	2348	OD1	ASP	H	86	-2.847	-2.199	14.921	1.00	55.82	H	O
ATOM	2349	OD2	ASP	H	86	-3.632	-3.690	16.283	1.00	59.28	H	O
ATOM	2350	N	THR	H	87	-1.010	0.021	19.375	1.00	28.18	H	N
ATOM	2351	CA	THR	H	87	-0.869	0.995	20.448	1.00	28.98	H	C
ATOM	2352	C	THR	H	87	-0.116	2.236	19.965	1.00	25.03	H	C
ATOM	2353	O	THR	H	87	1.070	2.202	19.660	1.00	29.03	H	O
ATOM	2354	CB	THR	H	87	-0.080	0.324	21.576	1.00	32.63	H	C
ATOM	2355	OG1	THR	H	87	-0.724	-0.899	21.940	1.00	45.72	H	O
ATOM	2356	CG2	THR	H	87	-0.022	1.242	22.800	1.00	28.87	H	C
ATOM	2357	N	ALA	H	88	-0.856	3.356	19.858	1.00	30.69	H	N
ATOM	2358	CA	ALA	H	88	-0.225	4.581	19.382	1.00	28.18	H	C
ATOM	2359	C	ALA	H	88	-1.188	5.769	19.418	1.00	27.71	H	C
ATOM	2360	O	ALA	H	88	-2.368	5.636	19.717	1.00	30.07	H	O
ATOM	2361	CB	ALA	H	88	0.252	4.343	17.949	1.00	23.69	H	C
ATOM	2362	N	MET	H	89	-0.652	6.953	19.137	1.00	28.18	H	N
ATOM	2363	CA	MET	H	89	-1.458	8.155	19.096	1.00	25.31	H	C
ATOM	2364	C	MET	H	89	-2.140	8.117	17.736	1.00	23.34	H	C
ATOM	2365	O	MET	H	89	-1.489	7.900	16.713	1.00	26.05	H	O
ATOM	2366	CB	MET	H	89	-0.571	9.383	19.192	1.00	19.08	H	C
ATOM	2367	CG	MET	H	89	-1.307	10.719	19.128	1.00	28.58	H	C
ATOM	2368	SD	MET	H	89	-2.161	11.144	20.648	1.00	35.92	H	S
ATOM	2369	CE	MET	H	89	-0.855	11.100	21.797	1.00	23.37	H	C
ATOM	2370	N	TYR	H	90	-3.453	8.295	17.721	1.00	24.81	H	N
ATOM	2371	CA	TYR	H	90	-4.190	8.274	16.464	1.00	28.47	H	C
ATOM	2372	C	TYR	H	90	-4.611	9.683	16.032	1.00	35.61	H	C
ATOM	2373	O	TYR	H	90	-5.294	10.401	16.776	1.00	38.42	H	O
ATOM	2374	CB	TYR	H	90	-5.408	7.349	16.583	1.00	26.33	H	C
ATOM	2375	CG	TYR	H	90	-5.038	5.894	16.487	1.00	21.83	H	C
ATOM	2376	CD1	TYR	H	90	-4.360	5.256	17.523	1.00	21.33	H	C
ATOM	2377	CD2	TYR	H	90	-5.308	5.170	15.337	1.00	23.34	H	C
ATOM	2378	CE1	TYR	H	90	-3.957	3.940	17.416	1.00	13.25	H	C
ATOM	2379	CE2	TYR	H	90	-4.910	3.853	15.215	1.00	32.16	H	C
ATOM	2380	CZ	TYR	H	90	-4.235	3.244	16.256	1.00	32.37	H	C
ATOM	2381	OH	TYR	H	90	-3.826	1.944	16.120	1.00	31.42	H	O
ATOM	2382	N	TYR	H	91	-4.199	10.063	14.821	1.00	29.67	H	N
ATOM	2383	CA	TYR	H	91	-4.482	11.386	14.277	1.00	27.68	H	C
ATOM	2384	C	TYR	H	91	-5.437	11.423	13.105	1.00	30.61	H	C
ATOM	2385	O	TYR	H	91	-5.311	10.607	12.193	1.00	30.06	H	O
ATOM	2386	CB	TYR	H	91	-3.190	12.026	13.781	1.00	25.82	H	C
ATOM	2387	CG	TYR	H	91	-2.193	12.378	14.848	1.00	36.87	H	C
ATOM	2388	CD1	TYR	H	91	-2.378	13.493	15.653	1.00	30.76	H	C
ATOM	2389	CD2	TYR	H	91	-1.057	11.601	15.049	1.00	24.87	H	C
ATOM	2390	CE1	TYR	H	91	-1.471	13.821	16.616	1.00	21.54	H	C
ATOM	2391	CE2	TYR	H	91	-0.149	11.929	16.011	1.00	20.34	H	C
ATOM	2392	CZ	TYR	H	91	-0.365	13.039	16.790	1.00	19.98	H	C
ATOM	2393	OH	TYR	H	91	0.536	13.375	17.763	1.00	38.12	H	O
ATOM	2394	N	CYS	H	92	-6.396	12.352	13.120	1.00	34.72	H	N
ATOM	2395	CA	CYS	H	92	-7.249	12.514	11.941	1.00	39.10	H	C
ATOM	2396	C	CYS	H	92	-6.598	13.624	11.120	1.00	31.38	H	C
ATOM	2397	O	CYS	H	92	-6.025	14.575	11.661	1.00	25.53	H	O
ATOM	2398	CB	CYS	H	92	-8.737	12.860	12.245	1.00	35.33	H	C
ATOM	2399	SG	CYS	H	92	-9.256	14.091	13.507	1.00	69.15	H	S
ATOM	2400	N	ALA	H	93	-6.644	13.474	9.810	1.00	22.90	H	N
ATOM	2401	CA	ALA	H	93	-6.063	14.464	8.942	1.00	23.14	H	C
ATOM	2402	C	ALA	H	93	-6.899	14.620	7.692	1.00	31.52	H	C
ATOM	2403	O	ALA	H	93	-7.472	13.654	7.178	1.00	37.17	H	O
ATOM	2404	CB	ALA	H	93	-4.640	14.066	8.573	1.00	22.98	H	C
ATOM	2405	N	ARG	H	94	-6.987	15.853	7.214	1.00	31.22	H	N
ATOM	2406	CA	ARG	H	94	-7.718	16.112	5.993	1.00	27.88	H	C
ATOM	2407	C	ARG	H	94	-6.723	15.771	4.885	1.00	30.21	H	C
ATOM	2408	O	ARG	H	94	-5.586	16.244	4.902	1.00	35.06	H	O
ATOM	2409	CB	ARG	H	94	-8.105	17.583	5.924	1.00	26.56	H	C
ATOM	2410	CG	ARG	H	94	-9.146	17.905	4.880	1.00	32.06	H	C
ATOM	2411	CD	ARG	H	94	-9.449	19.387	4.883	1.00	29.07	H	C

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ATOM   2412  NE  ARG H  94      -8.508  20.149   4.068  1.00 43.56      H    N
ATOM   2413  CZ  ARG H  94      -8.502  21.476   3.986  1.00 30.83      H    C
ATOM   2414  NH1 ARG H  94      -9.380  22.189   4.671  1.00 32.80      H    N
ATOM   2415  NH2 ARG H  94      -7.626  22.089   3.208  1.00 26.74      H    N
ATOM   2416  N   LEU H  95      -7.134  14.922   3.949  1.00 28.97      H    N
ATOM   2417  CA  LEU H  95      -6.369  14.534   2.771  1.00 29.42      H    C
ATOM   2418  C   LEU H  95      -6.686  15.429   1.571  1.00 34.07      H    C
ATOM   2419  O   LEU H  95      -7.687  15.275   0.885  1.00 43.12      H    O
ATOM   2420  CB  LEU H  95      -6.703  13.077   2.438  1.00 31.81      H    C
ATOM   2421  CG  LEU H  95      -5.882  12.539   1.263  1.00 17.92      H    C
ATOM   2422  CD1 LEU H  95      -4.381  12.512   1.564  1.00 33.14      H    C
ATOM   2423  CD2 LEU H  95      -6.265  11.111   0.872  1.00 43.38      H    C
ATOM   2424  N   ASP H  96      -5.805  16.423   1.356  1.00 33.38      H    N
ATOM   2425  CA  ASP H  96      -5.991  17.315   0.218  1.00 26.87      H    C
ATOM   2426  C   ASP H  96      -5.736  16.588  -1.105  1.00 28.04      H    C
ATOM   2427  O   ASP H  96      -5.942  17.112  -2.191  1.00 31.10      H    O
ATOM   2428  CB  ASP H  96      -5.021  18.489   0.367  1.00 20.28      H    C
ATOM   2429  CG  ASP H  96      -5.550  19.449   1.425  1.00 35.23      H    C
ATOM   2430  OD1 ASP H  96      -6.142  18.967   2.392  1.00 43.82      H    O
ATOM   2431  OD2 ASP H  96      -5.368  20.655   1.276  1.00 34.55      H    O
ATOM   2432  N   GLY H  97      -5.233  15.345  -0.982  1.00 35.21      H    N
ATOM   2433  CA  GLY H  97      -4.929  14.566  -2.178  1.00 34.98      H    C
ATOM   2434  C   GLY H  97      -3.509  13.995  -2.126  1.00 36.60      H    C
ATOM   2435  O   GLY H  97      -2.829  14.030  -1.109  1.00 55.18      H    O
ATOM   2436  N   TYR H  98      -3.080  13.414  -3.264  1.00 31.33      H    N
ATOM   2437  CA  TYR H  98      -1.726  12.873  -3.319  1.00 36.60      H    C
ATOM   2438  C   TYR H  98      -0.732  13.899  -3.869  1.00 38.11      H    C
ATOM   2439  O   TYR H  98       0.479  13.718  -3.839  1.00 38.31      H    O
ATOM   2440  CB  TYR H  98      -1.735  11.616  -4.192  1.00 33.71      H    C
ATOM   2441  CG  TYR H  98      -2.226  11.936  -5.559  1.00 38.48      H    C
ATOM   2442  CD1 TYR H  98      -1.549  12.869  -6.342  1.00 60.19      H    C
ATOM   2443  CD2 TYR H  98      -3.278  11.206  -6.116  1.00 58.17      H    C
ATOM   2444  CE1 TYR H  98      -1.902  13.051  -7.672  1.00 61.07      H    C
ATOM   2445  CE2 TYR H  98      -3.636  11.395  -7.442  1.00 66.49      H    C
ATOM   2446  CZ  TYR H  98      -2.954  12.313  -8.218  1.00 62.63      H    C
ATOM   2447  OH  TYR H  98      -3.289  12.487  -9.547  1.00 51.32      H    O
ATOM   2448  N   TYR H  99      -1.290  14.993  -4.421  1.00 34.57      H    N
ATOM   2449  CA  TYR H  99      -0.439  16.056  -4.942  1.00 28.11      H    C
ATOM   2450  C   TYR H  99       0.077  16.958  -3.819  1.00 30.06      H    C
ATOM   2451  O   TYR H  99       1.129  17.576  -3.918  1.00 45.17      H    O
ATOM   2452  CB  TYR H  99      -1.259  16.882  -5.933  1.00 35.30      H    C
ATOM   2453  CG  TYR H  99      -1.157  16.291  -7.294  1.00 45.25      H    C
ATOM   2454  CD1 TYR H  99      -2.191  16.474  -8.208  1.00 50.19      H    C
ATOM   2455  CD2 TYR H  99      -0.026  15.565  -7.666  1.00 67.32      H    C
ATOM   2456  CE1 TYR H  99      -2.090  15.946  -9.487  1.00 61.69      H    C
ATOM   2457  CE2 TYR H  99       0.070  15.028  -8.941  1.00 66.78      H    C
ATOM   2458  CZ  TYR H  99      -0.958  15.211  -9.847  1.00 61.53      H    C
ATOM   2459  OH  TYR H  99      -0.889  14.648 -11.107  1.00 64.87      H    O
ATOM   2460  N   PHE H 100      -0.868  16.958  -2.882  1.00 28.36      H    N
ATOM   2461  CA  PHE H 100      -0.843  17.912  -1.771  1.00 33.08      H    C
ATOM   2462  C   PHE H 100      -0.564  17.528  -0.313  1.00 32.51      H    C
ATOM   2463  O   PHE H 100      -0.409  18.414   0.510  1.00 28.93      H    O
ATOM   2464  CB  PHE H 100      -2.152  18.702  -1.836  1.00 35.07      H    C
ATOM   2465  CG  PHE H 100      -2.589  19.002  -3.244  1.00 40.19      H    C
ATOM   2466  CD1 PHE H 100      -1.920  19.958  -4.007  1.00 42.98      H    C
ATOM   2467  CD2 PHE H 100      -3.604  18.264  -3.841  1.00 32.65      H    C
ATOM   2468  CE1 PHE H 100      -2.256  20.160  -5.326  1.00 38.55      H    C
ATOM   2469  CE2 PHE H 100      -3.942  18.464  -5.164  1.00 22.61      H    C
ATOM   2470  CZ  PHE H 100      -3.272  19.407  -5.906  1.00 34.08      H    C
ATOM   2471  N   GLY H 100A     -0.513  16.243   0.023  1.00 32.84      H    N
ATOM   2472  CA  GLY H 100A     -0.246  15.859   1.403  1.00 24.07      H    C
ATOM   2473  C   GLY H 100A     -1.375  15.977   2.433  1.00 31.86      H    C
ATOM   2474  O   GLY H 100A     -2.508  16.393   2.147  1.00 31.43      H    O
ATOM   2475  N   PHE H 100B     -1.062  15.565   3.656  1.00 31.62      H    N
ATOM   2476  CA  PHE H 100B     -2.009  15.648   4.756  1.00 30.23      H    C
ATOM   2477  C   PHE H 100B     -1.848  17.067   5.278  1.00 28.52      H    C
ATOM   2478  O   PHE H 100B     -0.932  17.358   6.045  1.00 32.67      H    O
ATOM   2479  CB  PHE H 100B     -1.681  14.617   5.845  1.00 35.30      H    C
ATOM   2480  CG  PHE H 100B     -1.841  13.186   5.394  1.00 37.11      H    C
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ATOM   2481  CD1 PHE H 100B     -0.723  12.391   5.124  1.00 28.90        H    C
ATOM   2482  CD2 PHE H 100B     -3.104  12.641   5.211  1.00 27.19        H    C
ATOM   2483  CE1 PHE H 100B     -0.864  11.089   4.682  1.00 29.05        H    C
ATOM   2484  CE2 PHE H 100B     -3.252  11.329   4.766  1.00 27.20        H    C
ATOM   2485  CZ  PHE H 100B     -2.136  10.556   4.502  1.00 31.15        H    C
ATOM   2486  N   ALA H 101      -2.758  17.933   4.833  1.00 27.56        H    N
ATOM   2487  CA  ALA H 101      -2.760  19.355   5.154  1.00 25.66        H    C
ATOM   2488  C   ALA H 101      -3.142  19.783   6.570  1.00 25.19        H    C
ATOM   2489  O   ALA H 101      -2.666  20.790   7.069  1.00 36.47        H    O
ATOM   2490  CB  ALA H 101      -3.625  20.072   4.150  1.00 29.91        H    C
ATOM   2491  N   TYR H 102      -4.008  19.038   7.226  1.00 27.89        H    N
ATOM   2492  CA  TYR H 102      -4.398  19.414   8.574  1.00 25.32        H    C
ATOM   2493  C   TYR H 102      -4.423  18.174   9.432  1.00 24.39        H    C
ATOM   2494  O   TYR H 102      -4.814  17.104   8.968  1.00 30.42        H    O
ATOM   2495  CB  TYR H 102      -5.769  20.098   8.557  1.00 23.33        H    C
ATOM   2496  CG  TYR H 102      -5.724  21.484   7.938  1.00 32.18        H    C
ATOM   2497  CD1 TYR H 102      -5.415  22.610   8.716  1.00 28.43        H    C
ATOM   2498  CD2 TYR H 102      -5.923  21.662   6.565  1.00 26.31        H    C
ATOM   2499  CE1 TYR H 102      -5.306  23.843   8.158  1.00 10.30        H    C
ATOM   2500  CE2 TYR H 102      -5.812  22.896   5.995  1.00 16.36        H    C
ATOM   2501  CZ  TYR H 102      -5.504  23.990   6.794  1.00 34.64        H    C
ATOM   2502  OH  TYR H 102      -5.400  25.246   6.222  1.00 30.08        H    O
ATOM   2503  N   TRP H 103      -3.981  18.319  10.675  1.00 24.24        H    N
ATOM   2504  CA  TRP H 103      -3.950  17.213  11.608  1.00 28.55        H    C
ATOM   2505  C   TRP H 103      -4.657  17.635  12.888  1.00 30.13        H    C
ATOM   2506  O   TRP H 103      -4.653  18.811  13.249  1.00 37.40        H    O
ATOM   2507  CB  TRP H 103      -2.504  16.839  11.947  1.00 28.95        H    C
ATOM   2508  CG  TRP H 103      -1.662  16.413  10.790  1.00 25.38        H    C
ATOM   2509  CD1 TRP H 103      -1.428  17.107   9.634  1.00 18.65        H    C
ATOM   2510  CD2 TRP H 103      -0.956  15.178  10.665  1.00 30.58        H    C
ATOM   2511  NE1 TRP H 103      -0.630  16.374   8.797  1.00 21.56        H    N
ATOM   2512  CE2 TRP H 103      -0.330  15.183   9.403  1.00 25.47        H    C
ATOM   2513  CE3 TRP H 103      -0.796  14.065  11.495  1.00 28.45        H    C
ATOM   2514  CZ2 TRP H 103       0.436  14.123   8.956  1.00 15.55        H    C
ATOM   2515  CZ3 TRP H 103      -0.027  13.003  11.044  1.00 24.57        H    C
ATOM   2516  CH2 TRP H 103       0.574  13.039   9.786  1.00 26.41        H    C
ATOM   2517  N   GLY H 104      -5.268  16.677  13.573  1.00 30.49        H    N
ATOM   2518  CA  GLY H 104      -5.920  16.993  14.825  1.00 23.23        H    C
ATOM   2519  C   GLY H 104      -4.886  16.815  15.917  1.00 24.33        H    C
ATOM   2520  O   GLY H 104      -3.728  16.546  15.617  1.00 26.49        H    O
ATOM   2521  N   GLN H 105      -5.304  16.936  17.173  1.00 31.05        H    N
ATOM   2522  CA  GLN H 105      -4.403  16.809  18.313  1.00 30.94        H    C
ATOM   2523  C   GLN H 105      -4.074  15.370  18.673  1.00 34.31        H    C
ATOM   2524  O   GLN H 105      -3.222  15.124  19.524  1.00 41.91        H    O
ATOM   2525  CB  GLN H 105      -5.011  17.478  19.536  1.00 35.51        H    C
ATOM   2526  CG  GLN H 105      -6.191  18.384  19.228  1.00 52.15        H    C
ATOM   2527  CD  GLN H 105      -7.414  18.042  20.070  1.00 68.67        H    C
ATOM   2528  OE1 GLN H 105      -8.035  18.926  20.681  1.00 61.17        H    O
ATOM   2529  NE2 GLN H 105      -7.770  16.752  20.105  1.00 55.73        H    N
ATOM   2530  N   GLY H 106      -4.755  14.420  18.051  1.00 32.59        H    N
ATOM   2531  CA  GLY H 106      -4.490  13.026  18.354  1.00 28.33        H    C
ATOM   2532  C   GLY H 106      -5.137  12.508  19.633  1.00 28.80        H    C
ATOM   2533  O   GLY H 106      -5.420  13.258  20.567  1.00 30.10        H    O
ATOM   2534  N   THR H 107      -5.384  11.209  19.668  1.00 29.41        H    N
ATOM   2535  CA  THR H 107      -6.034  10.448  20.736  1.00 33.14        H    C
ATOM   2536  C   THR H 107      -5.319   9.124  21.007  1.00 33.83        H    C
ATOM   2537  O   THR H 107      -5.018   8.343  20.117  1.00 33.79        H    O
ATOM   2538  CB  THR H 107      -7.494  10.180  20.360  1.00 30.92        H    C
ATOM   2539  OG1 THR H 107      -8.205   9.778  21.533  1.00 42.28        H    O
ATOM   2540  CG2 THR H 107      -7.572   9.043  19.335  1.00 32.35        H    C
ATOM   2541  N   LEU H 108      -5.026   8.902  22.299  1.00 34.93        H    N
ATOM   2542  CA  LEU H 108      -4.162   7.789  22.653  1.00 39.45        H    C
ATOM   2543  C   LEU H 108      -4.918   6.471  22.836  1.00 36.37        H    C
ATOM   2544  O   LEU H 108      -5.874   6.358  23.592  1.00 40.38        H    O
ATOM   2545  CB  LEU H 108      -3.419   8.155  23.936  1.00 39.65        H    C
ATOM   2546  CG  LEU H 108      -1.902   8.119  23.750  1.00 20.00        H    C
ATOM   2547  CD1 LEU H 108      -1.186   9.177  24.596  1.00 20.00        H    C
ATOM   2548  CD2 LEU H 108      -1.292   6.767  24.127  1.00 20.00        H    C
ATOM   2549  N   VAL H 109      -4.448   5.462  22.077  1.00 33.52        H    N
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ATOM   2550  CA  VAL H 109      -4.950   4.107  22.268  1.00 38.50      H    C
ATOM   2551  C   VAL H 109      -3.831   3.173  22.733  1.00 41.95      H    C
ATOM   2552  O   VAL H 109      -2.822   2.980  22.068  1.00 45.65      H    O
ATOM   2553  CB  VAL H 109      -5.504   3.612  20.935  1.00 34.93      H    C
ATOM   2554  CG1 VAL H 109      -5.974   2.169  21.083  1.00 36.26      H    C
ATOM   2555  CG2 VAL H 109      -6.670   4.478  20.494  1.00 27.03      H    C
ATOM   2556  N   ALA H 110      -4.054   2.495  23.856  1.00 41.78      H    N
ATOM   2557  CA  ALA H 110      -3.117   1.467  24.311  1.00 44.45      H    C
ATOM   2558  C   ALA H 110      -3.807   0.132  24.542  1.00 42.44      H    C
ATOM   2559  O   ALA H 110      -4.881   0.069  25.135  1.00 43.07      H    O
ATOM   2560  CB  ALA H 110      -2.478   1.940  25.620  1.00 44.04      H    C
ATOM   2561  N   VAL H 111      -3.181  -0.937  24.070  1.00 43.71      H    N
ATOM   2562  CA  VAL H 111      -3.591  -2.301  24.195  1.00 46.41      H    C
ATOM   2563  C   VAL H 111      -2.668  -3.122  25.091  1.00 48.72      H    C
ATOM   2564  O   VAL H 111      -1.552  -3.511  24.737  1.00 51.00      H    O
ATOM   2565  CB  VAL H 111      -3.684  -2.843  22.793  1.00 46.04      H    C
ATOM   2566  CG1 VAL H 111      -4.683  -3.970  22.741  1.00 52.67      H    C
ATOM   2567  CG2 VAL H 111      -4.189  -1.718  21.897  1.00 36.76      H    C
ATOM   2568  N   SER H 112      -3.189  -3.346  26.316  1.00 53.18      H    N
ATOM   2569  CA  SER H 112      -3.314  -3.814  27.691  1.00 60.09      H    C
ATOM   2570  C   SER H 112      -4.756  -4.215  28.024  1.00 63.11      H    C
ATOM   2571  O   SER H 112      -5.722  -3.626  27.567  1.00 62.24      H    O
ATOM   2572  CB  SER H 112      -2.838  -2.698  28.621  1.00 59.39      H    C
ATOM   2573  OG  SER H 112      -1.412  -2.761  28.734  1.00 68.30      H    O
ATOM   2574  N   ALA H 113      -4.857  -5.297  28.814  1.00 69.58      H    N
ATOM   2575  CA  ALA H 113      -3.631  -5.952  29.241  1.00 64.05      H    C
ATOM   2576  C   ALA H 113      -3.050  -5.274  30.476  1.00 66.57      H    C
ATOM   2577  O   ALA H 113      -1.951  -4.735  30.471  1.00 67.66      H    O
ATOM   2578  CB  ALA H 113      -2.631  -5.866  28.085  1.00 61.17      H    C
ATOM   2579  N   ALA H 114      -3.851  -5.290  31.555  1.00 74.52      H    N
ATOM   2580  CA  ALA H 114      -3.501  -4.512  32.735  1.00 75.18      H    C
ATOM   2581  C   ALA H 114      -4.589  -3.481  33.031  1.00 73.15      H    C
ATOM   2582  O   ALA H 114      -5.200  -2.905  32.145  1.00 75.45      H    O
ATOM   2583  CB  ALA H 114      -2.174  -3.801  32.469  1.00 81.16      H    C
ATOM   2584  N   ALA H 115      -4.843  -3.279  34.333  1.00 20.00      H    N
ATOM   2585  CA  ALA H 115      -5.951  -2.416  34.716  1.00 20.00      H    C
ATOM   2586  C   ALA H 115      -5.508  -0.977  34.986  1.00 20.00      H    C
ATOM   2587  O   ALA H 115      -4.381  -0.703  35.374  1.00 20.00      H    O
ATOM   2588  CB  ALA H 115      -6.590  -3.008  35.973  1.00 20.00      H    C
ATOM   2589  N   THR H 116      -6.447  -0.042  34.728  1.00 48.17      H    N
ATOM   2590  CA  THR H 116      -6.197   1.360  35.045  1.00 49.91      H    C
ATOM   2591  C   THR H 116      -5.902   1.553  36.534  1.00 53.54      H    C
ATOM   2592  O   THR H 116      -6.514   0.955  37.408  1.00 61.76      H    O
ATOM   2593  CB  THR H 116      -7.435   2.174  34.652  1.00 51.97      H    C
ATOM   2594  OG1 THR H 116      -8.157   2.541  35.832  1.00 59.75      H    O
ATOM   2595  CG2 THR H 116      -8.353   1.345  33.753  1.00 67.33      H    C
ATOM   2596  N   THR H 117      -4.893   2.401  36.803  1.00 55.71      H    N
ATOM   2597  CA  THR H 117      -4.516   2.673  38.185  1.00 52.96      H    C
ATOM   2598  C   THR H 117      -4.807   4.128  38.569  1.00 52.33      H    C
ATOM   2599  O   THR H 117      -4.390   5.068  37.905  1.00 54.24      H    O
ATOM   2600  CB  THR H 117      -3.019   2.381  38.325  1.00 54.81      H    C
ATOM   2601  OG1 THR H 117      -2.778   1.015  37.979  1.00 57.21      H    O
ATOM   2602  CG2 THR H 117      -2.561   2.616  39.771  1.00 68.96      H    C
ATOM   2603  N   PRO H 118      -5.242   4.836  39.028  1.00 53.98      H    N
ATOM   2604  CA  PRO H 118      -5.168   6.296  39.166  1.00 50.39      H    C
ATOM   2605  C   PRO H 118      -3.872   6.738  39.851  1.00 51.76      H    C
ATOM   2606  O   PRO H 118      -3.247   5.971  40.578  1.00 52.75      H    O
ATOM   2607  CB  PRO H 118      -6.392   6.611  40.004  1.00 53.07      H    C
ATOM   2608  CG  PRO H 118      -6.424   5.452  40.935  1.00 53.57      H    C
ATOM   2609  CD  PRO H 118      -6.187   4.277  40.010  1.00 56.15      H    C
ATOM   2610  N   PRO H 119      -3.460   7.992  39.634  1.00 50.77      H    N
ATOM   2611  CA  PRO H 119      -2.234   8.518  40.231  1.00 51.99      H    C
ATOM   2612  C   PRO H 119      -2.362   9.092  41.640  1.00 57.32      H    C
ATOM   2613  O   PRO H 119      -3.462   9.238  42.177  1.00 60.85      H    O
ATOM   2614  CB  PRO H 119      -1.824   9.590  39.237  1.00 47.61      H    C
ATOM   2615  CG  PRO H 119      -3.141  10.178  38.879  1.00 45.24      H    C
ATOM   2616  CD  PRO H 119      -3.998   8.943  38.645  1.00 53.33      H    C
ATOM   2617  N   SER H 120      -1.206   9.410  42.220  1.00 57.59      H    N
ATOM   2618  CA  SER H 120      -0.984  10.062  43.505  1.00 52.71      H    C
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ATOM	2619	C	SER	H	120	-0.150	11.331	43.342	1.00	50.89	H C
ATOM	2620	O	SER	H	120	0.994	11.313	42.911	1.00	55.25	H O
ATOM	2621	CB	SER	H	120	-0.264	9.075	44.427	1.00	56.41	H C
ATOM	2622	OG	SER	H	120	-1.175	8.049	44.829	1.00	63.45	H O
ATOM	2623	N	VAL	H	121	-0.788	12.470	43.667	1.00	48.38	H N
ATOM	2624	CA	VAL	H	121	-0.121	13.749	43.460	1.00	45.09	H C
ATOM	2625	C	VAL	H	121	0.459	14.315	44.758	1.00	47.52	H C
ATOM	2626	O	VAL	H	121	-0.246	14.717	45.677	1.00	50.74	H O
ATOM	2627	CB	VAL	H	121	-1.141	14.727	42.872	1.00	42.48	H C
ATOM	2628	CG1	VAL	H	121	-0.418	15.856	42.140	1.00	41.61	H C
ATOM	2629	CG2	VAL	H	121	-2.052	14.002	41.898	1.00	38.28	H C
ATOM	2630	N	TYR	H	122	1.803	14.298	44.822	1.00	48.88	H N
ATOM	2631	CA	TYR	H	122	2.482	14.867	45.978	1.00	46.62	H C
ATOM	2632	C	TYR	H	122	3.043	16.256	45.663	1.00	49.87	H C
ATOM	2633	O	TYR	H	122	3.566	16.512	44.587	1.00	52.32	H O
ATOM	2634	CB	TYR	H	122	3.622	13.924	46.372	1.00	42.13	H C
ATOM	2635	CG	TYR	H	122	3.084	12.561	46.632	1.00	39.14	H C
ATOM	2636	CD1	TYR	H	122	2.084	12.381	47.583	1.00	33.27	H C
ATOM	2637	CD2	TYR	H	122	3.566	11.462	45.921	1.00	26.44	H C
ATOM	2638	CE1	TYR	H	122	1.560	11.118	47.816	1.00	39.62	H C
ATOM	2639	CE2	TYR	H	122	3.049	10.197	46.160	1.00	41.31	H C
ATOM	2640	CZ	TYR	H	122	2.055	10.022	47.106	1.00	39.35	H C
ATOM	2641	OH	TYR	H	122	1.547	8.763	47.359	1.00	46.83	H O
ATOM	2642	N	PRO	H	123	2.944	17.168	46.634	1.00	49.83	H N
ATOM	2643	CA	PRO	H	123	3.453	18.536	46.513	1.00	48.21	H C
ATOM	2644	C	PRO	H	123	4.960	18.606	46.720	1.00	50.86	H C
ATOM	2645	O	PRO	H	123	5.514	17.917	47.581	1.00	55.89	H O
ATOM	2646	CB	PRO	H	123	2.683	19.271	47.595	1.00	52.97	H C
ATOM	2647	CG	PRO	H	123	2.564	18.226	48.667	1.00	51.62	H C
ATOM	2648	CD	PRO	H	123	2.201	16.986	47.893	1.00	43.80	H C
ATOM	2649	N	LEU	H	124	5.626	19.432	45.923	1.00	49.83	H N
ATOM	2650	CA	LEU	H	124	7.066	19.575	46.038	1.00	52.27	H C
ATOM	2651	C	LEU	H	124	7.407	20.984	46.455	1.00	48.73	H C
ATOM	2652	O	LEU	H	124	7.380	21.915	45.648	1.00	48.20	H O
ATOM	2653	CB	LEU	H	124	7.767	19.224	44.715	1.00	56.15	H C
ATOM	2654	CG	LEU	H	124	7.671	17.772	44.212	1.00	53.01	H C
ATOM	2655	CD1	LEU	H	124	8.332	17.628	42.853	1.00	48.39	H C
ATOM	2656	CD2	LEU	H	124	8.326	16.840	45.212	1.00	59.89	H C
ATOM	2657	N	ALA	H	125	7.717	21.118	47.739	1.00	50.01	H N
ATOM	2658	CA	ALA	H	125	8.080	22.389	48.337	1.00	52.85	H C
ATOM	2659	C	ALA	H	125	9.551	22.353	48.710	1.00	54.62	H C
ATOM	2660	O	ALA	H	125	10.094	21.295	49.017	1.00	52.85	H O
ATOM	2661	CB	ALA	H	125	7.241	22.631	49.580	1.00	58.29	H C
ATOM	2662	N	PRO	H	126	10.221	23.514	48.676	1.00	53.35	H N
ATOM	2663	CA	PRO	H	126	11.639	23.574	49.027	1.00	54.53	H C
ATOM	2664	C	PRO	H	126	11.834	23.154	50.475	1.00	56.27	H C
ATOM	2665	O	PRO	H	126	10.808	23.018	51.175	1.00	61.53	H O
ATOM	2666	CB	PRO	H	126	11.985	25.040	48.803	1.00	53.66	H C
ATOM	2667	CG	PRO	H	126	10.694	25.727	49.091	1.00	60.53	H C
ATOM	2668	CD	PRO	H	126	9.705	24.858	48.370	1.00	48.22	H C
ATOM	2669	OXT	PRO	H	126	12.997	22.974	50.894	1.00	62.11	H O
ATOM	2670	N	THR	H	132	16.845	30.323	49.326	1.00	131.55	H N
ATOM	2671	CA	THR	H	132	15.835	30.845	48.416	1.00	132.47	H C
ATOM	2672	C	THR	H	132	16.091	32.322	48.094	1.00	130.65	H C
ATOM	2673	O	THR	H	132	15.683	33.228	48.815	1.00	132.15	H O
ATOM	2674	CB	THR	H	132	14.472	30.679	49.089	1.00	132.60	H C
ATOM	2675	OG1	THR	H	132	14.446	31.461	50.283	1.00	134.97	H O
ATOM	2676	CG2	THR	H	132	14.250	29.214	49.466	1.00	131.87	H C
ATOM	2677	N	ASN	H	133	16.828	32.548	46.981	1.00	126.17	H N
ATOM	2678	CA	ASN	H	133	17.281	33.902	46.666	1.00	123.00	H C
ATOM	2679	C	ASN	H	133	17.045	34.267	45.195	1.00	118.12	H C
ATOM	2680	O	ASN	H	133	17.646	33.716	44.283	1.00	118.63	H O
ATOM	2681	CB	ASN	H	133	18.787	33.958	46.968	1.00	124.75	H C
ATOM	2682	CG	ASN	H	133	19.063	34.983	48.039	1.00	125.18	H C
ATOM	2683	OD1	ASN	H	133	18.749	34.801	49.212	1.00	130.25	H O
ATOM	2684	ND2	ASN	H	133	19.650	36.111	47.602	1.00	119.92	H N
ATOM	2685	N	SER	H	134	16.086	35.203	44.979	1.00	109.67	H N
ATOM	2686	CA	SER	H	134	15.901	35.788	43.649	1.00	100.82	H C
ATOM	2687	C	SER	H	134	14.782	35.123	42.828	1.00	95.38	H C

ATOM	2688	O	SER	H	134	14.092	35.767	42.048	1.00	96.71	H O
ATOM	2689	CB	SER	H	134	17.225	35.729	42.888	1.00	102.40	H C
ATOM	2690	OG	SER	H	134	17.391	36.936	42.142	1.00	92.26	H O
ATOM	2691	N	MET	H	135	14.681	33.758	42.950	1.00	85.97	H N
ATOM	2692	CA	MET	H	135	13.640	33.007	42.214	1.00	75.45	H C
ATOM	2693	C	MET	H	135	13.234	31.737	42.977	1.00	68.66	H C
ATOM	2694	O	MET	H	135	13.837	31.393	44.037	1.00	67.11	H O
ATOM	2695	CB	MET	H	135	14.158	32.619	40.827	1.00	78.16	H C
ATOM	2696	CG	MET	H	135	13.679	33.454	39.620	1.00	87.38	H C
ATOM	2697	SD	MET	H	135	11.912	33.393	39.425	1.00	112.31	H S
ATOM	2698	CE	MET	H	135	11.764	33.473	37.638	1.00	95.09	H C
ATOM	2699	N	VAL	H	136	12.396	30.924	42.576	1.00	66.53	H N
ATOM	2700	CA	VAL	H	136	11.862	29.787	43.312	1.00	64.38	H C
ATOM	2701	C	VAL	H	136	11.450	28.655	42.383	1.00	60.86	H C
ATOM	2702	O	VAL	H	136	10.794	28.881	41.369	1.00	60.52	H O
ATOM	2703	CB	VAL	H	136	10.649	30.194	44.185	1.00	63.71	H C
ATOM	2704	CG1	VAL	H	136	10.017	28.972	44.813	1.00	66.52	H C
ATOM	2705	CG2	VAL	H	136	11.092	31.164	45.262	1.00	70.97	H C
ATOM	2706	N	THR	H	137	11.817	27.444	42.607	1.00	60.78	H N
ATOM	2707	CA	THR	H	137	11.265	26.333	41.842	1.00	55.89	H C
ATOM	2708	C	THR	H	137	10.464	25.399	42.735	1.00	52.85	H C
ATOM	2709	O	THR	H	137	10.980	24.867	43.714	1.00	51.83	H O
ATOM	2710	CB	THR	H	137	12.358	25.492	41.165	1.00	54.09	H C
ATOM	2711	OG1	THR	H	137	12.942	26.229	40.087	1.00	48.58	H O
ATOM	2712	CG2	THR	H	137	11.772	24.201	40.637	1.00	57.49	H C
ATOM	2713	N	LEU	H	138	9.195	25.219	42.404	1.00	50.91	H N
ATOM	2714	CA	LEU	H	138	8.350	24.318	43.162	1.00	51.88	H C
ATOM	2715	C	LEU	H	138	8.027	23.184	42.220	1.00	49.95	H C
ATOM	2716	O	LEU	H	138	8.260	23.294	41.012	1.00	53.08	H O
ATOM	2717	CB	LEU	H	138	7.071	25.016	43.622	1.00	50.53	H C
ATOM	2718	CG	LEU	H	138	7.313	26.155	44.613	1.00	46.88	H C
ATOM	2719	CD1	LEU	H	138	5.996	26.848	44.934	1.00	62.88	H C
ATOM	2720	CD2	LEU	H	138	7.944	25.611	45.870	1.00	75.29	H C
ATOM	2721	N	GLY	H	139	7.498	22.091	42.753	1.00	47.47	H N
ATOM	2722	CA	GLY	H	139	7.197	20.974	41.887	1.00	46.51	H C
ATOM	2723	C	GLY	H	139	5.959	20.195	42.244	1.00	47.53	H C
ATOM	2724	O	GLY	H	139	5.297	20.467	43.235	1.00	48.18	H O
ATOM	2725	N	CYS	H	140	5.663	19.205	41.414	1.00	52.13	H N
ATOM	2726	CA	CYS	H	140	4.503	18.351	41.592	1.00	54.83	H C
ATOM	2727	C	CYS	H	140	4.940	16.925	41.247	1.00	49.40	H C
ATOM	2728	O	CYS	H	140	5.633	16.698	40.250	1.00	44.99	H O
ATOM	2729	CB	CYS	H	140	3.377	18.813	40.655	1.00	57.10	H C
ATOM	2730	SG	CYS	H	140	1.704	18.276	41.141	1.00	76.47	H S
ATOM	2731	N	LEU	H	141	4.548	15.969	42.081	1.00	46.30	H N
ATOM	2732	CA	LEU	H	141	4.910	14.580	41.850	1.00	42.12	H C
ATOM	2733	C	LEU	H	141	3.646	13.734	41.662	1.00	40.17	H C
ATOM	2734	O	LEU	H	141	2.882	13.523	42.601	1.00	39.80	H O
ATOM	2735	CB	LEU	H	141	5.735	14.055	43.031	1.00	46.51	H C
ATOM	2736	CG	LEU	H	141	6.288	12.631	42.945	1.00	52.01	H C
ATOM	2737	CD1	LEU	H	141	7.259	12.570	41.784	1.00	55.61	H C
ATOM	2738	CD2	LEU	H	141	7.002	12.237	44.232	1.00	52.23	H C
ATOM	2739	N	VAL	H	142	3.440	13.268	40.432	1.00	38.37	H N
ATOM	2740	CA	VAL	H	142	2.291	12.450	40.068	1.00	37.81	H C
ATOM	2741	C	VAL	H	142	2.758	10.999	39.994	1.00	43.46	H C
ATOM	2742	O	VAL	H	142	3.168	10.522	38.935	1.00	44.35	H O
ATOM	2743	CB	VAL	H	142	1.729	12.889	38.695	1.00	37.90	H C
ATOM	2744	CG1	VAL	H	142	0.661	11.913	38.221	1.00	34.13	H C
ATOM	2745	CG2	VAL	H	142	1.149	14.283	38.799	1.00	29.37	H C
ATOM	2746	N	LYS	H	143	2.684	10.292	41.118	1.00	45.16	H N
ATOM	2747	CA	LYS	H	143	3.163	8.920	41.167	1.00	41.48	H C
ATOM	2748	C	LYS	H	143	2.141	7.798	40.999	1.00	46.30	H C
ATOM	2749	O	LYS	H	143	1.027	7.834	41.549	1.00	45.34	H O
ATOM	2750	CB	LYS	H	143	3.939	8.711	42.467	1.00	43.20	H C
ATOM	2751	CG	LYS	H	143	4.963	7.582	42.413	1.00	41.99	H C
ATOM	2752	CD	LYS	H	143	5.743	7.500	43.720	1.00	42.24	H C
ATOM	2753	CE	LYS	H	143	6.993	6.653	43.589	1.00	52.65	H C
ATOM	2754	NZ	LYS	H	143	6.693	5.280	43.090	1.00	67.31	H N
ATOM	2755	N	GLY	H	144	2.549	6.791	40.233	1.00	47.62	H N
ATOM	2756	CA	GLY	H	144	1.704	5.640	39.988	1.00	52.58	H C

ATOM	2757	C	GLY	H	144	0.369	5.882	39.299	1.00	55.82	H C
ATOM	2758	O	GLY	H	144	-0.560	6.422	39.890	1.00	63.65	H O
ATOM	2759	N	TYR	H	145	0.283	5.482	38.037	1.00	52.96	H N
ATOM	2760	CA	TYR	H	145	-0.942	5.599	37.259	1.00	46.96	H C
ATOM	2761	C	TYR	H	145	-0.820	4.849	35.930	1.00	44.52	H C
ATOM	2762	O	TYR	H	145	0.277	4.623	35.418	1.00	43.14	H O
ATOM	2763	CB	TYR	H	145	-1.302	7.062	37.002	1.00	41.24	H C
ATOM	2764	CG	TYR	H	145	-0.336	7.807	36.121	1.00	54.18	H C
ATOM	2765	CD1	TYR	H	145	0.721	8.522	36.670	1.00	52.12	H C
ATOM	2766	CD2	TYR	H	145	-0.501	7.827	34.740	1.00	37.28	H C
ATOM	2767	CE1	TYR	H	145	1.586	9.246	35.871	1.00	48.23	H C
ATOM	2768	CE2	TYR	H	145	0.358	8.543	33.934	1.00	45.82	H C
ATOM	2769	CZ	TYR	H	145	1.399	9.258	34.506	1.00	53.37	H C
ATOM	2770	OH	TYR	H	145	2.232	10.020	33.716	1.00	51.96	H O
ATOM	2771	N	PHE	H	146	-1.963	4.454	35.385	1.00	47.52	H N
ATOM	2772	CA	PHE	H	146	-2.002	3.718	34.133	1.00	40.66	H C
ATOM	2773	C	PHE	H	146	-3.418	3.793	33.579	1.00	38.13	H C
ATOM	2774	O	PHE	H	146	-4.387	3.717	34.324	1.00	37.80	H O
ATOM	2775	CB	PHE	H	146	-1.600	2.266	34.387	1.00	32.65	H C
ATOM	2776	CG	PHE	H	146	-1.391	1.468	33.139	1.00	40.82	H C
ATOM	2777	CD1	PHE	H	146	-2.463	0.908	32.463	1.00	41.99	H C
ATOM	2778	CD2	PHE	H	146	-0.119	1.288	32.625	1.00	38.82	H C
ATOM	2779	CE1	PHE	H	146	-2.266	0.188	31.305	1.00	39.34	H C
ATOM	2780	CE2	PHE	H	146	0.080	0.567	31.460	1.00	32.29	H C
ATOM	2781	CZ	PHE	H	146	-0.995	0.019	30.804	1.00	28.82	H C
ATOM	2782	N	PRO	H	147	-3.554	3.994	32.262	1.00	41.70	H N
ATOM	2783	CA	PRO	H	147	-2.444	4.151	31.325	1.00	39.65	H C
ATOM	2784	C	PRO	H	147	-2.207	5.630	31.123	1.00	41.99	H C
ATOM	2785	O	PRO	H	147	-2.689	6.456	31.898	1.00	39.17	H O
ATOM	2786	CB	PRO	H	147	-2.986	3.507	30.068	1.00	41.33	H C
ATOM	2787	CG	PRO	H	147	-4.403	4.014	30.077	1.00	36.45	H C
ATOM	2788	CD	PRO	H	147	-4.829	3.857	31.530	1.00	45.61	H C
ATOM	2789	N	GLU	H	148	-1.459	5.961	30.080	1.00	40.49	H N
ATOM	2790	CA	GLU	H	148	-1.200	7.352	29.770	1.00	42.77	H C
ATOM	2791	C	GLU	H	148	-2.481	7.814	29.103	1.00	48.73	H C
ATOM	2792	O	GLU	H	148	-3.292	6.993	28.683	1.00	56.82	H O
ATOM	2793	CB	GLU	H	148	-0.021	7.464	28.809	1.00	41.73	H C
ATOM	2794	CG	GLU	H	148	1.342	7.286	29.473	1.00	44.10	H C
ATOM	2795	CD	GLU	H	148	1.914	8.593	30.018	1.00	54.54	H C
ATOM	2796	OE1	GLU	H	148	1.268	9.240	30.872	1.00	49.74	H O
ATOM	2797	OE2	GLU	H	148	3.021	8.977	29.584	1.00	48.09	H O
ATOM	2798	N	PRO	H	149	-2.698	9.131	29.018	1.00	48.93	H N
ATOM	2799	CA	PRO	H	149	-1.771	10.127	29.533	1.00	46.06	H C
ATOM	2800	C	PRO	H	149	-2.349	10.712	30.808	1.00	46.54	H C
ATOM	2801	O	PRO	H	149	-3.262	10.155	31.410	1.00	52.02	H O
ATOM	2802	CB	PRO	H	149	-1.760	11.148	28.424	1.00	47.59	H C
ATOM	2803	CG	PRO	H	149	-3.227	11.241	28.133	1.00	35.29	H C
ATOM	2804	CD	PRO	H	149	-3.673	9.775	28.118	1.00	46.53	H C
ATOM	2805	N	VAL	H	150	-1.797	11.845	31.199	1.00	46.48	H N
ATOM	2806	CA	VAL	H	150	-2.239	12.617	32.336	1.00	48.36	H C
ATOM	2807	C	VAL	H	150	-1.769	13.975	31.976	1.00	51.53	H C
ATOM	2808	O	VAL	H	150	-0.866	14.111	31.166	1.00	49.48	H O
ATOM	2809	CB	VAL	H	150	-1.528	12.172	33.638	1.00	46.55	H C
ATOM	2810	CG1	VAL	H	150	-2.023	10.810	34.129	1.00	52.35	H C
ATOM	2811	CG2	VAL	H	150	-0.022	12.133	33.442	1.00	45.34	H C
ATOM	2812	N	THR	H	151	-2.457	14.985	32.493	1.00	53.87	H N
ATOM	2813	CA	THR	H	151	-2.050	16.343	32.179	1.00	52.79	H C
ATOM	2814	C	THR	H	151	-1.853	17.094	33.467	1.00	53.87	H C
ATOM	2815	O	THR	H	151	-2.467	16.801	34.480	1.00	58.71	H O
ATOM	2816	CB	THR	H	151	-3.167	17.041	31.389	1.00	49.68	H C
ATOM	2817	OG1	THR	H	151	-4.169	17.497	32.300	1.00	68.43	H O
ATOM	2818	CG2	THR	H	151	-3.814	16.082	30.390	1.00	50.57	H C
ATOM	2819	N	VAL	H	152	-0.916	18.052	33.417	1.00	54.84	H N
ATOM	2820	CA	VAL	H	152	-0.653	18.890	34.576	1.00	52.95	H C
ATOM	2821	C	VAL	H	152	-0.556	20.338	34.132	1.00	52.63	H C
ATOM	2822	O	VAL	H	152	0.044	20.670	33.121	1.00	50.48	H O
ATOM	2823	CB	VAL	H	152	0.672	18.465	35.236	1.00	51.86	H C
ATOM	2824	CG1	VAL	H	152	0.613	17.013	35.714	1.00	46.34	H C
ATOM	2825	CG2	VAL	H	152	1.840	18.631	34.275	1.00	53.57	H C

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ATOM   2826  N   THR H 153      -1.249  21.203  34.887  1.00 53.77      H    N
ATOM   2827  CA  THR H 153      -1.215  22.630  34.594  1.00 56.85      H    C
ATOM   2828  C   THR H 153      -0.947  23.377  35.880  1.00 59.60      H    C
ATOM   2829  O   THR H 153      -1.146  22.862  36.971  1.00 60.71      H    O
ATOM   2830  CB  THR H 153      -2.589  23.061  34.048  1.00 58.09      H    C
ATOM   2831  OG1 THR H 153      -3.610  22.721  34.987  1.00 63.79      H    O
ATOM   2832  CG2 THR H 153      -2.889  22.371  32.711  1.00 53.38      H    C
ATOM   2833  N   TRP H 154      -0.428  24.607  35.743  1.00 58.56      H    N
ATOM   2834  CA  TRP H 154      -0.160  25.388  36.943  1.00 59.00      H    C
ATOM   2835  C   TRP H 154      -1.058  26.617  36.985  1.00 65.51      H    C
ATOM   2836  O   TRP H 154      -1.090  27.437  36.077  1.00 68.44      H    O
ATOM   2837  CB  TRP H 154       1.310  25.839  36.936  1.00 58.83      H    C
ATOM   2838  CG  TRP H 154       2.220  24.700  37.226  1.00 63.23      H    C
ATOM   2839  CD1 TRP H 154       2.867  23.892  36.276  1.00 63.79      H    C
ATOM   2840  CD2 TRP H 154       2.606  24.185  38.526  1.00 55.01      H    C
ATOM   2841  NE1 TRP H 154       3.610  22.909  36.827  1.00 52.78      H    N
ATOM   2842  CE2 TRP H 154       3.457  23.068  38.283  1.00 53.67      H    C
ATOM   2843  CE3 TRP H 154       2.315  24.533  39.802  1.00 48.82      H    C
ATOM   2844  CZ2 TRP H 154       3.988  22.352  39.320  1.00 47.95      H    C
ATOM   2845  CZ3 TRP H 154       2.848  23.811  40.856  1.00 41.43      H    C
ATOM   2846  CH2 TRP H 154       3.692  22.703  40.610  1.00 46.15      H    C
ATOM   2847  N   ASN H 155      -1.843  26.698  38.075  1.00 67.18      H    N
ATOM   2848  CA  ASN H 155      -2.816  27.773  38.189  1.00 70.56      H    C
ATOM   2849  C   ASN H 155      -3.788  27.780  37.006  1.00 69.10      H    C
ATOM   2850  O   ASN H 155      -4.096  28.808  36.419  1.00 71.27      H    O
ATOM   2851  CB  ASN H 155      -2.065  29.103  38.255  1.00 70.76      H    C
ATOM   2852  CG  ASN H 155      -1.537  29.314  39.652  1.00 70.08      H    C
ATOM   2853  OD1 ASN H 155      -2.077  28.814  40.634  1.00 71.53      H    O
ATOM   2854  ND2 ASN H 155      -0.448  30.098  39.732  1.00 64.39      H    N
ATOM   2855  N   SER H 156      -4.242  26.570  36.631  1.00 71.92      H    N
ATOM   2856  CA  SER H 156      -5.245  26.483  35.576  1.00 71.41      H    C
ATOM   2857  C   SER H 156      -4.670  26.875  34.212  1.00 71.15      H    C
ATOM   2858  O   SER H 156      -5.371  26.975  33.212  1.00 74.08      H    O
ATOM   2859  CB  SER H 156      -6.398  27.417  35.949  1.00 74.57      H    C
ATOM   2860  OG  SER H 156      -6.915  27.040  37.226  1.00 75.73      H    O
ATOM   2861  N   GLY H 157      -3.349  27.138  34.201  1.00 69.68      H    N
ATOM   2862  CA  GLY H 157      -2.698  27.495  32.944  1.00 67.44      H    C
ATOM   2863  C   GLY H 157      -2.203  28.945  32.952  1.00 70.86      H    C
ATOM   2864  O   GLY H 157      -1.597  29.433  32.006  1.00 67.86      H    O
ATOM   2865  N   SER H 158      -2.527  29.647  34.058  1.00 74.60      H    N
ATOM   2866  CA  SER H 158      -2.075  31.029  34.216  1.00 82.23      H    C
ATOM   2867  C   SER H 158      -0.548  31.120  34.273  1.00 82.78      H    C
ATOM   2868  O   SER H 158       0.060  32.135  33.958  1.00 85.81      H    O
ATOM   2869  CB  SER H 158      -2.678  31.578  35.513  1.00 83.01      H    C
ATOM   2870  OG  SER H 158      -2.040  30.961  36.632  1.00 99.77      H    O
ATOM   2871  N   LEU H 159       0.069  30.015  34.734  1.00 82.52      H    N
ATOM   2872  CA  LEU H 159       1.525  29.954  34.677  1.00 82.36      H    C
ATOM   2873  C   LEU H 159       2.021  29.704  33.252  1.00 86.99      H    C
ATOM   2874  O   LEU H 159       2.025  28.590  32.747  1.00 79.57      H    O
ATOM   2875  CB  LEU H 159       1.993  28.822  35.593  1.00 81.28      H    C
ATOM   2876  CG  LEU H 159       1.795  29.147  37.075  1.00 79.39      H    C
ATOM   2877  CD1 LEU H 159       2.518  28.155  37.989  1.00 93.68      H    C
ATOM   2878  CD2 LEU H 159       2.313  30.535  37.455  1.00 62.45      H    C
ATOM   2879  N   SER H 160       2.414  30.808  32.585  1.00 93.62      H    N
ATOM   2880  CA  SER H 160       2.816  30.704  31.185  1.00 96.23      H    C
ATOM   2881  C   SER H 160       3.963  29.706  31.006  1.00 92.96      H    C
ATOM   2882  O   SER H 160       3.782  28.495  30.993  1.00 88.20      H    O
ATOM   2883  CB  SER H 160       3.255  32.089  30.707  1.00102.14      H    C
ATOM   2884  OG  SER H 160       3.409  32.948  31.837  1.00 98.22      H    O
ATOM   2885  N   SER H 161       5.176  30.264  30.814  1.00 89.77      H    N
ATOM   2886  CA  SER H 161       6.356  29.411  30.734  1.00 86.56      H    C
ATOM   2887  C   SER H 161       7.054  29.317  32.093  1.00 77.91      H    C
ATOM   2888  O   SER H 161       6.634  29.900  33.083  1.00 71.05      H    O
ATOM   2889  CB  SER H 161       7.309  30.008  29.700  1.00 92.32      H    C
ATOM   2890  OG  SER H 161       7.193  29.283  28.475  1.00 99.76      H    O
ATOM   2891  N   GLY H 162       8.133  28.513  32.130  1.00 69.90      H    N
ATOM   2892  CA  GLY H 162       8.873  28.369  33.379  1.00 63.56      H    C
ATOM   2893  C   GLY H 162       8.509  27.071  34.104  1.00 59.46      H    C
ATOM   2894  O   GLY H 162       9.024  26.747  35.165  1.00 61.58      H    O
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ATOM	2895	N	VAL	H	163	7.550	26.337	33.511	1.00	56.46	H N
ATOM	2896	CA	VAL	H	163	7.159	25.060	34.093	1.00	51.91	H C
ATOM	2897	C	VAL	H	163	7.695	23.886	33.267	1.00	46.10	H C
ATOM	2898	O	VAL	H	163	7.597	23.847	32.048	1.00	54.99	H O
ATOM	2899	CB	VAL	H	163	5.632	25.007	34.142	1.00	56.36	H C
ATOM	2900	CG1	VAL	H	163	5.049	26.077	33.222	1.00	41.84	H C
ATOM	2901	CG2	VAL	H	163	5.145	23.641	33.693	1.00	37.01	H C
ATOM	2902	N	HIS	H	164	8.321	22.926	33.973	1.00	38.73	H N
ATOM	2903	CA	HIS	H	164	8.861	21.764	33.277	1.00	38.20	H C
ATOM	2904	C	HIS	H	164	8.049	20.502	33.578	1.00	39.02	H C
ATOM	2905	O	HIS	H	164	7.976	20.032	34.706	1.00	45.91	H O
ATOM	2906	CB	HIS	H	164	10.313	21.577	33.717	1.00	47.41	H C
ATOM	2907	CG	HIS	H	164	11.186	22.595	33.029	1.00	50.39	H C
ATOM	2908	ND1	HIS	H	164	11.185	22.791	31.687	1.00	44.32	H N
ATOM	2909	CD2	HIS	H	164	12.121	23.462	33.604	1.00	55.52	H C
ATOM	2910	CE1	HIS	H	164	12.100	23.754	31.461	1.00	48.81	H C
ATOM	2911	NE2	HIS	H	164	12.675	24.174	32.590	1.00	54.09	H N
ATOM	2912	N	THR	H	165	7.370	19.928	32.580	1.00	38.94	H N
ATOM	2913	CA	THR	H	165	6.670	18.686	32.816	1.00	34.58	H C
ATOM	2914	C	THR	H	165	7.399	17.560	32.128	1.00	34.70	H C
ATOM	2915	O	THR	H	165	7.479	17.480	30.909	1.00	36.98	H O
ATOM	2916	CB	THR	H	165	5.254	18.805	32.243	1.00	29.54	H C
ATOM	2917	OG1	THR	H	165	4.542	19.815	32.962	1.00	26.80	H O
ATOM	2918	CG2	THR	H	165	4.511	17.466	32.408	1.00	30.37	H C
ATOM	2919	N	PHE	H	166	8.006	16.715	32.970	1.00	33.46	H N
ATOM	2920	CA	PHE	H	166	8.843	15.652	32.438	1.00	30.02	H C
ATOM	2921	C	PHE	H	166	8.045	14.422	32.045	1.00	34.42	H C
ATOM	2922	O	PHE	H	166	7.017	14.068	32.608	1.00	40.79	H O
ATOM	2923	CB	PHE	H	166	9.859	15.259	33.516	1.00	30.92	H C
ATOM	2924	CG	PHE	H	166	10.715	16.432	33.877	1.00	23.83	H C
ATOM	2925	CD1	PHE	H	166	11.915	16.636	33.210	1.00	29.02	H C
ATOM	2926	CD2	PHE	H	166	10.295	17.316	34.855	1.00	31.79	H C
ATOM	2927	CE1	PHE	H	166	12.682	17.749	33.512	1.00	31.45	H C
ATOM	2928	CE2	PHE	H	166	11.072	18.429	35.148	1.00	24.79	H C
ATOM	2929	CZ	PHE	H	166	12.266	18.654	34.478	1.00	30.14	H C
ATOM	2930	N	PRO	H	167	8.539	13.777	31.009	1.00	39.29	H N
ATOM	2931	CA	PRO	H	167	7.977	12.558	30.445	1.00	42.13	H C
ATOM	2932	C	PRO	H	167	7.936	11.450	31.506	1.00	47.73	H C
ATOM	2933	O	PRO	H	167	8.821	11.347	32.335	1.00	56.66	H O
ATOM	2934	CB	PRO	H	167	8.910	12.175	29.309	1.00	45.03	H C
ATOM	2935	CG	PRO	H	167	9.508	13.500	28.826	1.00	46.59	H C
ATOM	2936	CD	PRO	H	167	9.720	14.174	30.268	1.00	34.51	H C
ATOM	2937	N	ALA	H	168	6.837	10.656	31.518	1.00	45.33	H N
ATOM	2938	CA	ALA	H	168	6.700	9.658	32.569	1.00	42.85	H C
ATOM	2939	C	ALA	H	168	7.589	8.447	32.291	1.00	42.34	H C
ATOM	2940	O	ALA	H	168	7.978	8.165	31.165	1.00	39.56	H O
ATOM	2941	CB	ALA	H	168	5.236	9.220	32.623	1.00	37.42	H C
ATOM	2942	N	VAL	H	169	7.951	7.746	33.381	1.00	41.75	H N
ATOM	2943	CA	VAL	H	169	8.708	6.508	33.239	1.00	41.72	H C
ATOM	2944	CB	VAL	H	169	9.960	6.609	34.111	1.00	45.04	H C
ATOM	2945	CG1	VAL	H	169	10.743	5.299	34.055	1.00	58.27	H C
ATOM	2946	CG2	VAL	H	169	10.845	7.742	33.624	1.00	43.30	H C
ATOM	2947	O	VAL	H	169	7.107	5.322	34.609	1.00	47.89	H O
ATOM	2948	N	LEU	H	170	8.029	4.209	32.879	1.00	47.24	H N
ATOM	2949	CA	LEU	H	170	7.293	2.994	33.196	1.00	47.57	H C
ATOM	2950	C	LEU	H	170	8.099	2.072	34.110	1.00	50.54	H C
ATOM	2951	O	LEU	H	170	9.213	1.663	33.813	1.00	53.71	H O
ATOM	2952	CB	LEU	H	170	6.966	2.273	31.889	1.00	49.56	H C
ATOM	2953	CG	LEU	H	170	5.944	1.151	32.084	1.00	43.50	H C
ATOM	2954	CD1	LEU	H	170	4.717	1.614	32.875	1.00	47.61	H C
ATOM	2955	CD2	LEU	H	170	5.417	0.594	30.761	1.00	40.91	H C
ATOM	2956	N	GLU	H	171	7.509	1.787	35.285	1.00	55.65	H N
ATOM	2957	CA	GLU	H	171	8.159	0.876	36.217	1.00	68.14	H C
ATOM	2958	C	GLU	H	171	7.197	-0.226	36.666	1.00	67.74	H C
ATOM	2959	O	GLU	H	171	6.098	0.029	37.140	1.00	65.41	H O
ATOM	2960	CB	GLU	H	171	8.626	1.686	37.428	1.00	72.43	H C
ATOM	2961	CG	GLU	H	171	9.934	1.159	38.021	1.00	91.59	H C
ATOM	2962	CD	GLU	H	171	10.146	1.768	39.388	1.00	120.67	H C
ATOM	2963	OE1	GLU	H	171	11.228	1.613	39.940	1.00	130.29	H O

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ATOM   2964  OE2 GLU H 171       9.216   2.391  39.899  1.00122.92      H    O
ATOM   2965  N   SER H 172       7.611  -1.486  36.449  1.00 72.50      H    N
ATOM   2966  CA  SER H 172       6.698  -2.576  36.764  1.00 78.89      H    C
ATOM   2967  C   SER H 172       5.564  -2.629  35.737  1.00 79.78      H    C
ATOM   2968  O   SER H 172       5.392  -3.582  34.986  1.00 87.21      H    O
ATOM   2969  CB  SER H 172       6.099  -2.293  38.141  1.00 79.72      H    C
ATOM   2970  OG  SER H 172       4.766  -1.804  37.968  1.00 80.07      H    O
ATOM   2971  N   ASP H 173       4.739  -1.563  35.781  1.00 74.99      H    N
ATOM   2972  CA  ASP H 173       3.654  -1.391  34.824  1.00 72.78      H    C
ATOM   2973  C   ASP H 173       2.866  -0.123  35.157  1.00 65.42      H    C
ATOM   2974  O   ASP H 173       1.678   0.008  34.893  1.00 59.35      H    O
ATOM   2975  CB  ASP H 173       2.748  -2.625  34.859  1.00 81.69      H    C
ATOM   2976  CG  ASP H 173       2.371  -3.008  33.430  1.00 97.36      H    C
ATOM   2977  OD1 ASP H 173       2.070  -2.099  32.654  1.00108.23      H    O
ATOM   2978  OD2 ASP H 173       2.357  -4.193  33.120  1.00106.64      H    O
ATOM   2979  N   LEU H 174       3.586   0.813  35.796  1.00 63.54      H    N
ATOM   2980  CA  LEU H 174       2.969   2.059  36.232  1.00 55.65      H    C
ATOM   2981  C   LEU H 174       3.798   3.286  35.812  1.00 51.40      H    C
ATOM   2982  O   LEU H 174       5.019   3.255  35.734  1.00 54.33      H    O
ATOM   2983  CB  LEU H 174       2.819   2.014  37.760  1.00 54.66      H    C
ATOM   2984  CG  LEU H 174       1.767   0.993  38.222  1.00 48.08      H    C
ATOM   2985  CD1 LEU H 174       1.941   0.589  39.689  1.00 53.16      H    C
ATOM   2986  CD2 LEU H 174       0.335   1.512  38.091  1.00 59.23      H    C
ATOM   2987  N   TYR H 175       3.150   4.419  35.548  1.00 43.17      H    N
ATOM   2988  CA  TYR H 175       3.870   5.631  35.150  1.00 41.68      H    C
ATOM   2989  C   TYR H 175       4.025   6.621  36.287  1.00 40.74      H    C
ATOM   2990  O   TYR H 175       3.233   6.637  37.226  1.00 36.93      H    O
ATOM   2991  CB  TYR H 175       3.156   6.354  33.997  1.00 47.72      H    C
ATOM   2992  CG  TYR H 175       3.166   5.631  32.667  1.00 53.98      H    C
ATOM   2993  CD1 TYR H 175       4.346   5.452  31.955  1.00 51.27      H    C
ATOM   2994  CD2 TYR H 175       1.992   5.105  32.137  1.00 47.22      H    C
ATOM   2995  CE1 TYR H 175       4.354   4.764  30.754  1.00 58.28      H    C
ATOM   2996  CE2 TYR H 175       1.992   4.418  30.948  1.00 54.50      H    C
ATOM   2997  CZ  TYR H 175       3.171   4.243  30.257  1.00 55.81      H    C
ATOM   2998  OH  TYR H 175       3.166   3.509  29.089  1.00 41.75      H    O
ATOM   2999  N   THR H 176       5.058   7.452  36.171  1.00 41.73      H    N
ATOM   3000  CA  THR H 176       5.362   8.499  37.139  1.00 38.73      H    C
ATOM   3001  C   THR H 176       5.921   9.671  36.350  1.00 41.82      H    C
ATOM   3002  O   THR H 176       6.933   9.528  35.645  1.00 36.33      H    O
ATOM   3003  CB  THR H 176       6.468   8.094  38.131  1.00 41.02      H    C
ATOM   3004  OG1 THR H 176       6.251   6.754  38.592  1.00 49.99      H    O
ATOM   3005  CG2 THR H 176       6.480   9.045  39.310  1.00 36.35      H    C
ATOM   3006  N   LEU H 177       5.268  10.822  36.439  1.00 38.99      H    N
ATOM   3007  CA  LEU H 177       5.783  11.982  35.743  1.00 33.71      H    C
ATOM   3008  C   LEU H 177       6.070  12.988  36.820  1.00 32.17      H    C
ATOM   3009  O   LEU H 177       5.689  12.796  37.962  1.00 32.19      H    O
ATOM   3010  CB  LEU H 177       4.779  12.526  34.729  1.00 30.29      H    C
ATOM   3011  CG  LEU H 177       3.660  13.499  35.078  1.00 31.11      H    C
ATOM   3012  CD1 LEU H 177       4.186  14.867  35.498  1.00 32.05      H    C
ATOM   3013  CD2 LEU H 177       2.830  13.652  33.831  1.00 37.80      H    C
ATOM   3014  N   SER H 178       6.751  14.060  36.463  1.00 37.29      H    N
ATOM   3015  CA  SER H 178       7.105  15.065  37.440  1.00 36.26      H    C
ATOM   3016  C   SER H 178       6.994  16.416  36.761  1.00 40.62      H    C
ATOM   3017  O   SER H 178       7.258  16.532  35.562  1.00 37.73      H    O
ATOM   3018  CB  SER H 178       8.534  14.831  37.906  1.00 33.83      H    C
ATOM   3019  OG  SER H 178       8.654  15.142  39.273  1.00 53.70      H    O
ATOM   3020  N   SER H 179       6.600  17.437  37.511  1.00 35.74      H    N
ATOM   3021  CA  SER H 179       6.437  18.737  36.871  1.00 36.88      H    C
ATOM   3022  C   SER H 179       6.953  19.862  37.767  1.00 39.97      H    C
ATOM   3023  O   SER H 179       6.677  19.929  38.957  1.00 43.93      H    O
ATOM   3024  CB  SER H 179       4.951  18.948  36.573  1.00 41.66      H    C
ATOM   3025  OG  SER H 179       4.812  19.938  35.551  1.00 41.44      H    O
ATOM   3026  N   SER H 180       7.770  20.740  37.161  1.00 44.77      H    N
ATOM   3027  CA  SER H 180       8.376  21.808  37.942  1.00 47.17      H    C
ATOM   3028  C   SER H 180       7.933  23.189  37.460  1.00 51.73      H    C
ATOM   3029  O   SER H 180       7.776  23.451  36.275  1.00 56.63      H    O
ATOM   3030  CB  SER H 180       9.893  21.679  37.813  1.00 46.70      H    C
ATOM   3031  OG  SER H 180      10.300  22.191  36.544  1.00 39.66      H    O
ATOM   3032  N   VAL H 181       7.692  24.080  38.438  1.00 54.79      H    N
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ATOM	3033	CA	VAL	H	181	7.318	25.443	38.088	1.00	52.01	H	C
ATOM	3034	C	VAL	H	181	8.212	26.458	38.796	1.00	50.47	H	C
ATOM	3035	O	VAL	H	181	8.466	26.375	39.990	1.00	47.10	H	O
ATOM	3036	CB	VAL	H	181	5.862	25.661	38.501	1.00	50.38	H	C
ATOM	3037	CG1	VAL	H	181	5.748	25.673	40.024	1.00	47.12	H	C
ATOM	3038	CG2	VAL	H	181	5.365	26.985	37.951	1.00	39.28	H	C
ATOM	3039	N	THR	H	182	8.750	27.411	38.043	1.00	48.35	H	N
ATOM	3040	CA	THR	H	182	9.638	28.427	38.599	1.00	48.08	H	C
ATOM	3041	C	THR	H	182	8.954	29.788	38.586	1.00	51.63	H	C
ATOM	3042	O	THR	H	182	8.259	30.134	37.629	1.00	50.26	H	O
ATOM	3043	CB	THR	H	182	10.948	28.523	37.791	1.00	47.88	H	C
ATOM	3044	OG1	THR	H	182	11.621	27.264	37.831	1.00	51.81	H	O
ATOM	3045	CG2	THR	H	182	11.855	29.590	38.363	1.00	29.17	H	C
ATOM	3046	N	VAL	H	183	9.161	30.555	39.653	1.00	56.66	H	N
ATOM	3047	CA	VAL	H	183	8.566	31.882	39.791	1.00	57.17	H	C
ATOM	3048	C	VAL	H	183	9.449	32.755	40.650	1.00	59.90	H	C
ATOM	3049	O	VAL	H	183	10.231	32.257	41.454	1.00	59.55	H	O
ATOM	3050	CB	VAL	H	183	7.199	31.834	40.508	1.00	58.93	H	C
ATOM	3051	CG1	VAL	H	183	6.271	30.839	39.826	1.00	61.72	H	C
ATOM	3052	CG2	VAL	H	183	7.403	31.475	41.971	1.00	41.35	H	C
ATOM	3053	N	PRO	H	184	9.329	34.080	40.496	1.00	66.40	H	N
ATOM	3054	CA	PRO	H	184	10.142	34.990	41.300	1.00	66.49	H	C
ATOM	3055	C	PRO	H	184	9.825	34.725	42.765	1.00	67.25	H	C
ATOM	3056	O	PRO	H	184	8.738	34.249	43.093	1.00	66.00	H	O
ATOM	3057	CB	PRO	H	184	9.673	36.367	40.841	1.00	64.64	H	C
ATOM	3058	CG	PRO	H	184	9.314	36.132	39.408	1.00	71.49	H	C
ATOM	3059	CD	PRO	H	184	8.552	34.825	39.491	1.00	70.81	H	C
ATOM	3060	N	SER	H	185	10.779	35.012	43.640	1.00	66.78	H	N
ATOM	3061	CA	SER	H	185	10.586	34.790	45.061	1.00	67.40	H	C
ATOM	3062	C	SER	H	185	9.352	35.537	45.572	1.00	72.49	H	C
ATOM	3063	O	SER	H	185	8.673	35.081	46.492	1.00	73.45	H	O
ATOM	3064	CB	SER	H	185	11.827	35.245	45.817	1.00	66.63	H	C
ATOM	3065	OG	SER	H	185	12.993	34.763	45.181	1.00	65.52	H	O
ATOM	3066	N	SER	H	186	9.061	36.689	44.977	1.00	72.88	H	N
ATOM	3067	CA	SER	H	186	7.904	37.461	45.399	1.00	76.17	H	C
ATOM	3068	C	SER	H	186	6.633	36.611	45.310	1.00	78.37	H	C
ATOM	3069	O	SER	H	186	6.016	36.312	46.336	1.00	80.30	H	O
ATOM	3070	CB	SER	H	186	7.768	38.737	44.554	1.00	75.54	H	C
ATOM	3071	OG	SER	H	186	8.710	38.758	43.495	1.00	64.86	H	O
ATOM	3072	N	PRO	H	187	6.246	36.185	44.089	1.00	75.34	H	N
ATOM	3073	CA	PRO	H	187	5.051	35.367	43.859	1.00	69.64	H	C
ATOM	3074	C	PRO	H	187	4.756	34.323	44.928	1.00	66.91	H	C
ATOM	3075	O	PRO	H	187	3.648	34.269	45.451	1.00	68.67	H	O
ATOM	3076	CB	PRO	H	187	5.332	34.736	42.502	1.00	71.74	H	C
ATOM	3077	CG	PRO	H	187	6.029	35.838	41.782	1.00	71.69	H	C
ATOM	3078	CD	PRO	H	187	6.996	36.358	42.829	1.00	78.09	H	C
ATOM	3079	N	ARG	H	188	5.745	33.496	45.251	1.00	65.41	H	N
ATOM	3080	CA	ARG	H	188	5.568	32.446	46.255	1.00	66.06	H	C
ATOM	3081	C	ARG	H	188	6.649	32.600	47.319	1.00	71.72	H	C
ATOM	3082	O	ARG	H	188	7.776	32.982	47.017	1.00	73.68	H	O
ATOM	3083	CB	ARG	H	188	5.680	31.070	45.583	1.00	63.16	H	C
ATOM	3084	CG	ARG	H	188	4.610	30.050	45.956	1.00	47.34	H	C
ATOM	3085	CD	ARG	H	188	4.956	29.292	47.212	1.00	42.91	H	C
ATOM	3086	NE	ARG	H	188	6.371	28.942	47.242	1.00	58.37	H	N
ATOM	3087	CZ	ARG	H	188	6.941	28.200	48.185	1.00	63.59	H	C
ATOM	3088	NH1	ARG	H	188	6.221	27.717	49.188	1.00	58.02	H	N
ATOM	3089	NH2	ARG	H	188	8.239	27.947	48.132	1.00	75.00	H	N
ATOM	3090	N	PRO	H	189	6.324	32.290	48.581	1.00	73.56	H	N
ATOM	3091	CA	PRO	H	189	5.021	31.810	49.055	1.00	76.25	H	C
ATOM	3092	C	PRO	H	189	4.006	32.893	49.415	1.00	80.21	H	C
ATOM	3093	O	PRO	H	189	3.307	32.775	50.421	1.00	86.41	H	O
ATOM	3094	CB	PRO	H	189	5.400	30.964	50.263	1.00	76.00	H	C
ATOM	3095	CG	PRO	H	189	6.524	31.757	50.848	1.00	75.53	H	C
ATOM	3096	CD	PRO	H	189	7.346	32.143	49.633	1.00	74.81	H	C
ATOM	3097	N	SER	H	190	3.915	33.940	48.603	1.00	80.77	H	N
ATOM	3098	CA	SER	H	190	2.963	35.010	48.879	1.00	82.18	H	C
ATOM	3099	C	SER	H	190	1.719	34.817	48.030	1.00	81.86	H	C
ATOM	3100	O	SER	H	190	0.702	35.464	48.254	1.00	81.36	H	O
ATOM	3101	CB	SER	H	190	3.578	36.377	48.571	1.00	83.27	H	C

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ATOM   3102  OG  SER H 190       3.707  36.570  47.174  1.00 87.49      H    O
ATOM   3103  N   GLU H 191       1.811  33.924  47.052  1.00 81.18      H    N
ATOM   3104  CA  GLU H 191       0.694  33.642  46.162  1.00 80.63      H    C
ATOM   3105  C   GLU H 191       0.523  32.143  45.934  1.00 82.13      H    C
ATOM   3106  O   GLU H 191       1.465  31.447  45.558  1.00 80.46      H    O
ATOM   3107  CB  GLU H 191       0.903  34.334  44.820  1.00 81.67      H    C
ATOM   3108  CG  GLU H 191       0.887  35.844  44.879  1.00 78.66      H    C
ATOM   3109  CD  GLU H 191       1.138  36.466  43.518  1.00 84.10      H    C
ATOM   3110  OE1 GLU H 191       0.440  36.081  42.552  1.00 79.16      H    O
ATOM   3111  OE2 GLU H 191       2.028  37.338  43.417  1.00 84.64      H    O
ATOM   3112  N   THR H 192      -0.697  31.665  46.150  1.00 82.97      H    N
ATOM   3113  CA  THR H 192      -1.035  30.254  45.998  1.00 82.00      H    C
ATOM   3114  C   THR H 192      -0.683  29.609  44.663  1.00 80.53      H    C
ATOM   3115  O   THR H 192      -1.405  29.767  43.679  1.00 80.71      H    O
ATOM   3116  CB  THR H 192      -2.536  30.021  46.230  1.00 80.05      H    C
ATOM   3117  OG1 THR H 192      -2.869  30.370  47.577  1.00 88.12      H    O
ATOM   3118  CG2 THR H 192      -2.895  28.569  45.978  1.00 78.28      H    C
ATOM   3119  N   VAL H 193       0.426  28.877  44.636  1.00 75.98      H    N
ATOM   3120  CA  VAL H 193       0.836  28.165  43.432  1.00 68.25      H    C
ATOM   3121  C   VAL H 193       0.149  26.807  43.529  1.00 65.36      H    C
ATOM   3122  O   VAL H 193       0.328  26.087  44.509  1.00 64.64      H    O
ATOM   3123  CB  VAL H 193       2.360  27.972  43.384  1.00 66.83      H    C
ATOM   3124  CG1 VAL H 193       2.718  27.022  42.265  1.00 70.86      H    C
ATOM   3125  CG2 VAL H 193       3.046  29.313  43.170  1.00 66.13      H    C
ATOM   3126  N   THR H 194      -0.644  26.455  42.525  1.00 64.29      H    N
ATOM   3127  CA  THR H 194      -1.364  25.190  42.575  1.00 65.18      H    C
ATOM   3128  C   THR H 194      -1.173  24.250  41.390  1.00 63.54      H    C
ATOM   3129  O   THR H 194      -1.145  24.670  40.237  1.00 64.27      H    O
ATOM   3130  CB  THR H 194      -2.869  25.437  42.752  1.00 65.84      H    C
ATOM   3131  OG1 THR H 194      -3.085  26.186  43.952  1.00 67.51      H    O
ATOM   3132  CG2 THR H 194      -3.622  24.110  42.825  1.00 67.60      H    C
ATOM   3133  N   CYS H 195      -1.068  22.964  41.702  1.00 60.79      H    N
ATOM   3134  CA  CYS H 195      -0.878  21.930  40.699  1.00 61.12      H    C
ATOM   3135  C   CYS H 195      -2.215  21.268  40.365  1.00 57.72      H    C
ATOM   3136  O   CYS H 195      -2.912  20.771  41.248  1.00 56.12      H    O
ATOM   3137  CB  CYS H 195       0.124  20.891  41.222  1.00 60.88      H    C
ATOM   3138  SG  CYS H 195       0.445  19.499  40.098  1.00 74.47      H    S
ATOM   3139  N   ASN H 196      -2.559  21.265  39.081  1.00 52.67      H    N
ATOM   3140  CA  ASN H 196      -3.807  20.682  38.606  1.00 53.59      H    C
ATOM   3141  C   ASN H 196      -3.467  19.433  37.787  1.00 52.35      H    C
ATOM   3142  O   ASN H 196      -2.757  19.523  36.785  1.00 51.73      H    O
ATOM   3143  CB  ASN H 196      -4.535  21.701  37.728  1.00 59.81      H    C
ATOM   3144  CG  ASN H 196      -4.395  23.130  38.247  1.00 62.00      H    C
ATOM   3145  OD1 ASN H 196      -4.161  24.061  37.472  1.00 67.81      H    O
ATOM   3146  ND2 ASN H 196      -4.541  23.310  39.556  1.00 65.11      H    N
ATOM   3147  N   VAL H 197      -3.982  18.276  38.199  1.00 49.58      H    N
ATOM   3148  CA  VAL H 197      -3.689  17.016  37.512  1.00 46.57      H    C
ATOM   3149  C   VAL H 197      -4.930  16.190  37.159  1.00 48.56      H    C
ATOM   3150  O   VAL H 197      -5.888  16.135  37.925  1.00 53.48      H    O
ATOM   3151  CB  VAL H 197      -2.750  16.143  38.381  1.00 44.48      H    C
ATOM   3152  CG1 VAL H 197      -2.412  14.851  37.666  1.00 39.07      H    C
ATOM   3153  CG2 VAL H 197      -1.495  16.923  38.718  1.00 37.49      H    C
ATOM   3154  N   ALA H 198      -4.897  15.532  36.002  1.00 49.52      H    N
ATOM   3155  CA  ALA H 198      -6.021  14.717  35.551  1.00 48.53      H    C
ATOM   3156  C   ALA H 198      -5.610  13.434  34.832  1.00 51.07      H    C
ATOM   3157  O   ALA H 198      -4.711  13.441  33.993  1.00 55.91      H    O
ATOM   3158  CB  ALA H 198      -6.910  15.543  34.643  1.00 48.57      H    C
ATOM   3159  N   HIS H 199      -6.281  12.336  35.174  1.00 54.83      H    N
ATOM   3160  CA  HIS H 199      -6.037  11.031  34.561  1.00 51.27      H    C
ATOM   3161  C   HIS H 199      -7.384  10.385  34.250  1.00 51.92      H    C
ATOM   3162  O   HIS H 199      -7.882   9.555  35.002  1.00 46.18      H    O
ATOM   3163  CB  HIS H 199      -5.218  10.138  35.496  1.00 47.91      H    C
ATOM   3164  CG  HIS H 199      -5.003   8.745  34.982  1.00 42.99      H    C
ATOM   3165  ND1 HIS H 199      -5.849   7.699  35.281  1.00 52.90      H    N
ATOM   3166  CD2 HIS H 199      -4.026   8.221  34.203  1.00 52.68      H    C
ATOM   3167  CE1 HIS H 199      -5.403   6.593  34.713  1.00 50.68      H    C
ATOM   3168  NE2 HIS H 199      -4.297   6.882  34.053  1.00 47.65      H    N
ATOM   3169  N   PRO H 200      -7.989  10.778  33.120  1.00 58.59      H    N
ATOM   3170  CA  PRO H 200      -9.277  10.323  32.593  1.00 60.75      H    C
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ATOM	3171	C	PRO	H	200	-9.504	8.822	32.689	1.00	60.27	H C
ATOM	3172	O	PRO	H	200	-10.551	8.376	33.152	1.00	64.21	H O
ATOM	3173	CB	PRO	H	200	-9.236	10.800	31.146	1.00	61.93	H C
ATOM	3174	CG	PRO	H	200	-8.483	12.082	31.255	1.00	60.39	H C
ATOM	3175	CD	PRO	H	200	-7.342	11.699	32.167	1.00	60.10	H C
ATOM	3176	N	ALA	H	201	-8.523	8.047	32.244	1.00	57.28	H N
ATOM	3177	CA	ALA	H	201	-8.632	6.600	32.269	1.00	57.95	H C
ATOM	3178	C	ALA	H	201	-9.267	6.127	33.578	1.00	64.27	H C
ATOM	3179	O	ALA	H	201	-9.869	5.054	33.641	1.00	67.28	H O
ATOM	3180	CB	ALA	H	201	-7.263	5.979	32.079	1.00	53.21	H C
ATOM	3181	N	SER	H	202	-9.135	6.936	34.620	1.00	64.03	H N
ATOM	3182	CA	SER	H	202	-9.708	6.603	35.912	1.00	67.56	H C
ATOM	3183	C	SER	H	202	-10.529	7.790	36.400	1.00	71.63	H C
ATOM	3184	O	SER	H	202	-11.048	7.783	37.516	1.00	75.10	H O
ATOM	3185	CB	SER	H	202	-8.602	6.301	36.919	1.00	68.02	H C
ATOM	3186	OG	SER	H	202	-7.878	7.475	37.234	1.00	60.70	H O
ATOM	3187	N	SER	H	203	-10.639	8.809	35.552	1.00	73.88	H N
ATOM	3188	CA	SER	H	203	-11.383	10.014	35.887	1.00	75.67	H C
ATOM	3189	C	SER	H	203	-10.951	10.512	37.253	1.00	70.02	H C
ATOM	3190	O	SER	H	203	-11.738	10.537	38.190	1.00	70.12	H O
ATOM	3191	CB	SER	H	203	-12.888	9.732	35.888	1.00	81.76	H C
ATOM	3192	OG	SER	H	203	-13.367	9.502	34.571	1.00	92.44	H O
ATOM	3193	N	THR	H	204	-9.690	10.908	37.353	1.00	69.13	H N
ATOM	3194	CA	THR	H	204	-9.129	11.395	38.602	1.00	68.07	H C
ATOM	3195	C	THR	H	204	-8.638	12.825	38.462	1.00	69.60	H C
ATOM	3196	O	THR	H	204	-7.549	13.069	37.955	1.00	75.93	H O
ATOM	3197	CB	THR	H	204	-7.941	10.523	39.038	1.00	67.90	H C
ATOM	3198	OG1	THR	H	204	-8.377	9.169	39.197	1.00	69.69	H O
ATOM	3199	CG2	THR	H	204	-7.367	11.021	40.346	1.00	68.98	H C
ATOM	3200	N	LYS	H	205	-9.444	13.779	38.899	1.00	71.84	H N
ATOM	3201	CA	LYS	H	205	-9.041	15.171	38.824	1.00	72.92	H C
ATOM	3202	C	LYS	H	205	-8.508	15.512	40.206	1.00	70.26	H C
ATOM	3203	O	LYS	H	205	-9.036	15.027	41.200	1.00	70.61	H O
ATOM	3204	CB	LYS	H	205	-10.240	16.055	38.479	1.00	76.81	H C
ATOM	3205	CG	LYS	H	205	-9.928	17.541	38.480	1.00	93.84	H C
ATOM	3206	CD	LYS	H	205	-11.159	18.374	38.140	1.00	119.23	H C
ATOM	3207	CE	LYS	H	205	-10.866	19.875	38.218	1.00	127.13	H C
ATOM	3208	NZ	LYS	H	205	-10.500	20.334	39.593	1.00	118.10	H N
ATOM	3209	N	VAL	H	206	-7.455	16.323	40.273	1.00	71.24	H N
ATOM	3210	CA	VAL	H	206	-6.865	16.710	41.554	1.00	65.47	H C
ATOM	3211	C	VAL	H	206	-6.097	18.015	41.458	1.00	66.88	H C
ATOM	3212	O	VAL	H	206	-5.419	18.270	40.464	1.00	63.59	H O
ATOM	3213	CB	VAL	H	206	-5.879	15.648	42.080	1.00	60.18	H C
ATOM	3214	CG1	VAL	H	206	-5.211	16.151	43.341	1.00	59.04	H C
ATOM	3215	CG2	VAL	H	206	-6.595	14.354	42.363	1.00	58.52	H C
ATOM	3216	N	ASP	H	207	-6.211	18.835	42.502	1.00	70.84	H N
ATOM	3217	CA	ASP	H	207	-5.512	20.119	42.581	1.00	72.83	H C
ATOM	3218	C	ASP	H	207	-4.636	20.118	43.832	1.00	72.60	H C
ATOM	3219	O	ASP	H	207	-5.119	19.821	44.927	1.00	75.84	H O
ATOM	3220	CB	ASP	H	207	-6.511	21.278	42.659	1.00	71.33	H C
ATOM	3221	CG	ASP	H	207	-7.287	21.477	41.364	1.00	77.68	H C
ATOM	3222	OD1	ASP	H	207	-6.681	21.899	40.354	1.00	80.92	H O
ATOM	3223	OD2	ASP	H	207	-8.508	21.207	41.352	1.00	90.49	H O
ATOM	3224	N	LYS	H	208	-3.353	20.439	43.672	1.00	71.66	H N
ATOM	3225	CA	LYS	H	208	-2.431	20.471	44.805	1.00	67.72	H C
ATOM	3226	C	LYS	H	208	-1.774	21.829	45.029	1.00	67.29	H C
ATOM	3227	O	LYS	H	208	-1.123	22.387	44.143	1.00	60.51	H O
ATOM	3228	CB	LYS	H	208	-1.348	19.408	44.645	1.00	61.97	H C
ATOM	3229	CG	LYS	H	208	-1.885	18.004	44.650	1.00	70.11	H C
ATOM	3230	CD	LYS	H	208	-2.596	17.706	45.952	1.00	79.56	H C
ATOM	3231	CE	LYS	H	208	-1.633	17.728	47.136	1.00	79.20	H C
ATOM	3232	NZ	LYS	H	208	-2.313	17.296	48.397	1.00	74.65	H N
ATOM	3233	N	LYS	H	209	-1.959	22.348	46.235	1.00	68.04	H N
ATOM	3234	CA	LYS	H	209	-1.396	23.624	46.632	1.00	68.05	H C
ATOM	3235	C	LYS	H	209	-0.056	23.336	47.309	1.00	68.52	H C
ATOM	3236	O	LYS	H	209	0.067	22.404	48.111	1.00	68.41	H O
ATOM	3237	CB	LYS	H	209	-2.364	24.326	47.594	1.00	69.90	H C
ATOM	3238	CG	LYS	H	209	-1.838	25.586	48.257	1.00	66.76	H C
ATOM	3239	CD	LYS	H	209	-2.792	26.024	49.348	1.00	78.35	H C

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ATOM   3240  CE  LYS H 209      -2.194  27.115  50.220  1.00 94.10      H    C
ATOM   3241  NZ  LYS H 209      -3.031  27.382  51.432  1.00 96.38      H    N
ATOM   3242  N   ILE H 210       0.948  24.135  46.975  1.00 69.42      H    N
ATOM   3243  CA  ILE H 210       2.323  23.907  47.378  1.00 69.31      H    C
ATOM   3244  C   ILE H 210       2.654  24.760  48.593  1.00 73.85      H    C
ATOM   3245  O   ILE H 210       2.905  25.965  48.538  1.00 72.23      H    O
ATOM   3246  CB  ILE H 210       3.289  24.189  46.204  1.00 63.42      H    C
ATOM   3247  CG1 ILE H 210       2.763  23.606  44.883  1.00 55.85      H    C
ATOM   3248  CG2 ILE H 210       4.654  23.519  46.467  1.00 53.59      H    C
ATOM   3249  CD1 ILE H 210       2.724  22.077  44.880  1.00 42.80      H    C
TER    3250      ILE H 210
ATOM   3251  S   SO4 Z   1    -12.465   8.279  -5.420  1.00139.70      Z    S
ATOM   3252  O5  SO4 Z   1    -11.496   7.532  -4.640  1.00128.34      Z    O
ATOM   3253  O2  SO4 Z   1    -13.354   9.016  -4.584  1.00133.20      Z    O
ATOM   3254  O3  SO4 Z   1    -11.721   8.960  -6.420  1.00143.54      Z    O
ATOM   3255  O4  SO4 Z   1    -13.284   7.173  -6.136  1.00137.69      Z    O
TER    3256      SO4 Z   1
ATOM   3257  O   HOH W   1       6.642  26.255  11.504  1.00 44.22      W    O
ATOM   3258  O   HOH W   2      28.229  27.688  14.335  1.00 47.65      W    O
ATOM   3259  O   HOH W   3       4.085  20.721  15.240  1.00 46.98      W    O
ATOM   3260  O   HOH W   4      -2.722  25.529   5.319  1.00 43.81      W    O
ATOM   3261  O   HOH W   5      -0.482  15.335  20.340  1.00 56.36      W    O
ATOM   3262  O   HOH W   6      -9.832  15.976  -2.164  1.00 56.06      W    O
ATOM   3263  O   HOH W   7      -1.203  25.888  -0.428  1.00 50.40      W    O
ATOM   3264  O   HOH W   8     -10.065  13.544  33.937  1.00 59.05      W    O
ATOM   3265  O   HOH W   9      -4.782  15.152  -5.651  1.00 58.18      W    O
ATOM   3266  O   HOH W  10      -3.602  22.705   2.193  1.00 48.13      W    O
ATOM   3267  O   HOH W  11     -11.748  12.731  -2.744  1.00 46.32      W    O
ATOM   3268  O   HOH W  12      12.028  16.121  18.701  1.00 41.71      W    O
ATOM   3269  O   HOH W  13       3.379  -3.325   0.685  1.00 44.58      W    O
ATOM   3270  O   HOH W  14      17.930  21.064  55.610  1.00 32.59      W    O
ATOM   3271  O   HOH W  15      -0.999  21.444   1.050  1.00 39.37      W    O
ATOM   3272  O   HOH W  16      -7.188  20.691  15.900  1.00 58.62      W    O
ATOM   3273  O   HOH W  17      11.612   6.022  14.835  1.00 63.80      W    O
ATOM   3274  O   HOH W  18     -21.984   9.843   5.129  1.00 40.92      W    O
ATOM   3275  O   HOH W  19     -13.113  -7.726  18.949  1.00 55.85      W    O
ATOM   3276  O   HOH W  20      11.899  30.835  17.167  1.00 51.40      W    O
ATOM   3277  O   HOH W  21       5.068   4.550   7.254  1.00 66.68      W    O
ATOM   3278  O   HOH W  22      10.249  11.292  38.205  1.00 65.97      W    O
ATOM   3279  O   HOH W  23       8.242  27.276  13.281  1.00 40.53      W    O
ATOM   3280  O   HOH W  24      27.126  25.654  13.317  1.00 36.28      W    O
ATOM   3281  O   HOH W  25      -2.011  21.099  11.221  1.00 36.94      W    O
ATOM   3282  O   HOH W  26       4.152  14.440  20.408  1.00 44.38      W    O
ATOM   3283  O   HOH W  27       3.465   8.412  20.717  1.00 36.27      W    O
ATOM   3284  O   HOH W  28      -3.739  26.158  -0.964  1.00 59.49      W    O
ATOM   3285  O   HOH W  29       8.758  15.447  18.540  1.00 58.26      W    O
ATOM   3286  O   HOH W  30      11.634   3.618   7.590  1.00 64.90      W    O
ATOM   3287  O   HOH W  31       9.169  11.593  35.533  1.00 53.91      W    O
ATOM   3288  O   HOH W  32      21.365   7.678   8.159  1.00 56.30      W    O
ATOM   3289  O   HOH W  33       1.667  26.705  -2.342  1.00 34.36      W    O
ATOM   3290  O   HOH W  34      -0.777   2.920  -5.893  1.00 54.04      W    O
ATOM   3291  O   HOH W  35      -1.979   6.414  -4.690  1.00 86.59      W    O
ATOM   3292  O   HOH W  36       6.580   2.378   7.003  1.00 56.10      W    O
ATOM   3293  O   HOH W  37       8.782   3.265   5.256  1.00 35.26      W    O
ATOM   3294  O   HOH W  38      16.061   8.450  10.733  1.00 59.25      W    O
ATOM   3295  O   HOH W  39      29.645   4.189  52.482  1.00 54.67      W    O
ATOM   3296  O   HOH W  40      20.575   4.765  61.334  1.00 68.62      W    O
ATOM   3297  O   HOH W  41     -22.962  11.039  19.094  1.00 73.88      W    O
ATOM   3298  O   HOH W  42     -21.174  11.687  21.368  1.00 72.77      W    O
ATOM   3299  O   HOH W  43     -18.934  22.014   5.912  1.00 60.22      W    O
ATOM   3300  O   HOH W  44      10.166   1.139   9.698  1.00 47.40      W    O
ATOM   3301  O   HOH W  45     -16.050   3.113  11.263  1.00 37.96      W    O
ATOM   3302  O   HOH W  46      16.088  23.610  39.697  1.00 46.51      W    O
ATOM   3303  O   HOH W  47       2.897  30.138   2.027  1.00 61.24      W    O
ATOM   3304  O   HOH W  48      24.057   1.224  45.686  1.00 48.96      W    O
ATOM   3305  O   HOH W  49      23.165  21.916   7.479  1.00 66.86      W    O
ATOM   3306  O   HOH W  50     -11.702  14.692  23.074  1.00 50.02      W    O
ATOM   3307  O   HOH W  51     -12.219  -0.922   1.076  1.00 43.82      W    O
ATOM   3308  O   HOH W  52      12.391  12.245  37.897  1.00 49.94      W    O
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ATOM	3309	O	HOH	W	53	4.767	11.266	29.449	1.00	43.95	W	O
ATOM	3310	O	HOH	W	54	-3.099	21.164	48.329	1.00	58.57	W	O
ATOM	3311	O	HOH	W	55	12.781	10.766	29.425	1.00	53.41	W	O
ATOM	3312	O	HOH	W	56	14.923	28.548	3.207	1.00	58.18	W	O
ATOM	3313	O	HOH	W	57	16.115	16.431	-9.571	1.00	69.88	W	O
ATOM	3314	O	HOH	W	58	21.324	3.649	64.100	1.00	72.27	W	O
ATOM	3315	O	HOH	W	59	23.726	4.646	63.378	1.00	57.04	W	O
ATOM	3316	O	HOH	W	60	2.050	32.040	3.673	1.00	51.78	W	O
ATOM	3317	O	HOH	W	61	2.457	33.745	5.919	1.00	56.71	W	O
ATOM	3318	O	HOH	W	62	8.951	-2.545	-6.773	1.00	54.15	W	O
ATOM	3319	O	HOH	W	63	-6.141	27.599	9.560	1.00	51.61	W	O
ATOM	3320	O	HOH	W	64	10.484	22.284	28.826	1.00	50.78	W	O
TER	3321		HOH	W	64							

[a]Amino acids residues of the light (L) and heavy (H) chains are numbered according to the Chothia numbering system shown in Tables 6 and 7, respectively.
[b]Columns are labeled according to Protein Data Bank Format, Version 2.2

Table 11. Structure coordinates of human IL-13/mAb13.2 Fab[a, b]

	#	Name	Res.	Chain	Res #	X	Y	Z	occ	B	SegID	Ele
ATOM	1	N	ASP	L	1	19.935	-6.154	103.296	1.00	32.51	L	N
ATOM	2	CA	ASP	L	1	19.850	-5.026	102.305	1.00	31.66	L	C
ATOM	3	C	ASP	L	1	20.682	-3.882	102.873	1.00	33.17	L	C
ATOM	4	O	ASP	L	1	20.895	-3.771	104.096	1.00	35.13	L	O
ATOM	5	CB	ASP	L	1	18.401	-4.586	102.115	1.00	32.59	L	C
ATOM	6	CG	ASP	L	1	17.478	-5.746	101.733	1.00	38.56	L	C
ATOM	7	OD1	ASP	L	1	17.953	-6.910	101.564	1.00	32.48	L	O
ATOM	8	OD2	ASP	L	1	16.273	-5.483	101.616	1.00	40.42	L	O
ATOM	9	N	ILE	L	2	21.224	-3.062	101.987	1.00	28.09	L	N
ATOM	10	CA	ILE	L	2	22.045	-1.948	102.451	1.00	25.55	L	C
ATOM	11	C	ILE	L	2	21.091	-0.844	102.909	1.00	24.79	L	C
ATOM	12	O	ILE	L	2	20.173	-0.469	102.186	1.00	23.23	L	O
ATOM	13	CB	ILE	L	2	22.965	-1.444	101.317	1.00	24.03	L	C
ATOM	14	CG1	ILE	L	2	23.822	-2.608	100.829	1.00	23.16	L	C
ATOM	15	CG2	ILE	L	2	23.837	-0.288	101.800	1.00	21.56	L	C
ATOM	16	CD1	ILE	L	2	24.903	-2.205	99.809	1.00	25.01	L	C
ATOM	17	N	VAL	L	3	21.345	-0.288	104.091	1.00	19.63	L	N
ATOM	18	CA	VAL	L	3	20.480	0.748	104.626	1.00	23.36	L	C
ATOM	19	C	VAL	L	3	21.211	2.047	104.535	1.00	20.65	L	C
ATOM	20	O	VAL	L	3	22.377	2.136	104.919	1.00	17.60	L	O
ATOM	21	CB	VAL	L	3	20.136	0.498	106.139	1.00	25.72	L	C
ATOM	22	CG1	VAL	L	3	19.351	1.686	106.702	1.00	18.81	L	C
ATOM	23	CG2	VAL	L	3	19.339	-0.857	106.283	1.00	24.17	L	C
ATOM	24	N	LEU	L	4	20.508	3.071	104.059	1.00	14.42	L	N
ATOM	25	CA	LEU	L	4	21.161	4.374	103.883	1.00	18.70	L	C
ATOM	26	C	LEU	L	4	20.546	5.304	104.877	1.00	18.25	L	C
ATOM	27	O	LEU	L	4	19.327	5.432	104.897	1.00	17.11	L	O
ATOM	28	CB	LEU	L	4	20.915	4.936	102.460	1.00	17.37	L	C
ATOM	29	CG	LEU	L	4	21.456	4.027	101.325	1.00	18.48	L	C
ATOM	30	CD1	LEU	L	4	21.321	4.756	99.972	1.00	21.81	L	C
ATOM	31	CD2	LEU	L	4	22.892	3.634	101.547	1.00	10.40	L	C
ATOM	32	N	THR	L	5	21.397	5.948	105.669	1.00	17.41	L	N
ATOM	33	CA	THR	L	5	20.896	6.865	106.687	1.00	16.63	L	C
ATOM	34	C	THR	L	5	21.375	8.274	106.385	1.00	15.60	L	C
ATOM	35	O	THR	L	5	22.582	8.522	106.333	1.00	18.70	L	O
ATOM	36	CB	THR	L	5	21.394	6.433	108.085	1.00	20.60	L	C
ATOM	37	OG1	THR	L	5	20.969	5.078	108.303	1.00	20.77	L	O
ATOM	38	CG2	THR	L	5	20.809	7.344	109.172	1.00	10.87	L	C
ATOM	39	N	GLN	L	6	20.429	9.174	106.204	1.00	14.48	L	N
ATOM	40	CA	GLN	L	6	20.786	10.551	105.891	1.00	19.27	L	C
ATOM	41	C	GLN	L	6	20.774	11.432	107.115	1.00	20.35	L	C
ATOM	42	O	GLN	L	6	20.023	11.191	108.046	1.00	21.38	L	O
ATOM	43	CB	GLN	L	6	19.848	11.096	104.796	1.00	15.21	L	C
ATOM	44	CG	GLN	L	6	20.026	10.323	103.428	1.00	18.45	L	C
ATOM	45	CD	GLN	L	6	19.185	10.956	102.327	1.00	11.83	L	C
ATOM	46	OE1	GLN	L	6	18.438	10.297	101.640	1.00	18.94	L	O
ATOM	47	NE2	GLN	L	6	19.304	12.278	102.179	1.00	17.09	L	N
ATOM	48	N	SER	L	7	21.629	12.437	107.115	1.00	22.15	L	N
ATOM	49	CA	SER	L	7	21.659	13.375	108.226	1.00	23.60	L	C
ATOM	50	C	SER	L	7	22.105	14.733	107.717	1.00	22.73	L	C
ATOM	51	O	SER	L	7	22.919	14.831	106.800	1.00	20.83	L	O
ATOM	52	CB	SER	L	7	22.626	12.925	109.313	1.00	21.45	L	C
ATOM	53	OG	SER	L	7	23.935	12.943	108.812	1.00	36.06	L	O
ATOM	54	N	PRO	L	8	21.476	15.799	108.238	1.00	21.92	L	N
ATOM	55	CA	PRO	L	8	20.388	15.763	109.237	1.00	17.23	L	C
ATOM	56	C	PRO	L	8	19.108	15.448	108.500	1.00	18.60	L	C
ATOM	57	O	PRO	L	8	19.129	15.322	107.288	1.00	18.30	L	O
ATOM	58	CB	PRO	L	8	20.352	17.214	109.770	1.00	16.36	L	C
ATOM	59	CG	PRO	L	8	20.657	18.012	108.547	1.00	15.96	L	C
ATOM	60	CD	PRO	L	8	21.871	17.182	107.933	1.00	16.22	L	C
ATOM	61	N	ALA	L	9	17.992	15.350	109.217	1.00	21.69	L	N
ATOM	62	CA	ALA	L	9	16.728	15.087	108.575	1.00	20.93	L	C
ATOM	63	C	ALA	L	9	16.280	16.348	107.883	1.00	23.87	L	C
ATOM	64	O	ALA	L	9	15.597	16.301	106.847	1.00	23.97	L	O
ATOM	65	CB	ALA	L	9	15.664	14.668	109.609	1.00	16.15	L	C

ATOM	66	N	SER	L	10	16.645	17.501	108.463	1.00	23.97	L	N
ATOM	67	CA	SER	L	10	16.221	18.779	107.890	1.00	23.55	L	C
ATOM	68	C	SER	L	10	17.394	19.757	108.162	1.00	20.78	L	C
ATOM	69	O	SER	L	10	18.035	19.669	109.245	1.00	20.28	L	O
ATOM	70	CB	SER	L	10	14.973	19.288	108.657	1.00	19.45	L	C
ATOM	71	OG	SER	L	10	14.366	20.370	107.960	1.00	36.04	L	O
ATOM	72	N	LEU	L	11	17.634	20.652	107.203	1.00	16.86	L	N
ATOM	73	CA	LEU	L	11	18.736	21.642	107.298	1.00	17.36	L	C
ATOM	74	C	LEU	L	11	18.236	22.969	106.760	1.00	17.41	L	C
ATOM	75	O	LEU	L	11	17.601	22.996	105.724	1.00	20.59	L	O
ATOM	76	CB	LEU	L	11	19.915	21.175	106.395	1.00	21.77	L	C
ATOM	77	CG	LEU	L	11	21.034	22.165	106.165	1.00	24.51	L	C
ATOM	78	CD1	LEU	L	11	21.679	22.491	107.531	1.00	36.89	L	C
ATOM	79	CD2	LEU	L	11	22.085	21.573	105.281	1.00	37.85	L	C
ATOM	80	N	ALA	L	12	18.523	24.079	107.460	1.00	16.76	L	N
ATOM	81	CA	ALA	L	12	18.117	25.373	106.956	1.00	17.17	L	C
ATOM	82	C	ALA	L	12	19.398	26.247	106.827	1.00	16.24	L	C
ATOM	83	O	ALA	L	12	20.179	26.279	107.755	1.00	14.64	L	O
ATOM	84	CB	ALA	L	12	17.157	26.062	107.931	1.00	12.64	L	C
ATOM	85	N	VAL	L	13	19.559	26.909	105.698	1.00	13.87	L	N
ATOM	86	CA	VAL	L	13	20.690	27.848	105.538	1.00	13.69	L	C
ATOM	87	C	VAL	L	13	20.167	29.106	104.907	1.00	17.25	L	C
ATOM	88	O	VAL	L	13	19.055	29.117	104.336	1.00	21.72	L	O
ATOM	89	CB	VAL	L	13	21.818	27.286	104.656	1.00	15.08	L	C
ATOM	90	CG1	VAL	L	13	22.280	25.958	105.301	1.00	10.62	L	C
ATOM	91	CG2	VAL	L	13	21.357	27.096	103.157	1.00	9.18	L	C
ATOM	92	N	SER	L	14	20.923	30.202	105.000	1.00	15.71	L	N
ATOM	93	CA	SER	L	14	20.466	31.440	104.326	1.00	14.91	L	C
ATOM	94	C	SER	L	14	20.796	31.365	102.849	1.00	14.49	L	C
ATOM	95	O	SER	L	14	21.709	30.635	102.423	1.00	13.93	L	O
ATOM	96	CB	SER	L	14	21.203	32.682	104.941	1.00	11.69	L	C
ATOM	97	OG	SER	L	14	20.999	32.727	106.352	1.00	18.48	L	O
ATOM	98	N	LEU	L	15	20.079	32.137	102.048	1.00	13.89	L	N
ATOM	99	CA	LEU	L	15	20.330	32.173	100.620	1.00	16.79	L	C
ATOM	100	C	LEU	L	15	21.824	32.522	100.384	1.00	17.38	L	C
ATOM	101	O	LEU	L	15	22.354	33.409	101.025	1.00	21.74	L	O
ATOM	102	CB	LEU	L	15	19.462	33.258	99.927	1.00	14.69	L	C
ATOM	103	CG	LEU	L	15	17.926	32.958	99.764	1.00	34.86	L	C
ATOM	104	CD1	LEU	L	15	17.184	34.159	99.090	1.00	44.91	L	C
ATOM	105	CD2	LEU	L	15	17.743	31.665	98.905	1.00	32.56	L	C
ATOM	106	N	GLY	L	16	22.473	31.805	99.483	1.00	16.14	L	N
ATOM	107	CA	GLY	L	16	23.849	32.089	99.144	1.00	12.82	L	C
ATOM	108	C	GLY	L	16	24.831	31.323	99.964	1.00	14.60	L	C
ATOM	109	O	GLY	L	16	25.995	31.335	99.602	1.00	18.44	L	O
ATOM	110	N	GLN	L	17	24.402	30.683	101.063	1.00	10.34	L	N
ATOM	111	CA	GLN	L	17	25.309	29.914	101.882	1.00	12.15	L	C
ATOM	112	C	GLN	L	17	25.519	28.502	101.325	1.00	13.53	L	C
ATOM	113	O	GLN	L	17	24.873	28.108	100.371	1.00	14.77	L	O
ATOM	114	CB	GLN	L	17	24.776	29.775	103.318	1.00	17.40	L	C
ATOM	115	CG	GLN	L	17	24.887	31.111	104.106	1.00	10.18	L	C
ATOM	116	CD	GLN	L	17	24.584	30.902	105.540	1.00	17.90	L	C
ATOM	117	OE1	GLN	L	17	23.622	30.187	105.905	1.00	24.84	L	O
ATOM	118	NE2	GLN	L	17	25.401	31.478	106.386	1.00	4.74	L	N
ATOM	119	N	ARG	L	18	26.409	27.763	101.953	1.00	13.19	L	N
ATOM	120	CA	ARG	L	18	26.663	26.389	101.515	1.00	15.63	L	C
ATOM	121	C	ARG	L	18	25.833	25.437	102.374	1.00	15.34	L	C
ATOM	122	O	ARG	L	18	25.746	25.619	103.595	1.00	19.40	L	O
ATOM	123	CB	ARG	L	18	28.182	26.066	101.682	1.00	15.02	L	C
ATOM	124	CG	ARG	L	18	28.483	24.566	101.572	1.00	25.18	L	C
ATOM	125	CD	ARG	L	18	29.800	24.166	102.211	1.00	39.56	L	C
ATOM	126	NE	ARG	L	18	30.938	24.654	101.453	1.00	64.48	L	N
ATOM	127	CZ	ARG	L	18	31.436	25.885	101.533	1.00	79.37	L	C
ATOM	128	NH1	ARG	L	18	30.897	26.777	102.353	1.00	86.83	L	N
ATOM	129	NH2	ARG	L	18	32.488	26.225	100.788	1.00	82.59	L	N
ATOM	130	N	ALA	L	19	25.262	24.396	101.752	1.00	17.11	L	N
ATOM	131	CA	ALA	L	19	24.505	23.379	102.489	1.00	12.89	L	C
ATOM	132	C	ALA	L	19	25.198	22.031	102.204	1.00	16.54	L	C
ATOM	133	O	ALA	L	19	25.483	21.713	101.026	1.00	22.79	L	O
ATOM	134	CB	ALA	L	19	23.054	23.294	101.953	1.00	14.85	L	C

ATOM	135	N	THR	L	20	25.476	21.265	103.249	1.00	14.17	L	N
ATOM	136	CA	THR	L	20	26.096	19.960	103.054	1.00	15.56	L	C
ATOM	137	C	THR	L	20	25.227	18.934	103.752	1.00	15.65	L	C
ATOM	138	O	THR	L	20	24.813	19.126	104.923	1.00	20.89	L	O
ATOM	139	CB	THR	L	20	27.533	19.985	103.630	1.00	17.90	L	C
ATOM	140	OG1	THR	L	20	28.291	20.901	102.832	1.00	23.27	L	O
ATOM	141	CG2	THR	L	20	28.202	18.608	103.594	1.00	20.09	L	C
ATOM	142	N	ILE	L	21	24.896	17.877	103.035	1.00	14.46	L	N
ATOM	143	CA	ILE	L	21	24.066	16.841	103.610	1.00	18.34	L	C
ATOM	144	C	ILE	L	21	24.760	15.504	103.500	1.00	17.57	L	C
ATOM	145	O	ILE	L	21	25.495	15.251	102.542	1.00	18.26	L	O
ATOM	146	CB	ILE	L	21	22.648	16.809	103.010	1.00	19.09	L	C
ATOM	147	CG1	ILE	L	21	22.648	16.401	101.575	1.00	29.56	L	C
ATOM	148	CG2	ILE	L	21	21.985	18.173	103.154	1.00	23.73	L	C
ATOM	149	CD1	ILE	L	21	21.219	16.545	100.967	1.00	37.88	L	C
ATOM	150	N	SER	L	22	24.559	14.651	104.492	1.00	15.94	L	N
ATOM	151	CA	SER	L	22	25.286	13.391	104.429	1.00	20.98	L	C
ATOM	152	C	SER	L	22	24.467	12.148	104.321	1.00	18.51	L	C
ATOM	153	O	SER	L	22	23.269	12.123	104.622	1.00	20.37	L	O
ATOM	154	CB	SER	L	22	26.244	13.290	105.598	1.00	17.26	L	C
ATOM	155	OG	SER	L	22	25.516	13.126	106.775	1.00	38.04	L	O
ATOM	156	N	CYS	L	23	25.107	11.099	103.822	1.00	15.15	L	N
ATOM	157	CA	CYS	L	23	24.383	9.833	103.656	1.00	19.93	L	C
ATOM	158	C	CYS	L	23	25.370	8.749	104.099	1.00	19.09	L	C
ATOM	159	O	CYS	L	23	26.497	8.706	103.609	1.00	24.06	L	O
ATOM	160	CB	CYS	L	23	24.047	9.641	102.175	1.00	18.33	L	C
ATOM	161	SG	CYS	L	23	23.310	8.045	101.699	1.00	19.01	L	S
ATOM	162	N	LYS	L	24	24.961	7.869	105.013	1.00	19.81	L	N
ATOM	163	CA	LYS	L	24	25.876	6.835	105.490	1.00	21.44	L	C
ATOM	164	C	LYS	L	24	25.312	5.482	105.148	1.00	19.45	L	C
ATOM	165	O	LYS	L	24	24.168	5.216	105.416	1.00	17.29	L	O
ATOM	166	CB	LYS	L	24	26.089	6.960	107.018	1.00	20.14	L	C
ATOM	167	CG	LYS	L	24	26.987	5.848	107.576	1.00	38.35	L	C
ATOM	168	CD	LYS	L	24	27.320	6.037	109.086	1.00	55.69	L	C
ATOM	169	CE	LYS	L	24	28.358	7.158	109.343	1.00	65.78	L	C
ATOM	170	NZ	LYS	L	24	27.749	8.535	109.135	1.00	73.97	L	N
ATOM	171	N	ALA	L	25	26.122	4.613	104.564	1.00	16.58	L	N
ATOM	172	CA	ALA	L	25	25.595	3.290	104.192	1.00	20.95	L	C
ATOM	173	C	ALA	L	25	26.021	2.214	105.224	1.00	20.06	L	C
ATOM	174	O	ALA	L	25	27.130	2.293	105.753	1.00	21.66	L	O
ATOM	175	CB	ALA	L	25	26.141	2.885	102.822	1.00	16.44	L	C
ATOM	176	N	SER	L	26	25.176	1.214	105.434	1.00	20.89	L	N
ATOM	177	CA	SER	L	26	25.502	0.134	106.403	1.00	24.53	L	C
ATOM	178	C	SER	L	26	26.614	-0.805	105.917	1.00	24.48	L	C
ATOM	179	O	SER	L	26	27.258	-1.521	106.720	1.00	25.97	L	O
ATOM	180	CB	SER	L	26	24.234	-0.680	106.758	1.00	20.85	L	C
ATOM	181	OG	SER	L	26	23.577	-1.189	105.615	1.00	24.47	L	O
ATOM	182	N	GLU	L	27	26.848	-0.797	104.598	1.00	25.23	L	N
ATOM	183	CA	GLU	L	27	27.889	-1.606	103.971	1.00	22.24	L	C
ATOM	184	C	GLU	L	27	28.484	-0.723	102.886	1.00	22.04	L	C
ATOM	185	O	GLU	L	27	27.831	0.237	102.428	1.00	25.83	L	O
ATOM	186	CB	GLU	L	27	27.293	-2.881	103.288	1.00	16.57	L	C
ATOM	187	CG	GLU	L	27	26.251	-3.624	104.048	1.00	17.06	L	C
ATOM	188	CD	GLU	L	27	25.816	-4.858	103.275	1.00	25.63	L	C
ATOM	189	OE1	GLU	L	27	24.831	-5.516	103.672	1.00	18.33	L	O
ATOM	190	OE2	GLU	L	27	26.515	-5.132	102.264	1.00	23.85	L	O
ATOM	191	N	SER	L	28	29.698	-1.029	102.455	1.00	23.92	L	N
ATOM	192	CA	SER	L	28	30.355	-0.237	101.412	1.00	20.04	L	C
ATOM	193	C	SER	L	28	29.562	-0.293	100.128	1.00	21.07	L	C
ATOM	194	O	SER	L	28	28.967	-1.329	99.782	1.00	23.98	L	O
ATOM	195	CB	SER	L	28	31.779	-0.778	101.121	1.00	18.95	L	C
ATOM	196	OG	SER	L	28	32.408	-0.078	100.037	1.00	28.13	L	O
ATOM	197	N	VAL	L	29	29.570	0.798	99.383	1.00	18.22	L	N
ATOM	198	CA	VAL	L	29	28.829	0.788	98.103	1.00	17.79	L	C
ATOM	199	C	VAL	L	29	29.840	0.937	96.981	1.00	19.59	L	C
ATOM	200	O	VAL	L	29	29.465	1.207	95.837	1.00	22.01	L	O
ATOM	201	CB	VAL	L	29	27.766	1.940	98.010	1.00	17.51	L	C
ATOM	202	CG1	VAL	L	29	26.675	1.740	99.072	1.00	12.98	L	C
ATOM	203	CG2	VAL	L	29	28.441	3.326	98.172	1.00	16.63	L	C

ATOM	204	N	ASP	L	30	31.127	0.708	97.279	1.00	17.33	L	N
ATOM	205	CA	ASP	L	30	32.178	0.849	96.268	1.00	18.23	L	C
ATOM	206	C	ASP	L	30	32.339	-0.453	95.497	1.00	19.53	L	C
ATOM	207	O	ASP	L	30	32.219	-1.559	96.071	1.00	26.39	L	O
ATOM	208	CB	ASP	L	30	33.534	1.153	96.908	1.00	12.12	L	C
ATOM	209	CG	ASP	L	30	33.662	2.592	97.326	1.00	22.31	L	C
ATOM	210	OD1	ASP	L	30	34.761	2.975	97.764	1.00	29.89	L	O
ATOM	211	OD2	ASP	L	30	32.676	3.331	97.208	1.00	18.13	L	O
ATOM	212	N	ASN	L	30A	32.617	-0.316	94.206	1.00	20.90	L	N
ATOM	213	CA	ASN	L	30A	32.797	-1.499	93.344	1.00	22.44	L	C
ATOM	214	C	ASN	L	30A	34.090	-1.203	92.623	1.00	23.21	L	C
ATOM	215	O	ASN	L	30A	34.141	-0.339	91.735	1.00	25.31	L	O
ATOM	216	CB	ASN	L	30A	31.693	-1.594	92.283	1.00	20.72	L	C
ATOM	217	CG	ASN	L	30A	31.884	-2.785	91.384	1.00	24.84	L	C
ATOM	218	OD1	ASN	L	30A	31.800	-3.934	91.852	1.00	24.37	L	O
ATOM	219	ND2	ASN	L	30A	32.149	-2.530	90.071	1.00	23.26	L	N
ATOM	220	N	TYR	L	30B	35.161	-1.861	93.051	1.00	23.88	L	N
ATOM	221	CA	TYR	L	30B	36.460	-1.652	92.445	1.00	21.04	L	C
ATOM	222	C	TYR	L	30B	36.823	-0.230	92.173	1.00	18.95	L	C
ATOM	223	O	TYR	L	30B	37.123	0.166	91.038	1.00	21.35	L	O
ATOM	224	CB	TYR	L	30B	36.567	-2.494	91.176	1.00	19.64	L	C
ATOM	225	CG	TYR	L	30B	36.520	-3.965	91.534	1.00	26.67	L	C
ATOM	226	CD1	TYR	L	30B	37.580	-4.556	92.215	1.00	17.83	L	C
ATOM	227	CD2	TYR	L	30B	35.427	-4.754	91.211	1.00	30.04	L	C
ATOM	228	CE1	TYR	L	30B	37.542	-5.890	92.556	1.00	28.99	L	C
ATOM	229	CE2	TYR	L	30B	35.375	-6.104	91.553	1.00	38.10	L	C
ATOM	230	CZ	TYR	L	30B	36.445	-6.657	92.229	1.00	32.14	L	C
ATOM	231	OH	TYR	L	30B	36.429	-7.974	92.591	1.00	34.61	L	O
ATOM	232	N	GLY	L	30C	36.774	0.560	93.236	1.00	20.14	L	N
ATOM	233	CA	GLY	L	30C	37.178	1.951	93.126	1.00	21.20	L	C
ATOM	234	C	GLY	L	30C	36.101	2.933	92.676	1.00	25.36	L	C
ATOM	235	O	GLY	L	30C	36.355	4.122	92.635	1.00	29.51	L	O
ATOM	236	N	LYS	L	30D	34.925	2.437	92.306	1.00	22.83	L	N
ATOM	237	CA	LYS	L	30D	33.833	3.328	91.845	1.00	23.04	L	C
ATOM	238	C	LYS	L	30D	32.767	3.306	92.943	1.00	22.36	L	C
ATOM	239	O	LYS	L	30D	32.407	2.230	93.382	1.00	17.33	L	O
ATOM	240	CB	LYS	L	30D	33.195	2.807	90.554	1.00	24.66	L	C
ATOM	241	CG	LYS	L	30D	33.949	3.156	89.277	1.00	29.64	L	C
ATOM	242	CD	LYS	L	30D	35.097	2.195	88.997	1.00	26.58	L	C
ATOM	243	CE	LYS	L	30D	34.641	0.783	88.732	1.00	21.88	L	C
ATOM	244	NZ	LYS	L	30D	35.869	-0.054	88.518	1.00	25.71	L	N
ATOM	245	N	SER	L	31	32.263	4.488	93.362	1.00	16.41	L	N
ATOM	246	CA	SER	L	31	31.266	4.493	94.450	1.00	14.47	L	C
ATOM	247	C	SER	L	31	29.876	4.552	93.817	1.00	12.87	L	C
ATOM	248	O	SER	L	31	29.559	5.508	93.135	1.00	17.73	L	O
ATOM	249	CB	SER	L	31	31.528	5.718	95.369	1.00	13.31	L	C
ATOM	250	OG	SER	L	31	32.772	5.543	96.018	1.00	9.74	L	O
ATOM	251	N	LEU	L	32	29.068	3.533	94.047	1.00	14.84	L	N
ATOM	252	CA	LEU	L	32	27.737	3.444	93.414	1.00	15.21	L	C
ATOM	253	C	LEU	L	32	26.661	4.109	94.271	1.00	15.33	L	C
ATOM	254	O	LEU	L	32	25.759	3.444	94.743	1.00	15.90	L	O
ATOM	255	CB	LEU	L	32	27.410	1.946	93.122	1.00	14.19	L	C
ATOM	256	CG	LEU	L	32	28.528	1.268	92.240	1.00	16.68	L	C
ATOM	257	CD1	LEU	L	32	28.098	-0.113	91.812	1.00	19.02	L	C
ATOM	258	CD2	LEU	L	32	28.841	2.115	90.956	1.00	16.75	L	C
ATOM	259	N	MET	L	33	26.805	5.422	94.446	1.00	15.14	L	N
ATOM	260	CA	MET	L	33	25.858	6.243	95.228	1.00	15.51	L	C
ATOM	261	C	MET	L	33	25.424	7.400	94.306	1.00	14.12	L	C
ATOM	262	O	MET	L	33	26.268	8.060	93.664	1.00	14.69	L	O
ATOM	263	CB	MET	L	33	26.522	6.857	96.482	1.00	16.89	L	C
ATOM	264	CG	MET	L	33	25.438	7.575	97.437	1.00	11.58	L	C
ATOM	265	SD	MET	L	33	24.457	6.317	98.203	1.00	25.28	L	S
ATOM	266	CE	MET	L	33	25.482	5.831	99.589	1.00	11.25	L	C
ATOM	267	N	HIS	L	34	24.114	7.621	94.239	1.00	11.24	L	N
ATOM	268	CA	HIS	L	34	23.566	8.649	93.369	1.00	10.81	L	C
ATOM	269	C	HIS	L	34	22.672	9.529	94.235	1.00	13.28	L	C
ATOM	270	O	HIS	L	34	22.163	9.062	95.283	1.00	7.46	L	O
ATOM	271	CB	HIS	L	34	22.709	7.988	92.278	1.00	9.21	L	C
ATOM	272	CG	HIS	L	34	23.392	6.816	91.619	1.00	19.51	L	C

ATOM	273	ND1	HIS	L	34	24.568	6.950	90.896	1.00	18.89	L	N
ATOM	274	CD2	HIS	L	34	23.061	5.501	91.562	1.00	19.95	L	C
ATOM	275	CE1	HIS	L	34	24.932	5.770	90.429	1.00	8.56	L	C
ATOM	276	NE2	HIS	L	34	24.037	4.874	90.815	1.00	18.35	L	N
ATOM	277	N	TRP	L	35	22.478	10.770	93.806	1.00	11.97	L	N
ATOM	278	CA	TRP	L	35	21.658	11.731	94.603	1.00	14.22	L	C
ATOM	279	C	TRP	L	35	20.557	12.321	93.730	1.00	14.57	L	C
ATOM	280	O	TRP	L	35	20.793	12.665	92.577	1.00	13.68	L	O
ATOM	281	CB	TRP	L	35	22.525	12.914	95.123	1.00	12.34	L	C
ATOM	282	CG	TRP	L	35	23.529	12.532	96.148	1.00	18.11	L	C
ATOM	283	CD1	TRP	L	35	24.842	12.167	95.941	1.00	13.80	L	C
ATOM	284	CD2	TRP	L	35	23.346	12.610	97.560	1.00	15.53	L	C
ATOM	285	NE1	TRP	L	35	25.491	12.027	97.158	1.00	7.32	L	N
ATOM	286	CE2	TRP	L	35	24.588	12.302	98.164	1.00	10.41	L	C
ATOM	287	CE3	TRP	L	35	22.242	12.928	98.381	1.00	22.77	L	C
ATOM	288	CZ2	TRP	L	35	24.756	12.300	99.551	1.00	16.39	L	C
ATOM	289	CZ3	TRP	L	35	22.396	12.933	99.730	1.00	10.74	L	C
ATOM	290	CH2	TRP	L	35	23.643	12.622	100.320	1.00	11.41	L	C
ATOM	291	N	TYR	L	36	19.362	12.470	94.306	1.00	13.73	L	N
ATOM	292	CA	TYR	L	36	18.212	13.005	93.593	1.00	13.32	L	C
ATOM	293	C	TYR	L	36	17.614	14.178	94.360	1.00	12.87	L	C
ATOM	294	O	TYR	L	36	17.681	14.233	95.579	1.00	11.74	L	O
ATOM	295	CB	TYR	L	36	17.081	11.942	93.464	1.00	13.04	L	C
ATOM	296	CG	TYR	L	36	17.545	10.667	92.771	1.00	11.47	L	C
ATOM	297	CD1	TYR	L	36	18.207	9.660	93.488	1.00	9.50	L	C
ATOM	298	CD2	TYR	L	36	17.398	10.526	91.391	1.00	12.45	L	C
ATOM	299	CE1	TYR	L	36	18.739	8.534	92.820	1.00	12.96	L	C
ATOM	300	CE2	TYR	L	36	17.907	9.414	90.729	1.00	10.42	L	C
ATOM	301	CZ	TYR	L	36	18.578	8.436	91.445	1.00	12.56	L	C
ATOM	302	OH	TYR	L	36	19.180	7.385	90.768	1.00	13.38	L	O
ATOM	303	N	GLN	L	37	16.981	15.072	93.620	1.00	10.25	L	N
ATOM	304	CA	GLN	L	37	16.254	16.180	94.252	1.00	11.70	L	C
ATOM	305	C	GLN	L	37	14.783	15.956	93.941	1.00	13.16	L	C
ATOM	306	O	GLN	L	37	14.444	15.606	92.794	1.00	17.26	L	O
ATOM	307	CB	GLN	L	37	16.649	17.515	93.600	1.00	10.59	L	C
ATOM	308	CG	GLN	L	37	15.845	18.749	94.028	1.00	10.72	L	C
ATOM	309	CD	GLN	L	37	16.206	19.926	93.103	1.00	15.26	L	C
ATOM	310	OE1	GLN	L	37	15.916	19.885	91.887	1.00	16.02	L	O
ATOM	311	NE2	GLN	L	37	16.857	20.947	93.659	1.00	13.48	L	N
ATOM	312	N	GLN	L	38	13.916	16.212	94.921	1.00	17.77	L	N
ATOM	313	CA	GLN	L	38	12.470	16.140	94.680	1.00	20.77	L	C
ATOM	314	C	GLN	L	38	11.804	17.343	95.326	1.00	21.40	L	C
ATOM	315	O	GLN	L	38	11.828	17.509	96.563	1.00	22.63	L	O
ATOM	316	CB	GLN	L	38	11.835	14.901	95.313	1.00	19.42	L	C
ATOM	317	CG	GLN	L	38	10.354	14.805	94.968	1.00	13.86	L	C
ATOM	318	CD	GLN	L	38	9.748	13.498	95.491	1.00	19.68	L	C
ATOM	319	OE1	GLN	L	38	10.122	13.011	96.545	1.00	14.26	L	O
ATOM	320	NE2	GLN	L	38	8.834	12.935	94.726	1.00	19.99	L	N
ATOM	321	N	LYS	L	39	11.254	18.170	94.457	1.00	24.73	L	N
ATOM	322	CA	LYS	L	39	10.505	19.355	94.879	1.00	26.95	L	C
ATOM	323	C	LYS	L	39	9.047	18.965	95.083	1.00	31.28	L	C
ATOM	324	O	LYS	L	39	8.492	18.004	94.493	1.00	27.67	L	O
ATOM	325	CB	LYS	L	39	10.624	20.467	93.817	1.00	25.37	L	C
ATOM	326	CG	LYS	L	39	12.024	20.994	93.607	1.00	28.24	L	C
ATOM	327	CD	LYS	L	39	12.109	21.962	92.440	1.00	25.89	L	C
ATOM	328	CE	LYS	L	39	13.525	22.460	92.197	1.00	41.55	L	C
ATOM	329	NZ	LYS	L	39	13.723	23.040	90.805	1.00	39.62	L	N
ATOM	330	N	PRO	L	40	8.384	19.708	95.969	1.00	37.71	L	N
ATOM	331	CA	PRO	L	40	6.984	19.511	96.310	1.00	40.24	L	C
ATOM	332	C	PRO	L	40	6.129	19.315	95.045	1.00	37.39	L	C
ATOM	333	O	PRO	L	40	6.226	20.104	94.122	1.00	35.53	L	O
ATOM	334	CB	PRO	L	40	6.637	20.819	97.036	1.00	44.21	L	C
ATOM	335	CG	PRO	L	40	7.926	21.168	97.729	1.00	42.86	L	C
ATOM	336	CD	PRO	L	40	8.954	20.888	96.653	1.00	39.12	L	C
ATOM	337	N	GLY	L	41	5.363	18.230	95.002	1.00	36.74	L	N
ATOM	338	CA	GLY	L	41	4.506	17.946	93.862	1.00	36.85	L	C
ATOM	339	C	GLY	L	41	5.202	17.572	92.568	1.00	35.88	L	C
ATOM	340	O	GLY	L	41	4.576	17.503	91.523	1.00	35.09	L	O
ATOM	341	N	GLN	L	42	6.510	17.325	92.626	1.00	35.27	L	N

ATOM	342	CA	GLN	L	42	7.237	16.955	91.424	1.00	28.24	L	C
ATOM	343	C	GLN	L	42	7.856	15.584	91.607	1.00	25.86	L	C
ATOM	344	O	GLN	L	42	7.921	15.047	92.697	1.00	25.25	L	O
ATOM	345	CB	GLN	L	42	8.386	17.959	91.124	1.00	29.72	L	C
ATOM	346	CG	GLN	L	42	7.950	19.357	90.729	1.00	34.63	L	C
ATOM	347	CD	GLN	L	42	9.127	20.234	90.242	1.00	45.60	L	C
ATOM	348	OE1	GLN	L	42	8.965	21.421	90.002	1.00	50.47	L	O
ATOM	349	NE2	GLN	L	42	10.303	19.639	90.094	1.00	47.27	L	N
ATOM	350	N	SER	L	43	8.340	15.026	90.506	1.00	22.44	L	N
ATOM	351	CA	SER	L	43	8.985	13.744	90.587	1.00	23.17	L	C
ATOM	352	C	SER	L	43	10.490	13.988	90.930	1.00	21.02	L	C
ATOM	353	O	SER	L	43	10.986	15.104	90.802	1.00	19.00	L	O
ATOM	354	CB	SER	L	43	8.831	13.041	89.213	1.00	24.31	L	C
ATOM	355	OG	SER	L	43	9.851	13.443	88.334	1.00	31.71	L	O
ATOM	356	N	PRO	L	44	11.186	12.953	91.401	1.00	19.03	L	N
ATOM	357	CA	PRO	L	44	12.619	13.056	91.738	1.00	19.57	L	C
ATOM	358	C	PRO	L	44	13.403	13.344	90.454	1.00	19.17	L	C
ATOM	359	O	PRO	L	44	12.971	12.997	89.339	1.00	17.27	L	O
ATOM	360	CB	PRO	L	44	12.963	11.675	92.304	1.00	20.33	L	C
ATOM	361	CG	PRO	L	44	11.568	11.163	92.901	1.00	14.26	L	C
ATOM	362	CD	PRO	L	44	10.630	11.645	91.786	1.00	17.98	L	C
ATOM	363	N	ALA	L	45	14.576	13.942	90.603	1.00	14.94	L	N
ATOM	364	CA	ALA	L	45	15.400	14.217	89.428	1.00	15.76	L	C
ATOM	365	C	ALA	L	45	16.833	13.921	89.846	1.00	15.71	L	C
ATOM	366	O	ALA	L	45	17.287	14.318	90.927	1.00	14.34	L	O
ATOM	367	CB	ALA	L	45	15.300	15.702	89.000	1.00	17.79	L	C
ATOM	368	N	LEU	L	46	17.545	13.285	88.948	1.00	15.14	L	N
ATOM	369	CA	LEU	L	46	18.948	12.903	89.212	1.00	11.85	L	C
ATOM	370	C	LEU	L	46	19.841	14.154	89.206	1.00	12.85	L	C
ATOM	371	O	LEU	L	46	19.825	14.944	88.247	1.00	12.83	L	O
ATOM	372	CB	LEU	L	46	19.416	11.894	88.107	1.00	9.18	L	C
ATOM	373	CG	LEU	L	46	20.875	11.408	88.320	1.00	8.52	L	C
ATOM	374	CD1	LEU	L	46	21.074	10.591	89.660	1.00	8.06	L	C
ATOM	375	CD2	LEU	L	46	21.269	10.533	87.111	1.00	7.61	L	C
ATOM	376	N	LEU	L	47	20.630	14.323	90.277	1.00	11.81	L	N
ATOM	377	CA	LEU	L	47	21.578	15.439	90.384	1.00	11.37	L	C
ATOM	378	C	LEU	L	47	23.038	15.014	90.150	1.00	11.22	L	C
ATOM	379	O	LEU	L	47	23.774	15.649	89.393	1.00	13.32	L	O
ATOM	380	CB	LEU	L	47	21.556	15.997	91.789	1.00	11.40	L	C
ATOM	381	CG	LEU	L	47	20.215	16.587	92.289	1.00	11.75	L	C
ATOM	382	CD1	LEU	L	47	20.362	16.812	93.810	1.00	11.87	L	C
ATOM	383	CD2	LEU	L	47	19.911	17.879	91.522	1.00	4.80	L	C
ATOM	384	N	ILE	L	48	23.422	13.952	90.856	1.00	12.53	L	N
ATOM	385	CA	ILE	L	48	24.800	13.468	90.883	1.00	10.52	L	C
ATOM	386	C	ILE	L	48	24.821	11.953	90.754	1.00	14.33	L	C
ATOM	387	O	ILE	L	48	24.066	11.263	91.443	1.00	16.13	L	O
ATOM	388	CB	ILE	L	48	25.444	13.826	92.281	1.00	11.93	L	C
ATOM	389	CG1	ILE	L	48	25.465	15.351	92.495	1.00	9.28	L	C
ATOM	390	CG2	ILE	L	48	26.842	13.136	92.431	1.00	11.58	L	C
ATOM	391	CD1	ILE	L	48	26.422	16.165	91.519	1.00	14.29	L	C
ATOM	392	N	TYR	L	49	25.651	11.424	89.860	1.00	12.80	L	N
ATOM	393	CA	TYR	L	49	25.698	9.977	89.790	1.00	14.45	L	C
ATOM	394	C	TYR	L	49	27.118	9.484	90.107	1.00	13.75	L	C
ATOM	395	O	TYR	L	49	28.114	10.177	89.869	1.00	14.87	L	O
ATOM	396	CB	TYR	L	49	25.223	9.449	88.419	1.00	6.50	L	C
ATOM	397	CG	TYR	L	49	26.079	9.899	87.246	1.00	14.44	L	C
ATOM	398	CD1	TYR	L	49	27.100	9.105	86.733	1.00	9.63	L	C
ATOM	399	CD2	TYR	L	49	25.840	11.131	86.646	1.00	20.17	L	C
ATOM	400	CE1	TYR	L	49	27.876	9.531	85.632	1.00	18.33	L	C
ATOM	401	CE2	TYR	L	49	26.620	11.584	85.542	1.00	22.28	L	C
ATOM	402	CZ	TYR	L	49	27.624	10.778	85.049	1.00	20.57	L	C
ATOM	403	OH	TYR	L	49	28.372	11.257	83.987	1.00	19.11	L	O
ATOM	404	N	ARG	L	50	27.176	8.279	90.648	1.00	14.11	L	N
ATOM	405	CA	ARG	L	50	28.461	7.617	90.962	1.00	16.52	L	C
ATOM	406	C	ARG	L	50	29.311	8.530	91.871	1.00	16.04	L	C
ATOM	407	O	ARG	L	50	30.480	8.795	91.583	1.00	14.95	L	O
ATOM	408	CB	ARG	L	50	29.228	7.293	89.673	1.00	12.62	L	C
ATOM	409	CG	ARG	L	50	30.084	5.998	89.784	1.00	15.10	L	C
ATOM	410	CD	ARG	L	50	30.933	5.820	88.460	1.00	11.26	L	C

ATOM	411	NE	ARG	L	50	30.073	5.942	87.252	1.00	23.52	L	N
ATOM	412	CZ	ARG	L	50	30.543	6.227	86.037	1.00	20.37	L	C
ATOM	413	NH1	ARG	L	50	31.852	6.404	85.858	1.00	26.18	L	N
ATOM	414	NH2	ARG	L	50	29.727	6.354	85.003	1.00	18.24	L	N
ATOM	415	N	ALA	L	51	28.621	9.031	92.901	1.00	14.01	L	N
ATOM	416	CA	ALA	L	51	29.125	9.886	93.975	1.00	14.19	L	C
ATOM	417	C	ALA	L	51	29.531	11.309	93.680	1.00	16.63	L	C
ATOM	418	O	ALA	L	51	29.255	12.190	94.481	1.00	15.01	L	O
ATOM	419	CB	ALA	L	51	30.288	9.177	94.727	1.00	6.77	L	C
ATOM	420	N	SER	L	52	30.119	11.555	92.509	1.00	14.35	L	N
ATOM	421	CA	SER	L	52	30.652	12.887	92.214	1.00	12.90	L	C
ATOM	422	C	SER	L	52	30.437	13.427	90.815	1.00	10.83	L	C
ATOM	423	O	SER	L	52	30.884	14.542	90.504	1.00	9.89	L	O
ATOM	424	CB	SER	L	52	32.179	12.851	92.476	1.00	5.64	L	C
ATOM	425	OG	SER	L	52	32.747	11.797	91.672	1.00	19.18	L	O
ATOM	426	N	ASN	L	53	29.747	12.677	89.962	1.00	10.80	L	N
ATOM	427	CA	ASN	L	53	29.575	13.143	88.561	1.00	6.02	L	C
ATOM	428	C	ASN	L	53	28.301	13.953	88.439	1.00	13.29	L	C
ATOM	429	O	ASN	L	53	27.228	13.468	88.813	1.00	15.20	L	O
ATOM	430	CB	ASN	L	53	29.461	11.954	87.630	1.00	9.04	L	C
ATOM	431	CG	ASN	L	53	30.756	11.172	87.594	1.00	15.97	L	C
ATOM	432	OD1	ASN	L	53	31.787	11.705	87.178	1.00	24.43	L	O
ATOM	433	ND2	ASN	L	53	30.730	9.948	88.079	1.00	23.89	L	N
ATOM	434	N	LEU	L	54	28.443	15.143	87.880	1.00	12.27	L	N
ATOM	435	CA	LEU	L	54	27.296	16.075	87.725	1.00	11.19	L	C
ATOM	436	C	LEU	L	54	26.438	15.659	86.539	1.00	13.26	L	C
ATOM	437	O	LEU	L	54	26.928	15.572	85.400	1.00	17.40	L	O
ATOM	438	CB	LEU	L	54	27.866	17.498	87.499	1.00	9.35	L	C
ATOM	439	CG	LEU	L	54	26.793	18.590	87.336	1.00	9.35	L	C
ATOM	440	CD1	LEU	L	54	26.013	18.667	88.688	1.00	11.24	L	C
ATOM	441	CD2	LEU	L	54	27.473	20.001	86.935	1.00	10.06	L	C
ATOM	442	N	GLU	L	55	25.152	15.437	86.792	1.00	13.19	L	N
ATOM	443	CA	GLU	L	55	24.271	15.056	85.715	1.00	13.50	L	C
ATOM	444	C	GLU	L	55	24.099	16.206	84.684	1.00	16.40	L	C
ATOM	445	O	GLU	L	55	23.952	17.356	85.035	1.00	16.66	L	O
ATOM	446	CB	GLU	L	55	22.935	14.633	86.323	1.00	17.40	L	C
ATOM	447	CG	GLU	L	55	21.891	14.257	85.238	1.00	18.71	L	C
ATOM	448	CD	GLU	L	55	22.174	12.930	84.538	1.00	21.37	L	C
ATOM	449	OE1	GLU	L	55	23.189	12.227	84.879	1.00	29.09	L	O
ATOM	450	OE2	GLU	L	55	21.366	12.583	83.642	1.00	14.35	L	O
ATOM	451	N	SER	L	56	24.141	15.873	83.390	1.00	18.45	L	N
ATOM	452	CA	SER	L	56	23.959	16.910	82.370	1.00	21.02	L	C
ATOM	453	C	SER	L	56	22.660	17.692	82.628	1.00	20.45	L	C
ATOM	454	O	SER	L	56	21.610	17.089	82.907	1.00	23.00	L	O
ATOM	455	CB	SER	L	56	23.893	16.260	80.972	1.00	23.30	L	C
ATOM	456	OG	SER	L	56	23.696	17.280	79.990	1.00	35.05	L	O
ATOM	457	N	GLY	L	57	22.735	19.017	82.564	1.00	16.05	L	N
ATOM	458	CA	GLY	L	57	21.540	19.832	82.794	1.00	15.79	L	C
ATOM	459	C	GLY	L	57	21.383	20.336	84.219	1.00	17.48	L	C
ATOM	460	O	GLY	L	57	20.604	21.239	84.470	1.00	20.76	L	O
ATOM	461	N	ILE	L	58	22.130	19.758	85.154	1.00	15.63	L	N
ATOM	462	CA	ILE	L	58	22.077	20.199	86.559	1.00	13.54	L	C
ATOM	463	C	ILE	L	58	23.210	21.225	86.775	1.00	14.57	L	C
ATOM	464	O	ILE	L	58	24.353	20.972	86.376	1.00	15.41	L	O
ATOM	465	CB	ILE	L	58	22.321	18.985	87.479	1.00	16.14	L	C
ATOM	466	CG1	ILE	L	58	21.248	17.925	87.205	1.00	10.84	L	C
ATOM	467	CG2	ILE	L	58	22.293	19.433	88.957	1.00	14.42	L	C
ATOM	468	CD1	ILE	L	58	19.771	18.436	87.373	1.00	7.96	L	C
ATOM	469	N	PRO	L	59	22.933	22.351	87.471	1.00	16.57	L	N
ATOM	470	CA	PRO	L	59	24.011	23.324	87.650	1.00	15.02	L	C
ATOM	471	C	PRO	L	59	25.127	22.857	88.586	1.00	17.68	L	C
ATOM	472	O	PRO	L	59	24.888	22.119	89.551	1.00	20.81	L	O
ATOM	473	CB	PRO	L	59	23.296	24.567	88.181	1.00	13.09	L	C
ATOM	474	CG	PRO	L	59	22.119	24.013	88.932	1.00	14.55	L	C
ATOM	475	CD	PRO	L	59	21.702	22.766	88.166	1.00	16.37	L	C
ATOM	476	N	ALA	L	60	26.342	23.352	88.335	1.00	15.03	L	N
ATOM	477	CA	ALA	L	60	27.482	22.936	89.141	1.00	15.80	L	C
ATOM	478	C	ALA	L	60	27.443	23.436	90.588	1.00	16.37	L	C
ATOM	479	O	ALA	L	60	28.370	23.164	91.349	1.00	14.10	L	O

ATOM	480	CB	ALA	L	60	28.828	23.389	88.439	1.00	19.03	L	C
ATOM	481	N	ARG	L	61	26.382	24.141	90.979	1.00	13.86	L	N
ATOM	482	CA	ARG	L	61	26.259	24.485	92.408	1.00	12.66	L	C
ATOM	483	C	ARG	L	61	26.076	23.171	93.224	1.00	13.33	L	C
ATOM	484	O	ARG	L	61	26.222	23.166	94.448	1.00	11.62	L	O
ATOM	485	CB	ARG	L	61	25.015	25.355	92.610	1.00	10.50	L	C
ATOM	486	CG	ARG	L	61	24.958	26.567	91.634	1.00	21.56	L	C
ATOM	487	CD	ARG	L	61	23.759	27.528	91.982	1.00	34.92	L	C
ATOM	488	NE	ARG	L	61	22.428	27.036	91.558	1.00	20.51	L	N
ATOM	489	CZ	ARG	L	61	21.594	26.438	92.405	1.00	19.50	L	C
ATOM	490	NH1	ARG	L	61	21.952	26.279	93.670	1.00	20.76	L	N
ATOM	491	NH2	ARG	L	61	20.455	25.955	91.970	1.00	18.94	L	N
ATOM	492	N	PHE	L	62	25.682	22.086	92.546	1.00	11.06	L	N
ATOM	493	CA	PHE	L	62	25.545	20.771	93.174	1.00	13.46	L	C
ATOM	494	C	PHE	L	62	26.816	19.968	92.950	1.00	14.58	L	C
ATOM	495	O	PHE	L	62	27.282	19.875	91.818	1.00	14.64	L	O
ATOM	496	CB	PHE	L	62	24.378	19.988	92.507	1.00	10.25	L	C
ATOM	497	CG	PHE	L	62	23.019	20.612	92.793	1.00	11.04	L	C
ATOM	498	CD1	PHE	L	62	22.359	20.344	94.005	1.00	14.57	L	C
ATOM	499	CD2	PHE	L	62	22.478	21.533	91.929	1.00	11.67	L	C
ATOM	500	CE1	PHE	L	62	21.175	20.994	94.343	1.00	9.15	L	C
ATOM	501	CE2	PHE	L	62	21.248	22.220	92.278	1.00	5.02	L	C
ATOM	502	CZ	PHE	L	62	20.631	21.932	93.480	1.00	15.51	L	C
ATOM	503	N	SER	L	63	27.354	19.375	94.000	1.00	13.28	L	N
ATOM	504	CA	SER	L	63	28.542	18.518	93.801	1.00	16.69	L	C
ATOM	505	C	SER	L	63	28.450	17.384	94.817	1.00	16.93	L	C
ATOM	506	O	SER	L	63	27.740	17.512	95.803	1.00	13.99	L	O
ATOM	507	CB	SER	L	63	29.841	19.326	94.051	1.00	20.80	L	C
ATOM	508	OG	SER	L	63	29.864	19.821	95.383	1.00	15.22	L	O
ATOM	509	N	GLY	L	64	29.176	16.290	94.592	1.00	15.15	L	N
ATOM	510	CA	GLY	L	64	29.112	15.214	95.559	1.00	12.85	L	C
ATOM	511	C	GLY	L	64	30.474	14.689	95.846	1.00	17.05	L	C
ATOM	512	O	GLY	L	64	31.363	14.813	94.995	1.00	20.04	L	O
ATOM	513	N	SER	L	65	30.657	14.097	97.031	1.00	14.74	L	N
ATOM	514	CA	SER	L	65	31.927	13.486	97.361	1.00	17.90	L	C
ATOM	515	C	SER	L	65	31.709	12.310	98.326	1.00	15.64	L	C
ATOM	516	O	SER	L	65	30.597	12.056	98.752	1.00	10.29	L	O
ATOM	517	CB	SER	L	65	32.914	14.491	98.011	1.00	17.37	L	C
ATOM	518	OG	SER	L	65	32.304	14.967	99.193	1.00	31.08	L	O
ATOM	519	N	GLY	L	66	32.795	11.582	98.630	1.00	17.49	L	N
ATOM	520	CA	GLY	L	66	32.711	10.462	99.551	1.00	12.08	L	C
ATOM	521	C	GLY	L	66	33.145	9.168	98.886	1.00	17.57	L	C
ATOM	522	O	GLY	L	66	33.445	9.144	97.696	1.00	20.81	L	O
ATOM	523	N	SER	L	67	33.215	8.099	99.673	1.00	17.22	L	N
ATOM	524	CA	SER	L	67	33.591	6.784	99.170	1.00	17.33	L	C
ATOM	525	C	SER	L	67	33.241	5.817	100.287	1.00	18.00	L	C
ATOM	526	O	SER	L	67	32.990	6.220	101.444	1.00	16.60	L	O
ATOM	527	CB	SER	L	67	35.103	6.694	98.886	1.00	14.43	L	C
ATOM	528	OG	SER	L	67	35.792	6.817	100.136	1.00	15.13	L	O
ATOM	529	N	ARG	L	68	33.193	4.550	99.906	1.00	18.02	L	N
ATOM	530	CA	ARG	L	68	32.875	3.463	100.793	1.00	21.90	L	C
ATOM	531	C	ARG	L	68	31.494	3.545	101.440	1.00	23.10	L	C
ATOM	532	O	ARG	L	68	30.486	3.175	100.813	1.00	22.85	L	O
ATOM	533	CB	ARG	L	68	34.003	3.352	101.843	1.00	22.76	L	C
ATOM	534	CG	ARG	L	68	35.389	3.070	101.227	1.00	26.60	L	C
ATOM	535	CD	ARG	L	68	36.416	2.896	102.374	1.00	48.13	L	C
ATOM	536	NE	ARG	L	68	37.790	3.179	101.986	1.00	67.04	L	N
ATOM	537	CZ	ARG	L	68	38.466	4.289	102.301	1.00	77.72	L	C
ATOM	538	NH1	ARG	L	68	37.902	5.257	103.019	1.00	74.08	L	N
ATOM	539	NH2	ARG	L	68	39.737	4.417	101.918	1.00	83.92	L	N
ATOM	540	N	THR	L	69	31.431	4.023	102.691	1.00	24.77	L	N
ATOM	541	CA	THR	L	69	30.144	4.114	103.374	1.00	27.13	L	C
ATOM	542	C	THR	L	69	29.698	5.545	103.712	1.00	26.51	L	C
ATOM	543	O	THR	L	69	28.592	5.726	104.182	1.00	28.14	L	O
ATOM	544	CB	THR	L	69	30.158	3.306	104.710	1.00	26.91	L	C
ATOM	545	OG1	THR	L	69	31.166	3.856	105.554	1.00	27.96	L	O
ATOM	546	CG2	THR	L	69	30.523	1.820	104.424	1.00	25.31	L	C
ATOM	547	N	ASP	L	70	30.517	6.552	103.434	1.00	20.56	L	N
ATOM	548	CA	ASP	L	70	30.158	7.926	103.803	1.00	22.63	L	C

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ATOM    549  C   ASP L  70      30.238   8.863 102.615  1.00 20.68      L    C
ATOM    550  O   ASP L  70      31.290   9.031 102.016  1.00 26.56      L    O
ATOM    551  CB  ASP L  70      31.118   8.435 104.889  1.00 26.74      L    C
ATOM    552  CG  ASP L  70      31.033   7.586 106.173  1.00 33.17      L    C
ATOM    553  OD1 ASP L  70      30.028   7.693 106.878  1.00 45.62      L    O
ATOM    554  OD2 ASP L  70      31.954   6.800 106.428  1.00 48.35      L    O
ATOM    555  N   PHE L  71      29.124   9.526 102.329  1.00 17.29      L    N
ATOM    556  CA  PHE L  71      29.041  10.426 101.185  1.00 18.07      L    C
ATOM    557  C   PHE L  71      28.411  11.739 101.605  1.00 16.31      L    C
ATOM    558  O   PHE L  71      27.691  11.797 102.608  1.00 14.04      L    O
ATOM    559  CB  PHE L  71      28.138   9.766 100.109  1.00 16.27      L    C
ATOM    560  CG  PHE L  71      28.709   8.463  99.614  1.00 15.39      L    C
ATOM    561  CD1 PHE L  71      28.523   7.284 100.325  1.00 11.66      L    C
ATOM    562  CD2 PHE L  71      29.579   8.462  98.525  1.00  7.25      L    C
ATOM    563  CE1 PHE L  71      29.223   6.062  99.951  1.00 12.24      L    C
ATOM    564  CE2 PHE L  71      30.268   7.301  98.153  1.00  7.98      L    C
ATOM    565  CZ  PHE L  71      30.084   6.092  98.878  1.00  8.50      L    C
ATOM    566  N   THR L  72      28.624  12.765 100.801  1.00 17.20      L    N
ATOM    567  CA  THR L  72      27.998  14.035 101.081  1.00 17.62      L    C
ATOM    568  C   THR L  72      27.575  14.675  99.751  1.00 19.31      L    C
ATOM    569  O   THR L  72      28.196  14.435  98.717  1.00 20.88      L    O
ATOM    570  CB  THR L  72      28.964  15.020 101.770  1.00 15.55      L    C
ATOM    571  OG1 THR L  72      30.058  15.250 100.913  1.00 23.82      L    O
ATOM    572  CG2 THR L  72      29.542  14.436 103.030  1.00 15.82      L    C
ATOM    573  N   LEU L  73      26.493  15.457  99.807  1.00 19.72      L    N
ATOM    574  CA  LEU L  73      26.030  16.236  98.663  1.00 16.55      L    C
ATOM    575  C   LEU L  73      26.217  17.677  99.201  1.00 14.66      L    C
ATOM    576  O   LEU L  73      25.783  17.976 100.322  1.00 18.46      L    O
ATOM    577  CB  LEU L  73      24.513  15.996  98.415  1.00 12.04      L    C
ATOM    578  CG  LEU L  73      23.862  16.933  97.412  1.00 15.16      L    C
ATOM    579  CD1 LEU L  73      24.364  16.622  95.971  1.00  7.12      L    C
ATOM    580  CD2 LEU L  73      22.333  16.778  97.425  1.00 10.12      L    C
ATOM    581  N   THR L  74      26.779  18.549  98.366  1.00 15.06      L    N
ATOM    582  CA  THR L  74      27.001  19.931  98.745  1.00 14.50      L    C
ATOM    583  C   THR L  74      26.271  20.792  97.744  1.00 16.15      L    C
ATOM    584  O   THR L  74      26.297  20.513  96.532  1.00 20.55      L    O
ATOM    585  CB  THR L  74      28.497  20.274  98.756  1.00 14.01      L    C
ATOM    586  OG1 THR L  74      29.136  19.508  99.777  1.00 10.91      L    O
ATOM    587  CG2 THR L  74      28.719  21.793  99.068  1.00  8.51      L    C
ATOM    588  N   ILE L  75      25.520  21.784  98.233  1.00 16.30      L    N
ATOM    589  CA  ILE L  75      24.842  22.717  97.352  1.00 16.67      L    C
ATOM    590  C   ILE L  75      25.515  24.052  97.687  1.00 20.52      L    C
ATOM    591  O   ILE L  75      25.481  24.501  98.855  1.00 21.73      L    O
ATOM    592  CB  ILE L  75      23.331  22.809  97.656  1.00 20.98      L    C
ATOM    593  CG1 ILE L  75      22.756  21.387  97.597  1.00 14.60      L    C
ATOM    594  CG2 ILE L  75      22.643  23.703  96.641  1.00  7.63      L    C
ATOM    595  CD1 ILE L  75      21.239  21.348  97.963  1.00 10.72      L    C
ATOM    596  N   ASN L  76      26.085  24.703  96.691  1.00 18.75      L    N
ATOM    597  CA  ASN L  76      26.803  25.941  97.025  1.00 18.83      L    C
ATOM    598  C   ASN L  76      27.022  26.797  95.789  1.00 19.14      L    C
ATOM    599  O   ASN L  76      27.640  26.378  94.829  1.00 20.66      L    O
ATOM    600  CB  ASN L  76      28.159  25.535  97.655  1.00 20.07      L    C
ATOM    601  CG  ASN L  76      28.920  26.738  98.205  1.00 20.61      L    C
ATOM    602  OD1 ASN L  76      28.302  27.682  98.681  1.00 20.96      L    O
ATOM    603  ND2 ASN L  76      30.244  26.690  98.175  1.00 25.64      L    N
ATOM    604  N   PRO L  77      26.467  28.005  95.757  1.00 22.23      L    N
ATOM    605  CA  PRO L  77      25.632  28.644  96.793  1.00 22.24      L    C
ATOM    606  C   PRO L  77      24.205  28.126  96.665  1.00 22.29      L    C
ATOM    607  O   PRO L  77      23.721  27.852  95.567  1.00 23.37      L    O
ATOM    608  CB  PRO L  77      25.651  30.135  96.414  1.00 20.03      L    C
ATOM    609  CG  PRO L  77      25.601  30.058  94.807  1.00 18.01      L    C
ATOM    610  CD  PRO L  77      26.621  28.854  94.560  1.00 19.60      L    C
ATOM    611  N   VAL L  78      23.516  28.051  97.794  1.00 19.30      L    N
ATOM    612  CA  VAL L  78      22.086  27.650  97.773  1.00 15.86      L    C
ATOM    613  C   VAL L  78      21.237  28.809  97.198  1.00 15.02      L    C
ATOM    614  O   VAL L  78      21.528  30.006  97.458  1.00 18.62      L    O
ATOM    615  CB  VAL L  78      21.659  27.342  99.240  1.00 10.76      L    C
ATOM    616  CG1 VAL L  78      20.108  27.338  99.344  1.00 15.65      L    C
ATOM    617  CG2 VAL L  78      22.225  25.962  99.691  1.00  8.70      L    C
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ATOM	618	N	GLU	L	79	20.229	28.482	96.385	1.00	15.66	L	N
ATOM	619	CA	GLU	L	79	19.303	29.452	95.777	1.00	15.48	L	C
ATOM	620	C	GLU	L	79	17.890	29.108	96.280	1.00	19.00	L	C
ATOM	621	O	GLU	L	79	17.679	28.011	96.728	1.00	18.75	L	O
ATOM	622	CB	GLU	L	79	19.341	29.354	94.257	1.00	16.52	L	C
ATOM	623	CG	GLU	L	79	20.703	29.701	93.731	1.00	17.33	L	C
ATOM	624	CD	GLU	L	79	20.771	29.892	92.198	1.00	31.97	L	C
ATOM	625	OE1	GLU	L	79	21.811	30.362	91.749	1.00	36.07	L	O
ATOM	626	OE2	GLU	L	79	19.829	29.549	91.476	1.00	19.91	L	O
ATOM	627	N	ALA	L	80	16.946	30.041	96.179	1.00	17.42	L	N
ATOM	628	CA	ALA	L	80	15.594	29.804	96.728	1.00	15.69	L	C
ATOM	629	C	ALA	L	80	14.941	28.596	96.125	1.00	17.37	L	C
ATOM	630	O	ALA	L	80	14.202	27.902	96.797	1.00	20.28	L	O
ATOM	631	CB	ALA	L	80	14.655	31.034	96.432	1.00	17.81	L	C
ATOM	632	N	ASP	L	81	15.181	28.374	94.839	1.00	19.11	L	N
ATOM	633	CA	ASP	L	81	14.492	27.254	94.184	1.00	20.13	L	C
ATOM	634	C	ASP	L	81	15.083	25.903	94.533	1.00	18.90	L	C
ATOM	635	O	ASP	L	81	14.614	24.889	93.991	1.00	22.61	L	O
ATOM	636	CB	ASP	L	81	14.467	27.444	92.658	1.00	20.21	L	C
ATOM	637	CG	ASP	L	81	13.575	26.430	91.938	1.00	34.87	L	C
ATOM	638	OD1	ASP	L	81	12.398	26.284	92.319	1.00	48.81	L	O
ATOM	639	OD2	ASP	L	81	14.054	25.764	90.982	1.00	50.24	L	O
ATOM	640	N	ASP	L	82	16.057	25.871	95.453	1.00	16.98	L	N
ATOM	641	CA	ASP	L	82	16.640	24.587	95.887	1.00	15.01	L	C
ATOM	642	C	ASP	L	82	15.839	23.921	97.038	1.00	15.72	L	C
ATOM	643	O	ASP	L	82	16.144	22.779	97.470	1.00	19.30	L	O
ATOM	644	CB	ASP	L	82	18.088	24.761	96.328	1.00	13.58	L	C
ATOM	645	CG	ASP	L	82	19.016	25.236	95.161	1.00	19.81	L	C
ATOM	646	OD1	ASP	L	82	18.685	25.119	93.925	1.00	15.99	L	O
ATOM	647	OD2	ASP	L	82	20.081	25.777	95.531	1.00	22.54	L	O
ATOM	648	N	VAL	L	83	14.810	24.609	97.553	1.00	15.10	L	N
ATOM	649	CA	VAL	L	83	14.008	23.957	98.617	1.00	18.05	L	C
ATOM	650	C	VAL	L	83	13.427	22.662	98.020	1.00	17.36	L	C
ATOM	651	O	VAL	L	83	12.820	22.650	96.948	1.00	17.48	L	O
ATOM	652	CB	VAL	L	83	12.914	24.905	99.174	1.00	15.94	L	C
ATOM	653	CG1	VAL	L	83	13.604	25.942	100.046	1.00	23.49	L	C
ATOM	654	CG2	VAL	L	83	12.227	25.582	98.130	1.00	25.18	L	C
ATOM	655	N	ALA	L	84	13.651	21.576	98.738	1.00	15.63	L	N
ATOM	656	CA	ALA	L	84	13.272	20.269	98.218	1.00	14.84	L	C
ATOM	657	C	ALA	L	84	13.732	19.240	99.214	1.00	15.55	L	C
ATOM	658	O	ALA	L	84	14.336	19.576	100.253	1.00	15.84	L	O
ATOM	659	CB	ALA	L	84	14.071	20.056	96.900	1.00	14.40	L	C
ATOM	660	N	THR	L	85	13.416	17.959	98.930	1.00	15.71	L	N
ATOM	661	CA	THR	L	85	13.960	16.888	99.739	1.00	15.45	L	C
ATOM	662	C	THR	L	85	15.005	16.210	98.843	1.00	15.12	L	C
ATOM	663	O	THR	L	85	14.727	15.967	97.667	1.00	15.93	L	O
ATOM	664	CB	THR	L	85	12.845	15.855	100.140	1.00	17.03	L	C
ATOM	665	OG1	THR	L	85	11.920	16.521	101.021	1.00	22.01	L	O
ATOM	666	CG2	THR	L	85	13.470	14.657	100.918	1.00	8.72	L	C
ATOM	667	N	TYR	L	86	16.183	15.916	99.411	1.00	14.04	L	N
ATOM	668	CA	TYR	L	86	17.268	15.309	98.667	1.00	13.13	L	C
ATOM	669	C	TYR	L	86	17.447	13.879	99.156	1.00	16.69	L	C
ATOM	670	O	TYR	L	86	17.458	13.637	100.330	1.00	18.94	L	O
ATOM	671	CB	TYR	L	86	18.564	16.109	98.896	1.00	11.97	L	C
ATOM	672	CG	TYR	L	86	18.443	17.491	98.305	1.00	11.60	L	C
ATOM	673	CD1	TYR	L	86	17.811	18.516	98.981	1.00	7.53	L	C
ATOM	674	CD2	TYR	L	86	18.872	17.734	97.006	1.00	12.00	L	C
ATOM	675	CE1	TYR	L	86	17.590	19.772	98.364	1.00	11.09	L	C
ATOM	676	CE2	TYR	L	86	18.678	18.955	96.389	1.00	11.34	L	C
ATOM	677	CZ	TYR	L	86	18.043	19.968	97.056	1.00	17.23	L	C
ATOM	678	OH	TYR	L	86	17.888	21.177	96.447	1.00	15.79	L	O
ATOM	679	N	TYR	L	87	17.559	12.936	98.214	1.00	16.92	L	N
ATOM	680	CA	TYR	L	87	17.721	11.533	98.587	1.00	13.58	L	C
ATOM	681	C	TYR	L	87	19.002	10.935	98.055	1.00	12.86	L	C
ATOM	682	O	TYR	L	87	19.326	11.195	96.894	1.00	18.14	L	O
ATOM	683	CB	TYR	L	87	16.618	10.684	97.963	1.00	6.47	L	C
ATOM	684	CG	TYR	L	87	15.235	11.018	98.457	1.00	18.98	L	C
ATOM	685	CD1	TYR	L	87	14.461	11.985	97.824	1.00	11.56	L	C
ATOM	686	CD2	TYR	L	87	14.684	10.318	99.518	1.00	14.13	L	C

ATOM	687	CE1	TYR	L	87	13.156	12.228	98.246	1.00	15.50	L	C
ATOM	688	CE2	TYR	L	87	13.358	10.572	99.941	1.00	7.09	L	C
ATOM	689	CZ	TYR	L	87	12.621	11.510	99.306	1.00	17.61	L	C
ATOM	690	OH	TYR	L	87	11.313	11.799	99.716	1.00	18.17	L	O
ATOM	691	N	CYS	L	88	19.673	10.099	98.850	1.00	9.84	L	N
ATOM	692	CA	CYS	L	88	20.813	9.367	98.272	1.00	14.40	L	C
ATOM	693	C	CYS	L	88	20.235	7.961	97.902	1.00	15.10	L	C
ATOM	694	O	CYS	L	88	19.136	7.592	98.357	1.00	18.42	L	O
ATOM	695	CB	CYS	L	88	21.962	9.241	99.263	1.00	12.72	L	C
ATOM	696	SG	CYS	L	88	21.464	8.575	100.910	1.00	16.04	L	S
ATOM	697	N	GLN	L	89	20.944	7.220	97.041	1.00	11.35	L	N
ATOM	698	CA	GLN	L	89	20.468	5.917	96.588	1.00	9.96	L	C
ATOM	699	C	GLN	L	89	21.692	5.101	96.156	1.00	13.56	L	C
ATOM	700	O	GLN	L	89	22.591	5.652	95.507	1.00	14.17	L	O
ATOM	701	CB	GLN	L	89	19.561	6.138	95.392	1.00	9.47	L	C
ATOM	702	CG	GLN	L	89	18.988	4.858	94.748	1.00	8.43	L	C
ATOM	703	CD	GLN	L	89	19.713	4.527	93.433	1.00	12.81	L	C
ATOM	704	OE1	GLN	L	89	19.766	5.348	92.490	1.00	13.05	L	O
ATOM	705	NE2	GLN	L	89	20.250	3.310	93.364	1.00	7.99	L	N
ATOM	706	N	GLN	L	90	21.744	3.825	96.542	1.00	12.73	L	N
ATOM	707	CA	GLN	L	90	22.913	2.994	96.196	1.00	11.36	L	C
ATOM	708	C	GLN	L	90	22.517	1.939	95.194	1.00	12.24	L	C
ATOM	709	O	GLN	L	90	21.399	1.436	95.209	1.00	8.64	L	O
ATOM	710	CB	GLN	L	90	23.527	2.285	97.415	1.00	9.81	L	C
ATOM	711	CG	GLN	L	90	22.598	1.298	98.110	1.00	14.99	L	C
ATOM	712	CD	GLN	L	90	22.598	-0.129	97.521	1.00	18.05	L	C
ATOM	713	OE1	GLN	L	90	23.545	-0.566	96.864	1.00	15.88	L	O
ATOM	714	NE2	GLN	L	90	21.518	-0.858	97.800	1.00	20.57	L	N
ATOM	715	N	SER	L	91	23.473	1.641	94.322	1.00	13.95	L	N
ATOM	716	CA	SER	L	91	23.290	0.693	93.251	1.00	19.79	L	C
ATOM	717	C	SER	L	91	24.352	-0.403	93.325	1.00	18.67	L	C
ATOM	718	O	SER	L	91	24.611	-1.040	92.298	1.00	19.36	L	O
ATOM	719	CB	SER	L	91	23.441	1.425	91.887	1.00	15.12	L	C
ATOM	720	OG	SER	L	91	22.237	2.067	91.586	1.00	33.42	L	O
ATOM	721	N	ASN	L	92	24.930	-0.634	94.510	1.00	16.12	L	N
ATOM	722	CA	ASN	L	92	25.989	-1.659	94.620	1.00	15.63	L	C
ATOM	723	C	ASN	L	92	25.422	-3.053	94.890	1.00	14.30	L	C
ATOM	724	O	ASN	L	92	26.015	-4.064	94.460	1.00	16.71	L	O
ATOM	725	CB	ASN	L	92	27.040	-1.288	95.676	1.00	15.71	L	C
ATOM	726	CG	ASN	L	92	28.307	-2.149	95.545	1.00	14.45	L	C
ATOM	727	OD1	ASN	L	92	28.831	-2.324	94.450	1.00	27.57	L	O
ATOM	728	ND2	ASN	L	92	28.770	-2.700	96.656	1.00	25.93	L	N
ATOM	729	N	GLU	L	93	24.279	-3.143	95.562	1.00	16.66	L	N
ATOM	730	CA	GLU	L	93	23.643	-4.433	95.783	1.00	16.68	L	C
ATOM	731	C	GLU	L	93	22.164	-4.332	95.540	1.00	18.74	L	C
ATOM	732	O	GLU	L	93	21.542	-3.325	95.804	1.00	20.03	L	O
ATOM	733	CB	GLU	L	93	23.772	-4.934	97.261	1.00	20.26	L	C
ATOM	734	CG	GLU	L	93	25.164	-5.095	97.612	1.00	24.66	L	C
ATOM	735	CD	GLU	L	93	25.373	-5.930	98.887	1.00	27.35	L	C
ATOM	736	OE1	GLU	L	93	24.422	-6.153	99.638	1.00	20.40	L	O
ATOM	737	OE2	GLU	L	93	26.517	-6.309	99.032	1.00	31.57	L	O
ATOM	738	N	ASP	L	94	21.584	-5.438	95.123	1.00	20.63	L	N
ATOM	739	CA	ASP	L	94	20.123	-5.480	94.983	1.00	17.16	L	C
ATOM	740	C	ASP	L	94	19.620	-5.956	96.366	1.00	16.50	L	C
ATOM	741	O	ASP	L	94	20.278	-6.748	97.008	1.00	21.43	L	O
ATOM	742	CB	ASP	L	94	19.746	-6.525	93.962	1.00	18.30	L	C
ATOM	743	CG	ASP	L	94	20.195	-6.159	92.573	1.00	22.97	L	C
ATOM	744	OD1	ASP	L	94	20.453	-4.967	92.336	1.00	31.49	L	O
ATOM	745	OD2	ASP	L	94	20.255	-7.058	91.718	1.00	33.23	L	O
ATOM	746	N	PRO	L	95	18.473	-5.447	96.836	1.00	18.36	L	N
ATOM	747	CA	PRO	L	95	17.663	-4.449	96.112	1.00	15.59	L	C
ATOM	748	C	PRO	L	95	18.313	-3.067	96.210	1.00	15.03	L	C
ATOM	749	O	PRO	L	95	18.880	-2.731	97.243	1.00	15.51	L	O
ATOM	750	CB	PRO	L	95	16.325	-4.466	96.865	1.00	15.24	L	C
ATOM	751	CG	PRO	L	95	16.748	-4.764	98.308	1.00	19.84	L	C
ATOM	752	CD	PRO	L	95	17.832	-5.859	98.104	1.00	18.49	L	C
ATOM	753	N	TRP	L	96	18.190	-2.249	95.169	1.00	12.53	L	N
ATOM	754	CA	TRP	L	96	18.751	-0.916	95.285	1.00	11.43	L	C
ATOM	755	C	TRP	L	96	17.888	-0.227	96.339	1.00	15.42	L	C

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ATOM    756  O   TRP L  96      16.668  -0.463  96.364  1.00 16.13      L    O
ATOM    757  CB  TRP L  96      18.596  -0.141  93.994  1.00  6.29      L    C
ATOM    758  CG  TRP L  96      19.497  -0.624  92.924  1.00 18.26      L    C
ATOM    759  CD1 TRP L  96      20.292  -1.701  92.954  1.00 23.00      L    C
ATOM    760  CD2 TRP L  96      19.694   0.007  91.657  1.00 15.27      L    C
ATOM    761  NE1 TRP L  96      21.009  -1.785  91.775  1.00 15.73      L    N
ATOM    762  CE2 TRP L  96      20.650  -0.744  90.964  1.00 22.20      L    C
ATOM    763  CE3 TRP L  96      19.148   1.137  91.058  1.00 13.08      L    C
ATOM    764  CZ2 TRP L  96      21.092  -0.397  89.681  1.00 23.50      L    C
ATOM    765  CZ3 TRP L  96      19.583   1.498  89.787  1.00 29.69      L    C
ATOM    766  CH2 TRP L  96      20.552   0.729  89.118  1.00 23.23      L    C
ATOM    767  N   THR L  97      18.521   0.636  97.153  1.00 14.07      L    N
ATOM    768  CA  THR L  97      17.784   1.306  98.212  1.00 14.31      L    C
ATOM    769  C   THR L  97      18.051   2.804  98.229  1.00 16.18      L    C
ATOM    770  O   THR L  97      19.063   3.276  97.707  1.00 18.79      L    O
ATOM    771  CB  THR L  97      18.160   0.742  99.570  1.00 13.49      L    C
ATOM    772  OG1 THR L  97      19.588   0.642  99.618  1.00 17.28      L    O
ATOM    773  CG2 THR L  97      17.561  -0.728  99.749  1.00 10.34      L    C
ATOM    774  N   PHE L  98      17.119   3.515  98.851  1.00 16.74      L    N
ATOM    775  CA  PHE L  98      17.173   4.966  98.957  1.00 15.24      L    C
ATOM    776  C   PHE L  98      17.292   5.386 100.417  1.00 14.99      L    C
ATOM    777  O   PHE L  98      16.795   4.676 101.313  1.00 13.01      L    O
ATOM    778  CB  PHE L  98      15.898   5.572  98.435  1.00 12.91      L    C
ATOM    779  CG  PHE L  98      15.721   5.522  96.952  1.00 13.58      L    C
ATOM    780  CD1 PHE L  98      15.204   4.390  96.335  1.00 11.52      L    C
ATOM    781  CD2 PHE L  98      16.004   6.648  96.173  1.00 10.32      L    C
ATOM    782  CE1 PHE L  98      14.981   4.388  94.966  1.00 10.75      L    C
ATOM    783  CE2 PHE L  98      15.770   6.644  94.808  1.00 13.28      L    C
ATOM    784  CZ  PHE L  98      15.259   5.503  94.217  1.00 15.23      L    C
ATOM    785  N   GLY L  99      17.984   6.511 100.661  1.00 13.55      L    N
ATOM    786  CA  GLY L  99      18.027   7.055 102.027  1.00 10.54      L    C
ATOM    787  C   GLY L  99      16.637   7.610 102.318  1.00 12.58      L    C
ATOM    788  O   GLY L  99      15.796   7.735 101.424  1.00  9.94      L    O
ATOM    789  N   GLY L 100      16.424   8.022 103.565  1.00 12.36      L    N
ATOM    790  CA  GLY L 100      15.147   8.553 103.982  1.00  8.70      L    C
ATOM    791  C   GLY L 100      14.891  10.004 103.583  1.00 15.60      L    C
ATOM    792  O   GLY L 100      13.803  10.533 103.828  1.00 17.49      L    O
ATOM    793  N   GLY L 101      15.910  10.695 103.040  1.00 15.34      L    N
ATOM    794  CA  GLY L 101      15.662  12.053 102.574  1.00 18.81      L    C
ATOM    795  C   GLY L 101      16.100  13.108 103.567  1.00 17.29      L    C
ATOM    796  O   GLY L 101      16.044  12.868 104.775  1.00 18.50      L    O
ATOM    797  N   THR L 102      16.577  14.239 103.050  1.00 15.70      L    N
ATOM    798  CA  THR L 102      16.963  15.383 103.902  1.00 13.96      L    C
ATOM    799  C   THR L 102      16.243  16.556 103.300  1.00 12.46      L    C
ATOM    800  O   THR L 102      16.358  16.831 102.080  1.00 11.12      L    O
ATOM    801  CB  THR L 102      18.526  15.654 103.915  1.00 13.19      L    C
ATOM    802  OG1 THR L 102      19.194  14.618 104.653  1.00 18.45      L    O
ATOM    803  CG2 THR L 102      18.813  17.042 104.578  1.00  7.06      L    C
ATOM    804  N   LYS L 103      15.488  17.279 104.130  1.00 11.45      L    N
ATOM    805  CA  LYS L 103      14.756  18.405 103.615  1.00 13.95      L    C
ATOM    806  C   LYS L 103      15.578  19.704 103.729  1.00 12.14      L    C
ATOM    807  O   LYS L 103      16.098  19.996 104.795  1.00 16.90      L    O
ATOM    808  CB  LYS L 103      13.411  18.609 104.360  1.00 11.00      L    C
ATOM    809  CG  LYS L 103      12.759  19.922 103.933  1.00 25.30      L    C
ATOM    810  CD  LYS L 103      11.185  19.917 103.860  1.00 32.62      L    C
ATOM    811  CE  LYS L 103      10.533  19.242 105.063  1.00 42.65      L    C
ATOM    812  NZ  LYS L 103       9.000  19.156 104.966  1.00 51.76      L    N
ATOM    813  N   LEU L 104      15.689  20.453 102.641  1.00 11.40      L    N
ATOM    814  CA  LEU L 104      16.470  21.727 102.700  1.00 14.03      L    C
ATOM    815  C   LEU L 104      15.472  22.912 102.763  1.00 16.12      L    C
ATOM    816  O   LEU L 104      14.494  22.989 101.964  1.00 19.86      L    O
ATOM    817  CB  LEU L 104      17.316  21.896 101.444  1.00 17.08      L    C
ATOM    818  CG  LEU L 104      18.153  23.204 101.382  1.00 15.21      L    C
ATOM    819  CD1 LEU L 104      19.243  23.200 102.465  1.00 14.42      L    C
ATOM    820  CD2 LEU L 104      18.758  23.351  99.967  1.00 21.88      L    C
ATOM    821  N   GLU L 105      15.738  23.838 103.669  1.00 19.74      L    N
ATOM    822  CA  GLU L 105      14.883  25.048 103.776  1.00 23.03      L    C
ATOM    823  C   GLU L 105      15.777  26.266 103.798  1.00 21.66      L    C
ATOM    824  O   GLU L 105      16.995  26.152 104.094  1.00 23.85      L    O
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ATOM	825	CB	GLU	L	105	14.058	24.996	105.055	1.00	20.70	L C
ATOM	826	CG	GLU	L	105	12.822	24.033	104.818	1.00	42.64	L C
ATOM	827	CD	GLU	L	105	11.991	23.732	106.069	1.00	41.20	L C
ATOM	828	OE1	GLU	L	105	12.550	23.403	107.145	1.00	48.80	L O
ATOM	829	OE2	GLU	L	105	10.772	23.799	105.946	1.00	35.54	L O
ATOM	830	N	ILE	L	106	15.167	27.409	103.518	1.00	19.49	L N
ATOM	831	CA	ILE	L	106	15.897	28.691	103.477	1.00	18.78	L C
ATOM	832	C	ILE	L	106	15.594	29.515	104.702	1.00	18.92	L C
ATOM	833	O	ILE	L	106	14.423	29.655	105.047	1.00	17.74	L O
ATOM	834	CB	ILE	L	106	15.454	29.520	102.269	1.00	18.45	L C
ATOM	835	CG1	ILE	L	106	15.651	28.723	100.961	1.00	23.36	L C
ATOM	836	CG2	ILE	L	106	16.165	30.884	102.287	1.00	17.39	L C
ATOM	837	CD1	ILE	L	106	17.082	28.290	100.736	1.00	11.46	L C
ATOM	838	N	LYS	L	107	16.622	30.020	105.397	1.00	18.87	L N
ATOM	839	CA	LYS	L	107	16.391	30.902	106.544	1.00	18.21	L C
ATOM	840	CB	LYS	L	107	17.507	30.812	107.505	1.00	13.40	L C
ATOM	841	C	LYS	L	107	16.341	32.312	105.953	1.00	21.75	L C
ATOM	842	O	LYS	L	107	17.316	32.765	105.330	1.00	26.63	L O
ATOM	843	N	ARG	L	108	15.208	33.001	106.064	1.00	24.68	L N
ATOM	844	CA	ARG	L	108	15.110	34.375	105.588	1.00	23.09	L C
ATOM	845	C	ARG	L	108	14.597	35.310	106.685	1.00	22.48	L C
ATOM	846	O	ARG	L	108	14.547	34.974	107.860	1.00	26.67	L O
ATOM	847	CB	ARG	L	108	14.151	34.397	104.397	1.00	19.08	L C
ATOM	848	CG	ARG	L	108	12.735	33.971	104.784	1.00	22.27	L C
ATOM	849	CD	ARG	L	108	11.672	34.639	103.903	1.00	21.24	L C
ATOM	850	NE	ARG	L	108	11.420	36.012	104.351	1.00	20.00	L N
ATOM	851	CZ	ARG	L	108	10.862	36.858	103.466	1.00	20.00	L C
ATOM	852	NH1	ARG	L	108	10.555	36.441	102.250	1.00	20.00	L N
ATOM	853	NH2	ARG	L	108	10.614	38.120	103.825	1.00	20.00	L N
ATOM	854	N	ALA	L	109	14.245	36.539	106.266	1.00	22.10	L N
ATOM	855	CA	ALA	L	109	13.729	37.503	107.229	1.00	25.90	L C
ATOM	856	C	ALA	L	109	12.312	37.142	107.681	1.00	28.19	L C
ATOM	857	O	ALA	L	109	11.497	36.641	106.918	1.00	28.86	L O
ATOM	858	CB	ALA	L	109	13.730	38.883	106.570	1.00	19.28	L C
ATOM	859	N	ASP	L	110	11.904	37.545	108.886	1.00	24.17	L N
ATOM	860	CA	ASP	L	110	10.526	37.268	109.294	1.00	21.56	L C
ATOM	861	C	ASP	L	110	9.516	37.934	108.346	1.00	23.66	L C
ATOM	862	O	ASP	L	110	9.784	39.005	107.830	1.00	22.76	L O
ATOM	863	CB	ASP	L	110	10.297	37.805	110.698	1.00	19.33	L C
ATOM	864	CG	ASP	L	110	11.020	37.003	111.751	1.00	26.80	L C
ATOM	865	OD1	ASP	L	110	11.593	35.921	111.458	1.00	25.30	L O
ATOM	866	OD2	ASP	L	110	10.969	37.446	112.915	1.00	38.99	L O
ATOM	867	N	ALA	L	111	8.357	37.305	108.118	1.00	21.57	L N
ATOM	868	CA	ALA	L	111	7.330	37.901	107.280	1.00	17.99	L C
ATOM	869	C	ALA	L	111	5.960	37.587	107.893	1.00	20.07	L C
ATOM	870	O	ALA	L	111	5.625	36.421	108.163	1.00	22.24	L O
ATOM	871	CB	ALA	L	111	7.398	37.378	105.886	1.00	11.33	L C
ATOM	872	N	ALA	L	112	5.147	38.608	108.115	1.00	18.94	L N
ATOM	873	CA	ALA	L	112	3.860	38.333	108.766	1.00	18.42	L C
ATOM	874	C	ALA	L	112	2.873	37.698	107.817	1.00	20.56	L C
ATOM	875	O	ALA	L	112	2.869	37.981	106.647	1.00	25.17	L O
ATOM	876	CB	ALA	L	112	3.221	39.653	109.324	1.00	15.77	L C
ATOM	877	N	PRO	L	113	1.957	36.867	108.343	1.00	19.48	L N
ATOM	878	CA	PRO	L	113	0.994	36.258	107.426	1.00	17.01	L C
ATOM	879	C	PRO	L	113	-0.051	37.193	106.895	1.00	17.50	L C
ATOM	880	O	PRO	L	113	-0.427	38.129	107.573	1.00	21.67	L O
ATOM	881	CB	PRO	L	113	0.352	35.152	108.274	1.00	16.83	L C
ATOM	882	CG	PRO	L	113	0.478	35.664	109.662	1.00	10.92	L C
ATOM	883	CD	PRO	L	113	1.853	36.298	109.688	1.00	17.62	L C
ATOM	884	N	THR	L	114	-0.511	36.947	105.679	1.00	21.82	L N
ATOM	885	CA	THR	L	114	-1.625	37.725	105.138	1.00	21.62	L C
ATOM	886	C	THR	L	114	-2.839	36.808	105.388	1.00	24.80	L C
ATOM	887	O	THR	L	114	-2.946	35.714	104.786	1.00	25.84	L O
ATOM	888	CB	THR	L	114	-1.439	37.955	103.644	1.00	24.03	L C
ATOM	889	OG1	THR	L	114	-0.309	38.827	103.460	1.00	25.12	L O
ATOM	890	CG2	THR	L	114	-2.655	38.604	103.050	1.00	15.64	L C
ATOM	891	N	VAL	L	115	-3.752	37.263	106.255	1.00	22.00	L N
ATOM	892	CA	VAL	L	115	-4.897	36.423	106.654	1.00	21.60	L C
ATOM	893	C	VAL	L	115	-6.170	36.850	105.944	1.00	23.51	L C

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ATOM    894  O   VAL L 115      -6.455  38.053 105.906  1.00 22.67      L    O
ATOM    895  CB  VAL L 115      -5.104  36.543 108.159  1.00 18.30      L    C
ATOM    896  CG1 VAL L 115      -6.171  35.567 108.620  1.00 18.51      L    C
ATOM    897  CG2 VAL L 115      -3.743  36.262 108.930  1.00 15.64      L    C
ATOM    898  N   SER L 116      -6.920  35.878 105.413  1.00 21.18      L    N
ATOM    899  CA  SER L 116      -8.177  36.131 104.679  1.00 19.67      L    C
ATOM    900  C   SER L 116      -9.200  35.125 105.173  1.00 20.75      L    C
ATOM    901  O   SER L 116      -8.878  33.963 105.281  1.00 19.14      L    O
ATOM    902  CB  SER L 116      -8.003  35.930 103.162  1.00 16.47      L    C
ATOM    903  OG  SER L 116      -6.991  36.777 102.687  1.00 31.49      L    O
ATOM    904  N   ILE L 117     -10.438  35.565 105.478  1.00 18.42      L    N
ATOM    905  CA  ILE L 117     -11.452  34.627 105.968  1.00 19.19      L    C
ATOM    906  C   ILE L 117     -12.594  34.564 104.970  1.00 18.21      L    C
ATOM    907  O   ILE L 117     -12.884  35.572 104.306  1.00 19.48      L    O
ATOM    908  CB  ILE L 117     -11.980  35.028 107.384  1.00 20.88      L    C
ATOM    909  CG1 ILE L 117     -12.950  33.964 107.891  1.00 16.18      L    C
ATOM    910  CG2 ILE L 117     -12.633  36.421 107.356  1.00 21.53      L    C
ATOM    911  CD1 ILE L 117     -13.317  34.197 109.365  1.00 21.53      L    C
ATOM    912  N   PHE L 118     -13.211  33.383 104.839  1.00 16.84      L    N
ATOM    913  CA  PHE L 118     -14.262  33.214 103.861  1.00 14.96      L    C
ATOM    914  C   PHE L 118     -15.490  32.512 104.373  1.00 19.74      L    C
ATOM    915  O   PHE L 118     -15.406  31.427 104.918  1.00 24.08      L    O
ATOM    916  CB  PHE L 118     -13.776  32.382 102.677  1.00 16.32      L    C
ATOM    917  CG  PHE L 118     -12.558  32.927 102.032  1.00 19.49      L    C
ATOM    918  CD1 PHE L 118     -11.308  32.634 102.550  1.00 23.15      L    C
ATOM    919  CD2 PHE L 118     -12.653  33.805 100.964  1.00 16.22      L    C
ATOM    920  CE1 PHE L 118     -10.145  33.225 102.011  1.00 27.60      L    C
ATOM    921  CE2 PHE L 118     -11.486  34.395 100.420  1.00 18.98      L    C
ATOM    922  CZ  PHE L 118     -10.252  34.104 100.948  1.00 19.75      L    C
ATOM    923  N   PRO L 119     -16.671  33.102 104.161  1.00 24.09      L    N
ATOM    924  CA  PRO L 119     -17.866  32.401 104.643  1.00 21.88      L    C
ATOM    925  C   PRO L 119     -18.187  31.236 103.755  1.00 22.99      L    C
ATOM    926  O   PRO L 119     -17.649  31.105 102.623  1.00 25.33      L    O
ATOM    927  CB  PRO L 119     -18.993  33.441 104.512  1.00 21.57      L    C
ATOM    928  CG  PRO L 119     -18.289  34.768 104.438  1.00 24.58      L    C
ATOM    929  CD  PRO L 119     -16.957  34.496 103.742  1.00 23.46      L    C
ATOM    930  N   PRO L 120     -19.111  30.375 104.207  1.00 24.97      L    N
ATOM    931  CA  PRO L 120     -19.548  29.212 103.454  1.00 20.35      L    C
ATOM    932  C   PRO L 120     -20.169  29.766 102.153  1.00 22.34      L    C
ATOM    933  O   PRO L 120     -20.757  30.859 102.165  1.00 27.53      L    O
ATOM    934  CB  PRO L 120     -20.626  28.590 104.336  1.00 21.43      L    C
ATOM    935  CG  PRO L 120     -20.336  29.031 105.688  1.00 24.10      L    C
ATOM    936  CD  PRO L 120     -19.783  30.455 105.534  1.00 26.50      L    C
ATOM    937  N   SER L 121     -20.021  29.033 101.055  1.00 26.13      L    N
ATOM    938  CA  SER L 121     -20.559  29.461  99.739  1.00 28.80      L    C
ATOM    939  C   SER L 121     -22.061  29.144  99.748  1.00 30.89      L    C
ATOM    940  O   SER L 121     -22.508  28.278 100.482  1.00 28.98      L    O
ATOM    941  CB  SER L 121     -19.906  28.677  98.591  1.00 29.25      L    C
ATOM    942  OG  SER L 121     -20.172  27.284  98.686  1.00 28.45      L    O
ATOM    943  N   SER L 122     -22.831  29.855  98.916  1.00 33.37      L    N
ATOM    944  CA  SER L 122     -24.266  29.605  98.862  1.00 34.56      L    C
ATOM    945  C   SER L 122     -24.432  28.194  98.360  1.00 30.86      L    C
ATOM    946  O   SER L 122     -25.288  27.470  98.811  1.00 31.28      L    O
ATOM    947  CB  SER L 122     -24.935  30.594  97.903  1.00 36.90      L    C
ATOM    948  OG  SER L 122     -24.460  30.376  96.600  1.00 48.86      L    O
ATOM    949  N   GLU L 123     -23.571  27.776  97.436  1.00 28.18      L    N
ATOM    950  CA  GLU L 123     -23.659  26.408  96.936  1.00 33.35      L    C
ATOM    951  C   GLU L 123     -23.564  25.357  98.042  1.00 30.77      L    C
ATOM    952  O   GLU L 123     -24.316  24.377  98.049  1.00 28.32      L    O
ATOM    953  CB  GLU L 123     -22.554  26.177  95.913  1.00 35.48      L    C
ATOM    954  CG  GLU L 123     -22.812  26.923  94.643  1.00 49.39      L    C
ATOM    955  CD  GLU L 123     -22.019  28.188  94.524  1.00 60.63      L    C
ATOM    956  OE1 GLU L 123     -22.009  28.966  95.522  1.00 60.83      L    O
ATOM    957  OE2 GLU L 123     -21.405  28.378  93.434  1.00 60.19      L    O
ATOM    958  N   GLN L 124     -22.619  25.533  98.978  1.00 30.73      L    N
ATOM    959  CA  GLN L 124     -22.495  24.539 100.046  1.00 27.46      L    C
ATOM    960  C   GLN L 124     -23.678  24.587 101.005  1.00 25.19      L    C
ATOM    961  O   GLN L 124     -24.172  23.547 101.459  1.00 25.43      L    O
ATOM    962  CB  GLN L 124     -21.142  24.693 100.827  1.00 28.38      L    C
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ATOM	963	CG	GLN	L	124	-21.002	23.700	101.992	1.00	17.62	L C
ATOM	964	CD	GLN	L	124	-19.695	23.785	102.732	1.00	19.12	L C
ATOM	965	OE1	GLN	L	124	-19.129	24.872	102.862	1.00	20.58	L O
ATOM	966	NE2	GLN	L	124	-19.218	22.628	103.260	1.00	14.19	L N
ATOM	967	N	LEU	L	125	-24.128	25.781	101.331	1.00	23.58	L N
ATOM	968	CA	LEU	L	125	-25.255	25.923	102.246	1.00	26.99	L C
ATOM	969	C	LEU	L	125	-26.482	25.150	101.714	1.00	31.07	L C
ATOM	970	O	LEU	L	125	-27.160	24.439	102.467	1.00	31.01	L O
ATOM	971	CB	LEU	L	125	-25.574	27.404	102.442	1.00	21.80	L C
ATOM	972	CG	LEU	L	125	-24.497	28.130	103.268	1.00	26.32	L C
ATOM	973	CD1	LEU	L	125	-24.696	29.650	103.236	1.00	8.36	L C
ATOM	974	CD2	LEU	L	125	-24.556	27.611	104.698	1.00	20.84	L C
ATOM	975	N	THR	L	126	-26.753	25.264	100.424	1.00	33.07	L N
ATOM	976	CA	THR	L	126	-27.880	24.508	99.876	1.00	35.65	L C
ATOM	977	C	THR	L	126	-27.736	22.993	100.109	1.00	38.92	L C
ATOM	978	O	THR	L	126	-28.733	22.282	100.041	1.00	45.16	L O
ATOM	979	CB	THR	L	126	-28.021	24.678	98.376	1.00	37.07	L C
ATOM	980	OG1	THR	L	126	-26.987	23.913	97.745	1.00	49.44	L O
ATOM	981	CG2	THR	L	126	-27.929	26.170	97.960	1.00	27.81	L C
ATOM	982	N	SER	L	127	-26.517	22.483	100.366	1.00	38.10	L N
ATOM	983	CA	SER	L	127	-26.319	21.040	100.592	1.00	34.68	L C
ATOM	984	C	SER	L	127	-26.420	20.705	102.055	1.00	34.07	L C
ATOM	985	O	SER	L	127	-26.321	19.533	102.478	1.00	39.83	L O
ATOM	986	CB	SER	L	127	-24.949	20.596	100.094	1.00	34.83	L C
ATOM	987	OG	SER	L	127	-24.807	20.845	98.713	1.00	44.79	L O
ATOM	988	N	GLY	L	128	-26.596	21.730	102.855	1.00	29.72	L N
ATOM	989	CA	GLY	L	128	-26.717	21.469	104.259	1.00	34.23	L C
ATOM	990	C	GLY	L	128	-25.440	21.697	105.030	1.00	36.19	L C
ATOM	991	O	GLY	L	128	-25.456	21.612	106.264	1.00	40.26	L O
ATOM	992	N	GLY	L	129	-24.353	22.020	104.326	1.00	33.03	L N
ATOM	993	CA	GLY	L	129	-23.092	22.207	105.009	1.00	31.52	L C
ATOM	994	C	GLY	L	129	-22.632	23.635	105.101	1.00	30.69	L C
ATOM	995	O	GLY	L	129	-23.196	24.524	104.453	1.00	28.36	L O
ATOM	996	N	ALA	L	130	-21.609	23.859	105.927	1.00	29.57	L N
ATOM	997	CA	ALA	L	130	-21.095	25.205	106.141	1.00	29.07	L C
ATOM	998	C	ALA	L	130	-19.650	25.164	106.583	1.00	27.65	L C
ATOM	999	O	ALA	L	130	-19.376	25.016	107.771	1.00	32.06	L O
ATOM	1000	CB	ALA	L	130	-21.909	25.940	107.211	1.00	25.02	L C
ATOM	1001	N	SER	L	131	-18.732	25.329	105.635	1.00	26.55	L N
ATOM	1002	CA	SER	L	131	-17.320	25.336	105.998	1.00	23.33	L C
ATOM	1003	C	SER	L	131	-16.890	26.778	105.924	1.00	23.98	L C
ATOM	1004	O	SER	L	131	-17.229	27.504	104.948	1.00	27.26	L O
ATOM	1005	CB	SER	L	131	-16.504	24.489	105.005	1.00	18.37	L C
ATOM	1006	OG	SER	L	131	-16.912	23.139	105.001	1.00	24.81	L O
ATOM	1007	N	VAL	L	132	-16.156	27.213	106.955	1.00	20.02	L N
ATOM	1008	CA	VAL	L	132	-15.639	28.556	107.035	1.00	22.56	L C
ATOM	1009	C	VAL	L	132	-14.114	28.368	106.824	1.00	19.29	L C
ATOM	1010	O	VAL	L	132	-13.500	27.522	107.500	1.00	17.72	L O
ATOM	1011	CB	VAL	L	132	-15.862	29.175	108.417	1.00	23.70	L C
ATOM	1012	CG1	VAL	L	132	-15.461	30.666	108.372	1.00	19.40	L C
ATOM	1013	CG2	VAL	L	132	-17.369	29.077	108.816	1.00	21.15	L C
ATOM	1014	N	VAL	L	133	-13.531	29.141	105.914	1.00	18.23	L N
ATOM	1015	CA	VAL	L	133	-12.110	28.959	105.581	1.00	16.84	L C
ATOM	1016	C	VAL	L	133	-11.267	30.201	105.870	1.00	16.55	L C
ATOM	1017	O	VAL	L	133	-11.670	31.324	105.686	1.00	13.84	L O
ATOM	1018	CB	VAL	L	133	-11.935	28.585	104.057	1.00	16.50	L C
ATOM	1019	CG1	VAL	L	133	-10.401	28.419	103.741	1.00	12.48	L C
ATOM	1020	CG2	VAL	L	133	-12.729	27.202	103.710	1.00	11.93	L C
ATOM	1021	N	CYS	L	134	-10.052	29.967	106.318	1.00	16.38	L N
ATOM	1022	CA	CYS	L	134	-9.164	31.037	106.605	1.00	17.53	L C
ATOM	1023	C	CYS	L	134	-7.833	30.655	105.938	1.00	16.58	L C
ATOM	1024	O	CYS	L	134	-7.335	29.561	106.204	1.00	14.98	L O
ATOM	1025	CB	CYS	L	134	-8.948	31.072	108.108	1.00	16.98	L C
ATOM	1026	SG	CYS	L	134	-7.928	32.442	108.627	1.00	39.38	L S
ATOM	1027	N	PHE	L	135	-7.314	31.512	105.063	1.00	15.50	L N
ATOM	1028	CA	PHE	L	135	-5.972	31.311	104.479	1.00	15.01	L C
ATOM	1029	C	PHE	L	135	-5.009	32.262	105.236	1.00	17.04	L C
ATOM	1030	O	PHE	L	135	-5.343	33.413	105.482	1.00	18.37	L O
ATOM	1031	CB	PHE	L	135	-5.953	31.730	102.997	1.00	15.31	L C

ATOM	1032	CG	PHE	L	135	-6.719	30.784	102.083	1.00	12.44	L C
ATOM	1033	CD1	PHE	L	135	-6.530	29.429	102.170	1.00	12.71	L C
ATOM	1034	CD2	PHE	L	135	-7.604	31.263	101.147	1.00	14.37	L C
ATOM	1035	CE1	PHE	L	135	-7.221	28.534	101.341	1.00	16.73	L C
ATOM	1036	CE2	PHE	L	135	-8.312	30.383	100.294	1.00	19.45	L C
ATOM	1037	CZ	PHE	L	135	-8.121	29.008	100.399	1.00	21.66	L C
ATOM	1038	N	LEU	L	136	-3.795	31.794	105.502	1.00	18.77	L N
ATOM	1039	CA	LEU	L	136	-2.784	32.558	106.211	1.00	17.29	L C
ATOM	1040	C	LEU	L	136	-1.633	32.347	105.252	1.00	18.03	L C
ATOM	1041	O	LEU	L	136	-1.013	31.271	105.214	1.00	20.82	L O
ATOM	1042	CB	LEU	L	136	-2.528	31.937	107.580	1.00	15.90	L C
ATOM	1043	CG	LEU	L	136	-3.800	31.929	108.451	1.00	17.81	L C
ATOM	1044	CD1	LEU	L	136	-4.513	30.583	108.271	1.00	28.80	L C
ATOM	1045	CD2	LEU	L	136	-3.447	32.085	109.904	1.00	11.22	L C
ATOM	1046	N	ASN	L	137	-1.385	33.363	104.444	1.00	15.37	L N
ATOM	1047	CA	ASN	L	137	-0.421	33.204	103.397	1.00	15.78	L C
ATOM	1048	C	ASN	L	137	0.894	33.961	103.467	1.00	20.96	L C
ATOM	1049	O	ASN	L	137	0.972	35.032	104.011	1.00	24.05	L O
ATOM	1050	CB	ASN	L	137	-1.084	33.523	102.061	1.00	14.26	L C
ATOM	1051	CG	ASN	L	137	-2.092	32.423	101.574	1.00	15.09	L C
ATOM	1052	OD1	ASN	L	137	-2.866	32.668	100.681	1.00	27.52	L O
ATOM	1053	ND2	ASN	L	137	-2.097	31.263	102.196	1.00	22.74	L N
ATOM	1054	N	ASN	L	138	1.932	33.348	102.874	1.00	22.98	L N
ATOM	1055	CA	ASN	L	138	3.265	33.911	102.768	1.00	19.90	L C
ATOM	1056	C	ASN	L	138	3.928	34.495	104.025	1.00	21.41	L C
ATOM	1057	O	ASN	L	138	4.332	35.646	104.061	1.00	20.42	L O
ATOM	1058	CB	ASN	L	138	3.237	34.913	101.603	1.00	17.25	L C
ATOM	1059	CG	ASN	L	138	2.971	34.225	100.280	1.00	21.54	L C
ATOM	1060	OD1	ASN	L	138	1.863	33.812	100.006	1.00	29.62	L O
ATOM	1061	ND2	ASN	L	138	4.008	34.077	99.461	1.00	31.95	L N
ATOM	1062	N	PHE	L	139	4.073	33.665	105.062	1.00	20.62	L N
ATOM	1063	CA	PHE	L	139	4.691	34.064	106.294	1.00	18.04	L C
ATOM	1064	C	PHE	L	139	6.009	33.355	106.496	1.00	18.28	L C
ATOM	1065	O	PHE	L	139	6.316	32.417	105.788	1.00	20.30	L O
ATOM	1066	CB	PHE	L	139	3.727	33.800	107.512	1.00	18.19	L C
ATOM	1067	CG	PHE	L	139	3.218	32.377	107.633	1.00	20.48	L C
ATOM	1068	CD1	PHE	L	139	3.931	31.434	108.325	1.00	17.93	L C
ATOM	1069	CD2	PHE	L	139	2.004	32.004	107.061	1.00	17.24	L C
ATOM	1070	CE1	PHE	L	139	3.490	30.139	108.459	1.00	11.11	L C
ATOM	1071	CE2	PHE	L	139	1.530	30.697	107.197	1.00	16.66	L C
ATOM	1072	CZ	PHE	L	139	2.278	29.753	107.894	1.00	18.89	L C
ATOM	1073	N	TYR	L	140	6.803	33.847	107.430	1.00	21.00	L N
ATOM	1074	CA	TYR	L	140	8.085	33.240	107.797	1.00	20.95	L C
ATOM	1075	C	TYR	L	140	8.437	33.747	109.186	1.00	22.51	L C
ATOM	1076	O	TYR	L	140	8.305	34.940	109.476	1.00	21.26	L O
ATOM	1077	CB	TYR	L	140	9.215	33.612	106.810	1.00	20.12	L C
ATOM	1078	CG	TYR	L	140	10.461	32.818	107.134	1.00	21.24	L C
ATOM	1079	CD1	TYR	L	140	11.314	33.233	108.144	1.00	11.93	L C
ATOM	1080	CD2	TYR	L	140	10.719	31.607	106.502	1.00	19.61	L C
ATOM	1081	CE1	TYR	L	140	12.376	32.481	108.535	1.00	12.05	L C
ATOM	1082	CE2	TYR	L	140	11.797	30.823	106.901	1.00	11.86	L C
ATOM	1083	CZ	TYR	L	140	12.615	31.290	107.930	1.00	16.01	L C
ATOM	1084	OH	TYR	L	140	13.684	30.527	108.384	1.00	20.60	L O
ATOM	1085	N	PRO	L	141	8.867	32.855	110.084	1.00	22.91	L N
ATOM	1086	CA	PRO	L	141	9.072	31.399	109.974	1.00	23.17	L C
ATOM	1087	C	PRO	L	141	7.800	30.595	109.882	1.00	22.64	L C
ATOM	1088	O	PRO	L	141	6.705	31.153	109.928	1.00	22.66	L O
ATOM	1089	CB	PRO	L	141	9.887	31.054	111.227	1.00	22.87	L C
ATOM	1090	CG	PRO	L	141	9.422	32.054	112.197	1.00	25.55	L C
ATOM	1091	CD	PRO	L	141	9.306	33.344	111.403	1.00	21.81	L C
ATOM	1092	N	LYS	L	142	7.957	29.281	109.762	1.00	22.22	L N
ATOM	1093	CA	LYS	L	142	6.803	28.390	109.525	1.00	22.07	L C
ATOM	1094	C	LYS	L	142	5.852	28.206	110.707	1.00	20.25	L C
ATOM	1095	O	LYS	L	142	4.730	27.743	110.528	1.00	19.43	L O
ATOM	1096	CB	LYS	L	142	7.291	27.011	109.176	1.00	24.45	L C
ATOM	1097	CG	LYS	L	142	7.871	26.341	110.401	1.00	30.59	L C
ATOM	1098	CD	LYS	L	142	8.364	24.905	110.124	1.00	38.68	L C
ATOM	1099	CE	LYS	L	142	9.132	24.425	111.369	1.00	47.96	L C
ATOM	1100	NZ	LYS	L	142	9.840	23.118	111.175	1.00	68.01	L N

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ATOM   1101  N   ASP L 143       6.286  28.540 111.908  1.00 22.51      L    N
ATOM   1102  CA  ASP L 143       5.391  28.282 113.048  1.00 20.75      L    C
ATOM   1103  C   ASP L 143       4.215  29.252 113.125  1.00 23.08      L    C
ATOM   1104  O   ASP L 143       4.351  30.472 113.035  1.00 24.43      L    O
ATOM   1105  CB  ASP L 143       6.192  28.301 114.353  1.00 19.86      L    C
ATOM   1106  CG  ASP L 143       7.574  27.689 114.178  1.00 27.47      L    C
ATOM   1107  OD1 ASP L 143       8.549  28.452 113.962  1.00 27.50      L    O
ATOM   1108  OD2 ASP L 143       7.660  26.448 114.240  1.00 35.11      L    O
ATOM   1109  N   ILE L 144       3.018  28.699 113.301  1.00 22.13      L    N
ATOM   1110  CA  ILE L 144       1.855  29.567 113.387  1.00 21.65      L    C
ATOM   1111  C   ILE L 144       0.733  28.773 114.084  1.00 22.39      L    C
ATOM   1112  O   ILE L 144       0.724  27.530 114.087  1.00 25.88      L    O
ATOM   1113  CB  ILE L 144       1.448  29.993 111.951  1.00 23.73      L    C
ATOM   1114  CG1 ILE L 144       0.456  31.143 111.976  1.00 20.91      L    C
ATOM   1115  CG2 ILE L 144       0.978  28.814 111.199  1.00 21.02      L    C
ATOM   1116  CD1 ILE L 144       0.324  31.861 110.617  1.00 23.82      L    C
ATOM   1117  N   ASN L 145      -0.164  29.493 114.744  1.00 23.50      L    N
ATOM   1118  CA  ASN L 145      -1.252  28.793 115.442  1.00 29.06      L    C
ATOM   1119  C   ASN L 145      -2.531  29.541 115.032  1.00 28.27      L    C
ATOM   1120  O   ASN L 145      -2.530  30.760 114.907  1.00 29.90      L    O
ATOM   1121  CB  ASN L 145      -1.031  28.854 116.956  1.00 31.88      L    C
ATOM   1122  CG  ASN L 145      -1.901  27.857 117.722  1.00 50.47      L    C
ATOM   1123  OD1 ASN L 145      -2.445  28.192 118.780  1.00 64.13      L    O
ATOM   1124  ND2 ASN L 145      -2.029  26.627 117.201  1.00 46.82      L    N
ATOM   1125  N   VAL L 146      -3.595  28.796 114.797  1.00 26.85      L    N
ATOM   1126  CA  VAL L 146      -4.855  29.391 114.379  1.00 24.01      L    C
ATOM   1127  C   VAL L 146      -5.892  28.978 115.396  1.00 21.85      L    C
ATOM   1128  O   VAL L 146      -5.903  27.838 115.829  1.00 25.28      L    O
ATOM   1129  CB  VAL L 146      -5.275  28.862 112.986  1.00 22.10      L    C
ATOM   1130  CG1 VAL L 146      -6.686  29.332 112.602  1.00 20.92      L    C
ATOM   1131  CG2 VAL L 146      -4.293  29.454 111.948  1.00 29.40      L    C
ATOM   1132  N   LYS L 147      -6.713  29.932 115.788  1.00 20.98      L    N
ATOM   1133  CA  LYS L 147      -7.780  29.647 116.732  1.00 23.41      L    C
ATOM   1134  C   LYS L 147      -9.099  30.151 116.083  1.00 20.29      L    C
ATOM   1135  O   LYS L 147      -9.153  31.253 115.542  1.00 17.79      L    O
ATOM   1136  CB  LYS L 147      -7.504  30.402 118.034  1.00 19.81      L    C
ATOM   1137  CG  LYS L 147      -8.480  30.104 119.109  1.00 34.97      L    C
ATOM   1138  CD  LYS L 147      -8.242  31.037 120.294  1.00 50.25      L    C
ATOM   1139  CE  LYS L 147      -6.825  30.891 120.876  1.00 56.37      L    C
ATOM   1140  NZ  LYS L 147      -6.704  31.817 122.085  1.00 59.80      L    N
ATOM   1141  N   TRP L 148     -10.139  29.328 116.116  1.00 20.17      L    N
ATOM   1142  CA  TRP L 148     -11.445  29.785 115.629  1.00 18.95      L    C
ATOM   1143  C   TRP L 148     -12.362  30.181 116.806  1.00 21.21      L    C
ATOM   1144  O   TRP L 148     -12.325  29.559 117.838  1.00 20.59      L    O
ATOM   1145  CB  TRP L 148     -12.122  28.657 114.890  1.00 15.88      L    C
ATOM   1146  CG  TRP L 148     -11.490  28.422 113.546  1.00 21.74      L    C
ATOM   1147  CD1 TRP L 148     -10.513  27.487 113.208  1.00 16.65      L    C
ATOM   1148  CD2 TRP L 148     -11.855  29.085 112.337  1.00 22.15      L    C
ATOM   1149  NE1 TRP L 148     -10.281  27.540 111.832  1.00 22.24      L    N
ATOM   1150  CE2 TRP L 148     -11.087  28.513 111.284  1.00 21.65      L    C
ATOM   1151  CE3 TRP L 148     -12.756  30.111 112.040  1.00 14.25      L    C
ATOM   1152  CZ2 TRP L 148     -11.205  28.943 109.950  1.00 24.13      L    C
ATOM   1153  CZ3 TRP L 148     -12.884  30.542 110.716  1.00 20.29      L    C
ATOM   1154  CH2 TRP L 148     -12.106  29.955 109.676  1.00 19.03      L    C
ATOM   1155  N   LYS L 149     -13.174  31.215 116.623  1.00 22.89      L    N
ATOM   1156  CA  LYS L 149     -14.124  31.636 117.655  1.00 21.94      L    C
ATOM   1157  C   LYS L 149     -15.427  31.917 116.932  1.00 22.02      L    C
ATOM   1158  O   LYS L 149     -15.431  32.431 115.803  1.00 25.88      L    O
ATOM   1159  CB  LYS L 149     -13.675  32.909 118.375  1.00 22.50      L    C
ATOM   1160  CG  LYS L 149     -12.456  32.712 119.265  1.00 29.41      L    C
ATOM   1161  CD  LYS L 149     -11.972  34.038 119.890  1.00 36.17      L    C
ATOM   1162  CE  LYS L 149     -10.853  33.759 120.883  1.00 47.79      L    C
ATOM   1163  NZ  LYS L 149     -10.191  35.022 121.349  1.00 58.02      L    N
ATOM   1164  N   ILE L 150     -16.534  31.563 117.575  1.00 21.85      L    N
ATOM   1165  CA  ILE L 150     -17.842  31.808 116.995  1.00 19.42      L    C
ATOM   1166  C   ILE L 150     -18.603  32.519 118.121  1.00 20.57      L    C
ATOM   1167  O   ILE L 150     -18.735  31.982 119.232  1.00 22.05      L    O
ATOM   1168  CB  ILE L 150     -18.527  30.516 116.639  1.00 17.66      L    C
ATOM   1169  CG1 ILE L 150     -17.835  29.868 115.414  1.00 15.39      L    C
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ATOM	1170	CG2	ILE	L	150	-20.013	30.809	116.281	1.00	15.45	L	C
ATOM	1171	CD1	ILE	L	150	-18.484	28.535	114.955	1.00	5.50	L	C
ATOM	1172	N	ASP	L	151	-19.030	33.734	117.831	1.00	20.49	L	N
ATOM	1173	CA	ASP	L	151	-19.715	34.559	118.815	1.00	20.94	L	C
ATOM	1174	C	ASP	L	151	-18.815	34.701	120.052	1.00	24.12	L	C
ATOM	1175	O	ASP	L	151	-19.304	34.789	121.189	1.00	24.25	L	O
ATOM	1176	CB	ASP	L	151	-21.059	33.894	119.175	1.00	19.59	L	C
ATOM	1177	CG	ASP	L	151	-22.132	34.129	118.102	1.00	25.62	L	C
ATOM	1178	OD1	ASP	L	151	-21.968	35.055	117.272	1.00	27.32	L	O
ATOM	1179	OD2	ASP	L	151	-23.152	33.416	118.110	1.00	31.24	L	O
ATOM	1180	N	GLY	L	152	-17.493	34.685	119.850	1.00	19.02	L	N
ATOM	1181	CA	GLY	L	152	-16.617	34.845	120.990	1.00	23.51	L	C
ATOM	1182	C	GLY	L	152	-16.141	33.602	121.724	1.00	28.41	L	C
ATOM	1183	O	GLY	L	152	-15.242	33.688	122.577	1.00	32.84	L	O
ATOM	1184	N	SER	L	153	-16.732	32.458	121.438	1.00	28.85	L	N
ATOM	1185	CA	SER	L	153	-16.307	31.209	122.065	1.00	29.03	L	C
ATOM	1186	C	SER	L	153	-15.417	30.391	121.122	1.00	28.97	L	C
ATOM	1187	O	SER	L	153	-15.757	30.161	119.960	1.00	26.39	L	O
ATOM	1188	CB	SER	L	153	-17.505	30.360	122.471	1.00	25.23	L	C
ATOM	1189	OG	SER	L	153	-18.196	31.006	123.519	1.00	30.72	L	O
ATOM	1190	N	GLU	L	154	-14.283	29.942	121.643	1.00	28.12	L	N
ATOM	1191	CA	GLU	L	154	-13.380	29.141	120.842	1.00	31.33	L	C
ATOM	1192	C	GLU	L	154	-14.031	27.826	120.432	1.00	31.48	L	C
ATOM	1193	O	GLU	L	154	-14.753	27.175	121.200	1.00	35.29	L	O
ATOM	1194	CB	GLU	L	154	-12.091	28.879	121.635	1.00	32.78	L	C
ATOM	1195	CG	GLU	L	154	-11.053	28.084	120.877	1.00	40.84	L	C
ATOM	1196	CD	GLU	L	154	-9.769	27.927	121.683	1.00	43.42	L	C
ATOM	1197	OE1	GLU	L	154	-9.576	28.679	122.656	1.00	47.11	L	O
ATOM	1198	OE2	GLU	L	154	-8.966	27.061	121.335	1.00	52.41	L	O
ATOM	1199	N	ARG	L	155	-13.793	27.435	119.196	1.00	28.45	L	N
ATOM	1200	CA	ARG	L	155	-14.309	26.189	118.675	1.00	30.91	L	C
ATOM	1201	C	ARG	L	155	-13.115	25.406	118.252	1.00	32.16	L	C
ATOM	1202	O	ARG	L	155	-12.374	25.876	117.405	1.00	32.66	L	O
ATOM	1203	CB	ARG	L	155	-15.183	26.419	117.448	1.00	28.52	L	C
ATOM	1204	CG	ARG	L	155	-16.380	27.231	117.799	1.00	37.92	L	C
ATOM	1205	CD	ARG	L	155	-17.336	26.438	118.698	1.00	31.38	L	C
ATOM	1206	NE	ARG	L	155	-18.612	27.118	118.747	1.00	33.65	L	N
ATOM	1207	CZ	ARG	L	155	-19.691	26.762	118.062	1.00	17.41	L	C
ATOM	1208	NH1	ARG	L	155	-19.685	25.711	117.260	1.00	27.68	L	N
ATOM	1209	NH2	ARG	L	155	-20.780	27.482	118.185	1.00	25.10	L	N
ATOM	1210	N	GLN	L	156	-12.935	24.221	118.829	1.00	34.52	L	N
ATOM	1211	CA	GLN	L	156	-11.788	23.395	118.478	1.00	35.80	L	C
ATOM	1212	C	GLN	L	156	-12.127	22.210	117.605	1.00	36.43	L	C
ATOM	1213	O	GLN	L	156	-11.293	21.749	116.805	1.00	39.56	L	O
ATOM	1214	CB	GLN	L	156	-11.078	22.906	119.743	1.00	33.20	L	C
ATOM	1215	CG	GLN	L	156	-10.673	24.010	120.664	1.00	47.03	L	C
ATOM	1216	CD	GLN	L	156	-9.873	23.502	121.845	1.00	57.66	L	C
ATOM	1217	OE1	GLN	L	156	-10.360	22.685	122.634	1.00	72.71	L	O
ATOM	1218	NE2	GLN	L	156	-8.643	23.981	121.977	1.00	63.16	L	N
ATOM	1219	N	ASN	L	157	-13.341	21.698	117.723	1.00	38.17	L	N
ATOM	1220	CA	ASN	L	157	-13.708	20.539	116.913	1.00	38.15	L	C
ATOM	1221	C	ASN	L	157	-14.121	20.890	115.474	1.00	35.01	L	C
ATOM	1222	O	ASN	L	157	-14.616	21.993	115.235	1.00	34.08	L	O
ATOM	1223	CB	ASN	L	157	-14.866	19.812	117.563	1.00	43.26	L	C
ATOM	1224	CG	ASN	L	157	-14.457	19.007	118.785	1.00	57.31	L	C
ATOM	1225	OD1	ASN	L	157	-15.297	18.309	119.355	1.00	74.40	L	O
ATOM	1226	ND2	ASN	L	157	-13.175	19.089	119.191	1.00	54.46	L	N
ATOM	1227	N	GLY	L	158	-13.987	19.922	114.559	1.00	32.01	L	N
ATOM	1228	CA	GLY	L	158	-14.353	20.118	113.154	1.00	26.62	L	C
ATOM	1229	C	GLY	L	158	-13.389	21.035	112.359	1.00	26.13	L	C
ATOM	1230	O	GLY	L	158	-13.795	21.668	111.391	1.00	26.96	L	O
ATOM	1231	N	VAL	L	159	-12.136	21.114	112.781	1.00	22.23	L	N
ATOM	1232	CA	VAL	L	159	-11.148	21.959	112.106	1.00	23.71	L	C
ATOM	1233	C	VAL	L	159	-10.165	21.101	111.316	1.00	25.37	L	C
ATOM	1234	O	VAL	L	159	-9.706	20.080	111.799	1.00	34.95	L	O
ATOM	1235	CB	VAL	L	159	-10.376	22.820	113.140	1.00	19.67	L	C
ATOM	1236	CG1	VAL	L	159	-9.279	23.655	112.436	1.00	26.30	L	C
ATOM	1237	CG2	VAL	L	159	-11.327	23.737	113.878	1.00	16.36	L	C
ATOM	1238	N	LEU	L	160	-9.892	21.467	110.073	1.00	29.08	L	N

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ATOM   1239  CA  LEU L 160      -8.948  20.728 109.219  1.00 29.44      L    C
ATOM   1240  C   LEU L 160      -7.885  21.763 108.832  1.00 24.79      L    C
ATOM   1241  O   LEU L 160      -8.238  22.824 108.320  1.00 25.27      L    O
ATOM   1242  CB  LEU L 160      -9.658  20.233 107.946  1.00 29.93      L    C
ATOM   1243  CG  LEU L 160      -8.866  19.400 106.916  1.00 41.02      L    C
ATOM   1244  CD1 LEU L 160      -9.801  18.461 106.149  1.00 38.99      L    C
ATOM   1245  CD2 LEU L 160      -8.126  20.321 105.949  1.00 53.32      L    C
ATOM   1246  N   ASN L 161      -6.625  21.455 109.089  1.00 21.11      L    N
ATOM   1247  CA  ASN L 161      -5.543  22.387 108.800  1.00 19.49      L    C
ATOM   1248  C   ASN L 161      -4.602  21.752 107.801  1.00 18.69      L    C
ATOM   1249  O   ASN L 161      -4.409  20.538 107.838  1.00 21.55      L    O
ATOM   1250  CB  ASN L 161      -4.759  22.717 110.086  1.00 19.31      L    C
ATOM   1251  CG  ASN L 161      -5.511  23.651 111.029  1.00 12.67      L    C
ATOM   1252  OD1 ASN L 161      -6.298  24.476 110.607  1.00 21.51      L    O
ATOM   1253  ND2 ASN L 161      -5.232  23.539 112.311  1.00 27.96      L    N
ATOM   1254  N   SER L 162      -4.045  22.557 106.886  1.00 17.66      L    N
ATOM   1255  CA  SER L 162      -3.099  22.029 105.898  1.00 20.32      L    C
ATOM   1256  C   SER L 162      -2.031  23.129 105.737  1.00 20.31      L    C
ATOM   1257  O   SER L 162      -2.347  24.344 105.761  1.00 20.48      L    O
ATOM   1258  CB  SER L 162      -3.766  21.771 104.569  1.00 19.36      L    C
ATOM   1259  OG  SER L 162      -2.842  21.096 103.721  1.00 30.64      L    O
ATOM   1260  N   TRP L 163      -0.776  22.711 105.539  1.00 22.96      L    N
ATOM   1261  CA  TRP L 163       0.320  23.662 105.444  1.00 17.20      L    C
ATOM   1262  C   TRP L 163       1.127  23.380 104.181  1.00 16.75      L    C
ATOM   1263  O   TRP L 163       1.325  22.217 103.821  1.00 20.55      L    O
ATOM   1264  CB  TRP L 163       1.231  23.485 106.662  1.00 13.33      L    C
ATOM   1265  CG  TRP L 163       0.544  23.657 108.029  1.00 22.80      L    C
ATOM   1266  CD1 TRP L 163       0.495  24.786 108.763  1.00 19.32      L    C
ATOM   1267  CD2 TRP L 163      -0.167  22.651 108.791  1.00 26.71      L    C
ATOM   1268  NE1 TRP L 163      -0.199  24.560 109.945  1.00 30.77      L    N
ATOM   1269  CE2 TRP L 163      -0.614  23.259 109.977  1.00 26.86      L    C
ATOM   1270  CE3 TRP L 163      -0.463  21.302 108.575  1.00 32.13      L    C
ATOM   1271  CZ2 TRP L 163      -1.350  22.569 110.961  1.00 26.97      L    C
ATOM   1272  CZ3 TRP L 163      -1.199  20.595 109.565  1.00 31.68      L    C
ATOM   1273  CH2 TRP L 163      -1.629  21.243 110.738  1.00 37.55      L    C
ATOM   1274  N   THR L 164       1.600  24.416 103.506  1.00 19.49      L    N
ATOM   1275  CA  THR L 164       2.412  24.192 102.285  1.00 18.40      L    C
ATOM   1276  C   THR L 164       3.871  24.018 102.682  1.00 19.81      L    C
ATOM   1277  O   THR L 164       4.263  24.324 103.801  1.00 18.48      L    O
ATOM   1278  CB  THR L 164       2.367  25.378 101.286  1.00 16.10      L    C
ATOM   1279  OG1 THR L 164       2.767  26.598 101.961  1.00 22.69      L    O
ATOM   1280  CG2 THR L 164       0.978  25.562 100.694  1.00 20.82      L    C
ATOM   1281  N   ASP L 165       4.664  23.505 101.739  1.00 22.96      L    N
ATOM   1282  CA  ASP L 165       6.095  23.397 101.939  1.00 23.19      L    C
ATOM   1283  C   ASP L 165       6.590  24.820 101.584  1.00 18.88      L    C
ATOM   1284  O   ASP L 165       5.850  25.633 101.007  1.00 18.60      L    O
ATOM   1285  CB  ASP L 165       6.699  22.432 100.915  1.00 30.01      L    C
ATOM   1286  CG  ASP L 165       6.309  20.986 101.155  1.00 40.64      L    C
ATOM   1287  OD1 ASP L 165       5.882  20.384 100.158  1.00 52.97      L    O
ATOM   1288  OD2 ASP L 165       6.452  20.460 102.298  1.00 38.53      L    O
ATOM   1289  N   GLN L 166       7.848  25.089 101.885  1.00 13.81      L    N
ATOM   1290  CA  GLN L 166       8.415  26.424 101.625  1.00 12.21      L    C
ATOM   1291  C   GLN L 166       8.333  26.806 100.156  1.00 12.81      L    C
ATOM   1292  O   GLN L 166       8.604  26.014  99.290  1.00 16.65      L    O
ATOM   1293  CB  GLN L 166       9.845  26.458 102.164  1.00 12.35      L    C
ATOM   1294  CG  GLN L 166      10.442  27.875 102.139  1.00 12.75      L    C
ATOM   1295  CD  GLN L 166      11.704  27.936 102.959  1.00 16.64      L    C
ATOM   1296  OE1 GLN L 166      12.504  26.974 102.995  1.00 22.95      L    O
ATOM   1297  NE2 GLN L 166      11.900  29.050 103.628  1.00 15.16      L    N
ATOM   1298  N   ASP L 167       7.920  28.036  99.874  1.00 15.54      L    N
ATOM   1299  CA  ASP L 167       7.768  28.520  98.523  1.00 17.06      L    C
ATOM   1300  C   ASP L 167       9.168  28.649  97.864  1.00 17.69      L    C
ATOM   1301  O   ASP L 167      10.151  29.093  98.482  1.00 17.79      L    O
ATOM   1302  CB  ASP L 167       7.095  29.908  98.508  1.00 13.53      L    C
ATOM   1303  CG  ASP L 167       6.785  30.356  97.119  1.00 22.46      L    C
ATOM   1304  OD1 ASP L 167       5.750  29.917  96.602  1.00 24.43      L    O
ATOM   1305  OD2 ASP L 167       7.597  31.127  96.514  1.00 25.80      L    O
ATOM   1306  N   SER L 168       9.191  28.257  96.607  1.00 21.93      L    N
ATOM   1307  CA  SER L 168      10.385  28.290  95.761  1.00 24.57      L    C
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ATOM   1308  C   SER L 168      10.858  29.659  95.322  1.00 23.47      L    C
ATOM   1309  O   SER L 168      11.999  29.782  94.879  1.00 25.30      L    O
ATOM   1310  CB  SER L 168      10.133  27.465  94.480  1.00 17.84      L    C
ATOM   1311  OG  SER L 168      10.011  26.117  94.892  1.00 38.05      L    O
ATOM   1312  N   LYS L 169      10.005  30.657  95.398  1.00 20.49      L    N
ATOM   1313  CA  LYS L 169      10.397  31.989  94.958  1.00 19.32      L    C
ATOM   1314  C   LYS L 169      10.616  32.922  96.114  1.00 20.10      L    C
ATOM   1315  O   LYS L 169      11.610  33.623  96.145  1.00 19.99      L    O
ATOM   1316  CB  LYS L 169       9.319  32.574  94.021  1.00 21.29      L    C
ATOM   1317  CG  LYS L 169       9.239  31.821  92.667  1.00 30.17      L    C
ATOM   1318  CD  LYS L 169       8.116  32.333  91.773  1.00 44.01      L    C
ATOM   1319  CE  LYS L 169       8.244  31.763  90.356  1.00 57.38      L    C
ATOM   1320  NZ  LYS L 169       7.258  32.403  89.414  1.00 70.77      L    N
ATOM   1321  N   ASP L 170       9.699  32.972  97.083  1.00 23.16      L    N
ATOM   1322  CA  ASP L 170       9.915  33.914  98.176  1.00 20.43      L    C
ATOM   1323  C   ASP L 170      10.240  33.309  99.528  1.00 22.49      L    C
ATOM   1324  O   ASP L 170      10.345  34.018 100.535  1.00 24.06      L    O
ATOM   1325  CB  ASP L 170       8.719  34.874  98.269  1.00 23.52      L    C
ATOM   1326  CG  ASP L 170       7.420  34.180  98.769  1.00 28.59      L    C
ATOM   1327  OD1 ASP L 170       7.457  33.006  99.213  1.00 28.25      L    O
ATOM   1328  OD2 ASP L 170       6.362  34.859  98.753  1.00 32.02      L    O
ATOM   1329  N   SER L 171      10.437  31.980  99.555  1.00 22.30      L    N
ATOM   1330  CA  SER L 171      10.854  31.272 100.771  1.00 19.54      L    C
ATOM   1331  C   SER L 171       9.905  31.416 101.967  1.00 18.91      L    C
ATOM   1332  O   SER L 171      10.332  31.277 103.131  1.00 20.84      L    O
ATOM   1333  CB  SER L 171      12.260  31.715 101.193  1.00 16.86      L    C
ATOM   1334  OG  SER L 171      13.092  31.639 100.049  1.00 22.64      L    O
ATOM   1335  N   THR L 172       8.629  31.627 101.661  1.00 17.19      L    N
ATOM   1336  CA  THR L 172       7.634  31.745 102.747  1.00 17.27      L    C
ATOM   1337  C   THR L 172       6.824  30.428 102.837  1.00 15.12      L    C
ATOM   1338  O   THR L 172       6.950  29.534 101.988  1.00 13.25      L    O
ATOM   1339  CB  THR L 172       6.619  32.896 102.488  1.00 15.96      L    C
ATOM   1340  OG1 THR L 172       5.904  32.660 101.251  1.00 24.29      L    O
ATOM   1341  CG2 THR L 172       7.382  34.278 102.381  1.00 10.43      L    C
ATOM   1342  N   TYR L 173       5.959  30.374 103.849  1.00 14.89      L    N
ATOM   1343  CA  TYR L 173       5.091  29.260 104.100  1.00 13.98      L    C
ATOM   1344  C   TYR L 173       3.666  29.799 104.107  1.00 15.99      L    C
ATOM   1345  O   TYR L 173       3.442  31.018 104.327  1.00 11.83      L    O
ATOM   1346  CB  TYR L 173       5.366  28.683 105.488  1.00 12.06      L    C
ATOM   1347  CG  TYR L 173       6.732  28.076 105.588  1.00 19.95      L    C
ATOM   1348  CD1 TYR L 173       7.827  28.832 106.026  1.00 18.44      L    C
ATOM   1349  CD2 TYR L 173       6.937  26.749 105.215  1.00 12.63      L    C
ATOM   1350  CE1 TYR L 173       9.092  28.269 106.067  1.00 28.53      L    C
ATOM   1351  CE2 TYR L 173       8.216  26.174 105.287  1.00 20.24      L    C
ATOM   1352  CZ  TYR L 173       9.276  26.951 105.713  1.00 20.82      L    C
ATOM   1353  OH  TYR L 173      10.530  26.361 105.841  1.00 31.88      L    O
ATOM   1354  N   SER L 174       2.706  28.892 103.891  1.00 17.08      L    N
ATOM   1355  CA  SER L 174       1.281  29.276 103.906  1.00 14.79      L    C
ATOM   1356  C   SER L 174       0.465  28.199 104.605  1.00 15.22      L    C
ATOM   1357  O   SER L 174       0.924  27.065 104.737  1.00 18.05      L    O
ATOM   1358  CB  SER L 174       0.770  29.443 102.491  1.00 16.51      L    C
ATOM   1359  OG  SER L 174       1.300  30.632 101.906  1.00 16.19      L    O
ATOM   1360  N   MET L 175      -0.753  28.535 105.046  1.00 16.19      L    N
ATOM   1361  CA  MET L 175      -1.562  27.533 105.762  1.00 13.01      L    C
ATOM   1362  C   MET L 175      -3.020  27.781 105.431  1.00 14.56      L    C
ATOM   1363  O   MET L 175      -3.417  28.949 105.198  1.00 17.50      L    O
ATOM   1364  CB  MET L 175      -1.381  27.711 107.296  1.00 13.61      L    C
ATOM   1365  CG  MET L 175      -2.422  26.930 108.210  1.00 11.50      L    C
ATOM   1366  SD  MET L 175      -2.089  27.301 109.942  1.00 19.84      L    S
ATOM   1367  CE  MET L 175      -3.279  26.117 110.822  1.00 19.37      L    C
ATOM   1368  N   SER L 176      -3.803  26.699 105.418  1.00 12.14      L    N
ATOM   1369  CA  SER L 176      -5.268  26.830 105.196  1.00 12.43      L    C
ATOM   1370  C   SER L 176      -5.934  26.202 106.436  1.00 14.52      L    C
ATOM   1371  O   SER L 176      -5.486  25.146 106.909  1.00 13.64      L    O
ATOM   1372  CB  SER L 176      -5.673  26.020 103.982  1.00 11.93      L    C
ATOM   1373  OG  SER L 176      -7.084  25.984 103.817  1.00 16.86      L    O
ATOM   1374  N   SER L 177      -6.986  26.818 106.972  1.00 14.35      L    N
ATOM   1375  CA  SER L 177      -7.641  26.170 108.128  1.00 14.38      L    C
ATOM   1376  C   SER L 177      -9.113  26.219 107.753  1.00 16.20      L    C
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ATOM	1377	O	SER	L	177	-9.583	27.279	107.371	1.00	19.72	L O
ATOM	1378	CB	SER	L	177	-7.412	26.992	109.379	1.00	10.63	L C
ATOM	1379	OG	SER	L	177	-7.994	26.377	110.518	1.00	18.28	L O
ATOM	1380	N	THR	L	178	-9.823	25.089	107.862	1.00	18.72	L N
ATOM	1381	CA	THR	L	178	-11.227	25.063	107.512	1.00	19.80	L C
ATOM	1382	C	THR	L	178	-12.029	24.577	108.721	1.00	19.45	L C
ATOM	1383	O	THR	L	178	-11.728	23.487	109.262	1.00	19.44	L O
ATOM	1384	CB	THR	L	178	-11.483	24.064	106.371	1.00	17.81	L C
ATOM	1385	OG1	THR	L	178	-10.737	24.443	105.195	1.00	20.86	L O
ATOM	1386	CG2	THR	L	178	-12.952	24.049	106.014	1.00	20.63	L C
ATOM	1387	N	LEU	L	179	-13.001	25.380	109.168	1.00	16.56	L N
ATOM	1388	CA	LEU	L	179	-13.874	24.958	110.279	1.00	19.50	L C
ATOM	1389	C	LEU	L	179	-15.197	24.470	109.628	1.00	19.78	L C
ATOM	1390	O	LEU	L	179	-15.884	25.243	108.957	1.00	19.68	L O
ATOM	1391	CB	LEU	L	179	-14.157	26.132	111.207	1.00	18.74	L C
ATOM	1392	CG	LEU	L	179	-15.233	25.971	112.315	1.00	19.17	L C
ATOM	1393	CD1	LEU	L	179	-14.778	24.899	113.287	1.00	22.85	L C
ATOM	1394	CD2	LEU	L	179	-15.411	27.330	113.049	1.00	13.61	L C
ATOM	1395	N	THR	L	180	-15.558	23.209	109.836	1.00	16.39	L N
ATOM	1396	CA	THR	L	180	-16.778	22.728	109.226	1.00	22.47	L C
ATOM	1397	C	THR	L	180	-17.911	22.551	110.243	1.00	22.40	L C
ATOM	1398	O	THR	L	180	-17.733	22.007	111.335	1.00	22.24	L O
ATOM	1399	CB	THR	L	180	-16.510	21.437	108.450	1.00	24.69	L C
ATOM	1400	OG1	THR	L	180	-15.554	21.720	107.419	1.00	28.70	L O
ATOM	1401	CG2	THR	L	180	-17.819	20.902	107.799	1.00	25.60	L C
ATOM	1402	N	LEU	L	181	-19.061	23.109	109.883	1.00	25.76	L N
ATOM	1403	CA	LEU	L	181	-20.256	23.079	110.722	1.00	23.80	L C
ATOM	1404	C	LEU	L	181	-21.404	22.595	109.874	1.00	22.40	L C
ATOM	1405	O	LEU	L	181	-21.281	22.491	108.654	1.00	27.54	L O
ATOM	1406	CB	LEU	L	181	-20.618	24.486	111.158	1.00	20.99	L C
ATOM	1407	CG	LEU	L	181	-19.507	25.352	111.691	1.00	21.11	L C
ATOM	1408	CD1	LEU	L	181	-19.910	26.786	111.792	1.00	18.26	L C
ATOM	1409	CD2	LEU	L	181	-19.133	24.735	113.056	1.00	35.93	L C
ATOM	1410	N	THR	L	182	-22.537	22.342	110.524	1.00	21.49	L N
ATOM	1411	CA	THR	L	182	-23.734	21.983	109.771	1.00	21.66	L C
ATOM	1412	C	THR	L	182	-24.299	23.325	109.392	1.00	18.67	L C
ATOM	1413	O	THR	L	182	-23.964	24.340	110.009	1.00	17.07	L O
ATOM	1414	CB	THR	L	182	-24.819	21.226	110.648	1.00	20.54	L C
ATOM	1415	OG1	THR	L	182	-25.233	22.056	111.724	1.00	19.08	L O
ATOM	1416	CG2	THR	L	182	-24.250	19.974	111.210	1.00	19.23	L C
ATOM	1417	N	LYS	L	183	-25.161	23.332	108.377	1.00	22.53	L N
ATOM	1418	CA	LYS	L	183	-25.817	24.538	107.953	1.00	27.93	L C
ATOM	1419	C	LYS	L	183	-26.611	25.161	109.111	1.00	28.40	L C
ATOM	1420	O	LYS	L	183	-26.590	26.367	109.326	1.00	28.75	L O
ATOM	1421	CB	LYS	L	183	-26.777	24.222	106.814	1.00	24.85	L C
ATOM	1422	CG	LYS	L	183	-27.654	25.400	106.442	1.00	38.68	L C
ATOM	1423	CD	LYS	L	183	-28.739	24.912	105.465	1.00	51.46	L C
ATOM	1424	CE	LYS	L	183	-29.711	26.005	105.066	1.00	61.22	L C
ATOM	1425	NZ	LYS	L	183	-29.183	26.879	103.976	1.00	65.88	L N
ATOM	1426	N	ASP	L	184	-27.335	24.320	109.825	1.00	28.42	L N
ATOM	1427	CA	ASP	L	184	-28.132	24.787	110.967	1.00	30.29	L C
ATOM	1428	C	ASP	L	184	-27.275	25.431	112.047	1.00	27.78	L C
ATOM	1429	O	ASP	L	184	-27.641	26.480	112.605	1.00	26.36	L O
ATOM	1430	CB	ASP	L	184	-28.909	23.613	111.550	1.00	32.41	L C
ATOM	1431	CG	ASP	L	184	-30.029	23.164	110.615	1.00	47.03	L C
ATOM	1432	OD1	ASP	L	184	-30.432	23.971	109.744	1.00	50.38	L O
ATOM	1433	OD2	ASP	L	184	-30.492	22.017	110.752	1.00	57.39	L O
ATOM	1434	N	GLU	L	185	-26.126	24.823	112.341	1.00	26.34	L N
ATOM	1435	CA	GLU	L	185	-25.239	25.406	113.396	1.00	22.33	L C
ATOM	1436	C	GLU	L	185	-24.726	26.743	112.905	1.00	21.73	L C
ATOM	1437	O	GLU	L	185	-24.747	27.754	113.623	1.00	19.74	L O
ATOM	1438	CB	GLU	L	185	-24.076	24.429	113.729	1.00	22.69	L C
ATOM	1439	CG	GLU	L	185	-22.917	25.082	114.549	1.00	23.70	L C
ATOM	1440	CD	GLU	L	185	-23.294	25.438	116.017	1.00	24.94	L C
ATOM	1441	OE1	GLU	L	185	-24.490	25.392	116.384	1.00	27.91	L O
ATOM	1442	OE2	GLU	L	185	-22.395	25.779	116.802	1.00	27.17	L O
ATOM	1443	N	TYR	L	186	-24.296	26.772	111.637	1.00	20.59	L N
ATOM	1444	CA	TYR	L	186	-23.812	28.003	111.033	1.00	20.72	L C
ATOM	1445	C	TYR	L	186	-24.884	29.096	111.135	1.00	21.32	L C

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ATOM   1446  O   TYR L 186     -24.594  30.251 111.475  1.00 19.97      L    O
ATOM   1447  CB  TYR L 186     -23.443  27.769 109.565  1.00 21.88      L    C
ATOM   1448  CG  TYR L 186     -23.034  29.037 108.828  1.00 20.13      L    C
ATOM   1449  CD1 TYR L 186     -21.856  29.713 109.171  1.00 16.10      L    C
ATOM   1450  CD2 TYR L 186     -23.841  29.589 107.835  1.00 13.47      L    C
ATOM   1451  CE1 TYR L 186     -21.492  30.928 108.541  1.00 22.60      L    C
ATOM   1452  CE2 TYR L 186     -23.480  30.800 107.198  1.00 21.66      L    C
ATOM   1453  CZ  TYR L 186     -22.298  31.458 107.569  1.00 17.38      L    C
ATOM   1454  OH  TYR L 186     -21.907  32.657 107.007  1.00 26.12      L    O
ATOM   1455  N   GLU L 187     -26.145  28.732 110.882  1.00 26.58      L    N
ATOM   1456  CA  GLU L 187     -27.213  29.744 110.959  1.00 28.79      L    C
ATOM   1457  C   GLU L 187     -27.671  30.156 112.367  1.00 26.96      L    C
ATOM   1458  O   GLU L 187     -28.433  31.112 112.532  1.00 28.18      L    O
ATOM   1459  CB  GLU L 187     -28.403  29.304 110.087  1.00 29.15      L    C
ATOM   1460  CG  GLU L 187     -28.097  29.587 108.603  1.00 38.89      L    C
ATOM   1461  CD  GLU L 187     -29.007  28.858 107.603  1.00 54.73      L    C
ATOM   1462  OE1 GLU L 187     -28.892  29.178 106.397  1.00 54.75      L    O
ATOM   1463  OE2 GLU L 187     -29.806  27.966 107.994  1.00 57.19      L    O
ATOM   1464  N   ARG L 188     -27.167  29.462 113.385  1.00 25.60      L    N
ATOM   1465  CA  ARG L 188     -27.486  29.793 114.769  1.00 23.86      L    C
ATOM   1466  C   ARG L 188     -26.523  30.771 115.368  1.00 26.95      L    C
ATOM   1467  O   ARG L 188     -26.692  31.203 116.517  1.00 32.94      L    O
ATOM   1468  CB  ARG L 188     -27.455  28.527 115.636  1.00 25.29      L    C
ATOM   1469  CG  ARG L 188     -28.633  27.610 115.410  1.00 18.49      L    C
ATOM   1470  CD  ARG L 188     -28.685  26.568 116.464  1.00 20.66      L    C
ATOM   1471  NE  ARG L 188     -27.676  25.523 116.368  1.00 22.08      L    N
ATOM   1472  CZ  ARG L 188     -27.839  24.357 115.741  1.00 31.05      L    C
ATOM   1473  NH1 ARG L 188     -28.973  24.060 115.106  1.00 21.51      L    N
ATOM   1474  NH2 ARG L 188     -26.897  23.438 115.816  1.00 20.64      L    N
ATOM   1475  N   HIS L 189     -25.492  31.149 114.613  1.00 27.14      L    N
ATOM   1476  CA  HIS L 189     -24.505  32.053 115.171  1.00 23.85      L    C
ATOM   1477  C   HIS L 189     -24.228  33.199 114.218  1.00 24.26      L    C
ATOM   1478  O   HIS L 189     -24.560  33.131 113.040  1.00 20.63      L    O
ATOM   1479  CB  HIS L 189     -23.256  31.239 115.485  1.00 21.82      L    C
ATOM   1480  CG  HIS L 189     -23.474  30.234 116.589  1.00 23.43      L    C
ATOM   1481  ND1 HIS L 189     -23.498  30.610 117.912  1.00 18.19      L    N
ATOM   1482  CD2 HIS L 189     -23.717  28.904 116.570  1.00 16.28      L    C
ATOM   1483  CE1 HIS L 189     -23.754  29.561 118.670  1.00 13.06      L    C
ATOM   1484  NE2 HIS L 189     -23.897  28.504 117.885  1.00 15.13      L    N
ATOM   1485  N   ASN L 190     -23.636  34.250 114.735  1.00 24.89      L    N
ATOM   1486  CA  ASN L 190     -23.396  35.390 113.884  1.00 26.57      L    C
ATOM   1487  C   ASN L 190     -21.949  35.834 113.572  1.00 25.07      L    C
ATOM   1488  O   ASN L 190     -21.665  36.240 112.473  1.00 18.65      L    O
ATOM   1489  CB  ASN L 190     -24.129  36.593 114.472  1.00 33.07      L    C
ATOM   1490  CG  ASN L 190     -24.115  37.786 113.535  1.00 44.22      L    C
ATOM   1491  OD1 ASN L 190     -24.446  37.657 112.341  1.00 56.43      L    O
ATOM   1492  ND2 ASN L 190     -23.741  38.956 114.065  1.00 38.66      L    N
ATOM   1493  N   SER L 191     -21.084  35.798 114.568  1.00 24.96      L    N
ATOM   1494  CA  SER L 191     -19.696  36.279 114.426  1.00 24.15      L    C
ATOM   1495  C   SER L 191     -18.738  35.123 114.233  1.00 23.44      L    C
ATOM   1496  O   SER L 191     -18.689  34.219 115.065  1.00 25.33      L    O
ATOM   1497  CB  SER L 191     -19.320  37.056 115.696  1.00 20.64      L    C
ATOM   1498  OG  SER L 191     -18.092  37.707 115.570  1.00 34.95      L    O
ATOM   1499  N   TYR L 192     -17.976  35.164 113.130  1.00 20.47      L    N
ATOM   1500  CA  TYR L 192     -17.029  34.102 112.825  1.00 20.97      L    C
ATOM   1501  C   TYR L 192     -15.622  34.729 112.770  1.00 22.19      L    C
ATOM   1502  O   TYR L 192     -15.425  35.691 112.063  1.00 24.10      L    O
ATOM   1503  CB  TYR L 192     -17.436  33.470 111.492  1.00 17.62      L    C
ATOM   1504  CG  TYR L 192     -18.679  32.625 111.641  1.00 23.22      L    C
ATOM   1505  CD1 TYR L 192     -19.962  33.185 111.509  1.00 22.59      L    C
ATOM   1506  CD2 TYR L 192     -18.581  31.291 112.002  1.00 18.19      L    C
ATOM   1507  CE1 TYR L 192     -21.146  32.401 111.748  1.00 18.75      L    C
ATOM   1508  CE2 TYR L 192     -19.753  30.493 112.245  1.00 21.05      L    C
ATOM   1509  CZ  TYR L 192     -21.015  31.070 112.115  1.00 22.71      L    C
ATOM   1510  OH  TYR L 192     -22.121  30.287 112.355  1.00 19.40      L    O
ATOM   1511  N   THR L 193     -14.676  34.190 113.545  1.00 22.36      L    N
ATOM   1512  CA  THR L 193     -13.354  34.774 113.604  1.00 24.41      L    C
ATOM   1513  C   THR L 193     -12.233  33.758 113.480  1.00 24.10      L    C
ATOM   1514  O   THR L 193     -12.326  32.698 114.063  1.00 27.37      L    O
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ATOM	1515	CB	THR	L	193	-13.187	35.495	114.971	1.00	23.16	L	C
ATOM	1516	OG1	THR	L	193	-14.157	36.553	115.064	1.00	21.75	L	O
ATOM	1517	CG2	THR	L	193	-11.784	36.009	115.147	1.00	24.75	L	C
ATOM	1518	N	CYS	L	194	-11.215	34.108	112.690	1.00	22.54	L	N
ATOM	1519	CA	CYS	L	194	-9.983	33.318	112.457	1.00	26.58	L	C
ATOM	1520	C	CYS	L	194	-8.897	34.154	113.238	1.00	26.19	L	C
ATOM	1521	O	CYS	L	194	-8.706	35.294	112.848	1.00	24.23	L	O
ATOM	1522	CB	CYS	L	194	-9.561	33.391	110.919	1.00	24.94	L	C
ATOM	1523	SG	CYS	L	194	-8.068	32.434	110.661	1.00	42.81	L	S
ATOM	1524	N	GLU	L	195	-8.283	33.639	114.320	1.00	24.48	L	N
ATOM	1525	CA	GLU	L	195	-7.182	34.334	115.024	1.00	29.59	L	C
ATOM	1526	C	GLU	L	195	-5.844	33.609	114.798	1.00	30.32	L	C
ATOM	1527	O	GLU	L	195	-5.736	32.409	115.054	1.00	32.34	L	O
ATOM	1528	CB	GLU	L	195	-7.426	34.400	116.545	1.00	30.17	L	C
ATOM	1529	CG	GLU	L	195	-8.541	35.343	116.918	1.00	36.24	L	C
ATOM	1530	CD	GLU	L	195	-8.662	35.481	118.422	1.00	40.41	L	C
ATOM	1531	OE1	GLU	L	195	-7.813	34.889	119.126	1.00	37.64	L	O
ATOM	1532	OE2	GLU	L	195	-9.588	36.176	118.878	1.00	45.58	L	O
ATOM	1533	N	ALA	L	196	-4.832	34.351	114.356	1.00	29.64	L	N
ATOM	1534	CA	ALA	L	196	-3.507	33.789	114.084	1.00	28.09	L	C
ATOM	1535	C	ALA	L	196	-2.409	34.420	114.908	1.00	28.54	L	C
ATOM	1536	O	ALA	L	196	-2.284	35.642	114.929	1.00	30.56	L	O
ATOM	1537	CB	ALA	L	196	-3.153	33.991	112.624	1.00	29.68	L	C
ATOM	1538	N	THR	L	197	-1.607	33.592	115.568	1.00	29.39	L	N
ATOM	1539	CA	THR	L	197	-0.473	34.125	116.305	1.00	32.75	L	C
ATOM	1540	C	THR	L	197	0.759	33.583	115.564	1.00	31.12	L	C
ATOM	1541	O	THR	L	197	0.832	32.420	115.140	1.00	28.19	L	O
ATOM	1542	CB	THR	L	197	-0.477	33.711	117.796	1.00	34.20	L	C
ATOM	1543	OG1	THR	L	197	-0.216	32.310	117.927	1.00	37.75	L	O
ATOM	1544	CG2	THR	L	197	-1.827	34.046	118.406	1.00	33.92	L	C
ATOM	1545	N	HIS	L	198	1.711	34.469	115.370	1.00	30.73	L	N
ATOM	1546	CA	HIS	L	198	2.919	34.147	114.605	1.00	27.74	L	C
ATOM	1547	C	HIS	L	198	4.036	34.915	115.289	1.00	28.66	L	C
ATOM	1548	O	HIS	L	198	3.788	35.879	116.009	1.00	26.28	L	O
ATOM	1549	CB	HIS	L	198	2.719	34.651	113.168	1.00	24.97	L	C
ATOM	1550	CG	HIS	L	198	3.864	34.340	112.254	1.00	23.60	L	C
ATOM	1551	ND1	HIS	L	198	4.789	35.292	111.880	1.00	26.74	L	N
ATOM	1552	CD2	HIS	L	198	4.259	33.179	111.670	1.00	23.17	L	C
ATOM	1553	CE1	HIS	L	198	5.706	34.729	111.110	1.00	22.18	L	C
ATOM	1554	NE2	HIS	L	198	5.410	33.448	110.968	1.00	17.91	L	N
ATOM	1555	N	LYS	L	199	5.268	34.499	115.058	1.00	28.46	L	N
ATOM	1556	CA	LYS	L	199	6.391	35.179	115.711	1.00	30.45	L	C
ATOM	1557	C	LYS	L	199	6.336	36.684	115.519	1.00	30.56	L	C
ATOM	1558	O	LYS	L	199	6.784	37.429	116.387	1.00	34.50	L	O
ATOM	1559	CB	LYS	L	199	7.707	34.633	115.116	1.00	31.22	L	C
ATOM	1560	CG	LYS	L	199	9.034	35.296	115.576	1.00	33.02	L	C
ATOM	1561	CD	LYS	L	199	10.144	34.717	114.743	1.00	31.75	L	C
ATOM	1562	CE	LYS	L	199	11.548	35.183	115.205	1.00	26.57	L	C
ATOM	1563	NZ	LYS	L	199	12.553	34.725	114.206	1.00	35.93	L	N
ATOM	1564	N	THR	L	200	5.783	37.135	114.393	1.00	30.74	L	N
ATOM	1565	CA	THR	L	200	5.785	38.554	114.042	1.00	30.39	L	C
ATOM	1566	C	THR	L	200	4.916	39.445	114.890	1.00	36.75	L	C
ATOM	1567	O	THR	L	200	4.831	40.651	114.626	1.00	40.22	L	O
ATOM	1568	CB	THR	L	200	5.430	38.783	112.541	1.00	30.63	L	C
ATOM	1569	OG1	THR	L	200	4.283	37.982	112.176	1.00	34.17	L	O
ATOM	1570	CG2	THR	L	200	6.642	38.347	111.650	1.00	26.33	L	C
ATOM	1571	N	SER	L	201	4.240	38.842	115.875	1.00	42.72	L	N
ATOM	1572	CA	SER	L	201	3.444	39.601	116.831	1.00	43.91	L	C
ATOM	1573	C	SER	L	201	2.855	38.728	117.916	1.00	47.57	L	C
ATOM	1574	O	SER	L	201	2.126	37.756	117.644	1.00	50.70	L	O
ATOM	1575	CB	SER	L	201	2.328	40.364	116.130	1.00	43.23	L	C
ATOM	1576	OG	SER	L	201	1.711	41.223	117.077	1.00	48.62	L	O
ATOM	1577	N	THR	L	202	3.160	39.073	119.157	1.00	52.05	L	N
ATOM	1578	CA	THR	L	202	2.652	38.344	120.314	1.00	56.48	L	C
ATOM	1579	C	THR	L	202	1.097	38.311	120.322	1.00	56.15	L	C
ATOM	1580	O	THR	L	202	0.468	37.332	120.756	1.00	56.79	L	O
ATOM	1581	CB	THR	L	202	3.147	39.041	121.586	1.00	59.00	L	C
ATOM	1582	OG1	THR	L	202	4.517	39.445	121.400	1.00	62.75	L	O
ATOM	1583	CG2	THR	L	202	3.065	38.103	122.770	1.00	63.28	L	C

ATOM	1584	N	SER	L	203	0.494	39.399	119.845	1.00	54.97	L	N
ATOM	1585	CA	SER	L	203	-0.965	39.544	119.772	1.00	52.62	L	C
ATOM	1586	C	SER	L	203	-1.454	38.958	118.442	1.00	49.42	L	C
ATOM	1587	O	SER	L	203	-0.916	39.279	117.377	1.00	48.69	L	O
ATOM	1588	CB	SER	L	203	-1.298	41.013	119.794	1.00	54.28	L	C
ATOM	1589	OG	SER	L	203	-0.510	41.642	118.792	1.00	58.41	L	O
ATOM	1590	N	PRO	L	204	-2.522	38.151	118.477	1.00	47.34	L	N
ATOM	1591	CA	PRO	L	204	-3.014	37.553	117.233	1.00	42.56	L	C
ATOM	1592	C	PRO	L	204	-3.502	38.506	116.165	1.00	39.20	L	C
ATOM	1593	O	PRO	L	204	-3.898	39.613	116.453	1.00	33.50	L	O
ATOM	1594	CB	PRO	L	204	-4.137	36.635	117.715	1.00	44.27	L	C
ATOM	1595	CG	PRO	L	204	-4.723	37.438	118.867	1.00	43.09	L	C
ATOM	1596	CD	PRO	L	204	-3.435	37.849	119.599	1.00	48.00	L	C
ATOM	1597	N	ILE	L	205	-3.460	38.043	114.921	1.00	37.41	L	N
ATOM	1598	CA	ILE	L	205	-3.986	38.796	113.780	1.00	32.91	L	C
ATOM	1599	C	ILE	L	205	-5.428	38.239	113.757	1.00	30.62	L	C
ATOM	1600	O	ILE	L	205	-5.641	37.013	113.784	1.00	29.63	L	O
ATOM	1601	CB	ILE	L	205	-3.219	38.432	112.471	1.00	34.55	L	C
ATOM	1602	CG1	ILE	L	205	-1.814	39.073	112.503	1.00	31.34	L	C
ATOM	1603	CG2	ILE	L	205	-3.974	38.938	111.248	1.00	24.01	L	C
ATOM	1604	CD1	ILE	L	205	-0.939	38.666	111.290	1.00	42.44	L	C
ATOM	1605	N	VAL	L	206	-6.396	39.139	113.730	1.00	25.89	L	N
ATOM	1606	CA	VAL	L	206	-7.813	38.759	113.789	1.00	24.40	L	C
ATOM	1607	C	VAL	L	206	-8.582	39.102	112.524	1.00	22.44	L	C
ATOM	1608	O	VAL	L	206	-8.531	40.234	112.081	1.00	26.84	L	O
ATOM	1609	CB	VAL	L	206	-8.485	39.495	115.011	1.00	20.80	L	C
ATOM	1610	CG1	VAL	L	206	-9.979	39.144	115.107	1.00	25.93	L	C
ATOM	1611	CG2	VAL	L	206	-7.782	39.060	116.324	1.00	28.40	L	C
ATOM	1612	N	LYS	L	207	-9.259	38.127	111.900	1.00	23.36	L	N
ATOM	1613	CA	LYS	L	207	-10.088	38.410	110.716	1.00	21.65	L	C
ATOM	1614	C	LYS	L	207	-11.472	37.832	111.032	1.00	23.76	L	C
ATOM	1615	O	LYS	L	207	-11.585	36.737	111.566	1.00	27.90	L	O
ATOM	1616	CB	LYS	L	207	-9.560	37.756	109.450	1.00	23.08	L	C
ATOM	1617	CG	LYS	L	207	-8.259	38.397	109.002	1.00	32.25	L	C
ATOM	1618	CD	LYS	L	207	-8.452	39.818	108.444	1.00	39.96	L	C
ATOM	1619	CE	LYS	L	207	-7.059	40.481	108.245	1.00	45.64	L	C
ATOM	1620	NZ	LYS	L	207	-7.248	41.837	107.672	1.00	49.08	L	N
ATOM	1621	N	SER	L	208	-12.515	38.553	110.696	1.00	24.38	L	N
ATOM	1622	CA	SER	L	208	-13.865	38.071	111.044	1.00	25.80	L	C
ATOM	1623	C	SER	L	208	-14.875	38.506	110.050	1.00	23.17	L	C
ATOM	1624	O	SER	L	208	-14.619	39.407	109.269	1.00	27.40	L	O
ATOM	1625	CB	SER	L	208	-14.363	38.722	112.364	1.00	25.60	L	C
ATOM	1626	OG	SER	L	208	-13.384	38.712	113.361	1.00	44.51	L	O
ATOM	1627	N	PHE	L	209	-16.051	37.880	110.105	1.00	22.25	L	N
ATOM	1628	CA	PHE	L	209	-17.173	38.342	109.303	1.00	20.50	L	C
ATOM	1629	C	PHE	L	209	-18.428	38.049	110.129	1.00	22.48	L	C
ATOM	1630	O	PHE	L	209	-18.387	37.253	111.055	1.00	24.58	L	O
ATOM	1631	CB	PHE	L	209	-17.269	37.664	107.939	1.00	16.13	L	C
ATOM	1632	CG	PHE	L	209	-17.620	36.198	108.000	1.00	26.94	L	C
ATOM	1633	CD1	PHE	L	209	-18.955	35.765	108.039	1.00	26.84	L	C
ATOM	1634	CD2	PHE	L	209	-16.606	35.241	108.000	1.00	31.15	L	C
ATOM	1635	CE1	PHE	L	209	-19.254	34.404	108.072	1.00	27.00	L	C
ATOM	1636	CE2	PHE	L	209	-16.897	33.895	108.027	1.00	21.00	L	C
ATOM	1637	CZ	PHE	L	209	-18.229	33.464	108.063	1.00	19.74	L	C
ATOM	1638	N	ASN	L	210	-19.522	38.737	109.814	1.00	29.53	L	N
ATOM	1639	CA	ASN	L	210	-20.809	38.497	110.471	1.00	32.53	L	C
ATOM	1640	C	ASN	L	210	-21.715	37.868	109.438	1.00	33.07	L	C
ATOM	1641	O	ASN	L	210	-21.804	38.326	108.302	1.00	37.81	L	O
ATOM	1642	CB	ASN	L	210	-21.424	39.789	110.987	1.00	33.31	L	C
ATOM	1643	CG	ASN	L	210	-20.647	40.358	112.131	1.00	41.97	L	C
ATOM	1644	OD1	ASN	L	210	-20.232	39.624	113.028	1.00	53.13	L	O
ATOM	1645	ND2	ASN	L	210	-20.427	41.673	112.111	1.00	48.33	L	N
ATOM	1646	N	ARG	L	211	-22.349	36.779	109.810	1.00	34.50	L	N
ATOM	1647	CA	ARG	L	211	-23.225	36.076	108.891	1.00	36.42	L	C
ATOM	1648	C	ARG	L	211	-24.255	37.088	108.362	1.00	43.20	L	C
ATOM	1649	O	ARG	L	211	-24.483	37.085	107.129	1.00	47.09	L	O
ATOM	1650	CB	ARG	L	211	-23.897	34.874	109.605	1.00	32.11	L	C
ATOM	1651	CG	ARG	L	211	-24.800	33.985	108.728	1.00	23.39	L	C
ATOM	1652	CD	ARG	L	211	-25.278	32.779	109.472	1.00	19.99	L	C

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ATOM   1653  NE  ARG L 211     -25.888  33.196 110.725  1.00 38.28      L    N
ATOM   1654  CZ  ARG L 211     -27.142  33.605 110.849  1.00 44.67      L    C
ATOM   1655  NH1 ARG L 211     -27.949  33.631 109.786  1.00 48.24      L    N
ATOM   1656  NH2 ARG L 211     -27.568  34.048 112.027  1.00 46.31      L    N
ATOM   1657  OXT ARG L 211     -24.796  37.887 109.158  1.00 43.58      L    O
TER    1658      ARG L 211
ATOM   1659  N   GLU H   1      13.634  16.019  73.396  1.00 37.05      H    N
ATOM   1660  CA  GLU H   1      13.497  15.897  74.879  1.00 37.26      H    C
ATOM   1661  C   GLU H   1      12.992  14.523  75.281  1.00 32.62      H    C
ATOM   1662  O   GLU H   1      12.103  13.972  74.644  1.00 31.05      H    O
ATOM   1663  CB  GLU H   1      12.537  16.969  75.411  1.00 39.07      H    C
ATOM   1664  CG  GLU H   1      11.930  16.635  76.750  1.00 56.68      H    C
ATOM   1665  CD  GLU H   1      11.585  17.889  77.553  1.00 73.84      H    C
ATOM   1666  OE1 GLU H   1      11.488  17.807  78.805  1.00 77.86      H    O
ATOM   1667  OE2 GLU H   1      11.417  18.958  76.922  1.00 78.38      H    O
ATOM   1668  N   VAL H   2      13.548  13.973  76.355  1.00 30.97      H    N
ATOM   1669  CA  VAL H   2      13.122  12.653  76.833  1.00 25.27      H    C
ATOM   1670  C   VAL H   2      11.817  12.857  77.557  1.00 25.45      H    C
ATOM   1671  O   VAL H   2      11.670  13.778  78.359  1.00 28.52      H    O
ATOM   1672  CB  VAL H   2      14.101  12.061  77.867  1.00 21.49      H    C
ATOM   1673  CG1 VAL H   2      13.467  10.846  78.519  1.00 20.68      H    C
ATOM   1674  CG2 VAL H   2      15.439  11.700  77.205  1.00 23.15      H    C
ATOM   1675  N   ALA H   3      10.865  11.994  77.290  1.00 25.40      H    N
ATOM   1676  CA  ALA H   3       9.593  12.073  77.975  1.00 28.29      H    C
ATOM   1677  C   ALA H   3       9.089  10.661  78.373  1.00 26.97      H    C
ATOM   1678  O   ALA H   3       9.185   9.698  77.593  1.00 29.48      H    O
ATOM   1679  CB  ALA H   3       8.549  12.845  77.052  1.00 27.69      H    C
ATOM   1680  N   LEU H   4       8.609  10.538  79.612  1.00 24.22      H    N
ATOM   1681  CA  LEU H   4       8.061   9.287  80.137  1.00 20.89      H    C
ATOM   1682  C   LEU H   4       6.689   9.658  80.678  1.00 22.76      H    C
ATOM   1683  O   LEU H   4       6.584  10.514  81.590  1.00 27.07      H    O
ATOM   1684  CB  LEU H   4       8.916   8.766  81.302  1.00 22.55      H    C
ATOM   1685  CG  LEU H   4      10.384   8.474  80.837  1.00 17.66      H    C
ATOM   1686  CD1 LEU H   4      11.151   8.000  82.071  1.00 17.39      H    C
ATOM   1687  CD2 LEU H   4      10.446   7.366  79.750  1.00 23.92      H    C
ATOM   1688  N   VAL H   5       5.639   9.005  80.176  1.00 24.40      H    N
ATOM   1689  CA  VAL H   5       4.290   9.364  80.620  1.00 20.43      H    C
ATOM   1690  C   VAL H   5       3.513   8.155  81.167  1.00 20.69      H    C
ATOM   1691  O   VAL H   5       3.095   7.262  80.397  1.00 23.26      H    O
ATOM   1692  CB  VAL H   5       3.505   9.990  79.464  1.00 17.37      H    C
ATOM   1693  CG1 VAL H   5       2.092  10.282  79.925  1.00 12.65      H    C
ATOM   1694  CG2 VAL H   5       4.204  11.263  78.989  1.00 16.08      H    C
ATOM   1695  N   GLU H   6       3.282   8.143  82.474  1.00 18.23      H    N
ATOM   1696  CA  GLU H   6       2.590   6.997  83.074  1.00 21.02      H    C
ATOM   1697  C   GLU H   6       1.080   7.101  83.005  1.00 24.64      H    C
ATOM   1698  O   GLU H   6       0.535   8.187  82.930  1.00 24.72      H    O
ATOM   1699  CB  GLU H   6       2.948   6.778  84.539  1.00 23.51      H    C
ATOM   1700  CG  GLU H   6       4.498   6.643  84.825  1.00 22.40      H    C
ATOM   1701  CD  GLU H   6       5.121   7.975  85.129  1.00 24.00      H    C
ATOM   1702  OE1 GLU H   6       4.652   9.035  84.652  1.00 22.51      H    O
ATOM   1703  OE2 GLU H   6       6.169   7.956  85.930  1.00 20.14      H    O
ATOM   1704  N   SER H   7       0.426   5.954  82.993  1.00 25.35      H    N
ATOM   1705  CA  SER H   7      -1.051   5.957  83.008  1.00 24.71      H    C
ATOM   1706  C   SER H   7      -1.494   4.639  83.623  1.00 23.70      H    C
ATOM   1707  O   SER H   7      -0.669   3.750  83.870  1.00 23.79      H    O
ATOM   1708  CB  SER H   7      -1.625   6.137  81.602  1.00 24.31      H    C
ATOM   1709  OG  SER H   7      -1.219   5.109  80.733  1.00 29.67      H    O
ATOM   1710  N   GLY H   8      -2.793   4.535  83.926  1.00 24.57      H    N
ATOM   1711  CA  GLY H   8      -3.309   3.306  84.479  1.00 26.40      H    C
ATOM   1712  C   GLY H   8      -3.483   3.239  85.973  1.00 27.67      H    C
ATOM   1713  O   GLY H   8      -3.994   2.242  86.485  1.00 32.68      H    O
ATOM   1714  N   GLY H   9      -3.071   4.256  86.714  1.00 26.70      H    N
ATOM   1715  CA  GLY H   9      -3.267   4.106  88.133  1.00 30.26      H    C
ATOM   1716  C   GLY H   9      -4.736   4.366  88.505  1.00 31.53      H    C
ATOM   1717  O   GLY H   9      -5.554   4.742  87.658  1.00 34.39      H    O
ATOM   1718  N   GLY H  10      -5.050   4.186  89.771  1.00 26.64      H    N
ATOM   1719  CA  GLY H  10      -6.399   4.406  90.224  1.00 24.06      H    C
ATOM   1720  C   GLY H  10      -6.617   3.606  91.474  1.00 28.46      H    C
ATOM   1721  O   GLY H  10      -5.670   3.135  92.107  1.00 29.65      H    O
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ATOM   1722  N   LEU H  11      -7.894   3.418  91.830  1.00 27.81      H    N
ATOM   1723  CA  LEU H  11      -8.248   2.704  93.050  1.00 26.68      H    C
ATOM   1724  C   LEU H  11      -8.468   1.217  92.762  1.00 29.79      H    C
ATOM   1725  O   LEU H  11      -9.134   0.859  91.790  1.00 31.97      H    O
ATOM   1726  CB  LEU H  11      -9.553   3.275  93.616  1.00 27.46      H    C
ATOM   1727  CG  LEU H  11     -10.211   2.593  94.829  1.00 30.78      H    C
ATOM   1728  CD1 LEU H  11      -9.387   2.638  96.069  1.00 21.39      H    C
ATOM   1729  CD2 LEU H  11     -11.577   3.319  95.076  1.00 26.61      H    C
ATOM   1730  N   VAL H  12      -7.979   0.362  93.641  1.00 31.51      H    N
ATOM   1731  CA  VAL H  12      -8.140  -1.062  93.408  1.00 31.17      H    C
ATOM   1732  C   VAL H  12      -8.342  -1.688  94.747  1.00 29.15      H    C
ATOM   1733  O   VAL H  12      -7.779  -1.243  95.722  1.00 29.56      H    O
ATOM   1734  CB  VAL H  12      -6.873  -1.668  92.693  1.00 32.00      H    C
ATOM   1735  CG1 VAL H  12      -5.599  -1.392  93.539  1.00 28.63      H    C
ATOM   1736  CG2 VAL H  12      -7.045  -3.187  92.482  1.00 29.00      H    C
ATOM   1737  N   LYS H  13      -9.176  -2.723  94.826  1.00 28.70      H    N
ATOM   1738  CA  LYS H  13      -9.363  -3.342  96.115  1.00 31.56      H    C
ATOM   1739  C   LYS H  13      -8.219  -4.272  96.474  1.00 30.38      H    C
ATOM   1740  O   LYS H  13      -7.512  -4.781  95.618  1.00 33.11      H    O
ATOM   1741  CB  LYS H  13     -10.696  -4.153  96.145  1.00 33.16      H    C
ATOM   1742  CG  LYS H  13     -11.898  -3.328  95.773  1.00 41.91      H    C
ATOM   1743  CD  LYS H  13     -13.189  -3.961  96.279  1.00 51.54      H    C
ATOM   1744  CE  LYS H  13     -14.387  -3.251  95.690  1.00 65.14      H    C
ATOM   1745  NZ  LYS H  13     -14.447  -3.378  94.190  1.00 58.25      H    N
ATOM   1746  N   PRO H  14      -8.006  -4.494  97.763  1.00 28.47      H    N
ATOM   1747  CA  PRO H  14      -6.935  -5.398  98.191  1.00 27.81      H    C
ATOM   1748  C   PRO H  14      -7.158  -6.767  97.499  1.00 30.73      H    C
ATOM   1749  O   PRO H  14      -8.300  -7.224  97.382  1.00 33.00      H    O
ATOM   1750  CB  PRO H  14      -7.162  -5.504  99.686  1.00 27.15      H    C
ATOM   1751  CG  PRO H  14      -7.812  -4.191 100.033  1.00 25.33      H    C
ATOM   1752  CD  PRO H  14      -8.684  -3.850  98.901  1.00 24.23      H    C
ATOM   1753  N   GLY H  15      -6.077  -7.418  97.087  1.00 31.50      H    N
ATOM   1754  CA  GLY H  15      -6.149  -8.694  96.398  1.00 26.43      H    C
ATOM   1755  C   GLY H  15      -6.402  -8.471  94.922  1.00 31.35      H    C
ATOM   1756  O   GLY H  15      -6.348  -9.393  94.114  1.00 37.77      H    O
ATOM   1757  N   GLY H  16      -6.658  -7.228  94.547  1.00 30.42      H    N
ATOM   1758  CA  GLY H  16      -6.924  -6.919  93.159  1.00 30.36      H    C
ATOM   1759  C   GLY H  16      -5.678  -6.869  92.275  1.00 30.40      H    C
ATOM   1760  O   GLY H  16      -4.555  -7.147  92.740  1.00 33.82      H    O
ATOM   1761  N   SER H  17      -5.912  -6.536  91.007  1.00 27.09      H    N
ATOM   1762  CA  SER H  17      -4.893  -6.420  89.970  1.00 31.01      H    C
ATOM   1763  C   SER H  17      -5.030  -5.095  89.249  1.00 33.12      H    C
ATOM   1764  O   SER H  17      -6.118  -4.506  89.210  1.00 35.49      H    O
ATOM   1765  CB  SER H  17      -5.035  -7.527  88.925  1.00 29.40      H    C
ATOM   1766  OG  SER H  17      -4.519  -8.733  89.433  1.00 40.23      H    O
ATOM   1767  N   LEU H  18      -3.933  -4.645  88.635  1.00 29.11      H    N
ATOM   1768  CA  LEU H  18      -3.967  -3.407  87.892  1.00 31.40      H    C
ATOM   1769  C   LEU H  18      -2.737  -3.388  86.979  1.00 28.04      H    C
ATOM   1770  O   LEU H  18      -1.704  -3.871  87.384  1.00 31.12      H    O
ATOM   1771  CB  LEU H  18      -3.904  -2.234  88.882  1.00 36.05      H    C
ATOM   1772  CG  LEU H  18      -4.099  -0.827  88.311  1.00 36.13      H    C
ATOM   1773  CD1 LEU H  18      -5.511  -0.718  87.716  1.00 32.11      H    C
ATOM   1774  CD2 LEU H  18      -3.910   0.228  89.402  1.00 41.12      H    C
ATOM   1775  N   LYS H  19      -2.838  -2.822  85.789  1.00 23.49      H    N
ATOM   1776  CA  LYS H  19      -1.670  -2.786  84.915  1.00 23.15      H    C
ATOM   1777  C   LYS H  19      -1.353  -1.349  84.578  1.00 26.43      H    C
ATOM   1778  O   LYS H  19      -2.207  -0.617  84.062  1.00 25.06      H    O
ATOM   1779  CB  LYS H  19      -1.911  -3.507  83.593  1.00 24.43      H    C
ATOM   1780  CG  LYS H  19      -0.624  -3.721  82.771  1.00 28.16      H    C
ATOM   1781  CD  LYS H  19      -0.877  -4.632  81.551  1.00 27.11      H    C
ATOM   1782  CE  LYS H  19       0.438  -5.139  80.971  1.00 37.87      H    C
ATOM   1783  NZ  LYS H  19       0.227  -5.854  79.670  1.00 50.80      H    N
ATOM   1784  N   LEU H  20      -0.120  -0.942  84.881  1.00 25.63      H    N
ATOM   1785  CA  LEU H  20       0.334   0.417  84.587  1.00 23.09      H    C
ATOM   1786  C   LEU H  20       1.119   0.431  83.293  1.00 21.89      H    C
ATOM   1787  O   LEU H  20       1.814  -0.552  82.969  1.00 23.58      H    O
ATOM   1788  CB  LEU H  20       1.277   0.900  85.707  1.00 22.80      H    C
ATOM   1789  CG  LEU H  20       0.799   0.750  87.143  1.00 23.07      H    C
ATOM   1790  CD1 LEU H  20       1.851   1.306  88.119  1.00 30.17      H    C
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ATOM   1791  CD2 LEU H  20      -0.538   1.505  87.267  1.00 26.07      H    C
ATOM   1792  N   SER H  21       1.050   1.558  82.595  1.00 19.29      H    N
ATOM   1793  CA  SER H  21       1.749   1.754  81.359  1.00 22.08      H    C
ATOM   1794  C   SER H  21       2.636   2.978  81.440  1.00 24.30      H    C
ATOM   1795  O   SER H  21       2.353   3.911  82.195  1.00 27.22      H    O
ATOM   1796  CB  SER H  21       0.748   1.964  80.229  1.00 21.00      H    C
ATOM   1797  OG  SER H  21       0.011   0.761  80.030  1.00 34.43      H    O
ATOM   1798  N   CYS H  22       3.661   2.991  80.608  1.00 21.98      H    N
ATOM   1799  CA  CYS H  22       4.571   4.125  80.536  1.00 20.64      H    C
ATOM   1800  C   CYS H  22       4.981   4.313  79.090  1.00 21.24      H    C
ATOM   1801  O   CYS H  22       5.646   3.437  78.532  1.00 27.26      H    O
ATOM   1802  CB  CYS H  22       5.802   3.897  81.424  1.00 21.02      H    C
ATOM   1803  SG  CYS H  22       6.992   5.249  81.188  1.00 29.58      H    S
ATOM   1804  N   ALA H  23       4.556   5.436  78.489  1.00 17.76      H    N
ATOM   1805  CA  ALA H  23       4.855   5.821  77.114  1.00 20.00      H    C
ATOM   1806  C   ALA H  23       6.179   6.585  77.077  1.00 23.26      H    C
ATOM   1807  O   ALA H  23       6.306   7.663  77.655  1.00 25.72      H    O
ATOM   1808  CB  ALA H  23       3.739   6.738  76.544  1.00 17.81      H    C
ATOM   1809  N   ALA H  24       7.133   6.073  76.318  1.00 24.36      H    N
ATOM   1810  CA  ALA H  24       8.427   6.705  76.290  1.00 25.28      H    C
ATOM   1811  C   ALA H  24       8.741   7.270  74.950  1.00 26.13      H    C
ATOM   1812  O   ALA H  24       8.397   6.679  73.921  1.00 27.39      H    O
ATOM   1813  CB  ALA H  24       9.480   5.704  76.687  1.00 25.98      H    C
ATOM   1814  N   SER H  25       9.407   8.414  74.946  1.00 24.17      H    N
ATOM   1815  CA  SER H  25       9.761   9.022  73.680  1.00 26.47      H    C
ATOM   1816  C   SER H  25      11.004   9.896  73.855  1.00 26.46      H    C
ATOM   1817  O   SER H  25      11.383  10.242  74.967  1.00 28.62      H    O
ATOM   1818  CB  SER H  25       8.583   9.889  73.200  1.00 27.45      H    C
ATOM   1819  OG  SER H  25       8.344  10.935  74.132  1.00 24.69      H    O
ATOM   1820  N   GLY H  26      11.678  10.210  72.769  1.00 22.55      H    N
ATOM   1821  CA  GLY H  26      12.807  11.111  72.911  1.00 20.54      H    C
ATOM   1822  C   GLY H  26      14.151  10.470  73.084  1.00 24.32      H    C
ATOM   1823  O   GLY H  26      15.139  11.176  73.294  1.00 24.89      H    O
ATOM   1824  N   PHE H  27      14.199   9.141  73.028  1.00 21.93      H    N
ATOM   1825  CA  PHE H  27      15.482   8.426  73.112  1.00 20.14      H    C
ATOM   1826  C   PHE H  27      15.297   7.067  72.471  1.00 21.32      H    C
ATOM   1827  O   PHE H  27      14.152   6.622  72.250  1.00 23.00      H    O
ATOM   1828  CB  PHE H  27      15.964   8.301  74.591  1.00 20.36      H    C
ATOM   1829  CG  PHE H  27      15.035   7.491  75.504  1.00 18.12      H    C
ATOM   1830  CD1 PHE H  27      15.278   6.164  75.788  1.00 10.19      H    C
ATOM   1831  CD2 PHE H  27      13.905   8.073  76.058  1.00 18.20      H    C
ATOM   1832  CE1 PHE H  27      14.417   5.404  76.613  1.00 15.96      H    C
ATOM   1833  CE2 PHE H  27      13.028   7.329  76.893  1.00 21.16      H    C
ATOM   1834  CZ  PHE H  27      13.276   6.009  77.174  1.00  9.67      H    C
ATOM   1835  N   THR H  28      16.400   6.358  72.225  1.00 20.96      H    N
ATOM   1836  CA  THR H  28      16.307   5.056  71.570  1.00 20.74      H    C
ATOM   1837  C   THR H  28      15.937   4.013  72.549  1.00 22.28      H    C
ATOM   1838  O   THR H  28      16.775   3.363  73.126  1.00 25.49      H    O
ATOM   1839  CB  THR H  28      17.610   4.727  70.871  1.00 17.35      H    C
ATOM   1840  OG1 THR H  28      17.834   5.747  69.902  1.00 22.02      H    O
ATOM   1841  CG2 THR H  28      17.527   3.399  70.157  1.00 21.93      H    C
ATOM   1842  N   PHE H  29      14.636   3.854  72.730  1.00 20.12      H    N
ATOM   1843  CA  PHE H  29      14.092   2.922  73.707  1.00 19.24      H    C
ATOM   1844  C   PHE H  29      14.698   1.534  73.827  1.00 20.34      H    C
ATOM   1845  O   PHE H  29      15.023   1.081  74.937  1.00 22.88      H    O
ATOM   1846  CB  PHE H  29      12.568   2.808  73.476  1.00 18.98      H    C
ATOM   1847  CG  PHE H  29      11.821   2.069  74.551  1.00 18.94      H    C
ATOM   1848  CD1 PHE H  29      11.547   2.681  75.784  1.00 17.20      H    C
ATOM   1849  CD2 PHE H  29      11.337   0.774  74.328  1.00 17.93      H    C
ATOM   1850  CE1 PHE H  29      10.802   1.996  76.752  1.00 20.22      H    C
ATOM   1851  CE2 PHE H  29      10.587   0.086  75.316  1.00 20.54      H    C
ATOM   1852  CZ  PHE H  29      10.330   0.704  76.515  1.00  7.20      H    C
ATOM   1853  N   ILE H  30      14.872   0.847  72.699  1.00 22.05      H    N
ATOM   1854  CA  ILE H  30      15.393  -0.520  72.753  1.00 24.80      H    C
ATOM   1855  C   ILE H  30      16.752  -0.688  73.403  1.00 22.06      H    C
ATOM   1856  O   ILE H  30      17.027  -1.775  73.909  1.00 23.49      H    O
ATOM   1857  CB  ILE H  30      15.488  -1.222  71.350  1.00 23.26      H    C
ATOM   1858  CG1 ILE H  30      16.369  -0.396  70.424  1.00 23.10      H    C
ATOM   1859  CG2 ILE H  30      14.061  -1.412  70.768  1.00 32.12      H    C
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ATOM	1860	CD1	ILE	H	30	16.802	-1.136	69.186	1.00	38.83	H	C
ATOM	1861	N	SER	H	31	17.546	0.377	73.443	1.00	18.26	H	N
ATOM	1862	CA	SER	H	31	18.890	0.261	74.003	1.00	18.45	H	C
ATOM	1863	C	SER	H	31	18.984	0.503	75.508	1.00	18.69	H	C
ATOM	1864	O	SER	H	31	20.041	0.256	76.089	1.00	21.46	H	O
ATOM	1865	CB	SER	H	31	19.874	1.206	73.291	1.00	14.50	H	C
ATOM	1866	OG	SER	H	31	20.169	0.722	71.962	1.00	31.45	H	O
ATOM	1867	N	TYR	H	32	17.883	0.952	76.124	1.00	18.03	H	N
ATOM	1868	CA	TYR	H	32	17.886	1.240	77.549	1.00	14.33	H	C
ATOM	1869	C	TYR	H	32	17.152	0.280	78.441	1.00	15.02	H	C
ATOM	1870	O	TYR	H	32	16.115	-0.302	78.076	1.00	14.37	H	O
ATOM	1871	CB	TYR	H	32	17.310	2.665	77.818	1.00	13.79	H	C
ATOM	1872	CG	TYR	H	32	18.198	3.793	77.298	1.00	17.16	H	C
ATOM	1873	CD1	TYR	H	32	18.203	4.142	75.943	1.00	14.56	H	C
ATOM	1874	CD2	TYR	H	32	19.042	4.487	78.156	1.00	14.56	H	C
ATOM	1875	CE1	TYR	H	32	19.020	5.152	75.457	1.00	17.45	H	C
ATOM	1876	CE2	TYR	H	32	19.882	5.505	77.679	1.00	20.18	H	C
ATOM	1877	CZ	TYR	H	32	19.857	5.828	76.330	1.00	23.49	H	C
ATOM	1878	OH	TYR	H	32	20.666	6.850	75.863	1.00	28.23	H	O
ATOM	1879	N	ALA	H	33	17.698	0.140	79.651	1.00	14.42	H	N
ATOM	1880	CA	ALA	H	33	17.057	-0.615	80.695	1.00	14.51	H	C
ATOM	1881	C	ALA	H	33	15.993	0.394	81.252	1.00	14.39	H	C
ATOM	1882	O	ALA	H	33	16.123	1.624	81.104	1.00	12.17	H	O
ATOM	1883	CB	ALA	H	33	18.055	-1.001	81.806	1.00	12.68	H	C
ATOM	1884	N	MET	H	34	14.949	-0.140	81.862	1.00	16.84	H	N
ATOM	1885	CA	MET	H	34	13.874	0.700	82.416	1.00	16.36	H	C
ATOM	1886	C	MET	H	34	13.439	0.188	83.758	1.00	15.55	H	C
ATOM	1887	O	MET	H	34	13.601	-0.987	84.086	1.00	13.11	H	O
ATOM	1888	CB	MET	H	34	12.651	0.697	81.474	1.00	15.24	H	C
ATOM	1889	CG	MET	H	34	12.887	1.223	80.071	1.00	14.09	H	C
ATOM	1890	SD	MET	H	34	13.108	3.014	79.968	1.00	20.48	H	S
ATOM	1891	CE	MET	H	34	11.533	3.688	80.662	1.00	7.18	H	C
ATOM	1892	N	SER	H	35	12.790	1.053	84.546	1.00	16.91	H	N
ATOM	1893	CA	SER	H	35	12.374	0.616	85.875	1.00	19.04	H	C
ATOM	1894	C	SER	H	35	11.092	1.306	86.348	1.00	18.31	H	C
ATOM	1895	O	SER	H	35	10.620	2.251	85.722	1.00	24.04	H	O
ATOM	1896	CB	SER	H	35	13.451	0.992	86.951	1.00	14.30	H	C
ATOM	1897	OG	SER	H	35	14.755	0.386	86.723	1.00	22.00	H	O
ATOM	1898	N	TRP	H	36	10.567	0.771	87.440	1.00	12.01	H	N
ATOM	1899	CA	TRP	H	36	9.448	1.383	88.154	1.00	12.95	H	C
ATOM	1900	C	TRP	H	36	9.970	1.598	89.590	1.00	18.28	H	C
ATOM	1901	O	TRP	H	36	10.611	0.709	90.210	1.00	16.01	H	O
ATOM	1902	CB	TRP	H	36	8.232	0.467	88.231	1.00	14.71	H	C
ATOM	1903	CG	TRP	H	36	7.503	0.323	86.885	1.00	21.41	H	C
ATOM	1904	CD1	TRP	H	36	7.705	-0.669	85.937	1.00	9.67	H	C
ATOM	1905	CD2	TRP	H	36	6.505	1.203	86.345	1.00	18.07	H	C
ATOM	1906	NE1	TRP	H	36	6.897	-0.430	84.856	1.00	23.74	H	N
ATOM	1907	CE2	TRP	H	36	6.144	0.698	85.078	1.00	17.04	H	C
ATOM	1908	CE3	TRP	H	36	5.874	2.365	86.817	1.00	4.98	H	C
ATOM	1909	CZ2	TRP	H	36	5.177	1.314	84.267	1.00	16.74	H	C
ATOM	1910	CZ3	TRP	H	36	4.929	2.981	86.022	1.00	19.83	H	C
ATOM	1911	CH2	TRP	H	36	4.582	2.456	84.745	1.00	18.46	H	C
ATOM	1912	N	VAL	H	37	9.660	2.777	90.138	1.00	19.29	H	N
ATOM	1913	CA	VAL	H	37	10.093	3.115	91.481	1.00	19.64	H	C
ATOM	1914	C	VAL	H	37	8.845	3.770	92.101	1.00	19.14	H	C
ATOM	1915	O	VAL	H	37	8.269	4.629	91.495	1.00	19.32	H	O
ATOM	1916	CB	VAL	H	37	11.249	4.180	91.436	1.00	20.61	H	C
ATOM	1917	CG1	VAL	H	37	11.648	4.586	92.880	1.00	17.50	H	C
ATOM	1918	CG2	VAL	H	37	12.488	3.563	90.693	1.00	17.13	H	C
ATOM	1919	N	ARG	H	38	8.492	3.378	93.319	1.00	16.77	H	N
ATOM	1920	CA	ARG	H	38	7.287	3.953	93.923	1.00	15.98	H	C
ATOM	1921	C	ARG	H	38	7.630	4.775	95.146	1.00	18.04	H	C
ATOM	1922	O	ARG	H	38	8.684	4.632	95.734	1.00	16.62	H	O
ATOM	1923	CB	ARG	H	38	6.282	2.840	94.307	1.00	16.85	H	C
ATOM	1924	CG	ARG	H	38	6.772	1.938	95.386	1.00	8.21	H	C
ATOM	1925	CD	ARG	H	38	5.789	0.730	95.622	1.00	11.19	H	C
ATOM	1926	NE	ARG	H	38	6.272	-0.154	96.661	1.00	14.89	H	N
ATOM	1927	CZ	ARG	H	38	5.688	-1.319	96.949	1.00	22.76	H	C
ATOM	1928	NH1	ARG	H	38	4.620	-1.693	96.239	1.00	24.06	H	N

ATOM	1929	NH2	ARG	H	38	6.132	-2.078	97.948	1.00	23.16	H	N
ATOM	1930	N	GLN	H	39	6.722	5.687	95.494	1.00	18.48	H	N
ATOM	1931	CA	GLN	H	39	6.952	6.530	96.674	1.00	22.51	H	C
ATOM	1932	C	GLN	H	39	5.681	6.398	97.560	1.00	26.22	H	C
ATOM	1933	O	GLN	H	39	4.589	6.703	97.106	1.00	29.41	H	O
ATOM	1934	CB	GLN	H	39	7.135	7.993	96.242	1.00	20.08	H	C
ATOM	1935	CG	GLN	H	39	7.516	8.855	97.445	1.00	14.71	H	C
ATOM	1936	CD	GLN	H	39	8.012	10.206	97.003	1.00	17.69	H	C
ATOM	1937	OE1	GLN	H	39	7.450	10.799	96.080	1.00	22.74	H	O
ATOM	1938	NE2	GLN	H	39	9.069	10.709	97.657	1.00	18.94	H	N
ATOM	1939	N	THR	H	40	5.873	5.960	98.790	1.00	25.08	H	N
ATOM	1940	CA	THR	H	40	4.759	5.695	99.685	1.00	29.28	H	C
ATOM	1941	C	THR	H	40	4.186	6.999	100.217	1.00	33.51	H	C
ATOM	1942	O	THR	H	40	4.780	8.083	100.063	1.00	32.02	H	O
ATOM	1943	CB	THR	H	40	5.216	4.895	100.892	1.00	31.26	H	C
ATOM	1944	OG1	THR	H	40	6.209	5.658	101.561	1.00	31.13	H	O
ATOM	1945	CG2	THR	H	40	5.773	3.512	100.514	1.00	25.76	H	C
ATOM	1946	N	PRO	H	41	3.022	6.913	100.873	1.00	36.66	H	N
ATOM	1947	CA	PRO	H	41	2.477	8.172	101.383	1.00	36.86	H	C
ATOM	1948	C	PRO	H	41	3.443	8.778	102.402	1.00	34.19	H	C
ATOM	1949	O	PRO	H	41	3.458	9.974	102.614	1.00	31.19	H	O
ATOM	1950	CB	PRO	H	41	1.129	7.754	101.986	1.00	37.38	H	C
ATOM	1951	CG	PRO	H	41	0.734	6.506	101.085	1.00	40.44	H	C
ATOM	1952	CD	PRO	H	41	2.088	5.790	101.047	1.00	34.79	H	C
ATOM	1953	N	GLU	H	42	4.267	7.959	103.020	1.00	33.50	H	N
ATOM	1954	CA	GLU	H	42	5.212	8.508	103.978	1.00	31.61	H	C
ATOM	1955	C	GLU	H	42	6.439	9.112	103.280	1.00	30.07	H	C
ATOM	1956	O	GLU	H	42	7.333	9.576	103.954	1.00	28.54	H	O
ATOM	1957	CB	GLU	H	42	5.637	7.449	104.982	1.00	35.54	H	C
ATOM	1958	CG	GLU	H	42	4.441	6.687	105.587	1.00	46.36	H	C
ATOM	1959	CD	GLU	H	42	3.822	5.712	104.591	1.00	59.41	H	C
ATOM	1960	OE1	GLU	H	42	4.424	4.635	104.358	1.00	59.82	H	O
ATOM	1961	OE2	GLU	H	42	2.748	6.039	104.027	1.00	63.05	H	O
ATOM	1962	N	LYS	H	43	6.428	9.133	101.944	1.00	25.52	H	N
ATOM	1963	CA	LYS	H	43	7.505	9.712	101.126	1.00	24.37	H	C
ATOM	1964	C	LYS	H	43	8.755	8.881	100.935	1.00	24.96	H	C
ATOM	1965	O	LYS	H	43	9.754	9.391	100.407	1.00	22.88	H	O
ATOM	1966	CB	LYS	H	43	7.938	11.087	101.655	1.00	27.09	H	C
ATOM	1967	CG	LYS	H	43	7.326	12.215	100.938	1.00	34.74	H	C
ATOM	1968	CD	LYS	H	43	5.872	12.299	101.209	1.00	51.35	H	C
ATOM	1969	CE	LYS	H	43	5.123	12.594	99.921	1.00	51.99	H	C
ATOM	1970	NZ	LYS	H	43	3.689	12.833	100.223	1.00	50.46	H	N
ATOM	1971	N	ARG	H	44	8.717	7.612	101.318	1.00	25.07	H	N
ATOM	1972	CA	ARG	H	44	9.917	6.778	101.151	1.00	27.51	H	C
ATOM	1973	C	ARG	H	44	9.887	6.273	99.709	1.00	27.18	H	C
ATOM	1974	O	ARG	H	44	8.816	5.960	99.168	1.00	23.86	H	O
ATOM	1975	CB	ARG	H	44	9.897	5.561	102.080	1.00	30.75	H	C
ATOM	1976	CG	ARG	H	44	9.672	5.841	103.567	1.00	44.30	H	C
ATOM	1977	CD	ARG	H	44	10.839	6.497	104.317	1.00	61.82	H	C
ATOM	1978	NE	ARG	H	44	12.097	5.755	104.254	1.00	70.52	H	N
ATOM	1979	CZ	ARG	H	44	13.093	5.869	105.139	1.00	63.42	H	C
ATOM	1980	NH1	ARG	H	44	12.985	6.684	106.193	1.00	51.27	H	N
ATOM	1981	NH2	ARG	H	44	14.233	5.217	104.925	1.00	41.30	H	N
ATOM	1982	N	LEU	H	45	11.057	6.234	99.095	1.00	21.99	H	N
ATOM	1983	CA	LEU	H	45	11.181	5.768	97.723	1.00	23.75	H	C
ATOM	1984	C	LEU	H	45	11.637	4.287	97.779	1.00	22.20	H	C
ATOM	1985	O	LEU	H	45	12.519	3.933	98.550	1.00	21.33	H	O
ATOM	1986	CB	LEU	H	45	12.238	6.607	96.978	1.00	20.46	H	C
ATOM	1987	CG	LEU	H	45	11.743	8.037	96.592	1.00	26.15	H	C
ATOM	1988	CD1	LEU	H	45	12.981	8.967	96.324	1.00	19.17	H	C
ATOM	1989	CD2	LEU	H	45	10.849	8.021	95.337	1.00	7.95	H	C
ATOM	1990	N	GLU	H	46	11.037	3.465	96.940	1.00	21.98	H	N
ATOM	1991	CA	GLU	H	46	11.398	2.041	96.915	1.00	26.58	H	C
ATOM	1992	C	GLU	H	46	11.450	1.571	95.478	1.00	21.11	H	C
ATOM	1993	O	GLU	H	46	10.467	1.731	94.751	1.00	22.21	H	O
ATOM	1994	CB	GLU	H	46	10.311	1.189	97.635	1.00	28.65	H	C
ATOM	1995	CG	GLU	H	46	10.123	1.593	99.117	1.00	49.98	H	C
ATOM	1996	CD	GLU	H	46	8.955	0.846	99.817	1.00	62.45	H	C
ATOM	1997	OE1	GLU	H	46	8.157	0.180	99.090	1.00	54.94	H	O

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ATOM   1998  OE2 GLU H  46       8.861    0.923  101.080  1.00 76.63      H    O
ATOM   1999  N   TRP H  47      12.586    1.015   95.071  1.00 16.27      H    N
ATOM   2000  CA  TRP H  47      12.708    0.485   93.728  1.00 17.07      H    C
ATOM   2001  C   TRP H  47      11.769   -0.762   93.679  1.00 15.27      H    C
ATOM   2002  O   TRP H  47      11.792   -1.584   94.592  1.00 18.79      H    O
ATOM   2003  CB  TRP H  47      14.181    0.092   93.501  1.00 19.17      H    C
ATOM   2004  CG  TRP H  47      14.386   -0.878   92.324  1.00 16.79      H    C
ATOM   2005  CD1 TRP H  47      14.232   -0.609   90.978  1.00  8.71      H    C
ATOM   2006  CD2 TRP H  47      14.708   -2.240   92.432  1.00 15.94      H    C
ATOM   2007  NE1 TRP H  47      14.425   -1.758   90.246  1.00 15.37      H    N
ATOM   2008  CE2 TRP H  47      14.728   -2.771   91.121  1.00 13.73      H    C
ATOM   2009  CE3 TRP H  47      14.987   -3.087   93.520  1.00 19.49      H    C
ATOM   2010  CZ2 TRP H  47      15.021   -4.120   90.864  1.00 17.65      H    C
ATOM   2011  CZ3 TRP H  47      15.280   -4.440   93.257  1.00 11.79      H    C
ATOM   2012  CH2 TRP H  47      15.293   -4.929   91.945  1.00 16.64      H    C
ATOM   2013  N   VAL H  48      10.976   -0.857   92.613  1.00 16.40      H    N
ATOM   2014  CA  VAL H  48       9.980   -1.935   92.400  1.00 20.27      H    C
ATOM   2015  C   VAL H  48      10.328   -2.961   91.316  1.00 17.27      H    C
ATOM   2016  O   VAL H  48       9.966   -4.116   91.442  1.00 17.49      H    O
ATOM   2017  CB  VAL H  48       8.602   -1.279   92.038  1.00 21.34      H    C
ATOM   2018  CG1 VAL H  48       7.611   -2.301   91.498  1.00 24.15      H    C
ATOM   2019  CG2 VAL H  48       8.052   -0.607   93.274  1.00 24.24      H    C
ATOM   2020  N   ALA H  49      11.034   -2.548   90.263  1.00 16.96      H    N
ATOM   2021  CA  ALA H  49      11.346   -3.493   89.194  1.00 17.77      H    C
ATOM   2022  C   ALA H  49      12.206   -2.877   88.154  1.00 19.92      H    C
ATOM   2023  O   ALA H  49      12.109   -1.657   87.912  1.00 24.74      H    O
ATOM   2024  CB  ALA H  49      10.021   -3.962   88.495  1.00 16.94      H    C
ATOM   2025  N   SER H  50      12.980   -3.721   87.465  1.00 21.88      H    N
ATOM   2026  CA  SER H  50      13.807   -3.266   86.363  1.00 21.57      H    C
ATOM   2027  C   SER H  50      13.754   -4.316   85.265  1.00 21.78      H    C
ATOM   2028  O   SER H  50      13.545   -5.502   85.563  1.00 23.60      H    O
ATOM   2029  CB  SER H  50      15.272   -3.137   86.774  1.00 21.45      H    C
ATOM   2030  OG  SER H  50      15.460   -2.078   87.683  1.00 21.58      H    O
ATOM   2031  N   ILE H  51      13.900   -3.849   84.036  1.00 20.05      H    N
ATOM   2032  CA  ILE H  51      14.003   -4.754   82.858  1.00 17.96      H    C
ATOM   2033  C   ILE H  51      15.172   -4.273   81.999  1.00 17.53      H    C
ATOM   2034  O   ILE H  51      15.269   -3.087   81.682  1.00 19.16      H    O
ATOM   2035  CB  ILE H  51      12.679   -4.795   82.058  1.00 17.66      H    C
ATOM   2036  CG1 ILE H  51      12.796   -5.869   80.958  1.00 23.68      H    C
ATOM   2037  CG2 ILE H  51      12.325   -3.407   81.427  1.00  8.10      H    C
ATOM   2038  CD1 ILE H  51      11.433   -6.214   80.376  1.00 15.41      H    C
ATOM   2039  N   SER H  52      16.100   -5.176   81.625  1.00 14.90      H    N
ATOM   2040  CA  SER H  52      17.264   -4.790   80.816  1.00 15.78      H    C
ATOM   2041  C   SER H  52      16.899   -4.630   79.352  1.00 16.46      H    C
ATOM   2042  O   SER H  52      15.815   -5.022   78.940  1.00 22.00      H    O
ATOM   2043  CB  SER H  52      18.384   -5.853   80.913  1.00 15.21      H    C
ATOM   2044  OG  SER H  52      17.962   -7.063   80.253  1.00 20.35      H    O
ATOM   2045  N   SER H  53      17.786   -4.068   78.558  1.00 18.03      H    N
ATOM   2046  CA  SER H  53      17.515   -3.925   77.129  1.00 20.13      H    C
ATOM   2047  C   SER H  53      17.441   -5.342   76.528  1.00 22.74      H    C
ATOM   2048  O   SER H  53      16.774   -5.539   75.518  1.00 26.71      H    O
ATOM   2049  CB  SER H  53      18.645   -3.160   76.445  1.00 20.15      H    C
ATOM   2050  OG  SER H  53      19.898   -3.829   76.632  1.00 16.33      H    O
ATOM   2051  N   GLY H  54      18.102   -6.314   77.160  1.00 22.48      H    N
ATOM   2052  CA  GLY H  54      18.041   -7.697   76.676  1.00 18.24      H    C
ATOM   2053  C   GLY H  54      16.805   -8.441   77.176  1.00 22.94      H    C
ATOM   2054  O   GLY H  54      16.562   -9.593   76.800  1.00 22.69      H    O
ATOM   2055  N   GLY H  55      16.017   -7.799   78.044  1.00 20.19      H    N
ATOM   2056  CA  GLY H  55      14.806   -8.434   78.547  1.00 15.12      H    C
ATOM   2057  C   GLY H  55      14.880   -9.146   79.888  1.00 21.67      H    C
ATOM   2058  O   GLY H  55      13.904   -9.788   80.282  1.00 25.28      H    O
ATOM   2059  N   ASN H  56      16.014   -9.067   80.586  1.00 21.16      H    N
ATOM   2060  CA  ASN H  56      16.144   -9.673   81.915  1.00 23.73      H    C
ATOM   2061  C   ASN H  56      15.330   -8.806   82.892  1.00 23.78      H    C
ATOM   2062  O   ASN H  56      15.336   -7.577   82.747  1.00 27.58      H    O
ATOM   2063  CB  ASN H  56      17.589   -9.632   82.392  1.00 29.97      H    C
ATOM   2064  CG  ASN H  56      18.530  -10.453   81.518  1.00 35.89      H    C
ATOM   2065  OD1 ASN H  56      19.747  -10.418   81.706  1.00 35.43      H    O
ATOM   2066  ND2 ASN H  56      17.973  -11.194   80.591  1.00 24.91      H    N
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ATOM   2067  N   THR H  57      14.711  -9.435  83.889  1.00 19.38      H    N
ATOM   2068  CA  THR H  57      13.896  -8.717  84.883  1.00 16.47      H    C
ATOM   2069  C   THR H  57      14.475  -8.890  86.270  1.00 19.01      H    C
ATOM   2070  O   THR H  57      15.104  -9.903  86.583  1.00 21.14      H    O
ATOM   2071  CB  THR H  57      12.389  -9.200  84.886  1.00 17.39      H    C
ATOM   2072  OG1 THR H  57      12.332 -10.589  85.205  1.00 25.30      H    O
ATOM   2073  CG2 THR H  57      11.732  -8.970  83.551  1.00 16.69      H    C
ATOM   2074  N   TYR H  58      14.232  -7.896  87.129  1.00 20.35      H    N
ATOM   2075  CA  TYR H  58      14.754  -7.889  88.475  1.00 17.82      H    C
ATOM   2076  C   TYR H  58      13.674  -7.248  89.364  1.00 17.82      H    C
ATOM   2077  O   TYR H  58      13.013  -6.261  88.947  1.00 13.98      H    O
ATOM   2078  CB  TYR H  58      16.014  -7.016  88.550  1.00 16.91      H    C
ATOM   2079  CG  TYR H  58      17.033  -7.287  87.445  1.00 21.18      H    C
ATOM   2080  CD1 TYR H  58      16.817  -6.817  86.147  1.00 20.25      H    C
ATOM   2081  CD2 TYR H  58      18.224  -7.945  87.722  1.00 24.53      H    C
ATOM   2082  CE1 TYR H  58      17.759  -6.965  85.163  1.00 17.16      H    C
ATOM   2083  CE2 TYR H  58      19.180  -8.128  86.727  1.00 32.42      H    C
ATOM   2084  CZ  TYR H  58      18.932  -7.613  85.451  1.00 33.73      H    C
ATOM   2085  OH  TYR H  58      19.898  -7.689  84.482  1.00 41.39      H    O
ATOM   2086  N   TYR H  59      13.553  -7.798  90.562  1.00 17.63      H    N
ATOM   2087  CA  TYR H  59      12.533  -7.347  91.504  1.00 19.97      H    C
ATOM   2088  C   TYR H  59      12.996  -7.474  92.932  1.00 18.44      H    C
ATOM   2089  O   TYR H  59      13.779  -8.349  93.253  1.00 24.99      H    O
ATOM   2090  CB  TYR H  59      11.246  -8.248  91.436  1.00 20.01      H    C
ATOM   2091  CG  TYR H  59      10.633  -8.429  90.072  1.00 22.20      H    C
ATOM   2092  CD1 TYR H  59      10.936  -9.532  89.290  1.00 14.53      H    C
ATOM   2093  CD2 TYR H  59       9.755  -7.477  89.562  1.00 22.20      H    C
ATOM   2094  CE1 TYR H  59      10.389  -9.687  88.033  1.00 14.82      H    C
ATOM   2095  CE2 TYR H  59       9.194  -7.616  88.314  1.00 20.92      H    C
ATOM   2096  CZ  TYR H  59       9.528  -8.736  87.549  1.00 25.21      H    C
ATOM   2097  OH  TYR H  59       8.996  -8.828  86.300  1.00 27.97      H    O
ATOM   2098  N   PRO H  60      12.501  -6.605  93.836  1.00 17.68      H    N
ATOM   2099  CA  PRO H  60      12.912  -6.760  95.234  1.00 18.52      H    C
ATOM   2100  C   PRO H  60      11.941  -7.853  95.838  1.00 23.43      H    C
ATOM   2101  O   PRO H  60      10.854  -8.097  95.286  1.00 21.98      H    O
ATOM   2102  CB  PRO H  60      12.634  -5.379  95.835  1.00 19.08      H    C
ATOM   2103  CG  PRO H  60      11.354  -4.978  95.085  1.00 17.15      H    C
ATOM   2104  CD  PRO H  60      11.714  -5.373  93.638  1.00 15.96      H    C
ATOM   2105  N   ASP H  61      12.307  -8.462  96.962  1.00 22.56      H    N
ATOM   2106  CA  ASP H  61      11.431  -9.496  97.562  1.00 23.00      H    C
ATOM   2107  C   ASP H  61      10.045  -8.987  97.911  1.00 23.44      H    C
ATOM   2108  O   ASP H  61       9.095  -9.743  97.919  1.00 26.44      H    O
ATOM   2109  CB  ASP H  61      12.083 -10.074  98.815  1.00 22.98      H    C
ATOM   2110  CG  ASP H  61      13.287 -10.902  98.504  1.00 27.24      H    C
ATOM   2111  OD1 ASP H  61      14.042 -11.166  99.439  1.00 27.26      H    O
ATOM   2112  OD2 ASP H  61      13.482 -11.273  97.327  1.00 28.00      H    O
ATOM   2113  N   SER H  62       9.912  -7.685  98.170  1.00 27.64      H    N
ATOM   2114  CA  SER H  62       8.598  -7.107  98.526  1.00 24.00      H    C
ATOM   2115  C   SER H  62       7.551  -7.281  97.437  1.00 22.42      H    C
ATOM   2116  O   SER H  62       6.345  -7.272  97.716  1.00 22.71      H    O
ATOM   2117  CB  SER H  62       8.751  -5.600  98.863  1.00 22.99      H    C
ATOM   2118  OG  SER H  62       9.242  -4.893  97.736  1.00 22.44      H    O
ATOM   2119  N   VAL H  63       7.967  -7.402  96.176  1.00 23.61      H    N
ATOM   2120  CA  VAL H  63       6.968  -7.562  95.130  1.00 26.04      H    C
ATOM   2121  C   VAL H  63       7.147  -8.789  94.193  1.00 27.76      H    C
ATOM   2122  O   VAL H  63       6.301  -9.061  93.346  1.00 28.27      H    O
ATOM   2123  CB  VAL H  63       6.819  -6.253  94.214  1.00 25.05      H    C
ATOM   2124  CG1 VAL H  63       6.701  -5.013  95.086  1.00 19.86      H    C
ATOM   2125  CG2 VAL H  63       7.978  -6.125  93.224  1.00 22.12      H    C
ATOM   2126  N   LYS H  64       8.263  -9.483  94.325  1.00 34.01      H    N
ATOM   2127  CA  LYS H  64       8.553 -10.649  93.477  1.00 37.73      H    C
ATOM   2128  C   LYS H  64       7.431 -11.666  93.629  1.00 36.21      H    C
ATOM   2129  O   LYS H  64       6.985 -11.943  94.732  1.00 40.72      H    O
ATOM   2130  CB  LYS H  64       9.870 -11.288  93.897  1.00 40.50      H    C
ATOM   2131  CG  LYS H  64      10.493 -12.165  92.823  1.00 49.69      H    C
ATOM   2132  CD  LYS H  64      11.595 -12.977  93.447  1.00 67.46      H    C
ATOM   2133  CE  LYS H  64      12.336 -13.781  92.388  1.00 84.78      H    C
ATOM   2134  NZ  LYS H  64      12.931 -15.014  93.018  1.00 92.94      H    N
ATOM   2135  N   GLY H  65       6.967 -12.177  92.504  1.00 34.99      H    N
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ATOM	2136	CA	GLY	H	65	5.876	-13.134	92.522	1.00	33.39	H	C
ATOM	2137	C	GLY	H	65	4.544	-12.447	92.308	1.00	33.65	H	C
ATOM	2138	O	GLY	H	65	3.593	-13.076	91.859	1.00	40.69	H	O
ATOM	2139	N	ARG	H	66	4.471	-11.147	92.609	1.00	29.54	H	N
ATOM	2140	CA	ARG	H	66	3.222	-10.420	92.455	1.00	23.99	H	C
ATOM	2141	C	ARG	H	66	3.205	-9.377	91.343	1.00	27.36	H	C
ATOM	2142	O	ARG	H	66	2.144	-9.079	90.802	1.00	26.62	H	O
ATOM	2143	CB	ARG	H	66	2.872	-9.740	93.767	1.00	24.49	H	C
ATOM	2144	CG	ARG	H	66	2.673	-10.671	94.956	1.00	20.93	H	C
ATOM	2145	CD	ARG	H	66	2.156	-9.875	96.177	1.00	26.28	H	C
ATOM	2146	NE	ARG	H	66	3.013	-8.738	96.549	1.00	26.58	H	N
ATOM	2147	CZ	ARG	H	66	2.590	-7.468	96.631	1.00	23.28	H	C
ATOM	2148	NH1	ARG	H	66	1.325	-7.156	96.356	1.00	20.50	H	N
ATOM	2149	NH2	ARG	H	66	3.429	-6.513	97.026	1.00	23.33	H	N
ATOM	2150	N	PHE	H	67	4.377	-8.805	91.041	1.00	28.25	H	N
ATOM	2151	CA	PHE	H	67	4.527	-7.775	90.002	1.00	28.94	H	C
ATOM	2152	C	PHE	H	67	5.356	-8.293	88.845	1.00	27.61	H	C
ATOM	2153	O	PHE	H	67	6.344	-8.982	89.047	1.00	28.35	H	O
ATOM	2154	CB	PHE	H	67	5.291	-6.533	90.563	1.00	32.76	H	C
ATOM	2155	CG	PHE	H	67	4.496	-5.690	91.510	1.00	35.90	H	C
ATOM	2156	CD1	PHE	H	67	3.336	-6.190	92.108	1.00	32.82	H	C
ATOM	2157	CD2	PHE	H	67	4.934	-4.407	91.843	1.00	27.67	H	C
ATOM	2158	CE1	PHE	H	67	2.620	-5.421	93.032	1.00	37.74	H	C
ATOM	2159	CE2	PHE	H	67	4.236	-3.644	92.758	1.00	34.67	H	C
ATOM	2160	CZ	PHE	H	67	3.081	-4.138	93.358	1.00	41.48	H	C
ATOM	2161	N	THR	H	68	4.962	-7.937	87.637	1.00	28.82	H	N
ATOM	2162	CA	THR	H	68	5.726	-8.301	86.457	1.00	29.24	H	C
ATOM	2163	C	THR	H	68	5.964	-7.073	85.574	1.00	28.81	H	C
ATOM	2164	O	THR	H	68	5.009	-6.399	85.175	1.00	29.95	H	O
ATOM	2165	CB	THR	H	68	4.940	-9.382	85.611	1.00	31.63	H	C
ATOM	2166	OG1	THR	H	68	4.660	-10.484	86.463	1.00	28.51	H	O
ATOM	2167	CG2	THR	H	68	5.735	-9.824	84.396	1.00	17.86	H	C
ATOM	2168	N	ILE	H	69	7.227	-6.779	85.268	1.00	24.66	H	N
ATOM	2169	CA	ILE	H	69	7.546	-5.666	84.369	1.00	25.58	H	C
ATOM	2170	C	ILE	H	69	7.756	-6.235	82.965	1.00	27.22	H	C
ATOM	2171	O	ILE	H	69	8.245	-7.357	82.839	1.00	31.09	H	O
ATOM	2172	CB	ILE	H	69	8.852	-4.947	84.841	1.00	26.43	H	C
ATOM	2173	CG1	ILE	H	69	9.127	-3.732	83.959	1.00	18.67	H	C
ATOM	2174	CG2	ILE	H	69	10.060	-5.907	84.829	1.00	28.93	H	C
ATOM	2175	CD1	ILE	H	69	10.299	-2.888	84.578	1.00	22.12	H	C
ATOM	2176	N	SER	H	70	7.369	-5.492	81.924	1.00	24.59	H	N
ATOM	2177	CA	SER	H	70	7.542	-5.962	80.560	1.00	20.35	H	C
ATOM	2178	C	SER	H	70	7.651	-4.750	79.670	1.00	20.76	H	C
ATOM	2179	O	SER	H	70	7.380	-3.642	80.110	1.00	22.20	H	O
ATOM	2180	CB	SER	H	70	6.326	-6.838	80.156	1.00	18.01	H	C
ATOM	2181	OG	SER	H	70	5.148	-6.082	80.171	1.00	19.53	H	O
ATOM	2182	N	ARG	H	71	8.080	-4.931	78.430	1.00	21.74	H	N
ATOM	2183	CA	ARG	H	71	8.197	-3.810	77.546	1.00	22.80	H	C
ATOM	2184	C	ARG	H	71	7.718	-4.155	76.155	1.00	25.05	H	C
ATOM	2185	O	ARG	H	71	7.855	-5.291	75.693	1.00	28.88	H	O
ATOM	2186	CB	ARG	H	71	9.679	-3.350	77.440	1.00	22.32	H	C
ATOM	2187	CG	ARG	H	71	10.654	-4.473	76.878	1.00	17.63	H	C
ATOM	2188	CD	ARG	H	71	12.132	-4.115	77.230	1.00	13.84	H	C
ATOM	2189	NE	ARG	H	71	12.522	-2.868	76.577	1.00	26.63	H	N
ATOM	2190	CZ	ARG	H	71	13.529	-2.079	76.974	1.00	20.51	H	C
ATOM	2191	NH1	ARG	H	71	14.253	-2.413	78.030	1.00	13.73	H	N
ATOM	2192	NH2	ARG	H	71	13.792	-0.972	76.324	1.00	17.61	H	N
ATOM	2193	N	ASP	H	72	7.190	-3.165	75.464	1.00	24.41	H	N
ATOM	2194	CA	ASP	H	72	6.788	-3.397	74.094	1.00	24.18	H	C
ATOM	2195	C	ASP	H	72	7.709	-2.502	73.272	1.00	25.45	H	C
ATOM	2196	O	ASP	H	72	7.498	-1.297	73.158	1.00	25.31	H	O
ATOM	2197	CB	ASP	H	72	5.333	-2.998	73.865	1.00	27.17	H	C
ATOM	2198	CG	ASP	H	72	4.914	-3.198	72.416	1.00	30.78	H	C
ATOM	2199	OD1	ASP	H	72	5.759	-2.993	71.510	1.00	33.98	H	O
ATOM	2200	OD2	ASP	H	72	3.741	-3.535	72.194	1.00	38.58	H	O
ATOM	2201	N	ASN	H	73	8.752	-3.105	72.711	1.00	26.35	H	N
ATOM	2202	CA	ASN	H	73	9.720	-2.377	71.912	1.00	29.04	H	C
ATOM	2203	C	ASN	H	73	9.235	-1.837	70.569	1.00	31.02	H	C
ATOM	2204	O	ASN	H	73	9.895	-1.011	69.945	1.00	28.40	H	O

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ATOM   2205  CB  ASN H  73      10.958  -3.246  71.675  1.00 31.88      H    C
ATOM   2206  CG  ASN H  73      11.812  -3.396  72.923  1.00 32.53      H    C
ATOM   2207  OD1 ASN H  73      11.632  -2.669  73.912  1.00 42.74      H    O
ATOM   2208  ND2 ASN H  73      12.759  -4.319  72.877  1.00 33.41      H    N
ATOM   2209  N   ALA H  74       8.076  -2.276  70.115  1.00 32.65      H    N
ATOM   2210  CA  ALA H  74       7.595  -1.739  68.853  1.00 32.57      H    C
ATOM   2211  C   ALA H  74       6.852  -0.422  69.164  1.00 33.69      H    C
ATOM   2212  O   ALA H  74       6.922   0.547  68.421  1.00 31.16      H    O
ATOM   2213  CB  ALA H  74       6.660  -2.771  68.187  1.00 29.62      H    C
ATOM   2214  N   ARG H  75       6.189  -0.399  70.311  1.00 32.12      H    N
ATOM   2215  CA  ARG H  75       5.408   0.758  70.729  1.00 32.75      H    C
ATOM   2216  C   ARG H  75       6.097   1.695  71.737  1.00 29.96      H    C
ATOM   2217  O   ARG H  75       5.565   2.771  72.030  1.00 28.48      H    O
ATOM   2218  CB  ARG H  75       4.071   0.276  71.327  1.00 35.04      H    C
ATOM   2219  CG  ARG H  75       3.111  -0.412  70.334  1.00 40.61      H    C
ATOM   2220  CD  ARG H  75       1.825  -0.875  71.046  1.00 61.45      H    C
ATOM   2221  NE  ARG H  75       0.853  -1.612  70.224  1.00 68.33      H    N
ATOM   2222  CZ  ARG H  75       1.029  -2.841  69.731  1.00 69.94      H    C
ATOM   2223  NH1 ARG H  75       2.157  -3.513  69.950  1.00 60.61      H    N
ATOM   2224  NH2 ARG H  75       0.045  -3.419  69.040  1.00 70.68      H    N
ATOM   2225  N   ASN H  76       7.271   1.307  72.249  1.00 27.39      H    N
ATOM   2226  CA  ASN H  76       7.995   2.149  73.236  1.00 22.45      H    C
ATOM   2227  C   ASN H  76       7.114   2.344  74.461  1.00 24.26      H    C
ATOM   2228  O   ASN H  76       6.883   3.462  74.915  1.00 27.85      H    O
ATOM   2229  CB  ASN H  76       8.347   3.546  72.680  1.00 22.88      H    C
ATOM   2230  CG  ASN H  76       9.606   3.558  71.780  1.00 30.19      H    C
ATOM   2231  OD1 ASN H  76      10.162   4.622  71.501  1.00 45.69      H    O
ATOM   2232  ND2 ASN H  76      10.045   2.411  71.354  1.00 27.13      H    N
ATOM   2233  N   ILE H  77       6.624   1.251  75.001  1.00 20.55      H    N
ATOM   2234  CA  ILE H  77       5.783   1.289  76.166  1.00 21.43      H    C
ATOM   2235  C   ILE H  77       6.347   0.293  77.178  1.00 26.35      H    C
ATOM   2236  O   ILE H  77       6.750  -0.825  76.833  1.00 27.67      H    O
ATOM   2237  CB  ILE H  77       4.314   0.848  75.819  1.00 25.31      H    C
ATOM   2238  CG1 ILE H  77       3.752   1.702  74.674  1.00 31.02      H    C
ATOM   2239  CG2 ILE H  77       3.455   0.930  77.069  1.00 24.50      H    C
ATOM   2240  CD1 ILE H  77       2.332   1.304  74.167  1.00 18.41      H    C
ATOM   2241  N   LEU H  78       6.381   0.703  78.436  1.00 27.91      H    N
ATOM   2242  CA  LEU H  78       6.874  -0.106  79.528  1.00 24.89      H    C
ATOM   2243  C   LEU H  78       5.645  -0.396  80.365  1.00 24.76      H    C
ATOM   2244  O   LEU H  78       4.866   0.506  80.598  1.00 25.50      H    O
ATOM   2245  CB  LEU H  78       7.851   0.727  80.405  1.00 24.49      H    C
ATOM   2246  CG  LEU H  78       8.376   0.043  81.650  1.00 18.05      H    C
ATOM   2247  CD1 LEU H  78       9.449  -1.026  81.241  1.00 27.00      H    C
ATOM   2248  CD2 LEU H  78       9.068   1.102  82.532  1.00 15.70      H    C
ATOM   2249  N   TYR H  79       5.484  -1.630  80.833  1.00 26.11      H    N
ATOM   2250  CA  TYR H  79       4.330  -1.997  81.662  1.00 25.62      H    C
ATOM   2251  C   TYR H  79       4.720  -2.514  83.014  1.00 27.75      H    C
ATOM   2252  O   TYR H  79       5.827  -3.036  83.193  1.00 29.83      H    O
ATOM   2253  CB  TYR H  79       3.525  -3.156  80.994  1.00 22.60      H    C
ATOM   2254  CG  TYR H  79       2.952  -2.791  79.652  1.00 27.08      H    C
ATOM   2255  CD1 TYR H  79       3.565  -3.195  78.479  1.00 20.92      H    C
ATOM   2256  CD2 TYR H  79       1.791  -2.020  79.556  1.00 24.64      H    C
ATOM   2257  CE1 TYR H  79       3.048  -2.848  77.247  1.00 24.71      H    C
ATOM   2258  CE2 TYR H  79       1.277  -1.668  78.323  1.00 21.72      H    C
ATOM   2259  CZ  TYR H  79       1.908  -2.084  77.173  1.00 24.82      H    C
ATOM   2260  OH  TYR H  79       1.423  -1.711  75.935  1.00 21.43      H    O
ATOM   2261  N   LEU H  80       3.779  -2.429  83.964  1.00 25.48      H    N
ATOM   2262  CA  LEU H  80       3.947  -3.007  85.272  1.00 25.75      H    C
ATOM   2263  C   LEU H  80       2.592  -3.669  85.596  1.00 27.57      H    C
ATOM   2264  O   LEU H  80       1.599  -2.983  85.835  1.00 34.28      H    O
ATOM   2265  CB  LEU H  80       4.245  -1.992  86.409  1.00 25.22      H    C
ATOM   2266  CG  LEU H  80       4.468  -2.735  87.754  1.00 26.52      H    C
ATOM   2267  CD1 LEU H  80       5.836  -3.504  87.721  1.00 18.29      H    C
ATOM   2268  CD2 LEU H  80       4.552  -1.721  88.992  1.00 20.69      H    C
ATOM   2269  N   GLN H  81       2.550  -4.993  85.563  1.00 30.10      H    N
ATOM   2270  CA  GLN H  81       1.318  -5.716  85.905  1.00 32.07      H    C
ATOM   2271  C   GLN H  81       1.409  -6.033  87.376  1.00 30.52      H    C
ATOM   2272  O   GLN H  81       2.379  -6.674  87.832  1.00 30.77      H    O
ATOM   2273  CB  GLN H  81       1.224  -7.029  85.104  1.00 34.27      H    C
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ATOM   2274  CG  GLN H  81       0.084  -7.955  85.580  1.00 36.03      H    C
ATOM   2275  CD  GLN H  81      -1.266  -7.341  85.316  1.00 40.10      H    C
ATOM   2276  OE1 GLN H  81      -2.047  -7.096  86.248  1.00 35.51      H    O
ATOM   2277  NE2 GLN H  81      -1.543  -7.047  84.053  1.00 29.75      H    N
ATOM   2278  N   MET H  82       0.428  -5.573  88.153  1.00 29.32      H    N
ATOM   2279  CA  MET H  82       0.446  -5.840  89.579  1.00 31.69      H    C
ATOM   2280  C   MET H  82      -0.719  -6.757  89.911  1.00 33.42      H    C
ATOM   2281  O   MET H  82      -1.784  -6.580  89.386  1.00 37.22      H    O
ATOM   2282  CB  MET H  82       0.305  -4.526  90.380  1.00 32.57      H    C
ATOM   2283  CG  MET H  82       1.424  -3.501  90.097  1.00 34.83      H    C
ATOM   2284  SD  MET H  82       1.236  -1.930  91.036  1.00 41.35      H    S
ATOM   2285  CE  MET H  82       0.076  -1.286  90.153  1.00 21.34      H    C
ATOM   2286  N   SER H  82A     -0.500  -7.722  90.789  1.00 33.87      H    N
ATOM   2287  CA  SER H  82A     -1.553  -8.656  91.161  1.00 32.69      H    C
ATOM   2288  C   SER H  82A     -1.455  -8.809  92.664  1.00 30.35      H    C
ATOM   2289  O   SER H  82A     -0.448  -8.439  93.253  1.00 27.66      H    O
ATOM   2290  CB  SER H  82A     -1.309 -10.011  90.445  1.00 30.90      H    C
ATOM   2291  OG  SER H  82A     -0.074 -10.562  90.886  1.00 39.97      H    O
ATOM   2292  N   SER H  82B     -2.456  -9.444  93.270  1.00 30.11      H    N
ATOM   2293  CA  SER H  82B     -2.532  -9.614  94.738  1.00 32.59      H    C
ATOM   2294  C   SER H  82B     -2.084  -8.329  95.464  1.00 34.41      H    C
ATOM   2295  O   SER H  82B     -1.256  -8.387  96.386  1.00 34.38      H    O
ATOM   2296  CB  SER H  82B     -1.670 -10.769  95.249  1.00 31.62      H    C
ATOM   2297  OG  SER H  82B     -1.941 -11.975  94.545  1.00 39.73      H    O
ATOM   2298  N   LEU H  82C     -2.646  -7.194  95.050  1.00 34.50      H    N
ATOM   2299  CA  LEU H  82C     -2.300  -5.892  95.687  1.00 34.52      H    C
ATOM   2300  C   LEU H  82C     -2.677  -5.867  97.154  1.00 33.77      H    C
ATOM   2301  O   LEU H  82C     -3.731  -6.405  97.563  1.00 36.50      H    O
ATOM   2302  CB  LEU H  82C     -2.965  -4.745  94.923  1.00 31.33      H    C
ATOM   2303  CG  LEU H  82C     -2.300  -4.508  93.556  1.00 29.69      H    C
ATOM   2304  CD1 LEU H  82C     -3.142  -3.680  92.586  1.00 14.81      H    C
ATOM   2305  CD2 LEU H  82C     -0.928  -3.764  93.850  1.00 22.96      H    C
ATOM   2306  N   ARG H  83      -1.794  -5.270  97.953  1.00 37.50      H    N
ATOM   2307  CA  ARG H  83      -1.967  -5.119  99.404  1.00 37.28      H    C
ATOM   2308  C   ARG H  83      -2.044  -3.624  99.699  1.00 35.39      H    C
ATOM   2309  O   ARG H  83      -1.641  -2.802  98.859  1.00 34.41      H    O
ATOM   2310  CB  ARG H  83      -0.753  -5.691 100.115  1.00 35.83      H    C
ATOM   2311  CG  ARG H  83      -0.474  -7.134  99.749  1.00 44.13      H    C
ATOM   2312  CD  ARG H  83       0.963  -7.485 100.035  1.00 58.61      H    C
ATOM   2313  NE  ARG H  83       1.255  -8.881  99.733  1.00 65.92      H    N
ATOM   2314  CZ  ARG H  83       2.452  -9.433  99.885  1.00 68.29      H    C
ATOM   2315  NH1 ARG H  83       3.467  -8.701 100.328  1.00 66.48      H    N
ATOM   2316  NH2 ARG H  83       2.628 -10.727  99.618  1.00 76.67      H    N
ATOM   2317  N   SER H  84      -2.518  -3.268 100.887  1.00 33.54      H    N
ATOM   2318  CA  SER H  84      -2.634  -1.854 101.209  1.00 31.43      H    C
ATOM   2319  C   SER H  84      -1.268  -1.181 101.096  1.00 30.46      H    C
ATOM   2320  O   SER H  84      -1.188  -0.048 100.617  1.00 27.90      H    O
ATOM   2321  CB  SER H  84      -3.221  -1.658 102.606  1.00 32.69      H    C
ATOM   2322  OG  SER H  84      -2.301  -1.987 103.617  1.00 45.64      H    O
ATOM   2323  N   GLU H  85      -0.218  -1.906 101.491  1.00 27.55      H    N
ATOM   2324  CA  GLU H  85       1.174  -1.437 101.453  1.00 28.67      H    C
ATOM   2325  C   GLU H  85       1.693  -1.073 100.071  1.00 27.89      H    C
ATOM   2326  O   GLU H  85       2.728  -0.431  99.984  1.00 31.91      H    O
ATOM   2327  CB  GLU H  85       2.153  -2.463 102.036  1.00 28.80      H    C
ATOM   2328  CG  GLU H  85       1.715  -3.123 103.296  1.00 46.74      H    C
ATOM   2329  CD  GLU H  85       0.844  -4.321 103.003  1.00 56.38      H    C
ATOM   2330  OE1 GLU H  85       1.397  -5.388 102.632  1.00 62.51      H    O
ATOM   2331  OE2 GLU H  85      -0.389  -4.180 103.105  1.00 56.24      H    O
ATOM   2332  N   ASP H  86       1.030  -1.524  99.009  1.00 25.29      H    N
ATOM   2333  CA  ASP H  86       1.429  -1.160  97.655  1.00 25.71      H    C
ATOM   2334  C   ASP H  86       0.845   0.226  97.273  1.00 26.77      H    C
ATOM   2335  O   ASP H  86       1.075   0.712  96.147  1.00 25.68      H    O
ATOM   2336  CB  ASP H  86       0.906  -2.178  96.624  1.00 26.58      H    C
ATOM   2337  CG  ASP H  86       1.418  -3.603  96.877  1.00 32.52      H    C
ATOM   2338  OD1 ASP H  86       0.586  -4.562  96.763  1.00 30.42      H    O
ATOM   2339  OD2 ASP H  86       2.627  -3.765  97.172  1.00 29.99      H    O
ATOM   2340  N   THR H  87       0.072   0.851  98.176  1.00 23.93      H    N
ATOM   2341  CA  THR H  87      -0.531   2.165  97.842  1.00 23.44      H    C
ATOM   2342  C   THR H  87       0.661   3.163  97.690  1.00 22.23      H    C
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ATOM	2343	O	THR	H	87	1.447	3.314	98.591	1.00	21.36	H	O
ATOM	2344	CB	THR	H	87	-1.458	2.654	98.956	1.00	26.73	H	C
ATOM	2345	OG1	THR	H	87	-2.623	1.808	98.992	1.00	26.03	H	O
ATOM	2346	CG2	THR	H	87	-1.881	4.145	98.709	1.00	28.47	H	C
ATOM	2347	N	ALA	H	88	0.722	3.845	96.568	1.00	19.07	H	N
ATOM	2348	CA	ALA	H	88	1.889	4.717	96.354	1.00	17.45	H	C
ATOM	2349	C	ALA	H	88	1.815	5.404	95.052	1.00	21.75	H	C
ATOM	2350	O	ALA	H	88	0.972	5.103	94.182	1.00	21.21	H	O
ATOM	2351	CB	ALA	H	88	3.162	3.843	96.361	1.00	14.94	H	C
ATOM	2352	N	MET	H	89	2.746	6.358	94.868	1.00	22.41	H	N
ATOM	2353	CA	MET	H	89	2.827	7.001	93.570	1.00	24.72	H	C
ATOM	2354	C	MET	H	89	3.794	6.092	92.835	1.00	22.60	H	C
ATOM	2355	O	MET	H	89	4.839	5.790	93.399	1.00	26.75	H	O
ATOM	2356	CB	MET	H	89	3.516	8.378	93.679	1.00	24.18	H	C
ATOM	2357	CG	MET	H	89	3.623	9.117	92.352	1.00	24.57	H	C
ATOM	2358	SD	MET	H	89	2.092	9.565	91.500	1.00	31.14	H	S
ATOM	2359	CE	MET	H	89	1.586	10.985	92.556	1.00	17.32	H	C
ATOM	2360	N	TYR	H	90	3.478	5.699	91.598	1.00	19.66	H	N
ATOM	2361	CA	TYR	H	90	4.390	4.838	90.830	1.00	18.76	H	C
ATOM	2362	C	TYR	H	90	5.026	5.618	89.717	1.00	19.48	H	C
ATOM	2363	O	TYR	H	90	4.343	6.131	88.836	1.00	18.22	H	O
ATOM	2364	CB	TYR	H	90	3.643	3.600	90.214	1.00	16.54	H	C
ATOM	2365	CG	TYR	H	90	3.375	2.566	91.286	1.00	14.14	H	C
ATOM	2366	CD1	TYR	H	90	4.172	1.427	91.392	1.00	9.33	H	C
ATOM	2367	CD2	TYR	H	90	2.376	2.772	92.251	1.00	22.63	H	C
ATOM	2368	CE1	TYR	H	90	3.988	0.522	92.425	1.00	15.98	H	C
ATOM	2369	CE2	TYR	H	90	2.197	1.887	93.285	1.00	13.30	H	C
ATOM	2370	CZ	TYR	H	90	3.009	0.760	93.361	1.00	24.24	H	C
ATOM	2371	OH	TYR	H	90	2.835	-0.114	94.384	1.00	21.02	H	O
ATOM	2372	N	TYR	H	91	6.368	5.669	89.721	1.00	20.31	H	N
ATOM	2373	CA	TYR	H	91	7.094	6.384	88.651	1.00	17.12	H	C
ATOM	2374	C	TYR	H	91	7.769	5.400	87.681	1.00	19.92	H	C
ATOM	2375	O	TYR	H	91	8.393	4.441	88.121	1.00	18.18	H	O
ATOM	2376	CB	TYR	H	91	8.251	7.216	89.226	1.00	15.44	H	C
ATOM	2377	CG	TYR	H	91	7.793	8.338	90.138	1.00	17.08	H	C
ATOM	2378	CD1	TYR	H	91	7.818	8.208	91.507	1.00	9.66	H	C
ATOM	2379	CD2	TYR	H	91	7.339	9.525	89.589	1.00	15.29	H	C
ATOM	2380	CE1	TYR	H	91	7.408	9.260	92.338	1.00	16.34	H	C
ATOM	2381	CE2	TYR	H	91	6.901	10.577	90.398	1.00	15.56	H	C
ATOM	2382	CZ	TYR	H	91	6.944	10.446	91.755	1.00	21.42	H	C
ATOM	2383	OH	TYR	H	91	6.544	11.517	92.547	1.00	8.81	H	O
ATOM	2384	N	CYS	H	92	7.650	5.733	86.397	1.00	21.55	H	N
ATOM	2385	CA	CYS	H	92	8.311	5.065	85.278	1.00	22.10	H	C
ATOM	2386	C	CYS	H	92	9.709	5.751	85.270	1.00	20.94	H	C
ATOM	2387	O	CYS	H	92	9.771	6.959	85.435	1.00	20.43	H	O
ATOM	2388	CB	CYS	H	92	7.602	5.498	83.987	1.00	18.81	H	C
ATOM	2389	SG	CYS	H	92	8.429	4.801	82.569	1.00	32.60	H	S
ATOM	2390	N	ALA	H	93	10.805	5.022	85.095	1.00	18.52	H	N
ATOM	2391	CA	ALA	H	93	12.107	5.684	85.085	1.00	15.79	H	C
ATOM	2392	C	ALA	H	93	13.066	5.019	84.068	1.00	15.40	H	C
ATOM	2393	O	ALA	H	93	13.031	3.780	83.898	1.00	20.16	H	O
ATOM	2394	CB	ALA	H	93	12.737	5.604	86.462	1.00	16.78	H	C
ATOM	2395	N	ARG	H	94	13.898	5.821	83.402	1.00	15.89	H	N
ATOM	2396	CA	ARG	H	94	14.873	5.224	82.480	1.00	17.43	H	C
ATOM	2397	C	ARG	H	94	16.031	4.849	83.374	1.00	17.10	H	C
ATOM	2398	O	ARG	H	94	16.607	5.705	84.058	1.00	16.11	H	O
ATOM	2399	CB	ARG	H	94	15.325	6.211	81.417	1.00	13.45	H	C
ATOM	2400	CG	ARG	H	94	16.050	5.523	80.238	1.00	15.86	H	C
ATOM	2401	CD	ARG	H	94	16.477	6.566	79.242	1.00	13.79	H	C
ATOM	2402	NE	ARG	H	94	17.730	7.229	79.580	1.00	17.29	H	N
ATOM	2403	CZ	ARG	H	94	18.301	8.146	78.818	1.00	20.35	H	C
ATOM	2404	NH1	ARG	H	94	17.705	8.549	77.664	1.00	13.04	H	N
ATOM	2405	NH2	ARG	H	94	19.520	8.602	79.142	1.00	15.82	H	N
ATOM	2406	N	LEU	H	95	16.397	3.565	83.350	1.00	19.09	H	N
ATOM	2407	CA	LEU	H	95	17.469	3.079	84.217	1.00	17.64	H	C
ATOM	2408	C	LEU	H	95	18.737	3.085	83.375	1.00	19.46	H	C
ATOM	2409	O	LEU	H	95	18.912	2.219	82.515	1.00	20.81	H	O
ATOM	2410	CB	LEU	H	95	17.117	1.676	84.700	1.00	16.97	H	C
ATOM	2411	CG	LEU	H	95	18.301	1.013	85.430	1.00	19.81	H	C

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ATOM   2412  CD1 LEU H  95     18.891   2.007  86.390  1.00 26.56      H    C
ATOM   2413  CD2 LEU H  95     17.837  -0.192  86.136  1.00 17.57      H    C
ATOM   2414  N   ASP H  96     19.597   4.078  83.580  1.00 18.64      H    N
ATOM   2415  CA  ASP H  96     20.811   4.187  82.758  1.00 18.97      H    C
ATOM   2416  C   ASP H  96     21.900   3.220  83.242  1.00 18.94      H    C
ATOM   2417  O   ASP H  96     22.915   3.065  82.569  1.00 14.63      H    O
ATOM   2418  CB  ASP H  96     21.338   5.617  82.723  1.00 20.09      H    C
ATOM   2419  CG  ASP H  96     20.502   6.519  81.755  1.00 19.58      H    C
ATOM   2420  OD1 ASP H  96     19.319   6.184  81.578  1.00 26.69      H    O
ATOM   2421  OD2 ASP H  96     21.002   7.513  81.224  1.00 11.72      H    O
ATOM   2422  N   GLY H  97     21.663   2.627  84.402  1.00 15.66      H    N
ATOM   2423  CA  GLY H  97     22.574   1.601  84.922  1.00 16.17      H    C
ATOM   2424  C   GLY H  97     23.126   1.821  86.310  1.00 16.48      H    C
ATOM   2425  O   GLY H  97     23.064   2.935  86.841  1.00 14.75      H    O
ATOM   2426  N   TYR H  98     23.737   0.782  86.887  1.00 12.61      H    N
ATOM   2427  CA  TYR H  98     24.259   0.958  88.226  1.00 13.48      H    C
ATOM   2428  C   TYR H  98     25.374   2.029  88.271  1.00 14.66      H    C
ATOM   2429  O   TYR H  98     25.598   2.639  89.299  1.00 15.42      H    O
ATOM   2430  CB  TYR H  98     24.709  -0.385  88.870  1.00 15.11      H    C
ATOM   2431  CG  TYR H  98     25.762  -1.194  88.104  1.00 12.19      H    C
ATOM   2432  CD1 TYR H  98     27.123  -1.116  88.450  1.00 18.17      H    C
ATOM   2433  CD2 TYR H  98     25.384  -2.089  87.124  1.00 12.48      H    C
ATOM   2434  CE1 TYR H  98     28.089  -1.955  87.822  1.00 18.60      H    C
ATOM   2435  CE2 TYR H  98     26.330  -2.917  86.489  1.00  8.78      H    C
ATOM   2436  CZ  TYR H  98     27.651  -2.853  86.838  1.00  9.46      H    C
ATOM   2437  OH  TYR H  98     28.553  -3.723  86.277  1.00 13.71      H    O
ATOM   2438  N   TYR H  99     26.025   2.308  87.154  1.00 10.25      H    N
ATOM   2439  CA  TYR H  99     27.038   3.382  87.160  1.00 11.42      H    C
ATOM   2440  C   TYR H  99     26.476   4.782  86.874  1.00 13.38      H    C
ATOM   2441  O   TYR H  99     27.213   5.755  86.930  1.00 11.93      H    O
ATOM   2442  CB  TYR H  99     28.127   3.102  86.073  1.00  9.58      H    C
ATOM   2443  CG  TYR H  99     29.112   2.030  86.522  1.00 11.24      H    C
ATOM   2444  CD1 TYR H  99     29.940   2.265  87.613  1.00 16.63      H    C
ATOM   2445  CD2 TYR H  99     29.206   0.785  85.850  1.00 15.72      H    C
ATOM   2446  CE1 TYR H  99     30.872   1.295  88.063  1.00 17.96      H    C
ATOM   2447  CE2 TYR H  99     30.145  -0.222  86.275  1.00 20.42      H    C
ATOM   2448  CZ  TYR H  99     30.951   0.069  87.386  1.00 16.74      H    C
ATOM   2449  OH  TYR H  99     31.813  -0.917  87.795  1.00 14.93      H    O
ATOM   2450  N   PHE H 100     25.185   4.855  86.518  1.00 14.05      H    N
ATOM   2451  CA  PHE H 100     24.563   6.095  86.063  1.00 12.94      H    C
ATOM   2452  C   PHE H 100     23.283   6.544  86.789  1.00 15.00      H    C
ATOM   2453  O   PHE H 100     22.930   7.725  86.705  1.00 16.90      H    O
ATOM   2454  CB  PHE H 100     24.268   5.977  84.529  1.00 13.53      H    C
ATOM   2455  CG  PHE H 100     25.550   5.835  83.677  1.00 12.84      H    C
ATOM   2456  CD1 PHE H 100     25.918   4.597  83.136  1.00 12.65      H    C
ATOM   2457  CD2 PHE H 100     26.353   6.921  83.426  1.00 15.24      H    C
ATOM   2458  CE1 PHE H 100     27.068   4.469  82.358  1.00 12.14      H    C
ATOM   2459  CE2 PHE H 100     27.515   6.797  82.639  1.00 14.00      H    C
ATOM   2460  CZ  PHE H 100     27.862   5.563  82.110  1.00 12.32      H    C
ATOM   2461  N   GLY H 100A    22.604   5.615  87.466  1.00 13.85      H    N
ATOM   2462  CA  GLY H 100A    21.381   5.986  88.197  1.00 12.56      H    C
ATOM   2463  C   GLY H 100A    20.108   6.047  87.364  1.00 13.56      H    C
ATOM   2464  O   GLY H 100A    20.105   5.714  86.192  1.00 16.72      H    O
ATOM   2465  N   PHE H 100B    19.013   6.516  87.980  1.00 14.22      H    N
ATOM   2466  CA  PHE H 100B    17.722   6.639  87.266  1.00 16.09      H    C
ATOM   2467  C   PHE H 100B    17.797   8.041  86.665  1.00 19.51      H    C
ATOM   2468  O   PHE H 100B    17.537   9.028  87.347  1.00 18.58      H    O
ATOM   2469  CB  PHE H 100B    16.579   6.550  88.321  1.00 15.67      H    C
ATOM   2470  CG  PHE H 100B    16.435   5.181  88.952  1.00 17.58      H    C
ATOM   2471  CD1 PHE H 100B    16.614   5.011  90.323  1.00 12.85      H    C
ATOM   2472  CD2 PHE H 100B    16.074   4.069  88.177  1.00 13.17      H    C
ATOM   2473  CE1 PHE H 100B    16.444   3.764  90.923  1.00 13.91      H    C
ATOM   2474  CE2 PHE H 100B    15.903   2.799  88.792  1.00 12.44      H    C
ATOM   2475  CZ  PHE H 100B    16.083   2.656  90.155  1.00  9.26      H    C
ATOM   2476  N   ALA H 101     18.098   8.123  85.364  1.00 20.24      H    N
ATOM   2477  CA  ALA H 101     18.375   9.418  84.778  1.00 16.38      H    C
ATOM   2478  C   ALA H 101     17.175  10.278  84.391  1.00 17.03      H    C
ATOM   2479  O   ALA H 101     17.295  11.489  84.348  1.00 21.31      H    O
ATOM   2480  CB  ALA H 101     19.295   9.264  83.594  1.00 13.65      H    C
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ATOM	2481	N	TYR	H	102	16.043	9.647	84.130	1.00	18.14	H N
ATOM	2482	CA	TYR	H	102	14.816	10.361	83.745	1.00	17.04	H C
ATOM	2483	C	TYR	H	102	13.645	9.693	84.420	1.00	17.35	H C
ATOM	2484	O	TYR	H	102	13.572	8.471	84.472	1.00	14.92	H O
ATOM	2485	CB	TYR	H	102	14.593	10.296	82.235	1.00	17.95	H C
ATOM	2486	CG	TYR	H	102	15.585	11.140	81.523	1.00	20.25	H C
ATOM	2487	CD1	TYR	H	102	16.757	10.591	81.028	1.00	20.01	H C
ATOM	2488	CD2	TYR	H	102	15.402	12.513	81.456	1.00	20.00	H C
ATOM	2489	CE1	TYR	H	102	17.747	11.421	80.471	1.00	16.24	H C
ATOM	2490	CE2	TYR	H	102	16.372	13.343	80.911	1.00	15.52	H C
ATOM	2491	CZ	TYR	H	102	17.537	12.782	80.419	1.00	17.92	H C
ATOM	2492	OH	TYR	H	102	18.475	13.602	79.832	1.00	32.99	H O
ATOM	2493	N	TRP	H	103	12.728	10.512	84.921	1.00	17.03	H N
ATOM	2494	CA	TRP	H	103	11.564	10.003	85.632	1.00	17.00	H C
ATOM	2495	C	TRP	H	103	10.299	10.565	85.009	1.00	15.31	H C
ATOM	2496	O	TRP	H	103	10.306	11.676	84.472	1.00	18.72	H O
ATOM	2497	CB	TRP	H	103	11.595	10.459	87.110	1.00	18.58	H C
ATOM	2498	CG	TRP	H	103	12.760	9.947	87.947	1.00	22.42	H C
ATOM	2499	CD1	TRP	H	103	14.090	10.198	87.721	1.00	10.35	H C
ATOM	2500	CD2	TRP	H	103	12.685	9.164	89.135	1.00	13.24	H C
ATOM	2501	NE1	TRP	H	103	14.852	9.613	88.706	1.00	24.99	H N
ATOM	2502	CE2	TRP	H	103	14.024	8.968	89.590	1.00	11.38	H C
ATOM	2503	CE3	TRP	H	103	11.623	8.607	89.878	1.00	13.12	H C
ATOM	2504	CZ2	TRP	H	103	14.328	8.251	90.710	1.00	9.14	H C
ATOM	2505	CZ3	TRP	H	103	11.925	7.888	91.015	1.00	13.82	H C
ATOM	2506	CH2	TRP	H	103	13.281	7.709	91.426	1.00	13.97	H C
ATOM	2507	N	GLY	H	104	9.216	9.792	85.071	1.00	16.98	H N
ATOM	2508	CA	GLY	H	104	7.947	10.303	84.542	1.00	20.03	H C
ATOM	2509	C	GLY	H	104	7.258	11.169	85.604	1.00	22.00	H C
ATOM	2510	O	GLY	H	104	7.886	11.535	86.606	1.00	22.60	H O
ATOM	2511	N	ALA	H	105	5.979	11.508	85.400	1.00	24.52	H N
ATOM	2512	CA	ALA	H	105	5.284	12.344	86.356	1.00	23.39	H C
ATOM	2513	C	ALA	H	105	4.649	11.524	87.468	1.00	21.52	H C
ATOM	2514	O	ALA	H	105	4.218	12.078	88.465	1.00	24.75	H O
ATOM	2515	CB	ALA	H	105	4.185	13.220	85.606	1.00	24.94	H C
ATOM	2516	N	GLY	H	106	4.600	10.191	87.314	1.00	21.97	H N
ATOM	2517	CA	GLY	H	106	4.128	9.196	88.266	1.00	23.66	H C
ATOM	2518	C	GLY	H	106	2.610	9.025	88.183	1.00	23.03	H C
ATOM	2519	O	GLY	H	106	1.872	9.910	87.772	1.00	24.09	H O
ATOM	2520	N	THR	H	107	2.160	7.813	88.554	1.00	22.71	H N
ATOM	2521	CA	THR	H	107	0.727	7.542	88.566	1.00	21.91	H C
ATOM	2522	C	THR	H	107	0.306	6.924	89.901	1.00	21.11	H C
ATOM	2523	O	THR	H	107	0.862	5.939	90.367	1.00	18.20	H O
ATOM	2524	CB	THR	H	107	0.421	6.574	87.423	1.00	27.94	H C
ATOM	2525	OG1	THR	H	107	-0.995	6.432	87.297	1.00	33.93	H O
ATOM	2526	CG2	THR	H	107	1.030	5.202	87.728	1.00	17.61	H C
ATOM	2527	N	LEU	H	108	-0.687	7.564	90.541	1.00	24.58	H N
ATOM	2528	CA	LEU	H	108	-1.066	7.139	91.886	1.00	25.53	H C
ATOM	2529	C	LEU	H	108	-1.862	5.831	91.887	1.00	21.65	H C
ATOM	2530	O	LEU	H	108	-2.801	5.630	91.129	1.00	23.64	H O
ATOM	2531	CB	LEU	H	108	-1.900	8.252	92.519	1.00	30.90	H C
ATOM	2532	CG	LEU	H	108	-1.075	9.150	93.442	1.00	20.00	H C
ATOM	2533	CD1	LEU	H	108	-1.415	10.631	93.266	1.00	20.00	H C
ATOM	2534	CD2	LEU	H	108	-1.299	8.835	94.921	1.00	20.00	H C
ATOM	2535	N	VAL	H	109	-1.423	4.903	92.760	1.00	22.28	H N
ATOM	2536	CA	VAL	H	109	-2.177	3.669	92.946	1.00	22.76	H C
ATOM	2537	C	VAL	H	109	-2.662	3.531	94.390	1.00	25.97	H C
ATOM	2538	O	VAL	H	109	-1.892	3.509	95.340	1.00	22.42	H O
ATOM	2539	CB	VAL	H	109	-1.276	2.487	92.593	1.00	22.61	H C
ATOM	2540	CG1	VAL	H	109	-1.965	1.180	92.982	1.00	12.42	H C
ATOM	2541	CG2	VAL	H	109	-0.991	2.473	91.104	1.00	15.97	H C
ATOM	2542	N	ALA	H	110	-3.995	3.473	94.541	1.00	27.50	H N
ATOM	2543	CA	ALA	H	110	-4.549	3.344	95.883	1.00	34.16	H C
ATOM	2544	C	ALA	H	110	-5.218	1.984	96.096	1.00	30.55	H C
ATOM	2545	O	ALA	H	110	-6.145	1.604	95.393	1.00	28.32	H O
ATOM	2546	CB	ALA	H	110	-5.561	4.471	96.092	1.00	34.67	H C
ATOM	2547	N	VAL	H	111	-4.788	1.231	97.090	1.00	29.84	H N
ATOM	2548	CA	VAL	H	111	-5.337	-0.096	97.338	1.00	31.80	H C
ATOM	2549	C	VAL	H	111	-6.192	0.068	98.562	1.00	31.94	H C

ATOM	2550	O	VAL	H	111	-5.686	0.211	99.660	1.00	31.65	H	O
ATOM	2551	CB	VAL	H	111	-4.207	-1.118	97.630	1.00	34.06	H	C
ATOM	2552	CG1	VAL	H	111	-4.820	-2.488	97.985	1.00	31.41	H	C
ATOM	2553	CG2	VAL	H	111	-3.279	-1.246	96.368	1.00	27.16	H	C
ATOM	2554	N	SER	H	112	-7.506	0.047	98.345	1.00	33.05	H	N
ATOM	2555	CA	SER	H	112	-8.423	0.257	99.431	1.00	33.70	H	C
ATOM	2556	C	SER	H	112	-9.780	-0.337	99.112	1.00	36.79	H	C
ATOM	2557	O	SER	H	112	-10.182	-0.482	97.946	1.00	37.17	H	O
ATOM	2558	CB	SER	H	112	-8.603	1.761	99.645	1.00	32.72	H	C
ATOM	2559	OG	SER	H	112	-9.559	2.071	100.646	1.00	26.84	H	O
ATOM	2560	N	ALA	H	113	-10.487	-0.646	100.169	1.00	38.98	H	N
ATOM	2561	CA	ALA	H	113	-11.824	-1.173	100.013	1.00	41.14	H	C
ATOM	2562	C	ALA	H	113	-12.805	0.001	99.959	1.00	38.87	H	C
ATOM	2563	O	ALA	H	113	-13.983	-0.202	99.665	1.00	42.01	H	O
ATOM	2564	CB	ALA	H	113	-12.160	-2.055	101.202	1.00	43.56	H	C
ATOM	2565	N	ALA	H	114	-12.325	1.216	100.256	1.00	35.04	H	N
ATOM	2566	CA	ALA	H	114	-13.182	2.403	100.240	1.00	32.22	H	C
ATOM	2567	C	ALA	H	114	-13.707	2.673	98.847	1.00	34.27	H	C
ATOM	2568	O	ALA	H	114	-13.135	2.218	97.839	1.00	36.90	H	O
ATOM	2569	CB	ALA	H	114	-12.458	3.611	100.763	1.00	27.25	H	C
ATOM	2570	N	ALA	H	115	-14.798	3.431	98.796	1.00	34.74	H	N
ATOM	2571	CA	ALA	H	115	-15.460	3.725	97.537	1.00	37.80	H	C
ATOM	2572	C	ALA	H	115	-15.153	5.077	96.946	1.00	35.62	H	C
ATOM	2573	O	ALA	H	115	-15.027	6.068	97.652	1.00	34.30	H	O
ATOM	2574	CB	ALA	H	115	-16.987	3.584	97.707	1.00	39.57	H	C
ATOM	2575	N	THR	H	116	-15.090	5.101	95.622	1.00	32.15	H	N
ATOM	2576	CA	THR	H	116	-14.834	6.322	94.882	1.00	32.34	H	C
ATOM	2577	C	THR	H	116	-15.916	7.317	95.224	1.00	32.92	H	C
ATOM	2578	O	THR	H	116	-17.121	6.985	95.198	1.00	37.07	H	O
ATOM	2579	CB	THR	H	116	-14.893	6.044	93.385	1.00	32.96	H	C
ATOM	2580	OG1	THR	H	116	-13.832	5.138	93.046	1.00	41.93	H	O
ATOM	2581	CG2	THR	H	116	-14.752	7.314	92.582	1.00	33.48	H	C
ATOM	2582	N	THR	H	117	-15.514	8.528	95.594	1.00	36.22	H	N
ATOM	2583	CA	THR	H	117	-16.507	9.569	95.901	1.00	34.76	H	C
ATOM	2584	C	THR	H	117	-16.052	10.810	95.193	1.00	32.82	H	C
ATOM	2585	O	THR	H	117	-14.886	11.181	95.309	1.00	32.94	H	O
ATOM	2586	CB	THR	H	117	-16.597	9.867	97.385	1.00	33.77	H	C
ATOM	2587	OG1	THR	H	117	-16.771	8.640	98.098	1.00	39.01	H	O
ATOM	2588	CG2	THR	H	117	-17.789	10.765	97.652	1.00	34.01	H	C
ATOM	2589	N	PRO	H	118	-16.949	11.457	94.426	1.00	33.70	H	N
ATOM	2590	CA	PRO	H	118	-16.564	12.668	93.702	1.00	35.93	H	C
ATOM	2591	C	PRO	H	118	-16.494	13.861	94.655	1.00	35.72	H	C
ATOM	2592	O	PRO	H	118	-17.221	13.927	95.623	1.00	40.13	H	O
ATOM	2593	CB	PRO	H	118	-17.684	12.821	92.664	1.00	33.69	H	C
ATOM	2594	CG	PRO	H	118	-18.908	12.369	93.472	1.00	34.15	H	C
ATOM	2595	CD	PRO	H	118	-18.372	11.132	94.206	1.00	34.57	H	C
ATOM	2596	N	PRO	H	119	-15.633	14.837	94.362	1.00	35.03	H	N
ATOM	2597	CA	PRO	H	119	-15.571	15.983	95.273	1.00	33.26	H	C
ATOM	2598	C	PRO	H	119	-16.672	16.985	95.043	1.00	31.25	H	C
ATOM	2599	O	PRO	H	119	-17.268	17.024	93.972	1.00	33.26	H	O
ATOM	2600	CB	PRO	H	119	-14.241	16.620	94.924	1.00	33.76	H	C
ATOM	2601	CG	PRO	H	119	-14.176	16.379	93.413	1.00	31.63	H	C
ATOM	2602	CD	PRO	H	119	-14.588	14.917	93.327	1.00	35.32	H	C
ATOM	2603	N	SER	H	120	-16.914	17.818	96.050	1.00	31.16	H	N
ATOM	2604	CA	SER	H	120	-17.822	18.941	95.888	1.00	28.95	H	C
ATOM	2605	C	SER	H	120	-16.869	20.135	95.805	1.00	26.08	H	C
ATOM	2606	O	SER	H	120	-16.006	20.275	96.642	1.00	28.02	H	O
ATOM	2607	CB	SER	H	120	-18.763	19.081	97.078	1.00	29.74	H	C
ATOM	2608	OG	SER	H	120	-19.749	18.049	97.009	1.00	35.85	H	O
ATOM	2609	N	VAL	H	121	-17.007	20.969	94.776	1.00	22.55	H	N
ATOM	2610	CA	VAL	H	121	-16.132	22.120	94.603	1.00	20.71	H	C
ATOM	2611	C	VAL	H	121	-16.877	23.374	95.006	1.00	22.27	H	C
ATOM	2612	O	VAL	H	121	-17.939	23.654	94.481	1.00	27.65	H	O
ATOM	2613	CB	VAL	H	121	-15.651	22.195	93.124	1.00	17.00	H	C
ATOM	2614	CG1	VAL	H	121	-14.748	23.381	92.927	1.00	15.83	H	C
ATOM	2615	CG2	VAL	H	121	-14.936	20.859	92.738	1.00	16.73	H	C
ATOM	2616	N	TYR	H	122	-16.349	24.129	95.962	1.00	25.41	H	N
ATOM	2617	CA	TYR	H	122	-17.044	25.341	96.426	1.00	24.88	H	C
ATOM	2618	C	TYR	H	122	-16.203	26.561	96.279	1.00	24.68	H	C

ATOM	2619	O	TYR	H	122	-15.032	26.548	96.577	1.00	24.38	H	O
ATOM	2620	CB	TYR	H	122	-17.433	25.221	97.904	1.00	24.18	H	C
ATOM	2621	CG	TYR	H	122	-18.344	24.069	98.199	1.00	29.23	H	C
ATOM	2622	CD1	TYR	H	122	-19.571	23.951	97.546	1.00	25.06	H	C
ATOM	2623	CD2	TYR	H	122	-18.003	23.103	99.135	1.00	25.35	H	C
ATOM	2624	CE1	TYR	H	122	-20.425	22.898	97.825	1.00	21.10	H	C
ATOM	2625	CE2	TYR	H	122	-18.861	22.040	99.426	1.00	21.80	H	C
ATOM	2626	CZ	TYR	H	122	-20.059	21.950	98.767	1.00	26.10	H	C
ATOM	2627	OH	TYR	H	122	-20.912	20.895	99.028	1.00	34.59	H	O
ATOM	2628	N	PRO	H	123	-16.812	27.668	95.855	1.00	26.07	H	N
ATOM	2629	CA	PRO	H	123	-16.066	28.906	95.685	1.00	22.92	H	C
ATOM	2630	C	PRO	H	123	-15.828	29.629	97.011	1.00	25.12	H	C
ATOM	2631	O	PRO	H	123	-16.675	29.601	97.899	1.00	29.59	H	O
ATOM	2632	CB	PRO	H	123	-16.971	29.723	94.767	1.00	26.97	H	C
ATOM	2633	CG	PRO	H	123	-18.354	29.367	95.265	1.00	22.97	H	C
ATOM	2634	CD	PRO	H	123	-18.245	27.839	95.513	1.00	26.49	H	C
ATOM	2635	N	LEU	H	124	-14.671	30.279	97.127	1.00	26.07	H	N
ATOM	2636	CA	LEU	H	124	-14.326	31.043	98.325	1.00	24.46	H	C
ATOM	2637	C	LEU	H	124	-14.143	32.505	97.922	1.00	28.44	H	C
ATOM	2638	O	LEU	H	124	-13.148	32.883	97.270	1.00	28.59	H	O
ATOM	2639	CB	LEU	H	124	-13.026	30.503	98.959	1.00	24.13	H	C
ATOM	2640	CG	LEU	H	124	-13.138	29.021	99.352	1.00	25.03	H	C
ATOM	2641	CD1	LEU	H	124	-11.734	28.606	99.873	1.00	18.82	H	C
ATOM	2642	CD2	LEU	H	124	-14.254	28.781	100.416	1.00	12.78	H	C
ATOM	2643	N	ALA	H	125	-15.139	33.328	98.272	1.00	33.65	H	N
ATOM	2644	CA	ALA	H	125	-15.087	34.755	97.956	1.00	34.90	H	C
ATOM	2645	C	ALA	H	125	-15.210	35.537	99.281	1.00	37.39	H	C
ATOM	2646	O	ALA	H	125	-15.840	35.057	100.198	1.00	35.63	H	O
ATOM	2647	CB	ALA	H	125	-16.260	35.102	97.030	1.00	33.48	H	C
ATOM	2648	N	PRO	H	126	-14.621	36.744	99.375	1.00	44.34	H	N
ATOM	2649	CA	PRO	H	126	-14.664	37.596	100.585	1.00	48.17	H	C
ATOM	2650	C	PRO	H	126	-16.007	38.205	100.986	1.00	53.43	H	C
ATOM	2651	O	PRO	H	126	-16.816	38.560	100.135	1.00	53.07	H	O
ATOM	2652	CB	PRO	H	126	-13.650	38.697	100.281	1.00	48.47	H	C
ATOM	2653	CG	PRO	H	126	-13.593	38.733	98.735	1.00	46.77	H	C
ATOM	2654	CD	PRO	H	126	-13.652	37.277	98.392	1.00	47.77	H	C
ATOM	2655	N	GLY	H	127	-16.210	38.352	102.299	1.00	58.90	H	N
ATOM	2656	CA	GLY	H	127	-17.427	38.964	102.811	1.00	62.44	H	C
ATOM	2657	C	GLY	H	127	-17.313	40.472	102.691	1.00	65.56	H	C
ATOM	2658	O	GLY	H	127	-16.226	40.950	102.314	1.00	67.61	H	O
ATOM	2659	OXT	GLY	H	127	-18.294	41.197	102.962	1.00	69.07	H	O
ATOM	2660	N	ASN	H	133	-7.670	46.717	99.327	1.00	61.24	H	N
ATOM	2661	CA	ASN	H	133	-6.184	46.774	99.368	1.00	58.83	H	C
ATOM	2662	C	ASN	H	133	-5.627	46.469	98.005	1.00	54.12	H	C
ATOM	2663	O	ASN	H	133	-6.373	46.230	97.068	1.00	54.20	H	O
ATOM	2664	CB	ASN	H	133	-5.588	45.802	100.384	1.00	61.20	H	C
ATOM	2665	CG	ASN	H	133	-6.609	44.889	101.017	1.00	68.39	H	C
ATOM	2666	OD1	ASN	H	133	-6.246	44.026	101.820	1.00	78.27	H	O
ATOM	2667	ND2	ASN	H	133	-7.882	45.064	100.680	1.00	80.34	H	N
ATOM	2668	N	SER	H	134	-4.312	46.486	97.891	1.00	46.58	H	N
ATOM	2669	CA	SER	H	134	-3.669	46.251	96.611	1.00	43.64	H	C
ATOM	2670	C	SER	H	134	-4.089	44.941	95.952	1.00	40.86	H	C
ATOM	2671	O	SER	H	134	-4.406	44.914	94.760	1.00	38.97	H	O
ATOM	2672	CB	SER	H	134	-2.146	46.294	96.819	1.00	48.42	H	C
ATOM	2673	OG	SER	H	134	-1.411	45.905	95.669	1.00	51.69	H	O
ATOM	2674	N	MET	H	135	-4.095	43.852	96.725	1.00	40.34	H	N
ATOM	2675	CA	MET	H	135	-4.446	42.512	96.186	1.00	34.57	H	C
ATOM	2676	C	MET	H	135	-5.703	41.912	96.823	1.00	32.44	H	C
ATOM	2677	O	MET	H	135	-6.094	42.315	97.901	1.00	30.15	H	O
ATOM	2678	CB	MET	H	135	-3.300	41.536	96.461	1.00	35.25	H	C
ATOM	2679	CG	MET	H	135	-1.919	41.970	95.966	1.00	37.85	H	C
ATOM	2680	SD	MET	H	135	-1.916	42.012	94.167	1.00	48.89	H	S
ATOM	2681	CE	MET	H	135	-1.602	40.237	93.761	1.00	45.32	H	C
ATOM	2682	N	VAL	H	136	-6.345	40.956	96.158	1.00	29.30	H	N
ATOM	2683	CA	VAL	H	136	-7.479	40.275	96.789	1.00	29.61	H	C
ATOM	2684	C	VAL	H	136	-7.179	38.760	96.714	1.00	27.62	H	C
ATOM	2685	O	VAL	H	136	-6.608	38.289	95.727	1.00	21.53	H	O
ATOM	2686	CB	VAL	H	136	-8.853	40.549	96.112	1.00	28.96	H	C
ATOM	2687	CG1	VAL	H	136	-8.827	40.116	94.635	1.00	30.30	H	C

ATOM	2688	CG2	VAL	H	136	-9.967	39.759	96.854	1.00	19.18	H	C
ATOM	2689	N	THR	H	137	-7.508	38.028	97.776	1.00	26.58	H	N
ATOM	2690	CA	THR	H	137	-7.299	36.573	97.756	1.00	27.60	H	C
ATOM	2691	C	THR	H	137	-8.644	35.855	97.592	1.00	29.30	H	C
ATOM	2692	O	THR	H	137	-9.628	36.183	98.269	1.00	28.40	H	O
ATOM	2693	CB	THR	H	137	-6.612	36.148	99.044	1.00	26.81	H	C
ATOM	2694	OG1	THR	H	137	-5.301	36.741	99.081	1.00	29.61	H	O
ATOM	2695	CG2	THR	H	137	-6.425	34.610	99.115	1.00	27.58	H	C
ATOM	2696	N	LEU	H	138	-8.696	34.910	96.665	1.00	28.45	H	N
ATOM	2697	CA	LEU	H	138	-9.875	34.117	96.390	1.00	23.40	H	C
ATOM	2698	C	LEU	H	138	-9.475	32.658	96.580	1.00	23.57	H	C
ATOM	2699	O	LEU	H	138	-8.305	32.326	96.795	1.00	25.01	H	O
ATOM	2700	CB	LEU	H	138	-10.312	34.265	94.935	1.00	23.55	H	C
ATOM	2701	CG	LEU	H	138	-10.498	35.735	94.482	1.00	30.56	H	C
ATOM	2702	CD1	LEU	H	138	-10.849	35.826	92.950	1.00	19.69	H	C
ATOM	2703	CD2	LEU	H	138	-11.628	36.350	95.312	1.00	35.20	H	C
ATOM	2704	N	GLY	H	139	-10.444	31.776	96.475	1.00	19.26	H	N
ATOM	2705	CA	GLY	H	139	-10.060	30.370	96.580	1.00	21.12	H	C
ATOM	2706	C	GLY	H	139	-11.156	29.404	96.169	1.00	22.32	H	C
ATOM	2707	O	GLY	H	139	-12.255	29.823	95.796	1.00	19.43	H	O
ATOM	2708	N	CYS	H	140	-10.847	28.117	96.262	1.00	19.11	H	N
ATOM	2709	CA	CYS	H	140	-11.784	27.040	95.972	1.00	23.52	H	C
ATOM	2710	C	CYS	H	140	-11.571	25.947	97.001	1.00	23.22	H	C
ATOM	2711	O	CYS	H	140	-10.418	25.607	97.321	1.00	22.91	H	O
ATOM	2712	CB	CYS	H	140	-11.557	26.447	94.562	1.00	25.73	H	C
ATOM	2713	SG	CYS	H	140	-12.544	27.321	93.297	1.00	44.80	H	S
ATOM	2714	N	LEU	H	141	-12.676	25.397	97.521	1.00	21.53	H	N
ATOM	2715	CA	LEU	H	141	-12.622	24.289	98.512	1.00	20.48	H	C
ATOM	2716	C	LEU	H	141	-13.066	23.030	97.777	1.00	18.89	H	C
ATOM	2717	O	LEU	H	141	-14.169	23.004	97.193	1.00	22.71	H	O
ATOM	2718	CB	LEU	H	141	-13.598	24.560	99.692	1.00	17.17	H	C
ATOM	2719	CG	LEU	H	141	-13.729	23.490	100.794	1.00	25.38	H	C
ATOM	2720	CD1	LEU	H	141	-12.371	23.264	101.553	1.00	25.22	H	C
ATOM	2721	CD2	LEU	H	141	-14.797	23.935	101.790	1.00	21.03	H	C
ATOM	2722	N	VAL	H	142	-12.205	22.007	97.771	1.00	15.03	H	N
ATOM	2723	CA	VAL	H	142	-12.486	20.744	97.075	1.00	15.13	H	C
ATOM	2724	C	VAL	H	142	-12.671	19.721	98.187	1.00	18.32	H	C
ATOM	2725	O	VAL	H	142	-11.708	19.140	98.693	1.00	19.22	H	O
ATOM	2726	CB	VAL	H	142	-11.293	20.370	96.194	1.00	16.12	H	C
ATOM	2727	CG1	VAL	H	142	-11.611	19.084	95.365	1.00	16.05	H	C
ATOM	2728	CG2	VAL	H	142	-11.007	21.534	95.233	1.00	16.52	H	C
ATOM	2729	N	LYS	H	143	-13.938	19.463	98.512	1.00	19.22	H	N
ATOM	2730	CA	LYS	H	143	-14.254	18.650	99.664	1.00	23.50	H	C
ATOM	2731	C	LYS	H	143	-14.891	17.303	99.486	1.00	23.95	H	C
ATOM	2732	O	LYS	H	143	-15.787	17.124	98.656	1.00	28.68	H	O
ATOM	2733	CB	LYS	H	143	-15.156	19.497	100.574	1.00	21.98	H	C
ATOM	2734	CG	LYS	H	143	-15.507	18.917	101.941	1.00	25.06	H	C
ATOM	2735	CD	LYS	H	143	-16.282	19.991	102.758	1.00	28.37	H	C
ATOM	2736	CE	LYS	H	143	-16.877	19.396	104.058	1.00	28.90	H	C
ATOM	2737	NZ	LYS	H	143	-15.810	18.790	104.927	1.00	44.68	H	N
ATOM	2738	N	GLY	H	144	-14.419	16.381	100.312	1.00	24.19	H	N
ATOM	2739	CA	GLY	H	144	-14.944	15.038	100.379	1.00	26.62	H	C
ATOM	2740	C	GLY	H	144	-14.856	14.128	99.180	1.00	27.65	H	C
ATOM	2741	O	GLY	H	144	-15.897	13.622	98.714	1.00	30.78	H	O
ATOM	2742	N	TYR	H	145	-13.635	13.914	98.690	1.00	26.76	H	N
ATOM	2743	CA	TYR	H	145	-13.398	13.016	97.550	1.00	27.17	H	C
ATOM	2744	C	TYR	H	145	-12.535	11.814	97.920	1.00	29.53	H	C
ATOM	2745	O	TYR	H	145	-11.889	11.802	98.970	1.00	25.98	H	O
ATOM	2746	CB	TYR	H	145	-12.743	13.759	96.378	1.00	24.08	H	C
ATOM	2747	CG	TYR	H	145	-11.357	14.306	96.683	1.00	28.06	H	C
ATOM	2748	CD1	TYR	H	145	-10.204	13.586	96.338	1.00	30.37	H	C
ATOM	2749	CD2	TYR	H	145	-11.196	15.553	97.283	1.00	22.50	H	C
ATOM	2750	CE1	TYR	H	145	-8.897	14.112	96.575	1.00	25.17	H	C
ATOM	2751	CE2	TYR	H	145	-9.926	16.061	97.539	1.00	20.82	H	C
ATOM	2752	CZ	TYR	H	145	-8.793	15.356	97.184	1.00	28.20	H	C
ATOM	2753	OH	TYR	H	145	-7.553	15.864	97.461	1.00	17.93	H	O
ATOM	2754	N	PHE	H	146	-12.555	10.780	97.056	1.00	31.05	H	N
ATOM	2755	CA	PHE	H	146	-11.737	9.586	97.264	1.00	31.43	H	C
ATOM	2756	C	PHE	H	146	-11.753	8.812	95.960	1.00	32.08	H	C

ATOM	2757	O	PHE	H	146	-12.805	8.697	95.328	1.00	36.16	H O
ATOM	2758	CB	PHE	H	146	-12.306	8.690	98.359	1.00	29.02	H C
ATOM	2759	CG	PHE	H	146	-11.379	7.556	98.767	1.00	27.00	H C
ATOM	2760	CD1	PHE	H	146	-10.421	7.740	99.757	1.00	22.36	H C
ATOM	2761	CD2	PHE	H	146	-11.440	6.334	98.121	1.00	27.68	H C
ATOM	2762	CE1	PHE	H	146	-9.550	6.755	100.091	1.00	21.95	H C
ATOM	2763	CE2	PHE	H	146	-10.541	5.323	98.464	1.00	27.29	H C
ATOM	2764	CZ	PHE	H	146	-9.600	5.530	99.443	1.00	22.36	H C
ATOM	2765	N	PRO	H	147	-10.591	8.321	95.527	1.00	27.57	H N
ATOM	2766	CA	PRO	H	147	-9.315	8.477	96.209	1.00	26.64	H C
ATOM	2767	C	PRO	H	147	-8.572	9.704	95.669	1.00	26.21	H C
ATOM	2768	O	PRO	H	147	-9.112	10.443	94.866	1.00	25.89	H O
ATOM	2769	CB	PRO	H	147	-8.582	7.214	95.806	1.00	23.36	H C
ATOM	2770	CG	PRO	H	147	-8.879	7.172	94.377	1.00	25.94	H C
ATOM	2771	CD	PRO	H	147	-10.416	7.467	94.332	1.00	26.74	H C
ATOM	2772	N	GLU	H	148	-7.335	9.901	96.128	1.00	26.28	H N
ATOM	2773	CA	GLU	H	148	-6.490	10.963	95.562	1.00	29.14	H C
ATOM	2774	C	GLU	H	148	-6.174	10.431	94.162	1.00	28.26	H C
ATOM	2775	O	GLU	H	148	-6.178	9.219	93.951	1.00	32.81	H O
ATOM	2776	CB	GLU	H	148	-5.206	11.084	96.344	1.00	27.60	H C
ATOM	2777	CG	GLU	H	148	-5.450	11.628	97.701	1.00	28.15	H C
ATOM	2778	CD	GLU	H	148	-4.209	12.176	98.294	1.00	46.58	H C
ATOM	2779	OE1	GLU	H	148	-3.378	11.332	98.735	1.00	56.93	H O
ATOM	2780	OE2	GLU	H	148	-4.080	13.441	98.294	1.00	37.38	H O
ATOM	2781	N	PRO	H	149	-5.806	11.313	93.216	1.00	28.64	H N
ATOM	2782	CA	PRO	H	149	-5.671	12.760	93.426	1.00	26.39	H C
ATOM	2783	C	PRO	H	149	-6.724	13.569	92.707	1.00	24.55	H C
ATOM	2784	O	PRO	H	149	-7.597	13.026	92.035	1.00	23.88	H O
ATOM	2785	CB	PRO	H	149	-4.314	13.034	92.809	1.00	28.35	H C
ATOM	2786	CG	PRO	H	149	-4.455	12.232	91.462	1.00	20.74	H C
ATOM	2787	CD	PRO	H	149	-5.192	10.913	91.932	1.00	28.56	H C
ATOM	2788	N	VAL	H	150	-6.627	14.890	92.868	1.00	23.29	H N
ATOM	2789	CA	VAL	H	150	-7.448	15.809	92.113	1.00	19.21	H C
ATOM	2790	C	VAL	H	150	-6.429	16.769	91.532	1.00	24.23	H C
ATOM	2791	O	VAL	H	150	-5.306	16.897	92.035	1.00	26.42	H O
ATOM	2792	CB	VAL	H	150	-8.414	16.651	92.944	1.00	18.09	H C
ATOM	2793	CG1	VAL	H	150	-9.577	15.751	93.478	1.00	17.95	H C
ATOM	2794	CG2	VAL	H	150	-7.665	17.369	94.096	1.00	10.71	H C
ATOM	2795	N	THR	H	151	-6.811	17.441	90.471	1.00	24.63	H N
ATOM	2796	CA	THR	H	151	-5.939	18.436	89.935	1.00	30.43	H C
ATOM	2797	C	THR	H	151	-6.700	19.742	90.049	1.00	28.78	H C
ATOM	2798	O	THR	H	151	-7.915	19.765	89.869	1.00	26.29	H O
ATOM	2799	CB	THR	H	151	-5.597	18.153	88.481	1.00	31.70	H C
ATOM	2800	OG1	THR	H	151	-6.802	18.052	87.694	1.00	43.95	H O
ATOM	2801	CG2	THR	H	151	-4.824	16.859	88.402	1.00	36.27	H C
ATOM	2802	N	VAL	H	152	-5.980	20.808	90.364	1.00	26.62	H N
ATOM	2803	CA	VAL	H	152	-6.578	22.127	90.436	1.00	25.23	H C
ATOM	2804	C	VAL	H	152	-5.755	23.161	89.630	1.00	23.01	H C
ATOM	2805	O	VAL	H	152	-4.544	23.228	89.792	1.00	27.04	H O
ATOM	2806	CB	VAL	H	152	-6.625	22.623	91.897	1.00	25.96	H C
ATOM	2807	CG1	VAL	H	152	-7.340	24.014	91.930	1.00	22.70	H C
ATOM	2808	CG2	VAL	H	152	-7.372	21.609	92.784	1.00	25.04	H C
ATOM	2809	N	THR	H	153	-6.385	23.915	88.736	1.00	20.60	H N
ATOM	2810	CA	THR	H	153	-5.667	24.996	88.048	1.00	23.67	H C
ATOM	2811	C	THR	H	153	-6.627	26.211	88.132	1.00	24.11	H C
ATOM	2812	O	THR	H	153	-7.765	26.061	88.565	1.00	25.71	H O
ATOM	2813	CB	THR	H	153	-5.395	24.659	86.551	1.00	24.28	H C
ATOM	2814	OG1	THR	H	153	-6.632	24.412	85.889	1.00	25.91	H O
ATOM	2815	CG2	THR	H	153	-4.566	23.435	86.450	1.00	19.31	H C
ATOM	2816	N	TRP	H	154	-6.150	27.393	87.752	1.00	28.43	H N
ATOM	2817	CA	TRP	H	154	-6.961	28.600	87.754	1.00	32.03	H C
ATOM	2818	C	TRP	H	154	-6.981	29.195	86.342	1.00	30.20	H C
ATOM	2819	O	TRP	H	154	-5.952	29.288	85.689	1.00	29.01	H O
ATOM	2820	CB	TRP	H	154	-6.389	29.598	88.748	1.00	33.71	H C
ATOM	2821	CG	TRP	H	154	-6.641	29.175	90.185	1.00	33.79	H C
ATOM	2822	CD1	TRP	H	154	-5.828	28.406	90.998	1.00	25.73	H C
ATOM	2823	CD2	TRP	H	154	-7.800	29.499	90.957	1.00	32.12	H C
ATOM	2824	NE1	TRP	H	154	-6.430	28.241	92.244	1.00	21.18	H N
ATOM	2825	CE2	TRP	H	154	-7.638	28.900	92.239	1.00	27.40	H C

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ATOM   2826  CE3 TRP H 154      -8.964  30.231  90.693  1.00 25.24      H    C
ATOM   2827  CZ2 TRP H 154      -8.608  29.024  93.254  1.00 29.44      H    C
ATOM   2828  CZ3 TRP H 154      -9.929  30.352  91.705  1.00 30.04      H    C
ATOM   2829  CH2 TRP H 154      -9.737  29.748  92.972  1.00 24.77      H    C
ATOM   2830  N   ASN H 155      -8.144  29.560  85.867  1.00 30.30      H    N
ATOM   2831  CA  ASN H 155      -8.219  30.047  84.479  1.00 37.67      H    C
ATOM   2832  C   ASN H 155      -7.488  29.181  83.443  1.00 37.85      H    C
ATOM   2833  O   ASN H 155      -6.758  29.686  82.593  1.00 37.12      H    O
ATOM   2834  CB  ASN H 155      -7.740  31.496  84.413  1.00 34.75      H    C
ATOM   2835  CG  ASN H 155      -8.733  32.415  85.030  1.00 35.49      H    C
ATOM   2836  OD1 ASN H 155      -9.845  31.980  85.382  1.00 44.08      H    O
ATOM   2837  ND2 ASN H 155      -8.376  33.683  85.170  1.00 45.82      H    N
ATOM   2838  N   SER H 156      -7.712  27.876  83.528  1.00 37.34      H    N
ATOM   2839  CA  SER H 156      -7.123  26.916  82.612  1.00 36.58      H    C
ATOM   2840  C   SER H 156      -5.612  26.997  82.592  1.00 36.12      H    C
ATOM   2841  O   SER H 156      -4.972  26.657  81.592  1.00 38.51      H    O
ATOM   2842  CB  SER H 156      -7.672  27.141  81.200  1.00 37.40      H    C
ATOM   2843  OG  SER H 156      -9.060  26.867  81.135  1.00 37.91      H    O
ATOM   2844  N   GLY H 157      -5.040  27.435  83.706  1.00 30.77      H    N
ATOM   2845  CA  GLY H 157      -3.601  27.547  83.803  1.00 26.68      H    C
ATOM   2846  C   GLY H 157      -3.067  28.929  83.534  1.00 29.62      H    C
ATOM   2847  O   GLY H 157      -1.869  29.140  83.698  1.00 27.32      H    O
ATOM   2848  N   SER H 158      -3.940  29.878  83.157  1.00 31.56      H    N
ATOM   2849  CA  SER H 158      -3.528  31.255  82.852  1.00 33.96      H    C
ATOM   2850  C   SER H 158      -3.142  32.019  84.087  1.00 36.34      H    C
ATOM   2851  O   SER H 158      -2.390  32.981  84.026  1.00 41.32      H    O
ATOM   2852  CB  SER H 158      -4.652  32.041  82.153  1.00 32.92      H    C
ATOM   2853  OG  SER H 158      -4.650  31.782  80.781  1.00 39.53      H    O
ATOM   2854  N   LEU H 159      -3.668  31.584  85.217  1.00 39.25      H    N
ATOM   2855  CA  LEU H 159      -3.396  32.230  86.494  1.00 38.76      H    C
ATOM   2856  C   LEU H 159      -2.548  31.225  87.244  1.00 36.89      H    C
ATOM   2857  O   LEU H 159      -3.049  30.197  87.730  1.00 39.64      H    O
ATOM   2858  CB  LEU H 159      -4.734  32.462  87.186  1.00 41.00      H    C
ATOM   2859  CG  LEU H 159      -4.879  33.242  88.473  1.00 45.92      H    C
ATOM   2860  CD1 LEU H 159      -3.662  34.081  88.758  1.00 44.07      H    C
ATOM   2861  CD2 LEU H 159      -6.162  34.082  88.320  1.00 46.78      H    C
ATOM   2862  N   SER H 160      -1.268  31.522  87.329  1.00 35.36      H    N
ATOM   2863  CA  SER H 160      -0.327  30.620  87.958  1.00 37.84      H    C
ATOM   2864  C   SER H 160       0.509  31.105  89.144  1.00 34.85      H    C
ATOM   2865  O   SER H 160       0.707  30.378  90.115  1.00 35.06      H    O
ATOM   2866  CB  SER H 160       0.607  30.089  86.877  1.00 39.57      H    C
ATOM   2867  OG  SER H 160       1.004  28.783  87.208  1.00 54.86      H    O
ATOM   2868  N   SER H 161       1.037  32.308  89.080  1.00 33.71      H    N
ATOM   2869  CA  SER H 161       1.863  32.781  90.185  1.00 35.46      H    C
ATOM   2870  C   SER H 161       0.926  33.209  91.324  1.00 33.85      H    C
ATOM   2871  O   SER H 161      -0.237  33.538  91.084  1.00 35.17      H    O
ATOM   2872  CB  SER H 161       2.743  33.966  89.718  1.00 33.22      H    C
ATOM   2873  OG  SER H 161       1.944  35.110  89.467  1.00 38.84      H    O
ATOM   2874  N   GLY H 162       1.410  33.159  92.556  1.00 30.84      H    N
ATOM   2875  CA  GLY H 162       0.551  33.550  93.666  1.00 33.82      H    C
ATOM   2876  C   GLY H 162      -0.598  32.579  93.971  1.00 34.76      H    C
ATOM   2877  O   GLY H 162      -1.590  32.931  94.634  1.00 38.65      H    O
ATOM   2878  N   VAL H 163      -0.499  31.357  93.468  1.00 33.18      H    N
ATOM   2879  CA  VAL H 163      -1.520  30.356  93.748  1.00 27.52      H    C
ATOM   2880  C   VAL H 163      -0.920  29.483  94.821  1.00 27.53      H    C
ATOM   2881  O   VAL H 163       0.275  29.223  94.805  1.00 27.13      H    O
ATOM   2882  CB  VAL H 163      -1.803  29.435  92.508  1.00 28.90      H    C
ATOM   2883  CG1 VAL H 163      -2.545  28.168  92.958  1.00 26.60      H    C
ATOM   2884  CG2 VAL H 163      -2.650  30.208  91.431  1.00 27.66      H    C
ATOM   2885  N   HIS H 164      -1.746  29.029  95.772  1.00 25.64      H    N
ATOM   2886  CA  HIS H 164      -1.297  28.109  96.780  1.00 22.44      H    C
ATOM   2887  C   HIS H 164      -2.280  26.960  96.853  1.00 20.69      H    C
ATOM   2888  O   HIS H 164      -3.363  27.117  97.415  1.00 20.78      H    O
ATOM   2889  CB  HIS H 164      -1.242  28.731  98.162  1.00 19.62      H    C
ATOM   2890  CG  HIS H 164      -0.075  29.633  98.360  1.00 29.05      H    C
ATOM   2891  ND1 HIS H 164       1.236  29.205  98.227  1.00 26.92      H    N
ATOM   2892  CD2 HIS H 164      -0.020  30.951  98.653  1.00 31.28      H    C
ATOM   2893  CE1 HIS H 164       2.044  30.236  98.426  1.00 15.96      H    C
ATOM   2894  NE2 HIS H 164       1.307  31.300  98.684  1.00 26.44      H    N
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						-1.932	25.808	96.287	1.00	19.73	H	N
	ATOM	2896	CA	THR	H 165	-2.866	24.680	96.434	1.00	19.46	H	C
	ATOM	2897	C	THR	H 165	-2.371	23.869	97.622	1.00	16.26	H	C
	ATOM	2898	O	THR	H 165	-1.277	23.330	97.589	1.00	20.05	H	O
5	ATOM	2899	CB	THR	H 165	-2.913	23.856	95.113	1.00	18.44	H	C
	ATOM	2900	OG1	THR	H 165	-3.554	24.648	94.107	1.00	19.78	H	O
	ATOM	2901	CG2	THR	H 165	-3.750	22.575	95.299	1.00	13.68	H	C
	ATOM	2902	N	PHE	H 166	-3.181	23.752	98.677	1.00	15.64	H	N
	ATOM	2903	CA	PHE	H 166	-2.747	23.042	99.857	1.00	15.46	H	C
10	ATOM	2904	C	PHE	H 166	-2.826	21.500	99.769	1.00	15.55	H	C
	ATOM	2905	O	PHE	H 166	-3.701	20.936	99.109	1.00	18.73	H	O
	ATOM	2906	CB	PHE	H 166	-3.553	23.547	101.085	1.00	12.32	H	C
	ATOM	2907	CG	PHE	H 166	-3.345	25.027	101.375	1.00	11.24	H	C
	ATOM	2908	CD1	PHE	H 166	-3.999	25.997	100.633	1.00	11.46	H	C
15	ATOM	2909	CD2	PHE	H 166	-2.386	25.415	102.291	1.00	7.74	H	C
	ATOM	2910	CE1	PHE	H 166	-3.663	27.354	100.804	1.00	7.46	H	C
	ATOM	2911	CE2	PHE	H 166	-2.056	26.756	102.470	1.00	17.10	H	C
	ATOM	2912	CZ	PHE	H 166	-2.693	27.718	101.721	1.00	18.02	H	C
	ATOM	2913	N	PRO	H 167	-1.914	20.805	100.440	1.00	14.91	H	N
20	ATOM	2914	CA	PRO	H 167	-1.971	19.325	100.401	1.00	15.32	H	C
	ATOM	2915	C	PRO	H 167	-3.327	18.853	100.950	1.00	17.25	H	C
	ATOM	2916	O	PRO	H 167	-3.865	19.419	101.913	1.00	17.80	H	O
	ATOM	2917	CB	PRO	H 167	-0.854	18.898	101.368	1.00	11.96	H	C
	ATOM	2918	CG	PRO	H 167	0.133	20.030	101.292	1.00	19.53	H	C
25	ATOM	2919	CD	PRO	H 167	-0.790	21.279	101.282	1.00	17.99	H	C
	ATOM	2920	N	ALA	H 168	-3.846	17.779	100.377	1.00	21.70	H	N
	ATOM	2921	CA	ALA	H 168	-5.123	17.227	100.818	1.00	21.19	H	C
	ATOM	2922	C	ALA	H 168	-4.982	16.625	102.200	1.00	24.10	H	C
	ATOM	2923	O	ALA	H 168	-3.910	16.161	102.574	1.00	23.83	H	O
30	ATOM	2924	CB	ALA	H 168	-5.584	16.142	99.847	1.00	21.74	H	C
	ATOM	2925	N	VAL	H 169	-6.066	16.646	102.963	1.00	23.33	H	N
	ATOM	2926	CA	VAL	H 169	-6.062	16.066	104.288	1.00	25.37	H	C
	ATOM	2927	C	VAL	H 169	-7.177	15.025	104.330	1.00	28.13	H	C
	ATOM	2928	O	VAL	H 169	-8.269	15.272	103.881	1.00	27.25	H	O
35	ATOM	2929	CB	VAL	H 169	-6.329	17.083	105.345	1.00	28.37	H	C
	ATOM	2930	CG1	VAL	H 169	-6.454	16.372	106.715	1.00	29.42	H	C
	ATOM	2931	CG2	VAL	H 169	-5.155	18.088	105.368	1.00	24.48	H	C
	ATOM	2932	N	LEU	H 170	-6.868	13.870	104.896	1.00	32.34	H	N
	ATOM	2933	CA	LEU	H 170	-7.797	12.758	104.952	1.00	32.97	H	C
40	ATOM	2934	C	LEU	H 170	-8.536	12.719	106.248	1.00	35.04	H	C
	ATOM	2935	O	LEU	H 170	-7.909	12.711	107.305	1.00	35.43	H	O
	ATOM	2936	CB	LEU	H 170	-7.042	11.438	104.807	1.00	32.88	H	C
	ATOM	2937	CG	LEU	H 170	-7.913	10.181	104.914	1.00	35.41	H	C
	ATOM	2938	CD1	LEU	H 170	-8.703	10.023	103.629	1.00	22.56	H	C
45	ATOM	2939	CD2	LEU	H 170	-7.010	8.988	105.199	1.00	27.80	H	C
	ATOM	2940	N	ALA	H 171	-9.866	12.676	106.155	1.00	37.86	H	N
	ATOM	2941	CA	ALA	H 171	-10.744	12.570	107.322	1.00	42.55	H	C
	ATOM	2942	C	ALA	H 171	-11.937	11.631	106.998	1.00	45.59	H	C
	ATOM	2943	O	ALA	H 171	-12.513	11.685	105.922	1.00	45.22	H	O
50	ATOM	2944	CB	ALA	H 171	-11.254	13.955	107.735	1.00	43.37	H	C
	ATOM	2945	N	SER	H 172	-12.268	10.749	107.939	1.00	48.68	H	N
	ATOM	2946	CA	SER	H 172	-13.386	9.836	107.783	1.00	50.22	H	C
	ATOM	2947	C	SER	H 172	-13.438	9.283	106.381	1.00	50.04	H	C
	ATOM	2948	O	SER	H 172	-14.468	9.379	105.680	1.00	54.88	H	O
55	ATOM	2949	CB	SER	H 172	-14.693	10.557	108.097	1.00	51.94	H	C
	ATOM	2950	OG	SER	H 172	-14.605	11.294	109.313	1.00	58.55	H	O
	ATOM	2951	N	ALA	H 173	-12.316	8.717	105.955	1.00	46.45	H	N
	ATOM	2952	CA	ALA	H 173	-12.221	8.136	104.638	1.00	44.35	H	C
	ATOM	2953	C	ALA	H 173	-12.433	9.084	103.459	1.00	40.49	H	C
60	ATOM	2954	O	ALA	H 173	-12.644	8.625	102.354	1.00	41.86	H	O
	ATOM	2955	CB	ALA	H 173	-13.182	6.946	104.518	1.00	46.98	H	C
	ATOM	2956	N	LEU	H 174	-12.418	10.398	103.674	1.00	36.41	H	N
	ATOM	2957	CA	LEU	H 174	-12.548	11.299	102.523	1.00	32.15	H	C
	ATOM	2958	C	LEU	H 174	-11.479	12.391	102.637	1.00	30.15	H	C
65	ATOM	2959	O	LEU	H 174	-11.151	12.817	103.719	1.00	30.85	H	O
	ATOM	2960	CB	LEU	H 174	-13.921	12.000	102.465	1.00	32.78	H	C
	ATOM	2961	CG	LEU	H 174	-15.150	11.060	102.332	1.00	25.26	H	C
	ATOM	2962	CD1	LEU	H 174	-16.442	11.878	102.384	1.00	12.36	H	C
	ATOM	2963	CD2	LEU	H 174	-15.089	10.326	101.005	1.00	20.98	H	C

ATOM	2964	N	TYR	H	175	-10.999	12.828	101.487	1.00	27.64	H	N
ATOM	2965	CA	TYR	H	175	-9.983	13.877	101.391	1.00	27.11	H	C
ATOM	2966	C	TYR	H	175	-10.651	15.217	101.148	1.00	25.89	H	C
ATOM	2967	O	TYR	H	175	-11.699	15.279	100.499	1.00	22.59	H	O
ATOM	2968	CB	TYR	H	175	-9.092	13.601	100.185	1.00	28.71	H	C
ATOM	2969	CG	TYR	H	175	-8.129	12.491	100.404	1.00	33.19	H	C
ATOM	2970	CD1	TYR	H	175	-6.952	12.698	101.119	1.00	36.50	H	C
ATOM	2971	CD2	TYR	H	175	-8.411	11.209	99.935	1.00	30.21	H	C
ATOM	2972	CE1	TYR	H	175	-6.065	11.654	101.376	1.00	36.87	H	C
ATOM	2973	CE2	TYR	H	175	-7.540	10.161	100.172	1.00	42.67	H	C
ATOM	2974	CZ	TYR	H	175	-6.376	10.386	100.895	1.00	46.88	H	C
ATOM	2975	OH	TYR	H	175	-5.552	9.325	101.168	1.00	52.45	H	O
ATOM	2976	N	THR	H	176	-10.025	16.282	101.641	1.00	24.24	H	N
ATOM	2977	CA	THR	H	176	-10.483	17.630	101.373	1.00	24.99	H	C
ATOM	2978	C	THR	H	176	-9.248	18.510	101.109	1.00	22.35	H	C
ATOM	2979	O	THR	H	176	-8.234	18.373	101.772	1.00	22.32	H	O
ATOM	2980	CB	THR	H	176	-11.276	18.218	102.575	1.00	23.22	H	C
ATOM	2981	OG1	THR	H	176	-12.527	17.519	102.692	1.00	31.74	H	O
ATOM	2982	CG2	THR	H	176	-11.531	19.677	102.381	1.00	10.30	H	C
ATOM	2983	N	LEU	H	177	-9.312	19.378	100.112	1.00	22.69	H	N
ATOM	2984	CA	LEU	H	177	-8.179	20.266	99.954	1.00	25.06	H	C
ATOM	2985	C	LEU	H	177	-8.730	21.621	99.559	1.00	24.30	H	C
ATOM	2986	O	LEU	H	177	-9.895	21.750	99.205	1.00	22.61	H	O
ATOM	2987	CB	LEU	H	177	-7.157	19.757	98.908	1.00	21.57	H	C
ATOM	2988	CG	LEU	H	177	-7.270	19.745	97.374	1.00	26.70	H	C
ATOM	2989	CD1	LEU	H	177	-7.486	21.147	96.826	1.00	30.91	H	C
ATOM	2990	CD2	LEU	H	177	-5.957	19.177	96.740	1.00	15.94	H	C
ATOM	2991	N	SER	H	178	-7.866	22.631	99.643	1.00	22.75	H	N
ATOM	2992	CA	SER	H	178	-8.247	23.977	99.247	1.00	17.84	H	C
ATOM	2993	C	SER	H	178	-7.121	24.563	98.404	1.00	21.14	H	C
ATOM	2994	O	SER	H	178	-5.998	24.067	98.432	1.00	24.22	H	O
ATOM	2995	CB	SER	H	178	-8.445	24.866	100.475	1.00	13.35	H	C
ATOM	2996	OG	SER	H	178	-7.328	24.874	101.317	1.00	13.31	H	O
ATOM	2997	N	SER	H	179	-7.410	25.678	97.727	1.00	17.80	H	N
ATOM	2998	CA	SER	H	179	-6.422	26.347	96.877	1.00	21.55	H	C
ATOM	2999	C	SER	H	179	-6.798	27.835	96.921	1.00	18.82	H	C
ATOM	3000	O	SER	H	179	-7.983	28.190	96.806	1.00	16.75	H	O
ATOM	3001	CB	SER	H	179	-6.515	25.829	95.405	1.00	15.41	H	C
ATOM	3002	OG	SER	H	179	-5.567	26.519	94.582	1.00	21.64	H	O
ATOM	3003	N	SER	H	180	-5.800	28.677	97.141	1.00	17.88	H	N
ATOM	3004	CA	SER	H	180	-6.028	30.111	97.190	1.00	21.70	H	C
ATOM	3005	C	SER	H	180	-5.301	30.722	96.003	1.00	24.16	H	C
ATOM	3006	O	SER	H	180	-4.302	30.163	95.518	1.00	26.15	H	O
ATOM	3007	CB	SER	H	180	-5.458	30.694	98.476	1.00	14.18	H	C
ATOM	3008	OG	SER	H	180	-4.048	30.661	98.488	1.00	22.63	H	O
ATOM	3009	N	VAL	H	181	-5.809	31.862	95.544	1.00	24.76	H	N
ATOM	3010	CA	VAL	H	181	-5.165	32.572	94.450	1.00	28.32	H	C
ATOM	3011	C	VAL	H	181	-5.303	34.070	94.779	1.00	31.11	H	C
ATOM	3012	O	VAL	H	181	-6.373	34.534	95.252	1.00	27.76	H	O
ATOM	3013	CB	VAL	H	181	-5.777	32.198	93.107	1.00	25.96	H	C
ATOM	3014	CG1	VAL	H	181	-7.239	32.585	93.055	1.00	24.23	H	C
ATOM	3015	CG2	VAL	H	181	-4.989	32.890	91.965	1.00	28.59	H	C
ATOM	3016	N	THR	H	182	-4.211	34.810	94.590	1.00	32.70	H	N
ATOM	3017	CA	THR	H	182	-4.218	36.234	94.909	1.00	34.03	H	C
ATOM	3018	C	THR	H	182	-4.005	37.020	93.627	1.00	36.50	H	C
ATOM	3019	O	THR	H	182	-3.093	36.707	92.850	1.00	37.98	H	O
ATOM	3020	CB	THR	H	182	-3.128	36.552	95.875	1.00	31.37	H	C
ATOM	3021	OG1	THR	H	182	-3.283	35.720	97.033	1.00	40.50	H	O
ATOM	3022	CG2	THR	H	182	-3.195	38.023	96.277	1.00	32.65	H	C
ATOM	3023	N	VAL	H	183	-4.848	38.025	93.405	1.00	39.24	H	N
ATOM	3024	CA	VAL	H	183	-4.783	38.816	92.175	1.00	37.33	H	C
ATOM	3025	C	VAL	H	183	-5.049	40.278	92.535	1.00	40.59	H	C
ATOM	3026	O	VAL	H	183	-5.559	40.559	93.616	1.00	43.75	H	O
ATOM	3027	CB	VAL	H	183	-5.858	38.322	91.149	1.00	35.36	H	C
ATOM	3028	CG1	VAL	H	183	-5.723	36.802	90.921	1.00	23.98	H	C
ATOM	3029	CG2	VAL	H	183	-7.238	38.613	91.650	1.00	30.51	H	C
ATOM	3030	N	PRO	H	184	-4.671	41.225	91.647	1.00	44.29	H	N
ATOM	3031	CA	PRO	H	184	-4.892	42.663	91.903	1.00	43.69	H	C
ATOM	3032	C	PRO	H	184	-6.376	42.986	92.160	1.00	45.05	H	C

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ATOM   3033  O   PRO H 184      -7.275  42.516  91.440  1.00 45.22      H    O
ATOM   3034  CB  PRO H 184      -4.385  43.323  90.625  1.00 43.90      H    C
ATOM   3035  CG  PRO H 184      -3.269  42.373  90.169  1.00 42.32      H    C
ATOM   3036  CD  PRO H 184      -3.966  41.020  90.368  1.00 44.98      H    C
ATOM   3037  N   SER H 185      -6.639  43.801  93.170  1.00 45.15      H    N
ATOM   3038  CA  SER H 185      -8.029  44.159  93.496  1.00 50.32      H    C
ATOM   3039  C   SER H 185      -8.816  44.602  92.254  1.00 51.82      H    C
ATOM   3040  O   SER H 185      -9.997  44.277  92.098  1.00 53.19      H    O
ATOM   3041  CB  SER H 185      -8.066  45.308  94.512  1.00 52.23      H    C
ATOM   3042  OG  SER H 185      -7.310  45.024  95.657  1.00 55.30      H    O
ATOM   3043  N   SER H 186      -8.143  45.353  91.385  1.00 55.70      H    N
ATOM   3044  CA  SER H 186      -8.744  45.896  90.158  1.00 58.70      H    C
ATOM   3045  C   SER H 186      -9.408  44.843  89.270  1.00 61.29      H    C
ATOM   3046  O   SER H 186     -10.570  44.989  88.896  1.00 61.19      H    O
ATOM   3047  CB  SER H 186      -7.685  46.646  89.357  1.00 59.11      H    C
ATOM   3048  OG  SER H 186      -6.732  47.223  90.221  1.00 58.60      H    O
ATOM   3049  N   PRO H 187      -8.660  43.793  88.889  1.00 62.65      H    N
ATOM   3050  CA  PRO H 187      -9.086  42.667  88.056  1.00 61.57      H    C
ATOM   3051  C   PRO H 187     -10.349  41.921  88.486  1.00 61.38      H    C
ATOM   3052  O   PRO H 187     -11.042  41.382  87.645  1.00 62.12      H    O
ATOM   3053  CB  PRO H 187      -7.872  41.765  88.089  1.00 60.03      H    C
ATOM   3054  CG  PRO H 187      -6.774  42.758  87.954  1.00 64.04      H    C
ATOM   3055  CD  PRO H 187      -7.184  43.826  88.953  1.00 65.51      H    C
ATOM   3056  N   ARG H 188     -10.652  41.865  89.779  1.00 58.01      H    N
ATOM   3057  CA  ARG H 188     -11.843  41.137  90.192  1.00 53.46      H    C
ATOM   3058  C   ARG H 188     -12.869  41.986  90.932  1.00 53.17      H    C
ATOM   3059  O   ARG H 188     -12.512  42.894  91.687  1.00 55.75      H    O
ATOM   3060  CB  ARG H 188     -11.440  39.920  91.041  1.00 51.65      H    C
ATOM   3061  CG  ARG H 188     -11.888  38.574  90.466  1.00 47.14      H    C
ATOM   3062  CD  ARG H 188     -13.080  38.057  91.212  1.00 24.95      H    C
ATOM   3063  NE  ARG H 188     -13.208  38.806  92.451  1.00 25.44      H    N
ATOM   3064  CZ  ARG H 188     -14.092  38.535  93.397  1.00 30.93      H    C
ATOM   3065  NH1 ARG H 188     -14.932  37.526  93.250  1.00 29.87      H    N
ATOM   3066  NH2 ARG H 188     -14.137  39.270  94.492  1.00 29.13      H    N
ATOM   3067  N   PRO H 189     -14.164  41.714  90.705  1.00 49.03      H    N
ATOM   3068  CA  PRO H 189     -14.695  40.684  89.815  1.00 50.12      H    C
ATOM   3069  C   PRO H 189     -14.844  41.144  88.361  1.00 54.80      H    C
ATOM   3070  O   PRO H 189     -15.582  40.532  87.599  1.00 54.44      H    O
ATOM   3071  CB  PRO H 189     -16.045  40.378  90.432  1.00 49.09      H    C
ATOM   3072  CG  PRO H 189     -16.485  41.712  90.883  1.00 45.12      H    C
ATOM   3073  CD  PRO H 189     -15.246  42.289  91.522  1.00 45.67      H    C
ATOM   3074  N   SER H 190     -14.158  42.220  87.985  1.00 58.65      H    N
ATOM   3075  CA  SER H 190     -14.255  42.724  86.615  1.00 59.70      H    C
ATOM   3076  C   SER H 190     -13.721  41.670  85.646  1.00 60.48      H    C
ATOM   3077  O   SER H 190     -14.329  41.395  84.604  1.00 62.92      H    O
ATOM   3078  CB  SER H 190     -13.471  44.041  86.453  1.00 60.55      H    C
ATOM   3079  OG  SER H 190     -12.074  43.870  86.607  1.00 60.08      H    O
ATOM   3080  N   GLU H 191     -12.573  41.101  85.992  1.00 57.13      H    N
ATOM   3081  CA  GLU H 191     -11.954  40.053  85.196  1.00 55.55      H    C
ATOM   3082  C   GLU H 191     -12.266  38.765  85.952  1.00 53.43      H    C
ATOM   3083  O   GLU H 191     -12.058  38.691  87.155  1.00 54.38      H    O
ATOM   3084  CB  GLU H 191     -10.448  40.259  85.112  1.00 57.09      H    C
ATOM   3085  CG  GLU H 191     -10.003  41.394  84.207  1.00 57.68      H    C
ATOM   3086  CD  GLU H 191      -8.493  41.571  84.234  1.00 73.34      H    C
ATOM   3087  OE1 GLU H 191      -7.771  40.548  84.309  1.00 73.73      H    O
ATOM   3088  OE2 GLU H 191      -8.020  42.728  84.179  1.00 81.17      H    O
ATOM   3089  N   THR H 192     -12.749  37.753  85.243  1.00 50.94      H    N
ATOM   3090  CA  THR H 192     -13.137  36.498  85.877  1.00 48.18      H    C
ATOM   3091  C   THR H 192     -12.015  35.608  86.408  1.00 44.64      H    C
ATOM   3092  O   THR H 192     -10.920  35.581  85.861  1.00 42.83      H    O
ATOM   3093  CB  THR H 192     -13.983  35.681  84.920  1.00 47.39      H    C
ATOM   3094  OG1 THR H 192     -13.208  35.335  83.770  1.00 52.75      H    O
ATOM   3095  CG2 THR H 192     -15.162  36.508  84.481  1.00 48.68      H    C
ATOM   3096  N   VAL H 193     -12.309  34.884  87.494  1.00 38.76      H    N
ATOM   3097  CA  VAL H 193     -11.346  33.959  88.096  1.00 35.65      H    C
ATOM   3098  C   VAL H 193     -12.108  32.663  88.285  1.00 30.66      H    C
ATOM   3099  O   VAL H 193     -13.128  32.641  88.932  1.00 30.71      H    O
ATOM   3100  CB  VAL H 193     -10.821  34.477  89.469  1.00 36.30      H    C
ATOM   3101  CG1 VAL H 193      -9.893  33.432  90.119  1.00 40.07      H    C
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ATOM	3102	CG2	VAL	H	193	-10.021	35.750	89.253	1.00	36.63	H	C
ATOM	3103	N	THR	H	194	-11.609	31.584	87.698	1.00	27.25	H	N
ATOM	3104	CA	THR	H	194	-12.289	30.298	87.766	1.00	31.84	H	C
ATOM	3105	C	THR	H	194	-11.313	29.199	88.150	1.00	30.56	H	C
ATOM	3106	O	THR	H	194	-10.205	29.164	87.619	1.00	35.10	H	O
ATOM	3107	CB	THR	H	194	-12.922	29.966	86.365	1.00	34.30	H	C
ATOM	3108	OG1	THR	H	194	-13.895	30.962	86.049	1.00	38.36	H	O
ATOM	3109	CG2	THR	H	194	-13.599	28.614	86.345	1.00	25.67	H	C
ATOM	3110	N	CYS	H	195	-11.689	28.313	89.081	1.00	27.97	H	N
ATOM	3111	CA	CYS	H	195	-10.779	27.222	89.424	1.00	28.84	H	C
ATOM	3112	C	CYS	H	195	-11.260	25.979	88.670	1.00	28.13	H	C
ATOM	3113	O	CYS	H	195	-12.448	25.684	88.593	1.00	31.76	H	O
ATOM	3114	CB	CYS	H	195	-10.746	26.924	90.934	1.00	27.33	H	C
ATOM	3115	SG	CYS	H	195	-12.275	26.220	91.586	1.00	35.64	H	S
ATOM	3116	N	ASN	H	196	-10.331	25.273	88.077	1.00	27.69	H	N
ATOM	3117	CA	ASN	H	196	-10.679	24.077	87.321	1.00	29.01	H	C
ATOM	3118	C	ASN	H	196	-10.263	22.871	88.114	1.00	26.91	H	C
ATOM	3119	O	ASN	H	196	-9.078	22.668	88.365	1.00	23.66	H	O
ATOM	3120	CB	ASN	H	196	-9.950	24.089	85.974	1.00	31.51	H	C
ATOM	3121	CG	ASN	H	196	-9.856	25.473	85.388	1.00	29.50	H	C
ATOM	3122	OD1	ASN	H	196	-8.794	26.090	85.385	1.00	25.64	H	O
ATOM	3123	ND2	ASN	H	196	-10.980	25.972	84.887	1.00	34.55	H	N
ATOM	3124	N	VAL	H	197	-11.243	22.047	88.475	1.00	24.98	H	N
ATOM	3125	CA	VAL	H	197	-10.980	20.869	89.290	1.00	23.37	H	C
ATOM	3126	C	VAL	H	197	-11.344	19.582	88.587	1.00	25.84	H	C
ATOM	3127	O	VAL	H	197	-12.446	19.458	88.041	1.00	29.92	H	O
ATOM	3128	CB	VAL	H	197	-11.811	20.937	90.611	1.00	24.03	H	C
ATOM	3129	CG1	VAL	H	197	-11.512	19.731	91.490	1.00	23.67	H	C
ATOM	3130	CG2	VAL	H	197	-11.467	22.237	91.355	1.00	16.84	H	C
ATOM	3131	N	ALA	H	198	-10.431	18.623	88.607	1.00	28.07	H	N
ATOM	3132	CA	ALA	H	198	-10.724	17.328	88.004	1.00	29.46	H	C
ATOM	3133	C	ALA	H	198	-10.374	16.237	88.999	1.00	29.74	H	C
ATOM	3134	O	ALA	H	198	-9.376	16.314	89.732	1.00	28.58	H	O
ATOM	3135	CB	ALA	H	198	-9.937	17.125	86.666	1.00	31.83	H	C
ATOM	3136	N	HIS	H	199	-11.234	15.224	89.035	1.00	32.53	H	N
ATOM	3137	CA	HIS	H	199	-11.037	14.078	89.902	1.00	33.86	H	C
ATOM	3138	C	HIS	H	199	-11.232	12.847	89.032	1.00	37.42	H	C
ATOM	3139	O	HIS	H	199	-12.321	12.254	88.992	1.00	41.76	H	O
ATOM	3140	CB	HIS	H	199	-12.073	14.034	90.998	1.00	32.12	H	C
ATOM	3141	CG	HIS	H	199	-11.912	12.867	91.895	1.00	31.49	H	C
ATOM	3142	ND1	HIS	H	199	-12.952	12.004	92.184	1.00	37.94	H	N
ATOM	3143	CD2	HIS	H	199	-10.859	12.456	92.632	1.00	25.88	H	C
ATOM	3144	CE1	HIS	H	199	-12.542	11.128	93.086	1.00	36.27	H	C
ATOM	3145	NE2	HIS	H	199	-11.280	11.384	93.379	1.00	27.41	H	N
ATOM	3146	N	PRO	H	200	-10.174	12.430	88.346	1.00	38.60	H	N
ATOM	3147	CA	PRO	H	200	-10.230	11.270	87.453	1.00	39.66	H	C
ATOM	3148	C	PRO	H	200	-11.011	10.047	87.931	1.00	41.49	H	C
ATOM	3149	O	PRO	H	200	-11.835	9.493	87.180	1.00	43.64	H	O
ATOM	3150	CB	PRO	H	200	-8.757	10.945	87.218	1.00	40.63	H	C
ATOM	3151	CG	PRO	H	200	-8.077	12.314	87.320	1.00	40.85	H	C
ATOM	3152	CD	PRO	H	200	-8.782	12.876	88.552	1.00	40.30	H	C
ATOM	3153	N	ALA	H	201	-10.752	9.620	89.161	1.00	41.88	H	N
ATOM	3154	CA	ALA	H	201	-11.384	8.424	89.704	1.00	41.92	H	C
ATOM	3155	C	ALA	H	201	-12.908	8.316	89.607	1.00	44.22	H	C
ATOM	3156	O	ALA	H	201	-13.438	7.201	89.624	1.00	47.89	H	O
ATOM	3157	CB	ALA	H	201	-10.930	8.210	91.131	1.00	40.12	H	C
ATOM	3158	N	SER	H	202	-13.602	9.448	89.483	1.00	42.09	H	N
ATOM	3159	CA	SER	H	202	-15.060	9.475	89.371	1.00	40.45	H	C
ATOM	3160	C	SER	H	202	-15.422	10.267	88.112	1.00	38.79	H	C
ATOM	3161	O	SER	H	202	-16.543	10.725	87.937	1.00	39.19	H	O
ATOM	3162	CB	SER	H	202	-15.682	10.171	90.599	1.00	42.08	H	C
ATOM	3163	OG	SER	H	202	-15.398	11.576	90.610	1.00	36.22	H	O
ATOM	3164	N	SER	H	203	-14.451	10.429	87.241	1.00	36.91	H	N
ATOM	3165	CA	SER	H	203	-14.633	11.176	86.008	1.00	40.54	H	C
ATOM	3166	C	SER	H	203	-15.268	12.515	86.250	1.00	38.44	H	C
ATOM	3167	O	SER	H	203	-16.147	12.919	85.496	1.00	40.82	H	O
ATOM	3168	CB	SER	H	203	-15.493	10.389	85.007	1.00	40.55	H	C
ATOM	3169	OG	SER	H	203	-14.994	9.087	84.878	1.00	47.70	H	O
ATOM	3170	N	THR	H	204	-14.829	13.222	87.286	1.00	35.03	H	N

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ATOM   3171  CA  THR H 204     -15.393  14.530  87.585  1.00 34.07      H     C
ATOM   3172  C   THR H 204     -14.544  15.686  87.034  1.00 33.24      H     C
ATOM   3173  O   THR H 204     -13.329  15.696  87.168  1.00 35.71      H     O
ATOM   3174  CB  THR H 204     -15.537  14.741  89.112  1.00 33.83      H     C
ATOM   3175  OG1 THR H 204     -16.255  13.646  89.687  1.00 35.82      H     O
ATOM   3176  CG2 THR H 204     -16.312  15.999  89.393  1.00 34.28      H     C
ATOM   3177  N   ALA H 205     -15.204  16.653  86.407  1.00 34.41      H     N
ATOM   3178  CA  ALA H 205     -14.534  17.840  85.880  1.00 38.94      H     C
ATOM   3179  C   ALA H 205     -15.453  18.995  86.202  1.00 40.07      H     C
ATOM   3180  O   ALA H 205     -16.600  19.055  85.724  1.00 42.36      H     O
ATOM   3181  CB  ALA H 205     -14.322  17.753  84.382  1.00 39.13      H     C
ATOM   3182  N   VAL H 206     -14.967  19.902  87.036  1.00 39.65      H     N
ATOM   3183  CA  VAL H 206     -15.767  21.053  87.420  1.00 37.30      H     C
ATOM   3184  C   VAL H 206     -14.996  22.353  87.222  1.00 37.10      H     C
ATOM   3185  O   VAL H 206     -13.831  22.454  87.600  1.00 40.56      H     O
ATOM   3186  CB  VAL H 206     -16.186  20.947  88.923  1.00 36.53      H     C
ATOM   3187  CG1 VAL H 206     -16.886  22.189  89.369  1.00 32.26      H     C
ATOM   3188  CG2 VAL H 206     -17.098  19.750  89.125  1.00 38.59      H     C
ATOM   3189  N   ASP H 207     -15.626  23.335  86.601  1.00 35.38      H     N
ATOM   3190  CA  ASP H 207     -14.990  24.640  86.473  1.00 37.03      H     C
ATOM   3191  C   ASP H 207     -15.871  25.557  87.308  1.00 35.92      H     C
ATOM   3192  O   ASP H 207     -17.040  25.744  86.999  1.00 39.88      H     O
ATOM   3193  CB  ASP H 207     -14.957  25.124  85.019  1.00 37.71      H     C
ATOM   3194  CG  ASP H 207     -14.115  24.246  84.144  1.00 39.42      H     C
ATOM   3195  OD1 ASP H 207     -12.921  24.093  84.439  1.00 35.89      H     O
ATOM   3196  OD2 ASP H 207     -14.656  23.689  83.162  1.00 48.31      H     O
ATOM   3197  N   LYS H 208     -15.319  26.132  88.368  1.00 39.14      H     N
ATOM   3198  CA  LYS H 208     -16.095  27.022  89.244  1.00 36.68      H     C
ATOM   3199  C   LYS H 208     -15.655  28.476  89.192  1.00 35.58      H     C
ATOM   3200  O   LYS H 208     -14.567  28.829  89.650  1.00 34.67      H     O
ATOM   3201  CB  LYS H 208     -16.005  26.512  90.697  1.00 36.45      H     C
ATOM   3202  CG  LYS H 208     -16.852  27.300  91.664  1.00 36.28      H     C
ATOM   3203  CD  LYS H 208     -17.728  26.320  92.414  1.00 44.47      H     C
ATOM   3204  CE  LYS H 208     -18.601  25.501  91.481  1.00 35.64      H     C
ATOM   3205  NZ  LYS H 208     -19.805  26.271  91.120  1.00 51.91      H     N
ATOM   3206  N   LYS H 209     -16.488  29.339  88.609  1.00 35.32      H     N
ATOM   3207  CA  LYS H 209     -16.140  30.757  88.547  1.00 38.07      H     C
ATOM   3208  C   LYS H 209     -16.346  31.368  89.952  1.00 36.98      H     C
ATOM   3209  O   LYS H 209     -17.343  31.090  90.597  1.00 35.14      H     O
ATOM   3210  CB  LYS H 209     -17.057  31.497  87.562  1.00 38.43      H     C
ATOM   3211  CG  LYS H 209     -16.780  32.990  87.526  1.00 38.76      H     C
ATOM   3212  CD  LYS H 209     -18.026  33.806  87.127  1.00 42.22      H     C
ATOM   3213  CE  LYS H 209     -18.408  33.666  85.683  1.00 47.62      H     C
ATOM   3214  NZ  LYS H 209     -19.364  34.788  85.268  1.00 49.98      H     N
ATOM   3215  N   ILE H 210     -15.398  32.176  90.408  1.00 34.13      H     N
ATOM   3216  CA  ILE H 210     -15.507  32.814  91.720  1.00 34.36      H     C
ATOM   3217  C   ILE H 210     -16.341  34.106  91.545  1.00 36.70      H     C
ATOM   3218  O   ILE H 210     -15.920  34.951  90.751  1.00 36.92      H     O
ATOM   3219  CB  ILE H 210     -14.079  33.178  92.307  1.00 30.96      H     C
ATOM   3220  CG1 ILE H 210     -13.188  31.942  92.372  1.00 25.29      H     C
ATOM   3221  CG2 ILE H 210     -14.210  33.676  93.754  1.00 19.07      H     C
ATOM   3222  CD1 ILE H 210     -13.895  30.740  93.031  1.00 10.95      H     C
ATOM   3223  OXT ILE H 210     -17.412  34.268  92.175  1.00 42.73      H     O
TER    3224       ILE H 210
ATOM   3225  N   SER I   7      14.834  -3.003  64.812  1.00 41.42      I     N
ATOM   3226  CA  SER I   7      16.214  -3.341  65.271  1.00 43.47      I     C
ATOM   3227  C   SER I   7      16.170  -3.928  66.678  1.00 40.84      I     C
ATOM   3228  O   SER I   7      15.109  -3.952  67.298  1.00 48.28      I     O
ATOM   3229  CB  SER I   7      17.091  -2.097  65.247  1.00 40.12      I     C
ATOM   3230  OG  SER I   7      18.449  -2.441  65.503  1.00 44.19      I     O
ATOM   3231  N   THR I   8      17.309  -4.405  67.177  1.00 34.11      I     N
ATOM   3232  CA  THR I   8      17.384  -5.002  68.513  1.00 29.26      I     C
ATOM   3233  C   THR I   8      18.542  -4.314  69.246  1.00 26.30      I     C
ATOM   3234  O   THR I   8      19.375  -3.666  68.616  1.00 24.38      I     O
ATOM   3235  CB  THR I   8      17.703  -6.516  68.458  1.00 28.98      I     C
ATOM   3236  OG1 THR I   8      18.969  -6.713  67.790  1.00 27.25      I     O
ATOM   3237  CG2 THR I   8      16.606  -7.253  67.702  1.00 36.34      I     C
ATOM   3238  N   ALA I   9      18.512  -4.390  70.571  1.00 21.02      I     N
ATOM   3239  CA  ALA I   9      19.568  -3.787  71.402  1.00 23.18      I     C
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ATOM	3240	C	ALA	I	9	20.950	-4.314	70.951	1.00	24.18	I	C
ATOM	3241	O	ALA	I	9	21.937	-3.569	70.892	1.00	20.92	I	O
ATOM	3242	CB	ALA	I	9	19.330	-4.175	72.849	1.00	21.47	I	C
ATOM	3243	N	LEU	I	10	21.013	-5.611	70.655	1.00	24.97	I	N
ATOM	3244	CA	LEU	I	10	22.307	-6.193	70.237	1.00	26.56	I	C
ATOM	3245	C	LEU	I	10	22.751	-5.658	68.891	1.00	25.43	I	C
ATOM	3246	O	LEU	I	10	23.914	-5.335	68.675	1.00	19.53	I	O
ATOM	3247	CB	LEU	I	10	22.221	-7.732	70.202	1.00	28.67	I	C
ATOM	3248	CG	LEU	I	10	23.461	-8.495	69.682	1.00	26.05	I	C
ATOM	3249	CD1	LEU	I	10	24.700	-8.085	70.501	1.00	17.07	I	C
ATOM	3250	CD2	LEU	I	10	23.224	-9.990	69.854	1.00	24.04	I	C
ATOM	3251	N	ARG	I	11	21.798	-5.499	67.962	1.00	24.80	I	N
ATOM	3252	CA	ARG	I	11	22.203	-4.971	66.672	1.00	27.70	I	C
ATOM	3253	C	ARG	I	11	22.757	-3.549	66.827	1.00	26.39	I	C
ATOM	3254	O	ARG	I	11	23.758	-3.173	66.224	1.00	21.33	I	O
ATOM	3255	CB	ARG	I	11	20.991	-4.942	65.706	1.00	29.11	I	C
ATOM	3256	CG	ARG	I	11	21.336	-4.327	64.341	1.00	37.83	I	C
ATOM	3257	CD	ARG	I	11	20.129	-4.428	63.388	1.00	59.35	I	C
ATOM	3258	NE	ARG	I	11	19.798	-5.830	63.125	1.00	77.61	I	N
ATOM	3259	CZ	ARG	I	11	18.838	-6.243	62.294	1.00	87.85	I	C
ATOM	3260	NH1	ARG	I	11	18.628	-7.546	62.116	1.00	88.83	I	N
ATOM	3261	NH2	ARG	I	11	18.078	-5.355	61.640	1.00	93.94	I	N
ATOM	3262	N	GLU	I	12	22.046	-2.733	67.605	1.00	26.89	I	N
ATOM	3263	CA	GLU	I	12	22.466	-1.355	67.799	1.00	29.03	I	C
ATOM	3264	C	GLU	I	12	23.851	-1.358	68.464	1.00	28.58	I	C
ATOM	3265	O	GLU	I	12	24.695	-0.578	68.088	1.00	30.04	I	O
ATOM	3266	CB	GLU	I	12	21.448	-0.564	68.676	1.00	31.80	I	C
ATOM	3267	CG	GLU	I	12	20.044	-0.379	68.020	1.00	32.87	I	C
ATOM	3268	CD	GLU	I	12	20.170	0.154	66.634	1.00	42.19	I	C
ATOM	3269	OE1	GLU	I	12	20.725	1.266	66.479	1.00	53.05	I	O
ATOM	3270	OE2	GLU	I	12	19.739	-0.539	65.689	1.00	56.29	I	O
ATOM	3271	N	LEU	I	13	24.085	-2.252	69.415	1.00	26.72	I	N
ATOM	3272	CA	LEU	I	13	25.411	-2.267	70.083	1.00	25.15	I	C
ATOM	3273	C	LEU	I	13	26.478	-2.630	69.053	1.00	23.94	I	C
ATOM	3274	O	LEU	I	13	27.532	-2.002	68.968	1.00	23.25	I	O
ATOM	3275	CB	LEU	I	13	25.430	-3.257	71.250	1.00	19.59	I	C
ATOM	3276	CG	LEU	I	13	26.822	-3.465	71.893	1.00	21.18	I	C
ATOM	3277	CD1	LEU	I	13	27.527	-2.134	72.269	1.00	17.02	I	C
ATOM	3278	CD2	LEU	I	13	26.609	-4.357	73.128	1.00	25.81	I	C
ATOM	3279	N	ILE	I	14	26.169	-3.614	68.219	1.00	22.17	I	N
ATOM	3280	CA	ILE	I	14	27.151	-3.987	67.195	1.00	22.12	I	C
ATOM	3281	C	ILE	I	14	27.462	-2.824	66.272	1.00	24.29	I	C
ATOM	3282	O	ILE	I	14	28.630	-2.545	65.946	1.00	20.50	I	O
ATOM	3283	CB	ILE	I	14	26.636	-5.195	66.369	1.00	22.54	I	C
ATOM	3284	CG1	ILE	I	14	26.703	-6.427	67.261	1.00	21.93	I	C
ATOM	3285	CG2	ILE	I	14	27.478	-5.405	65.142	1.00	25.41	I	C
ATOM	3286	CD1	ILE	I	14	25.918	-7.632	66.756	1.00	8.06	I	C
ATOM	3287	N	GLU	I	15	26.418	-2.123	65.839	1.00	21.20	I	N
ATOM	3288	CA	GLU	I	15	26.638	-0.996	64.931	1.00	25.50	I	C
ATOM	3289	C	GLU	I	15	27.501	0.044	65.592	1.00	28.78	I	C
ATOM	3290	O	GLU	I	15	28.384	0.635	64.951	1.00	27.98	I	O
ATOM	3291	CB	GLU	I	15	25.295	-0.372	64.555	1.00	27.43	I	C
ATOM	3292	CG	GLU	I	15	24.551	-1.225	63.545	1.00	42.04	I	C
ATOM	3293	CD	GLU	I	15	23.135	-0.746	63.339	1.00	54.77	I	C
ATOM	3294	OE1	GLU	I	15	22.369	-1.442	62.633	1.00	58.59	I	O
ATOM	3295	OE2	GLU	I	15	22.795	0.323	63.896	1.00	59.54	I	O
ATOM	3296	N	GLU	I	16	27.273	0.278	66.892	1.00	25.33	I	N
ATOM	3297	CA	GLU	I	16	28.104	1.315	67.541	1.00	26.19	I	C
ATOM	3298	C	GLU	I	16	29.575	0.871	67.615	1.00	28.29	I	C
ATOM	3299	O	GLU	I	16	30.478	1.680	67.399	1.00	29.14	I	O
ATOM	3300	CB	GLU	I	16	27.565	1.649	68.961	1.00	26.31	I	C
ATOM	3301	CG	GLU	I	16	28.461	2.581	69.830	1.00	20.48	I	C
ATOM	3302	CD	GLU	I	16	28.623	3.961	69.264	1.00	32.83	I	C
ATOM	3303	OE1	GLU	I	16	27.908	4.295	68.291	1.00	40.64	I	O
ATOM	3304	OE2	GLU	I	16	29.472	4.734	69.788	1.00	43.53	I	O
ATOM	3305	N	LEU	I	17	29.825	-0.397	67.929	1.00	28.42	I	N
ATOM	3306	CA	LEU	I	17	31.221	-0.866	68.009	1.00	27.38	I	C
ATOM	3307	C	LEU	I	17	31.904	-0.791	66.626	1.00	28.23	I	C
ATOM	3308	O	LEU	I	17	33.088	-0.550	66.527	1.00	27.73	I	O

ATOM	3309	CB	LEU	I	17	31.271	-2.277	68.521	1.00	26.55	I	C
ATOM	3310	CG	LEU	I	17	30.675	-2.476	69.921	1.00	22.72	I	C
ATOM	3311	CD1	LEU	I	17	30.866	-3.925	70.342	1.00	5.48	I	C
ATOM	3312	CD2	LEU	I	17	31.304	-1.516	70.916	1.00	6.15	I	C
ATOM	3313	N	VAL	I	18	31.121	-0.991	65.570	1.00	28.82	I	N
ATOM	3314	CA	VAL	I	18	31.638	-0.900	64.202	1.00	26.07	I	C
ATOM	3315	C	VAL	I	18	32.001	0.574	64.016	1.00	27.53	I	C
ATOM	3316	O	VAL	I	18	33.103	0.905	63.597	1.00	28.33	I	O
ATOM	3317	CB	VAL	I	18	30.542	-1.316	63.171	1.00	26.01	I	C
ATOM	3318	CG1	VAL	I	18	30.970	-0.908	61.741	1.00	23.17	I	C
ATOM	3319	CG2	VAL	I	18	30.355	-2.841	63.203	1.00	25.17	I	C
ATOM	3320	N	ASN	I	19	31.090	1.462	64.389	1.00	26.75	I	N
ATOM	3321	CA	ASN	I	19	31.322	2.900	64.248	1.00	29.23	I	C
ATOM	3322	C	ASN	I	19	32.602	3.414	64.906	1.00	32.04	I	C
ATOM	3323	O	ASN	I	19	33.333	4.206	64.313	1.00	35.66	I	O
ATOM	3324	CB	ASN	I	19	30.153	3.700	64.826	1.00	25.97	I	C
ATOM	3325	CG	ASN	I	19	28.965	3.675	63.923	1.00	30.76	I	C
ATOM	3326	OD1	ASN	I	19	29.064	3.142	62.834	1.00	41.11	I	O
ATOM	3327	ND2	ASN	I	19	27.830	4.230	64.362	1.00	36.69	I	N
ATOM	3328	N	ILE	I	20	32.881	2.953	66.120	1.00	33.02	I	N
ATOM	3329	CA	ILE	I	20	34.051	3.465	66.808	1.00	28.41	I	C
ATOM	3330	C	ILE	I	20	35.341	2.745	66.514	1.00	31.21	I	C
ATOM	3331	O	ILE	I	20	36.404	3.188	66.974	1.00	36.21	I	O
ATOM	3332	CB	ILE	I	20	33.808	3.522	68.353	1.00	27.04	I	C
ATOM	3333	CG1	ILE	I	20	33.570	2.114	68.912	1.00	22.48	I	C
ATOM	3334	CG2	ILE	I	20	32.621	4.425	68.633	1.00	26.74	I	C
ATOM	3335	CD1	ILE	I	20	33.456	2.091	70.446	1.00	22.08	I	C
ATOM	3336	N	THR	I	21	35.295	1.659	65.765	1.00	28.97	I	N
ATOM	3337	CA	THR	I	21	36.542	0.961	65.468	1.00	37.12	I	C
ATOM	3338	C	THR	I	21	37.026	1.176	64.016	1.00	43.61	I	C
ATOM	3339	O	THR	I	21	38.030	0.547	63.631	1.00	41.22	I	O
ATOM	3340	CB	THR	I	21	36.422	-0.551	65.744	1.00	34.69	I	C
ATOM	3341	OG1	THR	I	21	35.269	-1.073	65.083	1.00	32.38	I	O
ATOM	3342	CG2	THR	I	21	36.270	-0.797	67.257	1.00	40.35	I	C
ATOM	3343	OXT	THR	I	21	36.409	1.993	63.291	1.00	55.16	I	O
ATOM	3344	N	ALA	I	26	43.997	8.557	65.207	1.00	69.33	I	N
ATOM	3345	CA	ALA	I	26	44.625	7.777	66.323	1.00	68.31	I	C
ATOM	3346	C	ALA	I	26	43.714	6.622	66.754	1.00	64.43	I	C
ATOM	3347	O	ALA	I	26	42.506	6.636	66.515	1.00	62.57	I	O
ATOM	3348	CB	ALA	I	26	44.911	8.711	67.544	1.00	68.87	I	C
ATOM	3349	N	PRO	I	27	44.291	5.604	67.401	1.00	61.86	I	N
ATOM	3350	CA	PRO	I	27	43.464	4.466	67.845	1.00	58.39	I	C
ATOM	3351	C	PRO	I	27	42.411	4.863	68.889	1.00	52.46	I	C
ATOM	3352	O	PRO	I	27	42.542	5.887	69.578	1.00	50.21	I	O
ATOM	3353	CB	PRO	I	27	44.481	3.486	68.436	1.00	60.58	I	C
ATOM	3354	CG	PRO	I	27	45.851	3.951	67.829	1.00	64.15	I	C
ATOM	3355	CD	PRO	I	27	45.700	5.452	67.814	1.00	61.04	I	C
ATOM	3356	N	LEU	I	28	41.371	4.040	68.988	1.00	44.59	I	N
ATOM	3357	CA	LEU	I	28	40.291	4.236	69.953	1.00	38.35	I	C
ATOM	3358	C	LEU	I	28	40.815	4.411	71.393	1.00	36.55	I	C
ATOM	3359	O	LEU	I	28	41.470	3.515	71.932	1.00	33.53	I	O
ATOM	3360	CB	LEU	I	28	39.361	3.039	69.898	1.00	33.20	I	C
ATOM	3361	CG	LEU	I	28	38.138	3.175	70.774	1.00	34.45	I	C
ATOM	3362	CD1	LEU	I	28	37.435	4.451	70.368	1.00	31.50	I	C
ATOM	3363	CD2	LEU	I	28	37.243	1.936	70.659	1.00	37.17	I	C
ATOM	3364	N	CYS	I	29	40.517	5.546	72.026	1.00	35.16	I	N
ATOM	3365	CA	CYS	I	29	40.968	5.823	73.401	1.00	36.16	I	C
ATOM	3366	C	CYS	I	29	42.480	5.581	73.512	1.00	38.10	I	C
ATOM	3367	O	CYS	I	29	43.005	5.144	74.564	1.00	39.22	I	O
ATOM	3368	CB	CYS	I	29	40.268	4.916	74.411	1.00	35.11	I	C
ATOM	3369	SG	CYS	I	29	38.447	4.968	74.417	1.00	37.70	I	S
ATOM	3370	N	ASN	I	30	43.169	5.894	72.425	1.00	40.14	I	N
ATOM	3371	CA	ASN	I	30	44.602	5.679	72.333	1.00	39.35	I	C
ATOM	3372	C	ASN	I	30	45.329	5.949	73.624	1.00	36.93	I	C
ATOM	3373	O	ASN	I	30	45.210	7.017	74.208	1.00	32.09	I	O
ATOM	3374	CB	ASN	I	30	45.207	6.547	71.244	1.00	43.64	I	C
ATOM	3375	CG	ASN	I	30	46.711	6.362	71.155	1.00	55.59	I	C
ATOM	3376	OD1	ASN	I	30	47.194	5.233	70.959	1.00	62.75	I	O
ATOM	3377	ND2	ASN	I	30	47.462	7.453	71.337	1.00	51.82	I	N

ATOM	3378	N	GLY	I	31	46.074	4.952	74.075	1.00	38.03	I	N
ATOM	3379	CA	GLY	I	31	46.821	5.085	75.306	1.00	39.13	I	C
ATOM	3380	C	GLY	I	31	46.164	4.380	76.488	1.00	39.21	I	C
ATOM	3381	O	GLY	I	31	46.842	4.002	77.439	1.00	43.77	I	O
ATOM	3382	N	SER	I	32	44.851	4.173	76.433	1.00	34.47	I	N
ATOM	3383	CA	SER	I	32	44.168	3.551	77.558	1.00	32.83	I	C
ATOM	3384	C	SER	I	32	44.218	2.038	77.452	1.00	29.83	I	C
ATOM	3385	O	SER	I	32	44.077	1.493	76.377	1.00	31.08	I	O
ATOM	3386	CB	SER	I	32	42.691	4.023	77.612	1.00	31.53	I	C
ATOM	3387	OG	SER	I	32	42.650	5.395	77.934	1.00	34.76	I	O
ATOM	3388	N	MET	I	33	44.379	1.376	78.587	1.00	27.38	I	N
ATOM	3389	CA	MET	I	33	44.446	-0.073	78.662	1.00	24.36	I	C
ATOM	3390	C	MET	I	33	43.337	-0.507	79.639	1.00	25.82	I	C
ATOM	3391	O	MET	I	33	43.031	0.204	80.584	1.00	26.49	I	O
ATOM	3392	CB	MET	I	33	45.777	-0.501	79.265	1.00	26.43	I	C
ATOM	3393	CG	MET	I	33	46.998	0.144	78.599	1.00	24.81	I	C
ATOM	3394	SD	MET	I	33	47.119	-0.525	76.995	1.00	42.00	I	S
ATOM	3395	CE	MET	I	33	47.786	-2.194	77.366	1.00	17.53	I	C
ATOM	3396	N	VAL	I	34	42.805	-1.705	79.425	1.00	21.73	I	N
ATOM	3397	CA	VAL	I	34	41.756	-2.252	80.243	1.00	19.21	I	C
ATOM	3398	C	VAL	I	34	42.041	-3.740	80.451	1.00	19.97	I	C
ATOM	3399	O	VAL	I	34	42.957	-4.311	79.872	1.00	21.24	I	O
ATOM	3400	CB	VAL	I	34	40.355	-2.169	79.540	1.00	17.84	I	C
ATOM	3401	CG1	VAL	I	34	39.972	-0.700	79.385	1.00	18.18	I	C
ATOM	3402	CG2	VAL	I	34	40.407	-2.897	78.187	1.00	13.68	I	C
ATOM	3403	N	TRP	I	35	41.232	-4.380	81.264	1.00	20.73	I	N
ATOM	3404	CA	TRP	I	35	41.500	-5.774	81.451	1.00	23.82	I	C
ATOM	3405	C	TRP	I	35	40.614	-6.606	80.556	1.00	22.12	I	C
ATOM	3406	O	TRP	I	35	39.561	-6.168	80.060	1.00	25.30	I	O
ATOM	3407	CB	TRP	I	35	41.341	-6.148	82.905	1.00	26.51	I	C
ATOM	3408	CG	TRP	I	35	40.032	-5.862	83.480	1.00	27.26	I	C
ATOM	3409	CD1	TRP	I	35	38.843	-6.512	83.204	1.00	25.09	I	C
ATOM	3410	CD2	TRP	I	35	39.775	-4.979	84.581	1.00	28.63	I	C
ATOM	3411	NE1	TRP	I	35	37.854	-6.089	84.106	1.00	29.68	I	N
ATOM	3412	CE2	TRP	I	35	38.402	-5.145	84.947	1.00	32.54	I	C
ATOM	3413	CE3	TRP	I	35	40.568	-4.070	85.298	1.00	27.26	I	C
ATOM	3414	CZ2	TRP	I	35	37.820	-4.434	85.992	1.00	29.43	I	C
ATOM	3415	CZ3	TRP	I	35	39.987	-3.368	86.342	1.00	33.13	I	C
ATOM	3416	CH2	TRP	I	35	38.623	-3.553	86.683	1.00	30.81	I	C
ATOM	3417	N	SER	I	36	41.057	-7.830	80.328	1.00	22.08	I	N
ATOM	3418	CA	SER	I	36	40.306	-8.723	79.463	1.00	22.46	I	C
ATOM	3419	C	SER	I	36	39.083	-9.330	80.132	1.00	22.65	I	C
ATOM	3420	O	SER	I	36	39.001	-9.447	81.350	1.00	24.38	I	O
ATOM	3421	CB	SER	I	36	41.211	-9.882	79.041	1.00	21.35	I	C
ATOM	3422	OG	SER	I	36	41.750	-10.425	80.244	1.00	29.08	I	O
ATOM	3423	N	ILE	I	37	38.119	-9.702	79.315	1.00	22.95	I	N
ATOM	3424	CA	ILE	I	37	36.992	-10.426	79.841	1.00	25.36	I	C
ATOM	3425	C	ILE	I	37	37.418	-11.897	79.613	1.00	26.84	I	C
ATOM	3426	O	ILE	I	37	38.241	-12.177	78.737	1.00	29.27	I	O
ATOM	3427	CB	ILE	I	37	35.714	-10.086	79.094	1.00	25.04	I	C
ATOM	3428	CG1	ILE	I	37	35.923	-9.994	77.620	1.00	34.62	I	C
ATOM	3429	CG2	ILE	I	37	35.237	-8.686	79.517	1.00	30.64	I	C
ATOM	3430	CD1	ILE	I	37	34.699	-9.222	76.962	1.00	30.59	I	C
ATOM	3431	N	ASN	I	38	36.860	-12.821	80.361	1.00	30.34	I	N
ATOM	3432	CA	ASN	I	38	37.290	-14.232	80.225	1.00	34.97	I	C
ATOM	3433	C	ASN	I	38	36.210	-15.281	79.957	1.00	35.10	I	C
ATOM	3434	O	ASN	I	38	36.406	-16.244	79.188	1.00	37.36	I	O
ATOM	3435	CB	ASN	I	38	38.061	-14.611	81.512	1.00	39.38	I	C
ATOM	3436	CG	ASN	I	38	39.216	-13.645	81.796	1.00	50.58	I	C
ATOM	3437	OD1	ASN	I	38	40.131	-13.509	80.975	1.00	56.26	I	O
ATOM	3438	ND2	ASN	I	38	39.173	-12.956	82.949	1.00	56.07	I	N
ATOM	3439	N	LEU	I	39	35.064	-15.116	80.589	1.00	32.58	I	N
ATOM	3440	CA	LEU	I	39	34.009	-16.109	80.469	1.00	30.50	I	C
ATOM	3441	C	LEU	I	39	32.927	-15.725	79.516	1.00	30.46	I	C
ATOM	3442	O	LEU	I	39	32.739	-14.539	79.226	1.00	29.70	I	O
ATOM	3443	CB	LEU	I	39	33.360	-16.349	81.840	1.00	31.84	I	C
ATOM	3444	CG	LEU	I	39	34.306	-16.668	82.986	1.00	35.60	I	C
ATOM	3445	CD1	LEU	I	39	33.523	-16.640	84.316	1.00	45.44	I	C
ATOM	3446	CD2	LEU	I	39	34.963	-18.037	82.724	1.00	39.91	I	C

ATOM	3447	N	THR	I	40	32.215	-16.739	79.028	1.00	32.11	I	N
ATOM	3448	CA	THR	I	40	31.090	-16.516	78.137	1.00	36.92	I	C
ATOM	3449	C	THR	I	40	29.935	-15.952	78.953	1.00	36.68	I	C
ATOM	3450	O	THR	I	40	29.227	-15.040	78.508	1.00	41.36	I	O
ATOM	3451	CB	THR	I	40	30.565	-17.848	77.503	1.00	38.87	I	C
ATOM	3452	OG1	THR	I	40	30.405	-18.854	78.536	1.00	44.51	I	O
ATOM	3453	CG2	THR	I	40	31.520	-18.325	76.432	1.00	38.41	I	C
ATOM	3454	N	ALA	I	41	29.757	-16.503	80.145	1.00	34.46	I	N
ATOM	3455	CA	ALA	I	41	28.683	-16.071	81.033	1.00	35.79	I	C
ATOM	3456	C	ALA	I	41	28.903	-14.655	81.599	1.00	33.42	I	C
ATOM	3457	O	ALA	I	41	30.012	-14.303	82.031	1.00	31.37	I	O
ATOM	3458	CB	ALA	I	41	28.522	-17.069	82.189	1.00	37.14	I	C
ATOM	3459	N	GLY	I	42	27.831	-13.862	81.582	1.00	28.18	I	N
ATOM	3460	CA	GLY	I	42	27.864	-12.495	82.100	1.00	26.16	I	C
ATOM	3461	C	GLY	I	42	28.773	-11.607	81.290	1.00	25.89	I	C
ATOM	3462	O	GLY	I	42	29.338	-10.675	81.811	1.00	23.85	I	O
ATOM	3463	N	MET	I	43	28.932	-11.910	80.003	1.00	27.06	I	N
ATOM	3464	CA	MET	I	43	29.835	-11.125	79.167	1.00	26.49	I	C
ATOM	3465	C	MET	I	43	29.514	-9.613	79.089	1.00	25.63	I	C
ATOM	3466	O	MET	I	43	30.422	-8.806	79.072	1.00	24.70	I	O
ATOM	3467	CB	MET	I	43	29.863	-11.691	77.726	1.00	25.09	I	C
ATOM	3468	CG	MET	I	43	30.876	-10.946	76.823	1.00	31.87	I	C
ATOM	3469	SD	MET	I	43	30.927	-11.571	75.102	1.00	50.36	I	S
ATOM	3470	CE	MET	I	43	29.431	-10.913	74.580	1.00	49.83	I	C
ATOM	3471	N	TYR	I	44	28.228	-9.239	78.967	1.00	23.56	I	N
ATOM	3472	CA	TYR	I	44	27.920	-7.799	78.843	1.00	21.86	I	C
ATOM	3473	C	TYR	I	44	28.349	-7.096	80.124	1.00	19.99	I	C
ATOM	3474	O	TYR	I	44	28.948	-6.028	80.088	1.00	23.39	I	O
ATOM	3475	CB	TYR	I	44	26.440	-7.549	78.655	1.00	23.84	I	C
ATOM	3476	CG	TYR	I	44	25.878	-8.026	77.350	1.00	25.71	I	C
ATOM	3477	CD1	TYR	I	44	26.263	-7.427	76.154	1.00	25.80	I	C
ATOM	3478	CD2	TYR	I	44	24.952	-9.061	77.315	1.00	27.28	I	C
ATOM	3479	CE1	TYR	I	44	25.733	-7.842	74.947	1.00	27.01	I	C
ATOM	3480	CE2	TYR	I	44	24.415	-9.498	76.100	1.00	22.75	I	C
ATOM	3481	CZ	TYR	I	44	24.824	-8.867	74.922	1.00	25.01	I	C
ATOM	3482	OH	TYR	I	44	24.320	-9.249	73.690	1.00	22.75	I	O
ATOM	3483	N	CYS	I	45	28.048	-7.724	81.245	1.00	17.09	I	N
ATOM	3484	CA	CYS	I	45	28.450	-7.120	82.510	1.00	17.82	I	C
ATOM	3485	C	CYS	I	45	29.967	-7.059	82.631	1.00	16.25	I	C
ATOM	3486	O	CYS	I	45	30.515	-6.076	83.113	1.00	21.21	I	O
ATOM	3487	CB	CYS	I	45	27.928	-7.903	83.689	1.00	15.24	I	C
ATOM	3488	SG	CYS	I	45	26.116	-7.936	83.883	1.00	20.73	I	S
ATOM	3489	N	ALA	I	46	30.665	-8.135	82.267	1.00	18.66	I	N
ATOM	3490	CA	ALA	I	46	32.128	-8.093	82.348	1.00	17.71	I	C
ATOM	3491	C	ALA	I	46	32.732	-7.009	81.432	1.00	19.91	I	C
ATOM	3492	O	ALA	I	46	33.705	-6.368	81.794	1.00	20.23	I	O
ATOM	3493	CB	ALA	I	46	32.746	-9.518	81.983	1.00	15.35	I	C
ATOM	3494	N	ALA	I	47	32.200	-6.861	80.216	1.00	23.62	I	N
ATOM	3495	CA	ALA	I	47	32.684	-5.845	79.286	1.00	22.12	I	C
ATOM	3496	C	ALA	I	47	32.457	-4.476	79.896	1.00	21.78	I	C
ATOM	3497	O	ALA	I	47	33.305	-3.602	79.813	1.00	18.94	I	O
ATOM	3498	CB	ALA	I	47	31.927	-5.952	77.927	1.00	18.65	I	C
ATOM	3499	N	LEU	I	48	31.287	-4.290	80.481	1.00	21.70	I	N
ATOM	3500	CA	LEU	I	48	31.014	-2.995	81.145	1.00	21.03	I	C
ATOM	3501	C	LEU	I	48	32.041	-2.745	82.292	1.00	21.18	I	C
ATOM	3502	O	LEU	I	48	32.589	-1.653	82.438	1.00	16.61	I	O
ATOM	3503	CB	LEU	I	48	29.582	-3.040	81.727	1.00	21.70	I	C
ATOM	3504	CG	LEU	I	48	29.216	-1.822	82.642	1.00	13.05	I	C
ATOM	3505	CD1	LEU	I	48	29.319	-0.520	81.854	1.00	9.05	I	C
ATOM	3506	CD2	LEU	I	48	27.771	-2.056	83.235	1.00	15.13	I	C
ATOM	3507	N	GLU	I	49	32.255	-3.767	83.108	1.00	20.18	I	N
ATOM	3508	CA	GLU	I	49	33.203	-3.663	84.258	1.00	19.63	I	C
ATOM	3509	C	GLU	I	49	34.601	-3.275	83.786	1.00	20.55	I	C
ATOM	3510	O	GLU	I	49	35.335	-2.512	84.439	1.00	26.90	I	O
ATOM	3511	CB	GLU	I	49	33.226	-5.012	85.031	1.00	17.04	I	C
ATOM	3512	CG	GLU	I	49	31.984	-5.184	85.968	1.00	20.14	I	C
ATOM	3513	CD	GLU	I	49	31.987	-4.123	87.040	1.00	22.52	I	C
ATOM	3514	OE1	GLU	I	49	32.933	-4.160	87.843	1.00	21.57	I	O
ATOM	3515	OE2	GLU	I	49	31.078	-3.244	87.073	1.00	10.29	I	O

ATOM	3516	N	SER	I	50	34.973	-3.759	82.611	1.00	18.39	I	N
ATOM	3517	CA	SER	I	50	36.307	-3.428	82.082	1.00	18.04	I	C
ATOM	3518	C	SER	I	50	36.368	-2.022	81.492	1.00	18.38	I	C
ATOM	3519	O	SER	I	50	37.235	-1.228	81.848	1.00	19.69	I	O
ATOM	3520	CB	SER	I	50	36.684	-4.412	80.956	1.00	16.41	I	C
ATOM	3521	OG	SER	I	50	37.988	-4.119	80.518	1.00	14.68	I	O
ATOM	3522	N	LEU	I	51	35.399	-1.714	80.618	1.00	19.34	I	N
ATOM	3523	CA	LEU	I	51	35.374	-0.436	79.913	1.00	17.71	I	C
ATOM	3524	C	LEU	I	51	34.994	0.798	80.754	1.00	19.46	I	C
ATOM	3525	O	LEU	I	51	35.371	1.923	80.412	1.00	21.21	I	O
ATOM	3526	CB	LEU	I	51	34.421	-0.552	78.686	1.00	16.17	I	C
ATOM	3527	CG	LEU	I	51	35.014	-1.455	77.585	1.00	11.29	I	C
ATOM	3528	CD1	LEU	I	51	34.002	-1.641	76.483	1.00	7.04	I	C
ATOM	3529	CD2	LEU	I	51	36.271	-0.787	76.972	1.00	14.57	I	C
ATOM	3530	N	ILE	I	52	34.326	0.582	81.875	1.00	18.04	I	N
ATOM	3531	CA	ILE	I	52	33.927	1.732	82.725	1.00	16.93	I	C
ATOM	3532	C	ILE	I	52	35.161	2.394	83.304	1.00	17.40	I	C
ATOM	3533	O	ILE	I	52	35.133	3.574	83.726	1.00	22.32	I	O
ATOM	3534	CB	ILE	I	52	32.981	1.272	83.897	1.00	17.81	I	C
ATOM	3535	CG1	ILE	I	52	32.253	2.493	84.538	1.00	21.78	I	C
ATOM	3536	CG2	ILE	I	52	33.789	0.520	84.971	1.00	9.73	I	C
ATOM	3537	CD1	ILE	I	52	31.212	3.105	83.597	1.00	8.98	I	C
ATOM	3538	N	ASN	I	53	36.272	1.649	83.374	1.00	22.00	I	N
ATOM	3539	CA	ASN	I	53	37.493	2.243	83.923	1.00	21.48	I	C
ATOM	3540	C	ASN	I	53	38.211	3.184	82.999	1.00	21.88	I	C
ATOM	3541	O	ASN	I	53	39.138	3.887	83.431	1.00	23.95	I	O
ATOM	3542	CB	ASN	I	53	38.459	1.157	84.358	1.00	18.16	I	C
ATOM	3543	CG	ASN	I	53	37.914	0.385	85.511	1.00	29.89	I	C
ATOM	3544	OD1	ASN	I	53	37.311	0.977	86.434	1.00	31.88	I	O
ATOM	3545	ND2	ASN	I	53	38.068	-0.941	85.467	1.00	41.94	I	N
ATOM	3546	N	VAL	I	54	37.781	3.241	81.733	1.00	23.83	I	N
ATOM	3547	CA	VAL	I	54	38.471	4.131	80.784	1.00	25.45	I	C
ATOM	3548	C	VAL	I	54	38.204	5.591	81.101	1.00	29.82	I	C
ATOM	3549	O	VAL	I	54	37.062	5.987	81.206	1.00	31.49	I	O
ATOM	3550	CB	VAL	I	54	38.064	3.832	79.306	1.00	20.94	I	C
ATOM	3551	CG1	VAL	I	54	38.791	4.820	78.352	1.00	11.51	I	C
ATOM	3552	CG2	VAL	I	54	38.453	2.385	78.975	1.00	17.89	I	C
ATOM	3553	N	SER	I	55	39.278	6.374	81.258	1.00	33.89	I	N
ATOM	3554	CA	SER	I	55	39.169	7.797	81.566	1.00	34.19	I	C
ATOM	3555	C	SER	I	55	39.539	8.646	80.383	1.00	33.52	I	C
ATOM	3556	O	SER	I	55	40.396	8.279	79.553	1.00	37.91	I	O
ATOM	3557	CB	SER	I	55	40.112	8.161	82.724	1.00	35.58	I	C
ATOM	3558	OG	SER	I	55	40.101	9.570	82.957	1.00	53.86	I	O
ATOM	3559	N	GLY	I	56	38.880	9.774	80.267	1.00	28.58	I	N
ATOM	3560	CA	GLY	I	56	39.231	10.704	79.205	1.00	28.05	I	C
ATOM	3561	C	GLY	I	56	38.958	10.276	77.774	1.00	29.97	I	C
ATOM	3562	O	GLY	I	56	39.636	10.722	76.851	1.00	30.95	I	O
ATOM	3563	N	CYS	I	57	37.958	9.430	77.564	1.00	27.62	I	N
ATOM	3564	CA	CYS	I	57	37.678	8.988	76.196	1.00	24.77	I	C
ATOM	3565	C	CYS	I	57	36.192	9.169	75.867	1.00	26.27	I	C
ATOM	3566	O	CYS	I	57	35.354	8.295	76.128	1.00	27.58	I	O
ATOM	3567	CB	CYS	I	57	38.064	7.535	76.040	1.00	24.74	I	C
ATOM	3568	SG	CYS	I	57	38.040	7.007	74.290	1.00	28.66	I	S
ATOM	3569	N	SER	I	58	35.861	10.298	75.257	1.00	22.20	I	N
ATOM	3570	CA	SER	I	58	34.449	10.516	74.948	1.00	18.10	I	C
ATOM	3571	C	SER	I	58	33.950	9.507	73.891	1.00	18.99	I	C
ATOM	3572	O	SER	I	58	32.743	9.210	73.802	1.00	20.20	I	O
ATOM	3573	CB	SER	I	58	34.241	11.957	74.461	1.00	13.59	I	C
ATOM	3574	OG	SER	I	58	35.149	12.274	73.404	1.00	17.58	I	O
ATOM	3575	N	ALA	I	59	34.845	8.928	73.104	1.00	20.43	I	N
ATOM	3576	CA	ALA	I	59	34.351	7.992	72.058	1.00	20.58	I	C
ATOM	3577	C	ALA	I	59	33.723	6.699	72.583	1.00	23.25	I	C
ATOM	3578	O	ALA	I	59	32.944	6.047	71.865	1.00	24.07	I	O
ATOM	3579	CB	ALA	I	59	35.473	7.625	71.108	1.00	17.69	I	C
ATOM	3580	N	ILE	I	60	34.084	6.309	73.804	1.00	25.09	I	N
ATOM	3581	CA	ILE	I	60	33.563	5.064	74.404	1.00	25.81	I	C
ATOM	3582	C	ILE	I	60	32.326	5.257	75.280	1.00	25.44	I	C
ATOM	3583	O	ILE	I	60	31.719	4.292	75.753	1.00	29.14	I	O
ATOM	3584	CB	ILE	I	60	34.693	4.382	75.268	1.00	26.48	I	C

ATOM	3585	CG1	ILE	I	60	34.429	2.873	75.383	1.00	29.24	I	C
ATOM	3586	CG2	ILE	I	60	34.770	5.007	76.682	1.00	27.68	I	C
ATOM	3587	CD1	ILE	I	60	34.788	2.139	74.124	1.00	35.86	I	C
ATOM	3588	N	GLU	I	61	31.916	6.504	75.486	1.00	27.58	I	N
ATOM	3589	CA	GLU	I	61	30.786	6.713	76.376	1.00	28.09	I	C
ATOM	3590	C	GLU	I	61	29.501	6.014	75.949	1.00	23.64	I	C
ATOM	3591	O	GLU	I	61	28.844	5.387	76.747	1.00	22.27	I	O
ATOM	3592	CB	GLU	I	61	30.530	8.216	76.576	1.00	28.67	I	C
ATOM	3593	CG	GLU	I	61	29.647	8.435	77.799	1.00	56.14	I	C
ATOM	3594	CD	GLU	I	61	29.437	9.895	78.121	1.00	79.31	I	C
ATOM	3595	OE1	GLU	I	61	30.453	10.575	78.443	1.00	87.35	I	O
ATOM	3596	OE2	GLU	I	61	28.268	10.350	78.034	1.00	78.03	I	O
ATOM	3597	N	LYS	I	62	29.156	6.110	74.675	1.00	22.10	I	N
ATOM	3598	CA	LYS	I	62	27.941	5.485	74.230	1.00	21.59	I	C
ATOM	3599	C	LYS	I	62	28.015	3.960	74.460	1.00	22.50	I	C
ATOM	3600	O	LYS	I	62	27.049	3.348	74.913	1.00	25.76	I	O
ATOM	3601	CB	LYS	I	62	27.724	5.788	72.749	1.00	25.19	I	C
ATOM	3602	CG	LYS	I	62	26.416	5.255	72.179	1.00	23.62	I	C
ATOM	3603	CD	LYS	I	62	26.218	5.870	70.789	1.00	40.59	I	C
ATOM	3604	CE	LYS	I	62	25.050	5.242	70.035	1.00	37.34	I	C
ATOM	3605	NZ	LYS	I	62	24.805	5.985	68.770	1.00	37.46	I	N
ATOM	3606	N	THR	I	63	29.154	3.350	74.157	1.00	17.72	I	N
ATOM	3607	CA	THR	I	63	29.309	1.914	74.390	1.00	16.79	I	C
ATOM	3608	C	THR	I	63	29.105	1.594	75.880	1.00	19.10	I	C
ATOM	3609	O	THR	I	63	28.441	0.633	76.237	1.00	18.80	I	O
ATOM	3610	CB	THR	I	63	30.702	1.454	73.932	1.00	19.14	I	C
ATOM	3611	OG1	THR	I	63	30.807	1.607	72.498	1.00	24.84	I	O
ATOM	3612	CG2	THR	I	63	30.917	-0.029	74.284	1.00	16.77	I	C
ATOM	3613	N	GLN	I	64	29.666	2.414	76.786	1.00	18.38	I	N
ATOM	3614	CA	GLN	I	64	29.439	2.123	78.195	1.00	18.26	I	C
ATOM	3615	C	GLN	I	64	27.944	2.127	78.570	1.00	17.32	I	C
ATOM	3616	O	GLN	I	64	27.476	1.301	79.334	1.00	17.63	I	O
ATOM	3617	CB	GLN	I	64	30.194	3.123	79.104	1.00	14.96	I	C
ATOM	3618	CG	GLN	I	64	31.712	3.131	78.912	1.00	21.19	I	C
ATOM	3619	CD	GLN	I	64	32.343	4.307	79.685	1.00	20.97	I	C
ATOM	3620	OE1	GLN	I	64	31.656	5.290	79.958	1.00	26.32	I	O
ATOM	3621	NE2	GLN	I	64	33.617	4.184	80.081	1.00	16.17	I	N
ATOM	3622	N	ARG	I	65	27.212	3.077	78.002	1.00	16.69	I	N
ATOM	3623	CA	ARG	I	65	25.802	3.242	78.268	1.00	18.05	I	C
ATOM	3624	C	ARG	I	65	24.998	2.120	77.653	1.00	20.85	I	C
ATOM	3625	O	ARG	I	65	24.035	1.620	78.264	1.00	21.77	I	O
ATOM	3626	CB	ARG	I	65	25.319	4.587	77.714	1.00	17.49	I	C
ATOM	3627	CG	ARG	I	65	25.935	5.731	78.482	1.00	27.25	I	C
ATOM	3628	CD	ARG	I	65	25.514	7.103	77.925	1.00	36.17	I	C
ATOM	3629	NE	ARG	I	65	26.063	8.153	78.793	1.00	49.27	I	N
ATOM	3630	CZ	ARG	I	65	25.587	8.457	79.994	1.00	41.70	I	C
ATOM	3631	NH1	ARG	I	65	24.542	7.800	80.475	1.00	30.90	I	N
ATOM	3632	NH2	ARG	I	65	26.170	9.417	80.718	1.00	44.99	I	N
ATOM	3633	N	MET	I	66	25.390	1.695	76.453	1.00	20.23	I	N
ATOM	3634	CA	MET	I	66	24.683	0.574	75.849	1.00	16.65	I	C
ATOM	3635	C	MET	I	66	24.910	-0.730	76.616	1.00	15.75	I	C
ATOM	3636	O	MET	I	66	23.998	-1.524	76.829	1.00	17.29	I	O
ATOM	3637	CB	MET	I	66	25.106	0.430	74.388	1.00	19.30	I	C
ATOM	3638	CG	MET	I	66	24.557	1.557	73.502	1.00	27.33	I	C
ATOM	3639	SD	MET	I	66	25.325	1.443	71.840	1.00	24.80	I	S
ATOM	3640	CE	MET	I	66	23.846	1.367	70.841	1.00	24.09	I	C
ATOM	3641	N	LEU	I	67	26.138	-0.951	77.060	1.00	17.99	I	N
ATOM	3642	CA	LEU	I	67	26.418	-2.129	77.880	1.00	16.87	I	C
ATOM	3643	C	LEU	I	67	25.658	-2.015	79.226	1.00	16.23	I	C
ATOM	3644	O	LEU	I	67	25.184	-3.016	79.799	1.00	19.29	I	O
ATOM	3645	CB	LEU	I	67	27.947	-2.218	78.136	1.00	18.99	I	C
ATOM	3646	CG	LEU	I	67	28.755	-2.694	76.907	1.00	18.84	I	C
ATOM	3647	CD1	LEU	I	67	30.276	-2.561	77.275	1.00	15.28	I	C
ATOM	3648	CD2	LEU	I	67	28.441	-4.176	76.515	1.00	15.11	I	C
ATOM	3649	N	SER	I	68	25.525	-0.799	79.745	1.00	13.33	I	N
ATOM	3650	CA	SER	I	68	24.777	-0.628	80.994	1.00	16.33	I	C
ATOM	3651	C	SER	I	68	23.306	-1.021	80.848	1.00	19.31	I	C
ATOM	3652	O	SER	I	68	22.656	-1.463	81.806	1.00	21.40	I	O
ATOM	3653	CB	SER	I	68	24.879	0.834	81.481	1.00	15.42	I	C

ATOM	3654	OG	SER	I	68	26.229	1.168	81.816	1.00	24.18	I	O
ATOM	3655	N	GLY	I	69	22.788	-0.863	79.636	1.00	17.78	I	N
ATOM	3656	CA	GLY	I	69	21.422	-1.229	79.310	1.00	13.18	I	C
ATOM	3657	C	GLY	I	69	21.290	-2.746	79.355	1.00	15.71	I	C
ATOM	3658	O	GLY	I	69	20.279	-3.242	79.800	1.00	14.07	I	O
ATOM	3659	N	PHE	I	70	22.324	-3.495	78.889	1.00	17.98	I	N
ATOM	3660	CA	PHE	I	70	22.265	-4.948	78.947	1.00	18.28	I	C
ATOM	3661	C	PHE	I	70	22.523	-5.477	80.370	1.00	18.48	I	C
ATOM	3662	O	PHE	I	70	22.034	-6.564	80.757	1.00	18.81	I	O
ATOM	3663	CB	PHE	I	70	23.346	-5.574	78.019	1.00	18.99	I	C
ATOM	3664	CG	PHE	I	70	22.947	-5.624	76.570	1.00	19.17	I	C
ATOM	3665	CD1	PHE	I	70	23.433	-4.685	75.683	1.00	13.86	I	C
ATOM	3666	CD2	PHE	I	70	22.121	-6.634	76.115	1.00	14.02	I	C
ATOM	3667	CE1	PHE	I	70	23.086	-4.746	74.297	1.00	15.78	I	C
ATOM	3668	CE2	PHE	I	70	21.757	-6.719	74.732	1.00	21.48	I	C
ATOM	3669	CZ	PHE	I	70	22.244	-5.766	73.841	1.00	19.98	I	C
ATOM	3670	N	CYS	I	71	23.299	-4.720	81.159	1.00	15.72	I	N
ATOM	3671	CA	CYS	I	71	23.613	-5.186	82.511	1.00	19.25	I	C
ATOM	3672	C	CYS	I	71	23.288	-4.039	83.511	1.00	19.54	I	C
ATOM	3673	O	CYS	I	71	24.209	-3.472	84.088	1.00	17.72	I	O
ATOM	3674	CB	CYS	I	71	25.118	-5.443	82.612	1.00	17.63	I	C
ATOM	3675	SG	CYS	I	71	25.681	-5.978	84.268	1.00	22.27	I	S
ATOM	3676	N	PRO	I	72	22.004	-3.667	83.656	1.00	20.43	I	N
ATOM	3677	CA	PRO	I	72	21.615	-2.570	84.563	1.00	20.56	I	C
ATOM	3678	C	PRO	I	72	21.849	-2.796	86.063	1.00	18.35	I	C
ATOM	3679	O	PRO	I	72	22.041	-1.806	86.804	1.00	18.45	I	O
ATOM	3680	CB	PRO	I	72	20.124	-2.345	84.201	1.00	20.03	I	C
ATOM	3681	CG	PRO	I	72	19.660	-3.743	83.874	1.00	22.09	I	C
ATOM	3682	CD	PRO	I	72	20.825	-4.260	83.006	1.00	22.41	I	C
ATOM	3683	N	HIS	I	73	21.844	-4.066	86.502	1.00	19.47	I	N
ATOM	3684	CA	HIS	I	73	22.089	-4.412	87.888	1.00	19.66	I	C
ATOM	3685	C	HIS	I	73	23.381	-5.238	87.946	1.00	21.68	I	C
ATOM	3686	O	HIS	I	73	23.562	-6.213	87.207	1.00	25.46	I	O
ATOM	3687	CB	HIS	I	73	20.900	-5.199	88.485	1.00	20.83	I	C
ATOM	3688	CG	HIS	I	73	19.672	-4.351	88.703	1.00	22.23	I	C
ATOM	3689	ND1	HIS	I	73	19.304	-3.876	89.943	1.00	16.76	I	N
ATOM	3690	CD2	HIS	I	73	18.770	-3.846	87.820	1.00	24.20	I	C
ATOM	3691	CE1	HIS	I	73	18.222	-3.109	89.811	1.00	16.41	I	C
ATOM	3692	NE2	HIS	I	73	17.878	-3.082	88.540	1.00	15.39	I	N
ATOM	3693	N	LYS	I	74	24.275	-4.823	88.824	1.00	21.95	I	N
ATOM	3694	CA	LYS	I	74	25.558	-5.460	88.935	1.00	21.35	I	C
ATOM	3695	C	LYS	I	74	25.414	-6.919	89.274	1.00	23.89	I	C
ATOM	3696	O	LYS	I	74	24.528	-7.310	90.044	1.00	22.28	I	O
ATOM	3697	CB	LYS	I	74	26.406	-4.771	90.030	1.00	22.82	I	C
ATOM	3698	CG	LYS	I	74	27.911	-5.064	89.908	1.00	21.50	I	C
ATOM	3699	CD	LYS	I	74	28.751	-4.501	91.096	1.00	16.86	I	C
ATOM	3700	CE	LYS	I	74	28.597	-5.307	92.383	1.00	15.58	I	C
ATOM	3701	NZ	LYS	I	74	29.438	-4.661	93.459	1.00	28.77	I	N
ATOM	3702	N	VAL	I	75	26.291	-7.728	88.692	1.00	30.24	I	N
ATOM	3703	CA	VAL	I	75	26.315	-9.147	88.987	1.00	32.25	I	C
ATOM	3704	C	VAL	I	75	27.653	-9.491	89.629	1.00	33.25	I	C
ATOM	3705	O	VAL	I	75	28.590	-8.668	89.633	1.00	36.67	I	O
ATOM	3706	CB	VAL	I	75	26.106	-9.983	87.715	1.00	31.71	I	C
ATOM	3707	CG1	VAL	I	75	24.737	-9.626	87.122	1.00	30.96	I	C
ATOM	3708	CG2	VAL	I	75	27.251	-9.701	86.667	1.00	37.27	I	C
ATOM	3709	N	SER	I	76	27.742	-10.679	90.227	1.00	38.75	I	N
ATOM	3710	CA	SER	I	76	29.010	-11.098	90.839	1.00	43.38	I	C
ATOM	3711	C	SER	I	76	30.110	-11.307	89.793	1.00	45.20	I	C
ATOM	3712	O	SER	I	76	29.926	-12.056	88.832	1.00	41.71	I	O
ATOM	3713	CB	SER	I	76	28.846	-12.402	91.626	1.00	45.35	I	C
ATOM	3714	OG	SER	I	76	30.126	-12.787	92.120	1.00	51.24	I	O
ATOM	3715	N	ALA	I	77	31.254	-10.652	89.982	1.00	49.67	I	N
ATOM	3716	CA	ALA	I	77	32.375	-10.766	89.048	1.00	54.47	I	C
ATOM	3717	C	ALA	I	77	32.943	-12.175	89.034	1.00	57.42	I	C
ATOM	3718	O	ALA	I	77	33.412	-12.653	88.003	1.00	59.50	I	O
ATOM	3719	CB	ALA	I	77	33.478	-9.766	89.414	1.00	51.64	I	C
ATOM	3720	N	GLY	I	78	32.895	-12.843	90.179	1.00	60.13	I	N
ATOM	3721	CA	GLY	I	78	33.412	-14.198	90.239	1.00	62.69	I	C
ATOM	3722	C	GLY	I	78	34.882	-14.206	89.849	1.00	63.55	I	C

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ATOM   3723  O   GLY I  78      35.563 -13.090  90.291  1.00 63.76      I    O
ATOM   3724  N   SER I  81      39.947 -16.327  92.121  1.00 67.81      I    N
ATOM   3725  CA  SER I  81      41.293 -16.933  92.348  1.00 65.14      I    C
ATOM   3726  C   SER I  81      42.348 -16.541  91.309  1.00 61.18      I    C
ATOM   3727  O   SER I  81      43.501 -16.954  91.421  1.00 60.41      I    O
ATOM   3728  CB  SER I  81      41.172 -18.457  92.368  1.00 65.70      I    C
ATOM   3729  OG  SER I  81      40.423 -18.891  93.492  1.00 69.36      I    O
ATOM   3730  N   SER I  82      41.956 -15.751  90.310  1.00 56.70      I    N
ATOM   3731  CA  SER I  82      42.867 -15.344  89.249  1.00 51.54      I    C
ATOM   3732  C   SER I  82      43.685 -14.090  89.610  1.00 47.03      I    C
ATOM   3733  O   SER I  82      43.155 -12.987  89.727  1.00 44.40      I    O
ATOM   3734  CB  SER I  82      42.067 -15.117  87.966  1.00 52.88      I    C
ATOM   3735  OG  SER I  82      42.944 -14.947  86.868  1.00 62.13      I    O
ATOM   3736  N   LEU I  83      44.992 -14.262  89.782  1.00 40.85      I    N
ATOM   3737  CA  LEU I  83      45.839 -13.152  90.182  1.00 33.26      I    C
ATOM   3738  C   LEU I  83      45.835 -11.917  89.264  1.00 32.94      I    C
ATOM   3739  O   LEU I  83      45.828 -10.799  89.748  1.00 30.66      I    O
ATOM   3740  CB  LEU I  83      47.287 -13.614  90.310  1.00 29.35      I    C
ATOM   3741  CG  LEU I  83      48.279 -12.574  90.838  1.00 27.09      I    C
ATOM   3742  CD1 LEU I  83      47.939 -12.173  92.295  1.00 12.16      I    C
ATOM   3743  CD2 LEU I  83      49.691 -13.159  90.750  1.00 24.42      I    C
ATOM   3744  N   HIS I  84      45.872 -12.145  87.957  1.00 29.82      I    N
ATOM   3745  CA  HIS I  84      45.974 -11.040  86.983  1.00 29.54      I    C
ATOM   3746  C   HIS I  84      44.628 -10.553  86.425  1.00 29.73      I    C
ATOM   3747  O   HIS I  84      44.592  -9.730  85.525  1.00 25.19      I    O
ATOM   3748  CB  HIS I  84      46.850 -11.516  85.820  1.00 26.32      I    C
ATOM   3749  CG  HIS I  84      48.157 -12.110  86.250  1.00 28.45      I    C
ATOM   3750  ND1 HIS I  84      49.148 -11.364  86.849  1.00 29.88      I    N
ATOM   3751  CD2 HIS I  84      48.635 -13.377  86.169  1.00 24.74      I    C
ATOM   3752  CE1 HIS I  84      50.180 -12.144  87.123  1.00 30.46      I    C
ATOM   3753  NE2 HIS I  84      49.894 -13.372  86.721  1.00 21.40      I    N
ATOM   3754  N   VAL I  85      43.536 -11.067  86.978  1.00 32.07      I    N
ATOM   3755  CA  VAL I  85      42.202 -10.744  86.471  1.00 32.06      I    C
ATOM   3756  C   VAL I  85      41.928  -9.272  86.189  1.00 33.84      I    C
ATOM   3757  O   VAL I  85      41.269  -8.945  85.194  1.00 36.05      I    O
ATOM   3758  CB  VAL I  85      41.112 -11.325  87.405  1.00 33.38      I    C
ATOM   3759  CG1 VAL I  85      41.122 -10.639  88.753  1.00 27.19      I    C
ATOM   3760  CG2 VAL I  85      39.765 -11.211  86.751  1.00 37.69      I    C
ATOM   3761  N   ARG I  86      42.424  -8.378  87.022  1.00 32.54      I    N
ATOM   3762  CA  ARG I  86      42.181  -6.974  86.794  1.00 31.61      I    C
ATOM   3763  C   ARG I  86      43.401  -6.217  86.290  1.00 31.91      I    C
ATOM   3764  O   ARG I  86      43.435  -4.977  86.319  1.00 35.23      I    O
ATOM   3765  CB  ARG I  86      41.586  -6.355  88.074  1.00 28.40      I    C
ATOM   3766  CG  ARG I  86      40.089  -6.712  88.217  1.00 41.94      I    C
ATOM   3767  CD  ARG I  86      39.461  -6.267  89.534  1.00 46.77      I    C
ATOM   3768  NE  ARG I  86      39.546  -7.320  90.565  1.00 63.98      I    N
ATOM   3769  CZ  ARG I  86      38.731  -8.386  90.654  1.00 66.04      I    C
ATOM   3770  NH1 ARG I  86      37.746  -8.587  89.784  1.00 52.07      I    N
ATOM   3771  NH2 ARG I  86      38.896  -9.253  91.647  1.00 62.26      I    N
ATOM   3772  N   ASP I  87      44.409  -6.944  85.790  1.00 30.34      I    N
ATOM   3773  CA  ASP I  87      45.582  -6.265  85.271  1.00 32.40      I    C
ATOM   3774  C   ASP I  87      45.118  -5.630  83.964  1.00 31.30      I    C
ATOM   3775  O   ASP I  87      44.441  -6.299  83.192  1.00 30.02      I    O
ATOM   3776  CB  ASP I  87      46.690  -7.243  84.879  1.00 34.02      I    C
ATOM   3777  CG  ASP I  87      47.463  -7.838  86.086  1.00 38.19      I    C
ATOM   3778  OD1 ASP I  87      47.145  -7.582  87.260  1.00 32.90      I    O
ATOM   3779  OD2 ASP I  87      48.406  -8.554  85.741  1.00 32.57      I    O
ATOM   3780  N   THR I  88      45.516  -4.392  83.687  1.00 30.86      I    N
ATOM   3781  CA  THR I  88      45.063  -3.748  82.443  1.00 31.20      I    C
ATOM   3782  C   THR I  88      46.075  -3.950  81.321  1.00 31.74      I    C
ATOM   3783  O   THR I  88      46.942  -3.091  81.058  1.00 33.75      I    O
ATOM   3784  CB  THR I  88      44.822  -2.258  82.703  1.00 29.81      I    C
ATOM   3785  OG1 THR I  88      46.027  -1.671  83.179  1.00 36.54      I    O
ATOM   3786  CG2 THR I  88      43.767  -2.090  83.782  1.00 24.42      I    C
ATOM   3787  N   ALA I  89      45.968  -5.085  80.639  1.00 31.60      I    N
ATOM   3788  CA  ALA I  89      46.955  -5.362  79.608  1.00 30.00      I    C
ATOM   3789  C   ALA I  89      46.448  -5.308  78.192  1.00 29.68      I    C
ATOM   3790  O   ALA I  89      47.205  -5.591  77.282  1.00 32.56      I    O
ATOM   3791  CB  ALA I  89      47.564  -6.708  79.859  1.00 35.66      I    C
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ATOM	3792	N	ILE	I	90	45.203	-4.897	77.975	1.00	26.67	I	N
ATOM	3793	CA	ILE	I	90	44.675	-4.930	76.618	1.00	21.52	I	C
ATOM	3794	C	ILE	I	90	44.399	-3.493	76.191	1.00	20.02	I	C
ATOM	3795	O	ILE	I	90	43.796	-2.739	76.949	1.00	18.80	I	O
ATOM	3796	CB	ILE	I	90	43.309	-5.690	76.590	1.00	22.56	I	C
ATOM	3797	CG1	ILE	I	90	43.439	-7.060	77.251	1.00	27.82	I	C
ATOM	3798	CG2	ILE	I	90	42.780	-5.835	75.178	1.00	20.25	I	C
ATOM	3799	CD1	ILE	I	90	44.554	-7.915	76.695	1.00	23.97	I	C
ATOM	3800	N	GLU	I	91	44.802	-3.115	74.992	1.00	22.48	I	N
ATOM	3801	CA	GLU	I	91	44.501	-1.768	74.513	1.00	25.02	I	C
ATOM	3802	C	GLU	I	91	42.983	-1.709	74.241	1.00	25.25	I	C
ATOM	3803	O	GLU	I	91	42.369	-2.675	73.785	1.00	24.40	I	O
ATOM	3804	CB	GLU	I	91	45.255	-1.470	73.201	1.00	26.65	I	C
ATOM	3805	CG	GLU	I	91	46.761	-1.457	73.383	1.00	43.52	I	C
ATOM	3806	CD	GLU	I	91	47.501	-1.542	72.054	1.00	66.85	I	C
ATOM	3807	OE1	GLU	I	91	48.725	-1.840	72.074	1.00	71.43	I	O
ATOM	3808	OE2	GLU	I	91	46.853	-1.312	70.997	1.00	76.33	I	O
ATOM	3809	N	VAL	I	92	42.374	-0.559	74.508	1.00	20.39	I	N
ATOM	3810	CA	VAL	I	92	40.939	-0.475	74.300	1.00	22.52	I	C
ATOM	3811	C	VAL	I	92	40.523	-0.874	72.888	1.00	24.09	I	C
ATOM	3812	O	VAL	I	92	39.571	-1.603	72.701	1.00	22.60	I	O
ATOM	3813	CB	VAL	I	92	40.428	0.925	74.574	1.00	24.93	I	C
ATOM	3814	CG1	VAL	I	92	38.923	0.968	74.198	1.00	23.93	I	C
ATOM	3815	CG2	VAL	I	92	40.622	1.268	76.076	1.00	29.40	I	C
ATOM	3816	N	ALA	I	93	41.241	-0.393	71.889	1.00	23.14	I	N
ATOM	3817	CA	ALA	I	93	40.901	-0.747	70.521	1.00	20.90	I	C
ATOM	3818	C	ALA	I	93	40.853	-2.249	70.320	1.00	21.97	I	C
ATOM	3819	O	ALA	I	93	39.949	-2.781	69.631	1.00	22.74	I	O
ATOM	3820	CB	ALA	I	93	41.903	-0.116	69.561	1.00	17.96	I	C
ATOM	3821	N	ALA	I	94	41.832	-2.953	70.883	1.00	20.31	I	N
ATOM	3822	CA	ALA	I	94	41.883	-4.420	70.728	1.00	22.41	I	C
ATOM	3823	C	ALA	I	94	40.764	-5.113	71.484	1.00	21.47	I	C
ATOM	3824	O	ALA	I	94	40.140	-6.098	70.998	1.00	21.82	I	O
ATOM	3825	CB	ALA	I	94	43.276	-4.974	71.187	1.00	23.67	I	C
ATOM	3826	N	PHE	I	95	40.483	-4.584	72.672	1.00	19.72	I	N
ATOM	3827	CA	PHE	I	95	39.426	-5.132	73.479	1.00	19.20	I	C
ATOM	3828	C	PHE	I	95	38.072	-5.000	72.750	1.00	20.71	I	C
ATOM	3829	O	PHE	I	95	37.284	-5.941	72.715	1.00	18.83	I	O
ATOM	3830	CB	PHE	I	95	39.352	-4.371	74.805	1.00	17.19	I	C
ATOM	3831	CG	PHE	I	95	38.253	-4.836	75.695	1.00	18.73	I	C
ATOM	3832	CD1	PHE	I	95	38.509	-5.739	76.707	1.00	19.09	I	C
ATOM	3833	CD2	PHE	I	95	36.939	-4.365	75.517	1.00	28.45	I	C
ATOM	3834	CE1	PHE	I	95	37.475	-6.189	77.554	1.00	24.24	I	C
ATOM	3835	CE2	PHE	I	95	35.914	-4.798	76.346	1.00	28.64	I	C
ATOM	3836	CZ	PHE	I	95	36.172	-5.706	77.360	1.00	28.20	I	C
ATOM	3837	N	VAL	I	96	37.814	-3.817	72.186	1.00	21.23	I	N
ATOM	3838	CA	VAL	I	96	36.534	-3.564	71.499	1.00	22.02	I	C
ATOM	3839	C	VAL	I	96	36.412	-4.391	70.191	1.00	22.65	I	C
ATOM	3840	O	VAL	I	96	35.358	-4.954	69.862	1.00	22.48	I	O
ATOM	3841	CB	VAL	I	96	36.354	-2.048	71.208	1.00	22.55	I	C
ATOM	3842	CG1	VAL	I	96	35.086	-1.833	70.313	1.00	18.24	I	C
ATOM	3843	CG2	VAL	I	96	36.164	-1.327	72.526	1.00	23.04	I	C
ATOM	3844	N	ALA	I	97	37.506	-4.495	69.452	1.00	25.04	I	N
ATOM	3845	CA	ALA	I	97	37.467	-5.306	68.235	1.00	26.44	I	C
ATOM	3846	C	ALA	I	97	37.132	-6.762	68.567	1.00	22.96	I	C
ATOM	3847	O	ALA	I	97	36.353	-7.388	67.886	1.00	24.45	I	O
ATOM	3848	CB	ALA	I	97	38.807	-5.233	67.515	1.00	31.87	I	C
ATOM	3849	N	ASP	I	98	37.709	-7.303	69.627	1.00	23.71	I	N
ATOM	3850	CA	ASP	I	98	37.425	-8.696	70.050	1.00	23.00	I	C
ATOM	3851	C	ASP	I	98	35.979	-8.812	70.558	1.00	24.40	I	C
ATOM	3852	O	ASP	I	98	35.283	-9.795	70.294	1.00	24.30	I	O
ATOM	3853	CB	ASP	I	98	38.382	-9.092	71.180	1.00	19.69	I	C
ATOM	3854	CG	ASP	I	98	38.094	-10.465	71.749	1.00	23.36	I	C
ATOM	3855	OD1	ASP	I	98	38.602	-11.503	71.271	1.00	32.56	I	O
ATOM	3856	OD2	ASP	I	98	37.296	-10.496	72.778	1.00	25.79	I	O
ATOM	3857	N	LEU	I	99	35.540	-7.819	71.338	1.00	25.64	I	N
ATOM	3858	CA	LEU	I	99	34.158	-7.857	71.849	1.00	23.64	I	C
ATOM	3859	C	LEU	I	99	33.254	-7.921	70.611	1.00	26.34	I	C
ATOM	3860	O	LEU	I	99	32.302	-8.681	70.575	1.00	21.05	I	O

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ATOM   3861  CB  LEU I  99      33.832  -6.556  72.655  1.00 26.66      I    C
ATOM   3862  CG  LEU I  99      32.389  -6.402  73.163  1.00 20.95      I    C
ATOM   3863  CD1 LEU I  99      31.978  -7.628  73.981  1.00 13.88      I    C
ATOM   3864  CD2 LEU I  99      32.325  -5.070  73.966  1.00 24.83      I    C
ATOM   3865  N   LEU I 100      33.545  -7.065  69.628  1.00 25.95      I    N
ATOM   3866  CA  LEU I 100      32.711  -6.993  68.426  1.00 28.26      I    C
ATOM   3867  C   LEU I 100      32.627  -8.366  67.732  1.00 29.60      I    C
ATOM   3868  O   LEU I 100      31.560  -8.810  67.305  1.00 29.23      I    O
ATOM   3869  CB  LEU I 100      33.273  -5.928  67.452  1.00 30.11      I    C
ATOM   3870  CG  LEU I 100      32.650  -5.886  66.044  1.00 27.15      I    C
ATOM   3871  CD1 LEU I 100      31.135  -5.727  66.148  1.00 31.05      I    C
ATOM   3872  CD2 LEU I 100      33.281  -4.740  65.254  1.00 26.52      I    C
ATOM   3873  N   LEU I 101      33.745  -9.063  67.675  1.00 29.37      I    N
ATOM   3874  CA  LEU I 101      33.759 -10.388  67.038  1.00 29.29      I    C
ATOM   3875  C   LEU I 101      32.817 -11.370  67.738  1.00 27.17      I    C
ATOM   3876  O   LEU I 101      32.059 -12.118  67.095  1.00 28.05      I    O
ATOM   3877  CB  LEU I 101      35.207 -10.893  67.069  1.00 28.28      I    C
ATOM   3878  CG  LEU I 101      35.600 -12.250  66.508  1.00 32.38      I    C
ATOM   3879  CD1 LEU I 101      37.152 -12.263  66.541  1.00 49.76      I    C
ATOM   3880  CD2 LEU I 101      35.018 -13.410  67.313  1.00 35.45      I    C
ATOM   3881  N   HIS I 102      32.870 -11.373  69.071  1.00 26.61      I    N
ATOM   3882  CA  HIS I 102      32.034 -12.251  69.877  1.00 27.47      I    C
ATOM   3883  C   HIS I 102      30.583 -11.798  69.756  1.00 29.67      I    C
ATOM   3884  O   HIS I 102      29.681 -12.633  69.610  1.00 31.47      I    O
ATOM   3885  CB  HIS I 102      32.512 -12.240  71.343  1.00 24.82      I    C
ATOM   3886  CG  HIS I 102      33.836 -12.910  71.517  1.00 31.90      I    C
ATOM   3887  ND1 HIS I 102      34.018 -14.251  71.250  1.00 35.56      I    N
ATOM   3888  CD2 HIS I 102      35.057 -12.422  71.843  1.00 30.43      I    C
ATOM   3889  CE1 HIS I 102      35.291 -14.560  71.396  1.00 33.85      I    C
ATOM   3890  NE2 HIS I 102      35.943 -13.472  71.756  1.00 40.02      I    N
ATOM   3891  N   LEU I 103      30.337 -10.488  69.801  1.00 25.34      I    N
ATOM   3892  CA  LEU I 103      28.934 -10.065  69.640  1.00 23.49      I    C
ATOM   3893  C   LEU I 103      28.346 -10.471  68.259  1.00 25.13      I    C
ATOM   3894  O   LEU I 103      27.187 -10.905  68.172  1.00 25.31      I    O
ATOM   3895  CB  LEU I 103      28.767  -8.550  69.831  1.00 21.97      I    C
ATOM   3896  CG  LEU I 103      29.020  -8.116  71.296  1.00 26.35      I    C
ATOM   3897  CD1 LEU I 103      28.850  -6.663  71.451  1.00 19.33      I    C
ATOM   3898  CD2 LEU I 103      28.028  -8.793  72.252  1.00 16.98      I    C
ATOM   3899  N   LYS I 104      29.139 -10.363  67.198  1.00 24.74      I    N
ATOM   3900  CA  LYS I 104      28.632 -10.737  65.869  1.00 26.53      I    C
ATOM   3901  C   LYS I 104      28.329 -12.220  65.811  1.00 27.50      I    C
ATOM   3902  O   LYS I 104      27.366 -12.627  65.208  1.00 28.46      I    O
ATOM   3903  CB  LYS I 104      29.625 -10.357  64.783  1.00 22.88      I    C
ATOM   3904  CG  LYS I 104      29.587  -8.914  64.413  1.00 31.89      I    C
ATOM   3905  CD  LYS I 104      30.631  -8.717  63.344  1.00 32.33      I    C
ATOM   3906  CE  LYS I 104      30.925  -7.279  63.115  1.00 59.68      I    C
ATOM   3907  NZ  LYS I 104      32.076  -7.164  62.142  1.00 68.07      I    N
ATOM   3908  N   ALA I 105      29.133 -13.023  66.479  1.00 29.46      I    N
ATOM   3909  CA  ALA I 105      28.882 -14.450  66.534  1.00 34.23      I    C
ATOM   3910  C   ALA I 105      27.563 -14.703  67.275  1.00 37.21      I    C
ATOM   3911  O   ALA I 105      26.663 -15.418  66.770  1.00 39.76      I    O
ATOM   3912  CB  ALA I 105      30.064 -15.163  67.232  1.00 32.11      I    C
ATOM   3913  N   LEU I 106      27.411 -14.122  68.470  1.00 39.89      I    N
ATOM   3914  CA  LEU I 106      26.165 -14.309  69.230  1.00 38.09      I    C
ATOM   3915  C   LEU I 106      24.938 -13.890  68.408  1.00 37.88      I    C
ATOM   3916  O   LEU I 106      23.913 -14.550  68.431  1.00 33.66      I    O
ATOM   3917  CB  LEU I 106      26.194 -13.477  70.530  1.00 36.52      I    C
ATOM   3918  CG  LEU I 106      24.863 -13.456  71.276  1.00 42.06      I    C
ATOM   3919  CD1 LEU I 106      24.583 -14.853  71.860  1.00 38.67      I    C
ATOM   3920  CD2 LEU I 106      24.917 -12.412  72.412  1.00 45.46      I    C
ATOM   3921  N   PHE I 107      25.064 -12.790  67.683  1.00 38.60      I    N
ATOM   3922  CA  PHE I 107      23.973 -12.279  66.867  1.00 40.37      I    C
ATOM   3923  C   PHE I 107      23.618 -13.276  65.764  1.00 43.78      I    C
ATOM   3924  O   PHE I 107      22.436 -13.549  65.529  1.00 44.25      I    O
ATOM   3925  CB  PHE I 107      24.365 -10.956  66.236  1.00 37.22      I    C
ATOM   3926  CG  PHE I 107      23.271 -10.311  65.429  1.00 36.27      I    C
ATOM   3927  CD1 PHE I 107      22.198  -9.699  66.048  1.00 46.75      I    C
ATOM   3928  CD2 PHE I 107      23.322 -10.317  64.052  1.00 36.68      I    C
ATOM   3929  CE1 PHE I 107      21.186  -9.098  65.296  1.00 35.59      I    C
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ATOM   3930  CE2 PHE I 107      22.320  -9.717  63.299  1.00 47.17      I    C
ATOM   3931  CZ  PHE I 107      21.253  -9.109  63.923  1.00 39.35      I    C
ATOM   3932  N   ALA I 108      24.638 -13.786  65.075  1.00 46.11      I    N
ATOM   3933  CA  ALA I 108      24.403 -14.758  63.993  1.00 52.09      I    C
ATOM   3934  C   ALA I 108      23.766 -16.034  64.566  1.00 55.44      I    C
ATOM   3935  O   ALA I 108      22.779 -16.540  64.031  1.00 56.71      I    O
ATOM   3936  CB  ALA I 108      25.730 -15.076  63.280  1.00 51.31      I    C
ATOM   3937  N   ALA I 109      24.327 -16.543  65.659  1.00 58.75      I    N
ATOM   3938  CA  ALA I 109      23.816 -17.732  66.338  1.00 63.42      I    C
ATOM   3939  C   ALA I 109      22.418 -17.549  66.929  1.00 66.89      I    C
ATOM   3940  O   ALA I 109      21.743 -16.521  66.672  1.00 69.76      I    O
ATOM   3941  CB  ALA I 109      24.791 -18.097  67.470  1.00 63.21      I    C
ATOM   3942  OXT ALA I 109      22.003 -18.464  67.674  1.00 70.12      I    O
TER    3943       ALA I 109
ATOM   3944  O4  OAC S   1      18.217  22.918  90.161  1.00 51.17      S    O
ATOM   3945  C2  OAC S   1      17.505  21.950  89.542  1.00 51.08      S    C
ATOM   3946  O3  OAC S   1      16.384  21.569  89.864  1.00 56.88      S    O
ATOM   3947  C1  OAC S   1      18.305  21.429  88.360  1.00 58.69      S    C
TER    3948       OAC S   1
ATOM   3949 ZN   ZN  Z   1      26.522  -6.968 101.166  1.00 26.39      Z   ZN
ATOM   3950 ZN   ZN  Z   2      49.447  -9.432  87.331  1.00 25.80      Z   ZN
ATOM   3951 ZN   ZN  Z   3      20.593   0.777  63.988  1.00 77.99      Z   ZN
TER    3952       ZN  Z   3
ATOM   3953  O   HOH W   1      28.273  11.562  96.929  1.00  8.42      W    O
ATOM   3954  O   HOH W   3      23.494  -3.183  91.025  1.00 12.22      W    O
ATOM   3955  O   HOH W   5      30.637  16.714  92.029  1.00  4.14      W    O
ATOM   3956  O   HOH W   6      13.096   6.849 100.854  1.00 17.39      W    O
ATOM   3957  O   HOH W   7      -8.093  23.904 105.322  1.00 11.23      W    O
ATOM   3958  O   HOH W   8      18.329  15.295  86.054  1.00 13.20      W    O
ATOM   3959  O   HOH W   9      11.643  17.561  91.629  1.00 19.27      W    O
ATOM   3960  O   HOH W  10      24.508  31.519 109.138  1.00 13.78      W    O
ATOM   3961  O   HOH W  11      23.563   9.514  84.581  1.00 11.36      W    O
ATOM   3962  O   HOH W  12      14.310   0.426  97.254  1.00 21.71      W    O
ATOM   3963  O   HOH W  13      38.621  -9.471  76.511  1.00  7.65      W    O
ATOM   3964  O   HOH W  14      28.271  -6.451  86.834  1.00 19.05      W    O
ATOM   3965  O   HOH W  16       3.235  26.147 105.955  1.00 24.84      W    O
ATOM   3966  O   HOH W  17      16.160  10.823 106.546  1.00 33.75      W    O
ATOM   3967  O   HOH W  18      27.918  32.988 106.240  1.00 17.97      W    O
ATOM   3968  O   HOH W  19      12.758  29.187  98.874  1.00 14.92      W    O
ATOM   3969  O   HOH W  20      25.445  20.063  84.133  1.00 21.98      W    O
ATOM   3970  O   HOH W  21      17.622  32.548  94.823  1.00 13.51      W    O
ATOM   3971  O   HOH W  22      28.770  22.300  95.542  1.00 20.26      W    O
ATOM   3972  O   HOH W  23      20.037   1.543  80.170  1.00 20.36      W    O
ATOM   3973  O   HOH W  24      25.817   0.831  84.674  1.00 25.39      W    O
ATOM   3974  O   HOH W  25      30.387  -7.369  88.168  1.00 30.75      W    O
ATOM   3975  O   HOH W  26      30.611  21.516  90.986  1.00 24.22      W    O
ATOM   3976  O   HOH W  27      16.026  30.411  92.826  1.00 29.13      W    O
ATOM   3977  O   HOH W  28      39.586  -2.015  82.847  1.00 20.63      W    O
ATOM   3978  O   HOH W  29      22.165  -7.013  84.963  1.00 21.19      W    O
ATOM   3979  O   HOH W  30      21.834  -1.471  72.582  1.00 22.31      W    O
ATOM   3980  O   HOH W  31      14.563   2.175  99.373  1.00 24.90      W    O
ATOM   3981  O   HOH W  32       3.923  30.530 100.919  1.00 21.71      W    O
ATOM   3982  O   HOH W  33      -4.724  35.239 102.749  1.00 21.70      W    O
ATOM   3983  O   HOH W  34      17.795   2.775 103.123  1.00 25.57      W    O
ATOM   3984  O   HOH W  35      18.316  34.220 103.279  1.00 17.83      W    O
ATOM   3985  O   HOH W  36      21.588  -1.766  75.413  1.00 15.19      W    O
ATOM   3986  O   HOH W  37       4.529  27.870 100.348  1.00 23.18      W    O
ATOM   3987  O   HOH W  38       4.257  28.013  97.680  1.00 34.26      W    O
ATOM   3988  O   HOH W  39      35.051  -2.423  87.326  1.00 28.36      W    O
ATOM   3989  O   HOH W  40      20.594  -3.706  99.423  1.00 26.79      W    O
ATOM   3990  O   HOH W  41      41.265   0.306  82.711  1.00 28.82      W    O
ATOM   3991  O   HOH W  42      21.119  35.325 107.301  1.00 15.65      W    O
ATOM   3992  O   HOH W  43      35.412  -7.469  83.691  1.00 23.60      W    O
ATOM   3993  O   HOH W  44      19.036  13.571  83.635  1.00 34.03      W    O
ATOM   3994  O   HOH W  45      23.461  35.887 100.291  1.00 26.02      W    O
ATOM   3995  O   HOH W  46      23.701  -4.144 105.686  1.00 31.69      W    O
ATOM   3996  O   HOH W  47      12.582   4.601  70.291  1.00 32.84      W    O
ATOM   3997  O   HOH W  48      32.825   7.152  92.066  1.00 30.03      W    O
ATOM   3998  O   HOH W  50      16.651   4.316 105.552  1.00 17.39      W    O
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ATOM   3999  O   HOH W  51       9.812  25.145 115.275  1.00 28.34      W    O
ATOM   4000  O   HOH W  52      40.139 -11.529  69.044  1.00 21.03      W    O
ATOM   4001  O   HOH W  53      27.250  33.402  98.412  1.00 26.19      W    O
ATOM   4002  O   HOH W  54      -6.410  20.233 102.747  1.00 32.23      W    O
ATOM   4003  O   HOH W  55      25.539  22.652 105.834  1.00 40.60      W    O
ATOM   4004  O   HOH W  56      -3.623  39.874 107.173  1.00 43.07      W    O
ATOM   4005  O   HOH W  57      30.894   4.390  71.988  1.00 32.39      W    O
ATOM   4006  O   HOH W  58      22.406   3.311  79.796  1.00 19.82      W    O
ATOM   4007  O   HOH W  59      34.129   6.169  87.418  1.00 33.67      W    O
ATOM   4008  O   HOH W  60      -3.318  35.590 100.547  1.00 28.53      W    O
ATOM   4009  O   HOH W  61      23.032  -6.709 102.637  1.00 35.35      W    O
ATOM   4010  O   HOH W  62     -10.710  38.525 105.096  1.00 21.21      W    O
ATOM   4011  O   HOH W  63      17.542   8.543 106.106  1.00 28.80      W    O
ATOM   4012  O   HOH W  64       2.489  33.089  97.944  1.00 22.39      W    O
ATOM   4013  O   HOH W  65      30.074  17.145  98.763  1.00 17.05      W    O
ATOM   4014  O   HOH W  66     -16.374  28.372 102.556  1.00 24.41      W    O
ATOM   4015  O   HOH W  67       9.528  23.065 103.276  1.00 39.55      W    O
ATOM   4016  O   HOH W  68      23.360  -5.629  91.918  1.00 29.13      W    O
ATOM   4017  O   HOH W  69      10.550  28.053 110.107  1.00 18.71      W    O
ATOM   4018  O   HOH W  70      -2.937  25.921 114.654  1.00 30.39      W    O
ATOM   4019  O   HOH W  71     -16.268  35.216 117.114  1.00 36.27      W    O
ATOM   4020  O   HOH W  72      23.240  -7.692  94.601  1.00 41.50      W    O
ATOM   4021  O   HOH W  73      28.558  29.902  99.941  1.00 37.38      W    O
ATOM   4022  O   HOH W  74     -15.000   6.861 100.111  1.00 27.16      W    O
ATOM   4023  O   HOH W  75       5.317  37.793 102.522  1.00 30.41      W    O
ATOM   4024  O   HOH W  76      19.168  23.700 110.137  1.00 28.91      W    O
ATOM   4025  O   HOH W  77      30.386 -10.910  84.608  1.00 32.94      W    O
ATOM   4026  O   HOH W  78      36.143   7.975  79.406  1.00 29.70      W    O
ATOM   4027  O   HOH W  79      22.776   9.248  82.183  1.00 20.17      W    O
ATOM   4028  O   HOH W  81      37.057  -8.282  74.493  1.00 20.27      W    O
ATOM   4029  O   HOH W  82      28.228  29.062 103.673  1.00 28.10      W    O
ATOM   4030  O   HOH W  83      -0.541  19.565 105.264  1.00 24.14      W    O
ATOM   4031  O   HOH W  84      22.692   3.297 107.514  1.00 26.48      W    O
ATOM   4032  O   HOH W  85       6.319   9.905  75.975  1.00 33.33      W    O
ATOM   4033  O   HOH W  86     -20.077  32.736 123.087  1.00 26.22      W    O
ATOM   4034  O   HOH W  87       2.894  -6.811  78.653  1.00 27.94      W    O
ATOM   4035  O   HOH W  88      16.333  13.154  86.247  1.00 19.04      W    O
ATOM   4036  O   HOH W  89     -18.401  26.785 101.005  1.00 20.65      W    O
ATOM   4037  O   HOH W  90      14.178   4.497 102.132  1.00 14.84      W    O
ATOM   4038  O   HOH W  91      37.756  12.396  75.146  1.00 53.57      W    O
ATOM   4039  O   HOH W  92       5.996  41.146 107.575  1.00 31.31      W    O
ATOM   4040  O   HOH W  93      33.958   9.979  93.064  1.00 21.64      W    O
ATOM   4041  O   HOH W  94      29.435  24.180  93.845  1.00 31.70      W    O
ATOM   4042  O   HOH W  95     -20.084  29.808 120.008  1.00 37.49      W    O
ATOM   4043  O   HOH W  96      11.886  24.347  94.949  1.00 31.14      W    O
ATOM   4044  O   HOH W  97      20.130  -7.765  79.021  1.00 24.27      W    O
ATOM   4045  O   HOH W  98      13.677  13.199  85.492  1.00 41.34      W    O
ATOM   4046  O   HOH W 100       9.428  16.898  98.102  1.00 28.31      W    O
ATOM   4047  O   HOH W 101      32.099 -12.636  81.025  1.00 21.44      W    O
ATOM   4048  O   HOH W 102     -14.681  35.792  88.683  1.00 43.48      W    O
ATOM   4049  O   HOH W 103      -7.331  22.775 102.908  1.00 21.34      W    O
ATOM   4050  O   HOH W 104      30.867  -3.411 103.450  1.00 17.02      W    O
ATOM   4051  O   HOH W 105      30.952   7.074  82.558  1.00 30.32      W    O
ATOM   4052  O   HOH W 106       0.055  -8.254  81.647  1.00 44.32      W    O
ATOM   4053  O   HOH W 107      24.927  13.293  82.288  1.00 33.73      W    O
ATOM   4054  O   HOH W 108     -23.807  32.474 120.697  1.00 34.73      W    O
ATOM   4055  O   HOH W 109       9.549 -11.066  85.205  1.00 32.37      W    O
ATOM   4056  O   HOH W 110      31.311  -4.410  95.935  1.00 36.67      W    O
ATOM   4057  O   HOH W 111      31.367  -8.798  85.899  1.00 24.73      W    O
ATOM   4058  O   HOH W 112      -2.685  32.829  97.162  1.00 14.26      W    O
ATOM   4059  O   HOH W 113      31.508  24.004  97.423  1.00 32.37      W    O
ATOM   4060  O   HOH W 114      14.725  -7.846  97.853  1.00 25.19      W    O
ATOM   4061  O   HOH W 115      -3.331  27.584  87.465  1.00 36.07      W    O
ATOM   4062  O   HOH W 116       9.759  12.912  73.461  1.00 17.17      W    O
ATOM   4063  O   HOH W 117      -9.716   4.459  90.108  1.00 32.05      W    O
ATOM   4064  O   HOH W 118      20.800   2.961  70.582  1.00 30.32      W    O
ATOM   4065  O   HOH W 119      18.183  35.258 107.203  1.00 25.90      W    O
ATOM   4066  O   HOH W 120      14.131  35.183 110.395  1.00 31.30      W    O
ATOM   4067  O   HOH W 122      13.443  31.066  92.909  1.00 28.30      W    O
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ATOM	4068	O	HOH W 123	5.710	25.002	114.636	1.00	50.47	W	O
ATOM	4069	O	HOH W 124	-9.776	26.728	117.248	1.00	38.41	W	O
ATOM	4070	O	HOH W 125	-15.147	2.711	93.850	1.00	28.99	W	O
ATOM	4071	O	HOH W 126	22.123	32.188	96.064	1.00	28.66	W	O
ATOM	4072	O	HOH W 127	18.922	7.388	72.762	1.00	31.98	W	O
ATOM	4073	O	HOH W 128	26.078	-10.105	80.952	1.00	33.21	W	O
ATOM	4074	O	HOH W 129	33.351	8.652	88.931	1.00	34.31	W	O
ATOM	4075	O	HOH W 130	33.136	15.710	88.777	1.00	51.57	W	O
ATOM	4076	O	HOH W 131	2.007	37.692	103.678	1.00	36.95	W	O
ATOM	4077	O	HOH W 132	33.678	5.637	104.529	1.00	28.36	W	O
ATOM	4078	O	HOH W 133	7.880	-11.049	90.515	1.00	41.06	W	O
ATOM	4079	O	HOH W 134	-11.066	28.063	82.867	1.00	45.18	W	O
ATOM	4080	O	HOH W 135	25.936	-6.768	94.146	1.00	32.98	W	O
ATOM	4081	O	HOH W 136	43.370	1.669	71.874	1.00	32.04	W	O
ATOM	4082	O	HOH W 137	1.019	6.008	79.468	1.00	40.19	W	O
ATOM	4083	O	HOH W 138	34.715	13.498	101.014	1.00	53.03	W	O
ATOM	4084	O	HOH W 139	22.191	11.429	81.361	1.00	41.29	W	O
ATOM	4085	O	HOH W 140	24.467	21.102	82.091	1.00	34.83	W	O
ATOM	4086	O	HOH W 141	15.139	37.655	103.495	1.00	28.25	W	O
ATOM	4087	O	HOH W 142	-11.890	15.447	104.306	1.00	26.61	W	O
ATOM	4088	O	HOH W 143	32.110	-6.441	90.476	1.00	34.73	W	O
ATOM	4089	O	HOH W 144	21.865	31.313	108.472	1.00	35.52	W	O
ATOM	4090	O	HOH W 145	19.868	20.917	110.695	1.00	48.68	W	O
ATOM	4091	O	HOH W 146	4.529	35.844	118.732	1.00	38.17	W	O
ATOM	4092	O	HOH W 147	31.420	13.080	84.897	1.00	35.77	W	O
ATOM	4093	O	HOH W 148	5.862	33.041	95.343	1.00	42.81	W	O
ATOM	4094	O	HOH W 149	36.227	-7.429	65.214	1.00	52.25	W	O
ATOM	4095	O	HOH W 150	12.533	-3.257	98.974	1.00	30.04	W	O
ATOM	4096	O	HOH W 151	41.936	5.196	81.078	1.00	48.30	W	O
ATOM	4097	O	HOH W 152	5.365	0.173	100.870	1.00	38.17	W	O
ATOM	4098	O	HOH W 153	18.974	10.598	76.035	1.00	27.27	W	O
ATOM	4099	O	HOH W 154	-11.459	23.657	81.891	1.00	44.66	W	O
ATOM	4100	O	HOH W 155	-11.643	37.549	102.792	1.00	29.06	W	O
ATOM	4101	O	HOH W 156	21.611	33.384	110.725	1.00	43.54	W	O
ATOM	4102	O	HOH W 157	5.082	13.359	91.364	1.00	34.56	W	O
ATOM	4103	O	HOH W 158	-4.222	32.340	117.504	1.00	52.91	W	O
ATOM	4104	O	HOH W 159	-4.833	0.443	84.678	1.00	31.52	W	O
ATOM	4105	O	HOH W 160	-2.712	24.390	91.588	1.00	42.37	W	O
ATOM	4106	O	HOH W 161	23.968	10.013	108.083	1.00	52.17	W	O
ATOM	4107	O	HOH W 162	39.266	7.831	70.972	1.00	30.66	W	O
ATOM	4108	O	HOH W 163	-6.156	19.204	110.800	1.00	49.86	W	O
ATOM	4109	O	HOH W 164	19.098	17.380	84.173	1.00	36.03	W	O
ATOM	4110	O	HOH W 165	13.399	33.954	93.836	1.00	36.17	W	O
ATOM	4111	O	HOH W 166	-31.448	25.540	114.441	1.00	37.50	W	O
ATOM	4112	O	HOH W 167	13.302	14.583	106.224	1.00	21.88	W	O
ATOM	4113	O	HOH W 169	1.752	26.748	97.241	1.00	37.67	W	O
ATOM	4114	O	HOH W 170	27.718	0.693	62.087	1.00	46.32	W	O
ATOM	4115	O	HOH W 171	28.912	-5.883	98.061	1.00	45.53	W	O
ATOM	4116	O	HOH W 172	12.144	-6.132	99.269	1.00	28.03	W	O
ATOM	4117	O	HOH W 173	9.713	14.070	99.156	1.00	36.36	W	O
ATOM	4118	O	HOH W 174	44.241	3.007	80.980	1.00	55.52	W	O
ATOM	4119	O	HOH W 175	-2.145	9.708	89.227	1.00	30.25	W	O
ATOM	4120	O	HOH W 176	21.259	13.911	103.297	1.00	46.50	W	O
ATOM	4121	O	HOH W 177	28.628	2.356	108.048	1.00	35.93	W	O
ATOM	4122	O	HOH W 178	-3.113	20.410	91.180	1.00	49.91	W	O
ATOM	4123	O	HOH W 179	9.943	40.130	105.661	1.00	49.34	W	O
ATOM	4124	O	HOH W 180	-14.721	37.561	104.779	1.00	37.09	W	O
ATOM	4125	O	HOH W 181	0.350	-13.390	93.145	1.00	42.85	W	O
ATOM	4126	O	HOH W 182	-16.751	30.840	125.808	1.00	43.38	W	O
ATOM	4127	O	HOH W 183	5.022	10.944	94.912	1.00	36.63	W	O
ATOM	4128	O	HOH W 184	47.344	-3.172	85.812	1.00	29.25	W	O
ATOM	4129	O	HOH W 185	-12.479	0.246	96.627	1.00	44.43	W	O
ATOM	4130	O	HOH W 186	11.422	0.781	69.608	1.00	50.67	W	O
ATOM	4131	O	HOH W 187	1.340	12.706	88.912	1.00	17.04	W	O
ATOM	4132	O	HOH W 188	22.147	27.729	88.824	1.00	45.97	W	O
ATOM	4133	O	HOH W 189	9.004	12.970	81.421	1.00	51.36	W	O
ATOM	4134	O	HOH W 191	30.121	9.526	83.001	1.00	30.35	W	O
ATOM	4135	O	HOH W 192	-13.167	21.122	108.317	1.00	36.08	W	O
ATOM	4136	O	HOH W 193	-17.245	22.145	114.082	1.00	45.19	W	O

ATOM	4137	O	HOH W 194	41.158	-7.584	68.969	1.00	35.80	W	O
ATOM	4138	O	HOH W 195	15.255	-3.823	74.196	1.00	33.67	W	O
ATOM	4139	O	HOH W 196	4.303	32.713	92.780	1.00	35.43	W	O
ATOM	4140	O	HOH W 197	31.497	18.300	97.022	1.00	26.66	W	O
ATOM	4141	O	HOH W 198	7.975	21.318	103.826	1.00	43.04	W	O
ATOM	4142	O	HOH W 199	8.986	-7.658	77.984	1.00	41.83	W	O
ATOM	4143	O	HOH W 200	-18.535	14.030	99.271	1.00	42.15	W	O
ATOM	4144	O	HOH W 201	35.091	-0.808	99.802	1.00	46.06	W	O
ATOM	4145	O	HOH W 203	-2.184	13.964	100.706	1.00	74.49	W	O
ATOM	4146	O	HOH W 204	34.686	-12.618	82.251	1.00	34.52	W	O
ATOM	4147	O	HOH W 205	10.210	18.638	100.418	1.00	37.42	W	O
ATOM	4148	O	HOH W 206	-8.704	10.500	91.279	1.00	42.78	W	O
ATOM	4149	O	HOH W 207	3.790	-6.540	82.547	1.00	23.61	W	O
ATOM	4150	O	HOH W 208	25.141	20.223	107.446	1.00	50.13	W	O
ATOM	4151	O	HOH W 209	21.473	-6.251	99.480	1.00	33.69	W	O
ATOM	4152	O	HOH W 212	-11.925	21.358	85.228	1.00	37.61	W	O
ATOM	4153	O	HOH W 214	36.678	-0.414	95.891	1.00	30.67	W	O
ATOM	4154	O	HOH W 215	-5.799	7.996	97.828	1.00	30.32	W	O
ATOM	4155	O	HOH W 216	-20.478	20.138	103.173	1.00	39.11	W	O
ATOM	4156	O	HOH W 217	12.213	14.368	87.152	1.00	31.57	W	O
ATOM	4157	O	HOH W 218	-22.625	18.132	100.101	1.00	46.35	W	O
ATOM	4158	O	HOH W 219	-19.563	28.480	88.113	1.00	51.22	W	O
ATOM	4159	O	HOH W 220	20.900	30.072	89.269	1.00	63.55	W	O
ATOM	4160	O	HOH W 221	-1.490	9.805	81.944	1.00	39.00	W	O
ATOM	4161	O	HOH W 222	21.948	-11.094	73.960	1.00	62.58	W	O
ATOM	4162	O	HOH W 223	16.250	35.597	101.623	1.00	29.57	W	O
ATOM	4163	O	HOH W 224	28.972	27.235	92.671	1.00	41.21	W	O
ATOM	4164	O	HOH W 225	45.423	2.082	74.169	1.00	39.22	W	O
ATOM	4165	O	HOH W 226	45.259	0.612	70.233	1.00	52.06	W	O
ATOM	4166	O	HOH W 227	-4.834	-10.203	92.007	1.00	28.91	W	O
ATOM	4167	O	HOH W 228	-26.786	21.041	113.504	1.00	63.51	W	O
ATOM	4168	O	HOH W 229	4.385	-4.060	99.169	1.00	44.90	W	O
ATOM	4169	O	HOH W 230	29.725	14.057	106.512	1.00	47.35	W	O
ATOM	4170	O	HOH W 231	8.274	16.343	88.023	1.00	37.92	W	O
ATOM	4171	O	HOH W 232	26.302	27.216	105.852	1.00	44.83	W	O
ATOM	4172	O	HOH W 233	-17.533	40.068	113.830	1.00	35.69	W	O
ATOM	4173	O	HOH W 234	-18.605	26.063	84.723	1.00	56.46	W	O
ATOM	4174	O	HOH W 235	33.922	15.190	94.802	1.00	56.82	W	O
ATOM	4175	O	HOH W 236	11.403	-9.873	79.359	1.00	46.16	W	O
ATOM	4176	O	HOH W 237	34.709	6.908	95.381	1.00	51.22	W	O
ATOM	4177	O	HOH W 238	9.586	13.857	85.777	1.00	32.27	W	O
ATOM	4178	O	HOH W 239	-20.363	18.864	100.658	1.00	66.22	W	O
ATOM	4179	O	HOH W 240	19.167	-7.670	71.595	1.00	38.96	W	O
ATOM	4180	O	HOH W 242	-4.347	7.089	83.943	1.00	34.28	W	O
ATOM	4181	O	HOH W 244	13.637	39.059	110.482	1.00	35.74	W	O
ATOM	4182	O	HOH W 245	6.635	11.429	105.918	1.00	98.33	W	O
ATOM	4183	O	HOH W 246	-11.717	37.604	118.307	1.00	60.71	W	O
ATOM	4184	O	HOH W 247	36.600	1.072	98.205	1.00	37.52	W	O
ATOM	4185	O	HOH W 248	1.815	2.355	101.069	1.00	30.58	W	O
ATOM	4186	O	HOH W 249	31.117	20.193	101.536	1.00	42.13	W	O
ATOM	4187	O	HOH W 250	6.143	32.066	113.958	1.00	34.13	W	O
ATOM	4188	O	HOH W 251	12.546	26.526	89.169	1.00	75.55	W	O
ATOM	4189	O	HOH W 252	15.820	-5.443	71.698	1.00	64.76	W	O
ATOM	4190	O	HOH W 253	-19.453	13.362	89.607	1.00	45.55	W	O
ATOM	4191	O	HOH W 254	-17.164	32.080	100.217	1.00	39.90	W	O
ATOM	4192	O	HOH W 255	37.030	-9.701	83.335	1.00	43.29	W	O
ATOM	4193	O	HOH W 256	34.324	-6.400	88.335	1.00	50.06	W	O
ATOM	4194	O	HOH W 257	49.009	-9.543	83.531	1.00	42.11	W	O
ATOM	4195	O	HOH W 258	9.878	15.022	101.645	1.00	48.63	W	O
ATOM	4196	O	HOH W 259	26.271	16.951	106.835	1.00	28.76	W	O
ATOM	4197	O	HOH W 260	21.231	10.692	77.782	1.00	52.78	W	O
ATOM	4198	O	HOH W 261	8.597	31.178	114.621	1.00	29.98	W	O
ATOM	4199	O	HOH W 263	28.771	11.642	105.175	1.00	49.49	W	O
ATOM	4200	O	HOH W 264	0.559	33.356	86.616	1.00	43.50	W	O
ATOM	4201	O	HOH W 265	-2.459	19.283	97.138	1.00	40.59	W	O
ATOM	4202	O	HOH W 266	33.611	10.760	95.480	1.00	31.51	W	O
ATOM	4203	O	HOH W 268	-13.163	9.376	82.701	1.00	91.44	W	O
ATOM	4204	O	HOH W 269	-10.588	-3.736	92.548	1.00	48.91	W	O
ATOM	4205	O	HOH W 270	30.517	-3.934	99.364	1.00	46.59	W	O

ATOM	4206	O	HOH W 271	-15.610	30.916	83.905	1.00	72.20	W	O
ATOM	4207	O	HOH W 272	8.482	-2.678	100.994	1.00	40.04	W	O
ATOM	4208	O	HOH W 273	-14.819	39.625	106.340	1.00	32.66	W	O
ATOM	4209	O	HOH W 274	-15.862	27.341	124.046	1.00	49.70	W	O
ATOM	4210	O	HOH W 275	0.355	7.737	78.018	1.00	39.51	W	O
ATOM	4211	O	HOH W 276	11.649	6.543	73.332	1.00	62.29	W	O
ATOM	4212	O	HOH W 277	13.896	1.911	70.069	1.00	36.22	W	O
ATOM	4213	O	HOH W 279	11.226	9.285	70.225	1.00	37.33	W	O
ATOM	4214	O	HOH W 280	17.596	11.506	73.709	1.00	37.13	W	O
ATOM	4215	O	HOH W 281	22.601	8.046	77.458	1.00	84.20	W	O
ATOM	4216	O	HOH W 282	22.007	2.832	75.959	1.00	60.94	W	O
ATOM	4217	O	HOH W 283	14.332	0.684	101.417	1.00	26.51	W	O
ATOM	4218	O	HOH W 284	17.488	14.803	74.520	1.00	50.25	W	O
ATOM	4219	O	HOH W 285	11.672	12.725	82.121	1.00	31.27	W	O
ATOM	4220	O	HOH W 286	13.338	15.638	79.654	1.00	49.99	W	O
ATOM	4221	O	HOH W 287	15.476	15.666	77.915	1.00	39.70	W	O
ATOM	4222	O	HOH W 288	-19.019	18.128	91.748	1.00	57.76	W	O
ATOM	4223	O	HOH W 289	-18.913	20.525	92.776	1.00	52.52	W	O
ATOM	4224	O	HOH W 290	-21.754	17.779	92.013	1.00	70.60	W	O
ATOM	4225	O	HOH W 291	-7.681	20.732	86.926	1.00	30.75	W	O
ATOM	4226	O	HOH W 292	-18.672	16.770	99.341	1.00	72.88	W	O
ATOM	4227	O	HOH W 293	41.053	-10.007	75.389	1.00	40.19	W	O
ATOM	4228	O	HOH W 294	15.967	34.561	95.189	1.00	32.39	W	O
ATOM	4229	O	HOH W 295	3.242	22.750	99.080	1.00	42.03	W	O
ATOM	4230	O	HOH W 296	42.034	1.021	85.260	1.00	31.00	W	O
ATOM	4231	O	HOH W 297	34.100	-8.318	85.997	1.00	20.43	W	O
ATOM	4232	O	HOH W 298	26.478	33.532	95.995	1.00	51.52	W	O
ATOM	4233	O	HOH W 299	34.395	6.694	89.928	1.00	53.02	W	O
ATOM	4234	O	HOH W 300	-0.985	37.065	99.982	1.00	39.51	W	O
ATOM	4235	O	HOH W 301	-0.252	34.259	98.319	1.00	40.18	W	O
ATOM	4236	O	HOH W 302	1.043	37.976	101.110	1.00	50.67	W	O
ATOM	4237	O	HOH W 303	13.169	27.347	107.852	1.00	46.98	W	O
ATOM	4238	O	HOH W 304	2.617	-8.808	82.550	1.00	34.55	W	O
ATOM	4239	O	HOH W 306	-24.119	34.693	121.849	1.00	38.49	W	O
ATOM	4240	O	HOH W 307	-21.110	33.926	125.264	1.00	35.91	W	O
ATOM	4241	O	HOH W 308	-22.717	35.450	124.405	1.00	40.22	W	O
ATOM	4242	O	HOH W 309	14.431	-7.080	100.358	1.00	40.89	W	O
ATOM	4243	O	HOH W 310	-1.633	26.170	89.620	1.00	32.95	W	O
ATOM	4244	O	HOH W 311	-0.715	23.415	92.259	1.00	48.52	W	O
ATOM	4245	O	HOH W 312	15.583	37.247	111.051	1.00	102.38	W	O
ATOM	4246	O	HOH W 313	49.127	-4.716	84.592	1.00	31.17	W	O
ATOM	4247	O	HOH W 316	4.543	25.776	97.442	1.00	20.30	W	O
ATOM	4248	O	HOH W 317	13.219	-2.231	96.766	1.00	26.75	W	O
ATOM	4249	O	HOH W 318	-1.027	12.136	89.956	1.00	30.29	W	O
ATOM	4250	O	HOH W 319	24.455	-0.869	84.238	1.00	47.96	W	O
ATOM	4251	O	HOH W 321	7.387	26.214	95.885	1.00	43.12	W	O
ATOM	4252	O	HOH W 323	-10.121	37.815	100.499	1.00	26.17	W	O
ATOM	4253	O	HOH W 324	44.204	-8.495	89.166	1.00	41.06	W	O
ATOM	4254	O	HOH W 325	16.219	0.595	103.250	1.00	24.87	W	O
ATOM	4255	O	HOH W 326	16.724	6.735	108.041	1.00	33.97	W	O
ATOM	4256	O	HOH W 327	-5.658	41.985	114.043	1.00	41.88	W	O
ATOM	4257	O	HOH W 328	30.517	7.926	72.820	1.00	24.86	W	O
ATOM	4258	O	HOH W 329	-4.229	13.443	105.886	1.00	42.46	W	O
ATOM	4259	O	HOH W 330	9.856	-2.127	98.647	1.00	29.78	W	O
ATOM	4260	O	HOH W 331	32.200	13.062	101.692	1.00	46.72	W	O
ATOM	4261	O	HOH W 332	11.618	16.977	87.587	1.00	38.22	W	O
ATOM	4262	O	HOH W 334	13.863	35.533	100.193	1.00	38.69	W	O
ATOM	4263	O	HOH W 335	3.202	20.353	103.614	1.00	41.76	W	O
ATOM	4264	O	HOH W 336	-0.265	25.481	112.882	1.00	45.85	W	O
ATOM	4265	O	HOH W 337	33.088	17.503	92.709	1.00	40.43	W	O
ATOM	4266	O	HOH W 338	-10.753	19.811	115.192	1.00	40.52	W	O
ATOM	4267	O	HOH W 339	5.702	24.463	117.434	1.00	32.03	W	O
ATOM	4268	O	HOH W 340	36.083	5.104	86.455	1.00	49.47	W	O
ATOM	4269	O	HOH W 341	45.308	-14.674	86.663	1.00	43.84	W	O
ATOM	4270	O	HOH W 342	-3.013	2.927	80.584	1.00	48.18	W	O
ATOM	4271	O	HOH W 343	-8.584	2.810	102.723	1.00	45.47	W	O
ATOM	4272	O	HOH W 344	14.270	31.214	111.267	1.00	53.23	W	O
ATOM	4273	O	HOH W 345	5.303	5.466	73.316	1.00	35.97	W	O
ATOM	4274	O	HOH W 346	5.884	14.859	94.569	1.00	34.36	W	O

ATOM	4275	O	HOH W 347	13.766	-10.804	94.639	1.00	37.55	W	O
ATOM	4276	O	HOH W 348	28.817	-6.638	95.408	1.00	46.05	W	O
ATOM	4277	O	HOH W 349	-16.201	4.012	101.225	1.00	55.36	W	O
ATOM	4278	O	HOH W 350	12.538	12.934	104.399	1.00	50.37	W	O
ATOM	4279	O	HOH W 351	-11.930	40.337	106.636	1.00	34.71	W	O
ATOM	4280	O	HOH W 352	14.848	22.833	108.104	1.00	32.58	W	O
ATOM	4281	O	HOH W 353	4.331	11.520	83.240	1.00	65.30	W	O
ATOM	4282	O	HOH W 354	-30.188	27.123	112.476	1.00	54.95	W	O
ATOM	4283	O	HOH W 355	0.831	37.120	115.463	1.00	45.14	W	O
ATOM	4284	O	HOH W 356	39.804	-9.143	67.597	1.00	38.07	W	O
ATOM	4285	O	HOH W 357	-5.193	41.092	118.296	1.00	49.38	W	O
ATOM	4286	O	HOH W 358	-4.318	15.660	94.910	1.00	64.77	W	O
ATOM	4287	O	HOH W 359	2.404	30.953	94.996	1.00	43.81	W	O
ATOM	4288	O	HOH W 360	5.633	-10.209	96.938	1.00	33.82	W	O
ATOM	4289	O	HOH W 361	4.540	-6.167	100.513	1.00	39.66	W	O
ATOM	4290	O	HOH W 362	-19.660	12.268	100.884	1.00	27.40	W	O
ATOM	4291	O	HOH W 363	46.225	-3.464	88.101	1.00	43.37	W	O
ATOM	4292	O	HOH W 364	23.301	28.533	108.032	1.00	49.28	W	O
ATOM	4293	O	HOH W 365	17.099	11.410	108.574	1.00	47.12	W	O
ATOM	4294	O	HOH W 366	26.600	2.351	110.176	1.00	37.38	W	O
ATOM	4295	O	HOH W 367	-22.520	39.595	116.261	1.00	49.47	W	O
ATOM	4296	O	HOH W 368	0.313	25.144	94.624	1.00	40.92	W	O
ATOM	4297	O	HOH W 369	20.613	-10.182	77.986	1.00	37.72	W	O
ATOM	4298	O	HOH W 370	22.771	6.260	79.455	1.00	47.23	W	O
ATOM	4299	O	HOH W 371	14.209	-9.494	101.679	1.00	50.86	W	O
ATOM	4300	O	HOH W 372	32.180	-13.182	64.680	1.00	31.90	W	O
ATOM	4301	O	HOH W 373	-15.578	22.302	119.158	1.00	67.22	W	O
ATOM	4302	O	HOH W 374	-5.806	33.729	119.651	1.00	78.83	W	O
ATOM	4303	O	HOH W 375	5.261	41.524	122.294	1.00	64.79	W	O
ATOM	4304	O	HOH W 376	-26.827	27.798	95.626	1.00	52.39	W	O
ATOM	4305	O	HOH W 377	-0.392	20.708	96.954	1.00	47.09	W	O
ATOM	4306	O	HOH W 378	38.359	3.116	87.840	1.00	51.46	W	O
ATOM	4307	O	HOH W 379	-8.697	-6.590	90.186	1.00	37.82	W	O
ATOM	4308	O	HOH W 380	34.329	-8.438	63.764	1.00	43.15	W	O
ATOM	4309	O	HOH W 381	25.046	4.206	109.068	1.00	36.85	W	O
ATOM	4310	O	HOH W 382	-12.307	4.812	90.954	1.00	54.83	W	O
ATOM	4311	O	HOH W 383	22.346	0.999	109.244	1.00	55.83	W	O
ATOM	4312	O	HOH W 384	20.145	33.493	94.808	1.00	33.85	W	O
ATOM	4313	O	HOH W 385	17.103	17.604	111.486	1.00	58.32	W	O
ATOM	4314	O	HOH W 386	-19.799	34.573	91.860	1.00	30.28	W	O
ATOM	4315	O	HOH W 387	14.665	36.499	114.334	1.00	75.56	W	O
ATOM	4316	O	HOH W 388	7.042	35.670	94.968	1.00	48.07	W	O
ATOM	4317	O	HOH W 389	32.245	-16.178	70.702	1.00	49.01	W	O
ATOM	4318	O	HOH W 390	10.283	21.058	100.027	1.00	84.17	W	O
ATOM	4319	O	HOH W 391	34.895	7.447	103.148	1.00	40.35	W	O
ATOM	4320	O	HOH W 392	-25.110	16.204	100.371	1.00	50.31	W	O
ATOM	4321	O	HOH W 393	-25.389	34.708	117.495	1.00	48.66	W	O
ATOM	4322	O	HOH W 394	11.890	21.970	101.820	1.00	68.28	W	O
ATOM	4323	O	HOH W 395	45.837	-5.824	89.349	1.00	28.55	W	O
ATOM	4324	O	HOH W 396	-8.379	40.188	104.608	1.00	50.71	W	O
ATOM	4325	O	HOH W 397	-2.215	0.600	81.682	1.00	55.91	W	O
ATOM	4326	O	HOH W 398	21.869	-8.133	89.554	1.00	70.38	W	O
ATOM	4327	O	HOH W 399	24.028	8.821	110.407	1.00	40.67	W	O
ATOM	4328	O	HOH W 400	4.868	30.432	91.498	1.00	63.30	W	O
ATOM	4329	O	HOH W 401	-13.446	0.549	94.109	1.00	38.55	W	O
ATOM	4330	O	HOH W 402	-14.032	30.272	124.462	1.00	67.33	W	O
ATOM	4331	O	HOH W 403	-8.252	25.376	115.719	1.00	72.04	W	O
ATOM	4332	O	HOH W 404	-19.618	7.134	97.108	1.00	69.74	W	O
ATOM	4333	O	HOH W 405	43.024	-2.573	87.596	1.00	47.06	W	O
ATOM	4334	O	HOH W 406	-8.280	39.609	100.109	1.00	45.22	W	O
ATOM	4335	O	HOH W 407	13.386	-2.161	101.138	1.00	40.32	W	O
ATOM	4336	O	HOH W 408	1.781	-3.496	73.915	1.00	35.10	W	O
ATOM	4337	O	HOH W 409	-19.493	33.560	127.412	1.00	52.12	W	O
ATOM	4338	O	HOH W 410	-12.357	32.930	84.450	1.00	55.63	W	O
ATOM	4339	O	HOH W 411	-16.396	41.453	106.252	1.00	67.78	W	O
ATOM	4340	O	HOH W 412	9.259	22.383	107.628	1.00	62.67	W	O
ATOM	4341	O	HOH W 413	26.452	10.638	108.233	1.00	55.75	W	O
ATOM	4342	O	HOH W 414	3.629	26.004	108.637	1.00	32.70	W	O
ATOM	4343	O	HOH W 415	15.226	13.844	73.002	1.00	48.60	W	O

ATOM	4344	O	HOH W 416	1.142	27.132	93.054	1.00	41.48	W	O
ATOM	4345	O	HOH W 417	-8.715	22.235	116.597	1.00	46.49	W	O
ATOM	4346	O	HOH W 418	14.671	-10.428	90.692	1.00	44.76	W	O
ATOM	4347	O	HOH W 419	41.314	7.425	77.188	1.00	58.46	W	O
ATOM	4348	O	HOH W 420	8.057	17.800	101.961	1.00	51.89	W	O
ATOM	4349	O	HOH W 421	29.708	7.490	70.081	1.00	36.19	W	O
ATOM	4350	O	HOH W 422	18.102	4.689	108.132	1.00	65.88	W	O
ATOM	4351	O	HOH W 423	20.158	13.014	111.569	1.00	56.69	W	O
ATOM	4352	O	HOH W 424	18.739	14.999	112.142	1.00	76.64	W	O
ATOM	4353	O	HOH W 425	24.783	24.390	107.699	1.00	68.92	W	O
ATOM	4354	O	HOH W 426	33.410	-5.505	95.203	1.00	42.38	W	O
ATOM	4355	O	HOH W 427	35.004	-3.766	95.192	1.00	35.89	W	O
ATOM	4356	O	HOH W 428	13.651	18.898	90.820	1.00	44.94	W	O
ATOM	4357	O	HOH W 429	31.902	10.936	83.768	1.00	50.77	W	O
ATOM	4358	O	HOH W 430	20.413	14.829	81.652	1.00	86.25	W	O
ATOM	4359	O	HOH W 431	32.924	22.614	95.004	1.00	57.23	W	O
ATOM	4360	O	HOH W 432	17.143	27.068	92.217	1.00	41.94	W	O
ATOM	4361	O	HOH W 433	17.696	29.224	90.849	1.00	44.20	W	O
ATOM	4362	O	HOH W 434	6.235	13.909	97.039	1.00	36.25	W	O
ATOM	4363	O	HOH W 435	15.368	1.745	105.621	1.00	65.45	W	O
ATOM	4364	O	HOH W 436	12.352	2.448	102.309	1.00	56.90	W	O
ATOM	4365	O	HOH W 437	17.216	-1.654	103.171	1.00	64.25	W	O
ATOM	4366	O	HOH W 438	-24.467	21.964	97.052	1.00	59.17	W	O
ATOM	4367	O	HOH W 439	6.899	37.197	100.238	1.00	53.34	W	O
ATOM	4368	O	HOH W 440	-5.836	25.471	114.752	1.00	49.14	W	O
ATOM	4369	O	HOH W 441	-17.656	23.630	116.338	1.00	60.48	W	O
ATOM	4370	O	HOH W 442	-21.781	21.666	113.537	1.00	30.82	W	O
ATOM	4371	O	HOH W 443	39.860	6.346	67.021	1.00	32.01	W	O
ATOM	4372	O	HOH W 444	42.143	8.359	69.500	1.00	39.71	W	O
ATOM	4373	O	HOH W 445	-8.339	-3.324	88.589	1.00	48.59	W	O
ATOM	4374	O	HOH W 446	-5.439	-2.506	84.631	1.00	49.07	W	O
ATOM	4375	O	HOH W 447	10.114	9.300	105.299	1.00	55.06	W	O
ATOM	4376	O	HOH W 448	16.239	-12.467	79.695	1.00	48.81	W	O
ATOM	4377	O	HOH W 449	12.931	14.962	82.732	1.00	55.97	W	O
ATOM	4378	O	HOH W 450	15.033	16.025	83.698	1.00	55.49	W	O
ATOM	4379	O	HOH W 451	10.617	15.905	83.861	1.00	54.71	W	O
ATOM	4380	O	HOH W 452	-5.587	14.189	96.637	1.00	17.19	W	O
ATOM	4381	O	HOH W 454	-2.694	14.148	88.813	1.00	39.38	W	O
ATOM	4382	O	HOH W 455	3.241	25.419	113.472	1.00	35.59	W	O
ATOM	4383	O	HOH W 456	6.666	28.248	94.111	1.00	31.20	W	O
ATOM	4384	O	HOH W 457	4.912	26.581	118.595	1.00	33.12	W	O
ATOM	4385	O	HOH W 458	13.177	32.164	114.127	1.00	57.36	W	O
ATOM	4386	O	HOH W 459	25.786	35.921	98.725	1.00	58.99	W	O
ATOM	4387	O	HOH W 460	22.635	4.638	74.051	1.00	46.06	W	O
ATOM	4388	O	HOH W 461	17.322	37.394	105.719	1.00	31.09	W	O
ATOM	4389	O	HOH W 462	-7.224	20.703	114.851	1.00	39.30	W	O
ATOM	4390	O	HOH W 463	35.611	11.671	98.382	1.00	46.52	W	O
ATOM	4391	O	HOH W 464	29.883	-13.953	62.902	1.00	57.02	W	O
ATOM	4392	O	HOH W 465	31.809	-8.822	91.814	1.00	48.95	W	O
ATOM	4393	O	HOH W 466	-4.260	7.670	89.713	1.00	47.18	W	O
ATOM	4394	O	HOH W 467	10.396	24.915	91.432	1.00	40.35	W	O
ATOM	4395	O	HOH W 468	25.263	11.071	82.716	1.00	54.15	W	O
ATOM	4396	O	HOH W 469	38.248	5.442	99.845	1.00	42.81	W	O
ATOM	4397	O	HOH W 470	36.347	9.341	100.618	1.00	34.65	W	O
ATOM	4398	O	HOH W 471	-16.914	41.482	111.141	1.00	42.00	W	O
ATOM	4399	O	HOH W 472	-9.184	24.264	81.849	1.00	47.30	W	O
ATOM	4400	O	HOH W 473	40.726	1.808	66.833	1.00	43.72	W	O
ATOM	4401	O	HOH W 474	31.808	-18.642	70.728	1.00	37.59	W	O
ATOM	4402	O	HOH W 475	16.188	22.858	110.296	1.00	49.77	W	O
ATOM	4403	O	HOH W 476	3.509	2.536	103.295	1.00	42.84	W	O
ATOM	4404	O	HOH W 477	11.289	41.122	108.943	1.00	45.98	W	O
ATOM	4405	O	HOH W 478	36.903	-5.044	64.038	1.00	55.21	W	O
ATOM	4406	O	HOH W 479	-6.947	8.034	91.049	1.00	52.73	W	O
ATOM	4407	O	HOH W 480	29.751	-15.588	72.186	1.00	39.77	W	O
ATOM	4408	O	HOH W 481	-19.537	40.486	107.195	1.00	44.19	W	O
ATOM	4409	O	HOH W 482	13.213	-5.095	67.720	1.00	60.90	W	O
ATOM	4410	O	HOH W 483	49.568	-7.870	76.168	1.00	56.88	W	O
ATOM	4411	O	HOH W 484	20.138	10.494	110.659	1.00	51.35	W	O
ATOM	4412	O	HOH W 485	23.477	20.576	109.910	1.00	40.59	W	O

ATOM	4413	O	HOH W 486	17.274	23.443	92.256	1.00	20.56	W	O
ATOM	4414	O	HOH W 487	-3.839	23.924	116.158	1.00	53.03	W	O
ATOM	4415	O	HOH W 488	-9.415	30.760	123.636	1.00	52.62	W	O
ATOM	4416	O	HOH W 489	-1.387	9.782	78.997	1.00	53.83	W	O
ATOM	4417	O	HOH W 490	9.922	-7.536	74.819	1.00	56.15	W	O
ATOM	4418	O	HOH W 491	-19.282	13.510	103.374	1.00	42.49	W	O
ATOM	4419	O	HOH W 492	5.004	29.828	93.747	1.00	45.34	W	O
ATOM	4420	O	HOH W 493	17.415	-8.223	91.913	1.00	37.18	W	O
ATOM	4421	O	HOH W 494	-12.983	20.330	105.539	1.00	54.57	W	O
ATOM	4422	O	HOH W 495	-7.159	22.883	83.768	1.00	46.62	W	O
ATOM	4423	O	HOH W 496	37.991	-8.468	95.150	1.00	50.24	W	O
ATOM	4424	O	HOH W 497	6.698	22.515	106.540	1.00	31.67	W	O
ATOM	4425	O	HOH W 498	0.537	27.673	90.158	1.00	49.73	W	O
ATOM	4426	O	HOH W 499	40.928	-10.554	82.991	1.00	67.78	W	O
ATOM	4427	O	HOH W 500	-9.156	36.949	84.009	1.00	72.95	W	O
ATOM	4428	O	HOH W 501	-33.297	21.816	110.516	1.00	49.38	W	O
ATOM	4429	O	HOH W 502	14.744	-12.296	83.500	1.00	61.03	W	O
ATOM	4430	O	HOH W 503	-0.797	13.710	92.437	1.00	67.43	W	O
ATOM	4431	O	HOH W 504	-4.021	-6.785	82.556	1.00	66.42	W	O
ATOM	4432	O	HOH W 505	39.144	-0.596	89.054	1.00	60.51	W	O
ATOM	4433	O	HOH W 506	-4.755	-6.160	85.441	1.00	49.25	W	O
ATOM	4434	O	HOH W 507	28.668	-12.917	86.013	1.00	72.20	W	O
ATOM	4435	O	HOH W 508	26.122	-13.358	85.255	1.00	54.49	W	O
ATOM	4436	O	HOH W 509	1.611	-7.783	103.500	1.00	63.21	W	O
ATOM	4437	O	HOH W 510	-16.935	38.862	97.751	1.00	38.07	W	O
TER	4438		HOH W 510							

[a]Amino acids residues of the light (L) and heavy (H) chains are numbered according to the Chothia numbering system as shown in Tables 6 and 7, respectively (Al-Lazikani *et al., Jour. Mol. Biol.* 273:927-948, 1997). Amino acid residues of IL-13 (I) are numbered as shown in SEQ ID NO:4 (FIG. 2B).

[b]Columns are labeled according to Protein Data Bank Format, Version 2.2

Table 12. Structure coordinates of human IL-13/mAb13.2 Fab/IL-13Ra1[a, b]

	#	Name	Res.	Chain	Res #	X	Y	Z	occ	B	SegID	
ATOM	1	CB	PRO	I	6	27.016	30.544	-8.876	1.00	78.94	I	C
ATOM	2	CG	PRO	I	6	25.927	30.356	-7.827	1.00	79.11	I	C
ATOM	3	C	PRO	I	6	28.494	28.571	-9.333	1.00	77.04	I	C
ATOM	4	O	PRO	I	6	28.955	27.658	-10.011	1.00	78.75	I	O
ATOM	5	N	PRO	I	6	26.037	28.388	-9.357	1.00	79.03	I	N
ATOM	6	CD	PRO	I	6	25.355	28.902	-8.177	1.00	78.57	I	C
ATOM	7	CA	PRO	I	6	27.169	29.250	-9.667	1.00	77.81	I	C
ATOM	8	N	SER	I	7	29.158	29.102	-8.292	1.00	73.92	I	N
ATOM	9	CA	SER	I	7	30.314	28.399	-7.754	1.00	70.46	I	C
ATOM	10	CB	SER	I	7	31.594	28.866	-8.450	1.00	71.68	I	C
ATOM	11	OG	SER	I	7	32.433	27.732	-8.694	1.00	70.98	I	O
ATOM	12	C	SER	I	7	30.438	28.627	-6.254	1.00	68.57	I	C
ATOM	13	O	SER	I	7	29.807	29.505	-5.678	1.00	68.82	I	O
ATOM	14	N	THR	I	8	31.238	27.760	-5.628	1.00	64.85	I	N
ATOM	15	CA	THR	I	8	31.542	27.924	-4.220	1.00	61.35	I	C
ATOM	16	CB	THR	I	8	31.055	26.659	-3.518	1.00	60.21	I	C
ATOM	17	OG1	THR	I	8	31.602	25.526	-4.191	1.00	60.16	I	O
ATOM	18	CG2	THR	I	8	29.525	26.585	-3.602	1.00	60.47	I	C
ATOM	19	C	THR	I	8	33.049	28.098	-4.021	1.00	59.39	I	C
ATOM	20	O	THR	I	8	33.866	27.692	-4.837	1.00	60.36	I	O
ATOM	21	N	ALA	I	9	33.455	28.703	-2.891	1.00	56.29	I	N
ATOM	22	CA	ALA	I	9	34.886	28.844	-2.652	1.00	53.24	I	C
ATOM	23	CB	ALA	I	9	35.099	29.365	-1.233	1.00	53.72	I	C
ATOM	24	C	ALA	I	9	35.601	27.499	-2.836	1.00	50.08	I	C
ATOM	25	O	ALA	I	9	36.740	27.420	-3.303	1.00	48.77	I	O
ATOM	26	N	LEU	I	10	34.896	26.425	-2.407	1.00	47.48	I	N
ATOM	27	CA	LEU	I	10	35.458	25.082	-2.467	1.00	47.12	I	C
ATOM	28	CB	LEU	I	10	34.532	24.133	-1.702	1.00	47.12	I	C
ATOM	29	CG	LEU	I	10	35.161	22.751	-1.483	1.00	47.82	I	C
ATOM	30	CD1	LEU	I	10	36.663	22.837	-1.178	1.00	46.75	I	C
ATOM	31	CD2	LEU	I	10	34.533	21.987	-0.316	1.00	47.41	I	C
ATOM	32	C	LEU	I	10	35.641	24.597	-3.910	1.00	45.94	I	C
ATOM	33	O	LEU	I	10	36.703	24.136	-4.306	1.00	44.31	I	O
ATOM	34	N	ARG	I	11	34.544	24.643	-4.689	1.00	45.74	I	N
ATOM	35	CA	ARG	I	11	34.605	24.150	-6.058	1.00	47.06	I	C
ATOM	36	CB	ARG	I	11	33.268	24.453	-6.736	1.00	50.47	I	C
ATOM	37	CG	ARG	I	11	33.168	23.828	-8.127	1.00	55.23	I	C
ATOM	38	CD	ARG	I	11	32.056	24.466	-8.967	1.00	59.66	I	C
ATOM	39	NE	ARG	I	11	32.248	24.165	-10.388	1.00	64.26	I	N
ATOM	40	CZ	ARG	I	11	31.352	23.350	-10.973	1.00	67.01	I	C
ATOM	41	NH1	ARG	I	11	30.187	23.118	-10.391	1.00	67.52	I	N
ATOM	42	NH2	ARG	I	11	31.638	22.791	-12.151	1.00	66.67	I	N
ATOM	43	C	ARG	I	11	35.750	24.793	-6.845	1.00	46.55	I	C
ATOM	44	O	ARG	I	11	36.517	24.134	-7.533	1.00	47.11	I	O
ATOM	45	N	GLU	I	12	35.823	26.135	-6.761	1.00	46.28	I	N
ATOM	46	CA	GLU	I	12	36.863	26.843	-7.497	1.00	45.52	I	C
ATOM	47	CB	GLU	I	12	36.654	28.346	-7.313	1.00	46.38	I	C
ATOM	48	CG	GLU	I	12	35.298	28.819	-7.850	1.00	49.26	I	C
ATOM	49	CD	GLU	I	12	35.349	28.900	-9.359	1.00	51.60	I	C
ATOM	50	OE1	GLU	I	12	36.412	29.179	-9.898	1.00	54.40	I	O
ATOM	51	OE2	GLU	I	12	34.312	28.700	-9.988	1.00	53.81	I	O
ATOM	52	C	GLU	I	12	38.261	26.436	-7.031	1.00	43.95	I	C
ATOM	53	O	GLU	I	12	39.205	26.341	-7.804	1.00	44.02	I	O
ATOM	54	N	LEU	I	13	38.395	26.233	-5.707	1.00	43.03	I	N
ATOM	55	CA	LEU	I	13	39.685	25.790	-5.186	1.00	43.21	I	C
ATOM	56	CB	LEU	I	13	39.623	25.788	-3.657	1.00	41.91	I	C
ATOM	57	CG	LEU	I	13	40.902	25.240	-3.027	1.00	43.10	I	C
ATOM	58	CD1	LEU	I	13	42.136	26.054	-3.419	1.00	40.08	I	C
ATOM	59	CD2	LEU	I	13	40.855	25.238	-1.496	1.00	43.85	I	C
ATOM	60	C	LEU	I	13	40.035	24.389	-5.688	1.00	44.05	I	C
ATOM	61	O	LEU	I	13	41.146	24.103	-6.105	1.00	44.32	I	O
ATOM	62	N	ILE	I	14	39.045	23.485	-5.597	1.00	44.06	I	N
ATOM	63	CA	ILE	I	14	39.276	22.125	-6.074	1.00	44.78	I	C
ATOM	64	CB	ILE	I	14	37.978	21.332	-5.907	1.00	42.05	I	C
ATOM	65	CG2	ILE	I	14	38.090	19.996	-6.653	1.00	41.67	I	C
ATOM	66	CG1	ILE	I	14	37.731	21.022	-4.430	1.00	39.88	I	C

ATOM	68	C	ILE	I	14	36.371	20.368	-4.199	1.00	38.79	I	C
ATOM	69	O	ILE	I	14	39.708	22.115	-7.542	1.00	47.20	I	C
ATOM	70	N	GLU	I	15	40.558	21.340	-7.968	1.00	47.59	I	O
ATOM	71	CA	GLU	I	15	39.070	22.994	-8.334	1.00	48.85	I	N
ATOM	72	CB	GLU	I	15	39.369	23.015	-9.761	1.00	51.76	I	C
ATOM	73	CG	GLU	I	15	38.372	23.943	-10.458	1.00	53.36	I	C
ATOM	74	CD	GLU	I	15	36.969	23.340	-10.484	1.00	57.81	I	C
ATOM	75	OE1	GLU	I	15	36.115	24.056	-11.508	1.00	61.60	I	C
ATOM	76	OE2	GLU	I	15	34.896	23.958	-11.425	1.00	63.74	I	O
ATOM	77	C	GLU	I	15	36.676	24.698	-12.394	1.00	64.24	I	O
ATOM	78	O	GLU	I	15	40.814	23.434	-10.041	1.00	52.17	I	C
ATOM	79	N	GLU	I	16	41.514	22.839	-10.850	1.00	53.33	I	O
ATOM	80	CA	GLU	I	16	41.252	24.510	-9.359	1.00	52.90	I	N
ATOM	81	CB	GLU	I	16	42.665	24.891	-9.466	1.00	52.55	I	C
ATOM	82	CG	GLU	I	16	42.895	26.165	-8.650	1.00	53.39	I	C
ATOM	83	CD	GLU	I	16	44.384	26.475	-8.463	1.00	54.58	I	C
ATOM	84	OE1	GLU	I	16	44.954	27.031	-9.751	1.00	56.47	I	C
ATOM	85	OE2	GLU	I	16	44.255	27.022	-10.754	1.00	56.93	I	O
ATOM	86	C	GLU	I	16	46.105	27.467	-9.741	1.00	56.71	I	O
ATOM	87	O	GLU	I	16	43.630	23.796	-9.001	1.00	51.84	I	C
ATOM	88	N	LEU	I	17	44.655	23.523	-9.623	1.00	50.16	I	O
ATOM	89	CA	LEU	I	17	43.323	23.187	-7.842	1.00	53.85	I	N
ATOM	90	CB	LEU	I	17	44.193	22.107	-7.389	1.00	54.85	I	C
ATOM	91	CG	LEU	I	17	43.658	21.562	-6.071	1.00	55.53	I	C
ATOM	92	CD1	LEU	I	17	43.933	22.504	-4.894	1.00	57.93	I	C
ATOM	93	CD2	LEU	I	17	43.907	21.778	-3.551	1.00	58.04	I	C
ATOM	94	C	LEU	I	17	45.303	23.190	-4.990	1.00	55.21	I	C
ATOM	95	O	LEU	I	17	44.287	20.988	-8.437	1.00	54.64	I	C
ATOM	96	N	VAL	I	18	45.326	20.369	-8.649	1.00	53.29	I	O
ATOM	97	CA	VAL	I	18	43.134	20.699	-9.068	1.00	54.67	I	N
ATOM	98	CB	VAL	I	18	43.143	19.739	-10.170	1.00	56.02	I	C
ATOM	99	CG1	VAL	I	18	41.707	19.562	-10.669	1.00	55.67	I	C
ATOM	100	CG2	VAL	I	18	41.691	18.686	-11.919	1.00	54.36	I	C
ATOM	101	C	VAL	I	18	40.855	18.904	-9.603	1.00	54.26	I	C
ATOM	102	O	VAL	I	18	44.016	20.241	-11.309	1.00	56.81	I	C
ATOM	103	N	ASN	I	19	44.779	19.508	-11.927	1.00	56.49	I	O
ATOM	104	CA	ASN	I	19	43.865	21.537	-11.615	1.00	58.66	I	N
ATOM	105	CB	ASN	I	19	44.587	22.072	-12.767	1.00	60.24	I	C
ATOM	106	CG	ASN	I	19	44.243	23.553	-12.930	1.00	62.77	I	C
ATOM	107	OD1	ASN	I	19	44.463	23.973	-14.361	1.00	66.30	I	C
ATOM	108	ND2	ASN	I	19	45.444	24.637	-14.697	1.00	66.87	I	O
ATOM	109	C	ASN	I	19	43.491	23.599	-15.222	1.00	69.04	I	N
ATOM	110	O	ASN	I	19	46.106	21.874	-12.654	1.00	60.76	I	C
ATOM	111	N	ILE	I	20	46.760	21.386	-13.559	1.00	61.67	I	O
ATOM	112	CA	ILE	I	20	46.681	22.301	-11.506	1.00	60.66	I	N
ATOM	113	CB	ILE	I	20	48.133	22.233	-11.369	1.00	61.31	I	C
ATOM	114	CG2	ILE	I	20	48.598	23.170	-10.239	1.00	59.89	I	C
ATOM	115	CG1	ILE	I	20	48.081	24.601	-10.471	1.00	59.08	I	C
ATOM	116	CD1	ILE	I	20	48.081	22.695	-8.882	1.00	58.35	I	C
ATOM	117	C	ILE	I	20	48.507	23.649	-7.757	1.00	53.99	I	C
ATOM	118	O	ILE	I	20	48.665	20.804	-11.140	1.00	62.24	I	C
ATOM	119	N	THR	I	21	49.846	20.527	-11.286	1.00	62.82	I	O
ATOM	120	CA	THR	I	21	47.766	19.884	-10.725	1.00	64.13	I	N
ATOM	121	CB	THR	I	21	48.272	18.536	-10.475	1.00	67.05	I	C
ATOM	122	OG1	THR	I	21	47.515	17.934	-9.292	1.00	65.01	I	C
ATOM	123	CG2	THR	I	21	46.110	18.119	-9.493	1.00	65.20	I	O
ATOM	124	C	THR	I	21	47.934	18.634	-7.998	1.00	64.13	I	C
ATOM	125	O	THR	I	21	48.149	17.601	-11.686	1.00	69.94	I	C
ATOM	126	N	GLN	I	22	48.386	16.404	-11.597	1.00	70.16	I	O
ATOM	127	CA	GLN	I	22	47.717	18.156	-12.833	1.00	74.84	I	N
ATOM	128	CB	GLN	I	22	47.796	17.344	-14.039	1.00	79.56	I	C
ATOM	129	CG	GLN	I	22	47.563	18.242	-15.257	1.00	79.69	I	C
ATOM	130	CD	GLN	I	22	46.107	18.696	-15.411	1.00	82.15	I	C
ATOM	131	OE1	GLN	I	22	46.038	19.891	-16.340	1.00	84.37	I	C
ATOM	132	NE2	GLN	I	22	46.743	20.011	-17.331	1.00	85.68	I	O
ATOM	133	C	GLN	I	22	45.095	20.790	-15.993	1.00	84.96	I	N
ATOM	134	O	GLN	I	22	49.182	16.717	-14.144	1.00	82.23	I	C
ATOM	135	N	ASN	I	23	50.208	17.384	-14.054	1.00	82.99	I	O
						49.204	15.378	-14.279	1.00	85.10	I	N

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ATOM    136  CA  ASN I  23      50.502  14.740 -14.456  1.00 87.69      I    C
ATOM    137  CB  ASN I  23      50.318  13.225 -14.479  1.00 89.46      I    C
ATOM    138  CG  ASN I  23      49.344  12.907 -15.579  1.00 91.98      I    C
ATOM    139  OD1 ASN I  23      48.554  13.754 -15.992  1.00 93.28      I    O
ATOM    140  ND2 ASN I  23      49.394  11.647 -16.047  1.00 92.89      I    N
ATOM    141  C   ASN I  23      51.177  15.233 -15.731  1.00 88.20      I    C
ATOM    142  O   ASN I  23      52.391  15.348 -15.826  1.00 88.08      I    O
ATOM    143  N   ASN I  24      50.337  15.517 -16.746  1.00 88.98      I    N
ATOM    144  CA  ASN I  24      50.868  16.147 -17.953  1.00 89.45      I    C
ATOM    145  CB  ASN I  24      49.697  16.736 -18.743  1.00 89.76      I    C
ATOM    146  CG  ASN I  24      48.615  15.708 -18.883  1.00 90.73      I    C
ATOM    147  OD1 ASN I  24      47.436  16.026 -19.024  1.00 91.03      I    O
ATOM    148  ND2 ASN I  24      49.058  14.445 -18.938  1.00 90.98      I    N
ATOM    149  C   ASN I  24      51.783  17.295 -17.596  1.00 89.22      I    C
ATOM    150  O   ASN I  24      52.769  17.586 -18.259  1.00 89.67      I    O
ATOM    151  N   LYS I  25      51.384  18.011 -16.541  1.00 88.77      I    N
ATOM    152  CA  LYS I  25      52.011  19.292 -16.317  1.00 88.13      I    C
ATOM    153  CB  LYS I  25      51.236  20.073 -15.261  1.00 87.83      I    C
ATOM    154  CG  LYS I  25      50.573  21.287 -15.901  1.00 88.09      I    C
ATOM    155  CD  LYS I  25      49.298  21.716 -15.180  1.00 87.96      I    C
ATOM    156  CE  LYS I  25      48.765  23.021 -15.758  1.00 87.47      I    C
ATOM    157  NZ  LYS I  25      47.511  23.383 -15.112  1.00 87.86      I    N
ATOM    158  C   LYS I  25      53.479  19.177 -15.941  1.00 87.88      I    C
ATOM    159  O   LYS I  25      54.359  19.464 -16.732  1.00 87.93      I    O
ATOM    160  N   ALA I  26      53.727  18.768 -14.680  1.00 87.24      I    N
ATOM    161  CA  ALA I  26      55.097  18.639 -14.190  1.00 87.03      I    C
ATOM    162  CB  ALA I  26      55.920  19.773 -14.793  1.00 86.82      I    C
ATOM    163  C   ALA I  26      55.156  18.728 -12.659  1.00 86.17      I    C
ATOM    164  O   ALA I  26      54.261  19.236 -12.003  1.00 86.49      I    O
ATOM    165  N   PRO I  27      56.230  18.158 -12.104  1.00 85.00      I    N
ATOM    166  CD  PRO I  27      57.357  17.502 -12.756  1.00 84.74      I    C
ATOM    167  CA  PRO I  27      56.407  18.123 -10.655  1.00 83.68      I    C
ATOM    168  CB  PRO I  27      57.843  17.707 -10.383  1.00 84.54      I    C
ATOM    169  CG  PRO I  27      58.352  16.974 -11.621  1.00 85.05      I    C
ATOM    170  C   PRO I  27      56.115  19.479 -10.015  1.00 82.78      I    C
ATOM    171  O   PRO I  27      56.807  20.461 -10.226  1.00 82.59      I    O
ATOM    172  N   LEU I  28      55.012  19.496  -9.237  1.00 81.31      I    N
ATOM    173  CA  LEU I  28      54.588  20.743  -8.605  1.00 79.53      I    C
ATOM    174  CB  LEU I  28      53.272  20.461  -7.864  1.00 79.22      I    C
ATOM    175  CG  LEU I  28      52.572  21.747  -7.428  1.00 78.56      I    C
ATOM    176  CD1 LEU I  28      52.267  22.680  -8.604  1.00 79.42      I    C
ATOM    177  CD2 LEU I  28      51.238  21.483  -6.732  1.00 78.52      I    C
ATOM    178  C   LEU I  28      55.648  21.319  -7.638  1.00 78.97      I    C
ATOM    179  O   LEU I  28      55.966  20.770  -6.599  1.00 78.25      I    O
ATOM    180  N   CYS I  29      56.233  22.451  -8.080  1.00 78.37      I    N
ATOM    181  CA  CYS I  29      57.063  23.311  -7.222  1.00 78.80      I    C
ATOM    182  C   CYS I  29      58.558  22.927  -7.126  1.00 79.64      I    C
ATOM    183  O   CYS I  29      59.399  23.724  -6.710  1.00 81.19      I    O
ATOM    184  CB  CYS I  29      56.387  23.648  -5.869  1.00 78.02      I    C
ATOM    185  SG  CYS I  29      55.321  25.110  -5.991  1.00 79.53      I    S
ATOM    186  N   ALA I  30      58.833  21.638  -7.488  1.00 79.61      I    N
ATOM    187  CA  ALA I  30      60.144  21.242  -8.025  1.00 79.88      I    C
ATOM    188  CB  ALA I  30      60.819  22.492  -8.580  1.00 79.91      I    C
ATOM    189  C   ALA I  30      61.080  20.547  -7.032  1.00 79.67      I    C
ATOM    190  O   ALA I  30      62.298  20.718  -7.049  1.00 80.11      I    O
ATOM    191  N   GLY I  31      60.482  19.717  -6.179  1.00 79.21      I    N
ATOM    192  CA  GLY I  31      61.112  19.428  -4.906  1.00 79.39      I    C
ATOM    193  C   GLY I  31      60.344  20.181  -3.821  1.00 78.91      I    C
ATOM    194  O   GLY I  31      59.220  19.845  -3.484  1.00 80.31      I    O
ATOM    195  N   SER I  32      60.988  21.238  -3.271  1.00 77.08      I    N
ATOM    196  CA  SER I  32      60.317  22.073  -2.255  1.00 75.27      I    C
ATOM    197  CB  SER I  32      59.382  23.064  -2.969  1.00 76.77      I    C
ATOM    198  OG  SER I  32      60.013  24.342  -3.017  1.00 80.23      I    O
ATOM    199  C   SER I  32      59.517  21.252  -1.233  1.00 73.51      I    C
ATOM    200  O   SER I  32      58.519  20.628  -1.553  1.00 73.95      I    O
ATOM    201  N   MET I  33      59.990  21.253   0.035  1.00 71.50      I    N
ATOM    202  CA  MET I  33      59.323  20.420   1.043  1.00 68.96      I    C
ATOM    203  CB  MET I  33      60.384  19.555   1.713  1.00 69.85      I    C
ATOM    204  CG  MET I  33      61.259  18.852   0.686  1.00 70.72      I    C
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ATOM    205  SD  MET I  33      60.793  17.138   0.458  1.00 73.74      I    S
ATOM    206  CE  MET I  33      61.652  16.452   1.874  1.00 72.51      I    C
ATOM    207  C   MET I  33      58.580  21.248   2.085  1.00 66.87      I    C
ATOM    208  O   MET I  33      59.084  22.195   2.664  1.00 67.96      I    O
ATOM    209  N   VAL I  34      57.293  20.874   2.281  1.00 64.12      I    N
ATOM    210  CA  VAL I  34      56.489  21.588   3.270  1.00 62.22      I    C
ATOM    211  CB  VAL I  34      55.262  22.183   2.578  1.00 62.02      I    C
ATOM    212  CG1 VAL I  34      55.684  23.296   1.626  1.00 60.10      I    C
ATOM    213  CG2 VAL I  34      54.532  21.107   1.800  1.00 58.25      I    C
ATOM    214  C   VAL I  34      56.029  20.700   4.450  1.00 62.11      I    C
ATOM    215  O   VAL I  34      56.054  19.479   4.372  1.00 61.47      I    O
ATOM    216  N   TRP I  35      55.618  21.355   5.548  1.00 61.68      I    N
ATOM    217  CA  TRP I  35      55.103  20.602   6.682  1.00 62.60      I    C
ATOM    218  CB  TRP I  35      54.958  21.567   7.862  1.00 63.98      I    C
ATOM    219  CG  TRP I  35      56.272  22.146   8.225  1.00 66.88      I    C
ATOM    220  CD2 TRP I  35      57.297  21.517   9.027  1.00 67.70      I    C
ATOM    221  CE2 TRP I  35      58.343  22.460   9.190  1.00 68.28      I    C
ATOM    222  CE3 TRP I  35      57.413  20.260   9.614  1.00 68.19      I    C
ATOM    223  CD1 TRP I  35      56.738  23.441   7.917  1.00 66.99      I    C
ATOM    224  NE1 TRP I  35      57.957  23.700   8.466  1.00 67.36      I    N
ATOM    225  CZ2 TRP I  35      59.461  22.131   9.942  1.00 69.16      I    C
ATOM    226  CZ3 TRP I  35      58.531  19.930  10.361  1.00 68.91      I    C
ATOM    227  CH2 TRP I  35      59.566  20.873  10.520  1.00 69.23      I    C
ATOM    228  C   TRP I  35      53.742  19.994   6.356  1.00 62.37      I    C
ATOM    229  O   TRP I  35      52.840  20.652   5.855  1.00 62.15      I    O
ATOM    230  N   SER I  36      53.617  18.680   6.609  1.00 61.20      I    N
ATOM    231  CA  SER I  36      52.275  18.095   6.574  1.00 61.84      I    C
ATOM    232  CB  SER I  36      52.414  16.571   6.702  1.00 62.31      I    C
ATOM    233  OG  SER I  36      52.742  16.233   8.048  1.00 65.85      I    O
ATOM    234  C   SER I  36      51.383  18.640   7.689  1.00 60.45      I    C
ATOM    235  O   SER I  36      51.831  19.023   8.763  1.00 60.13      I    O
ATOM    236  N   ILE I  37      50.069  18.705   7.388  1.00 60.87      I    N
ATOM    237  CA  ILE I  37      49.138  19.284   8.348  1.00 62.76      I    C
ATOM    238  CB  ILE I  37      48.525  20.527   7.703  1.00 60.98      I    C
ATOM    239  CG2 ILE I  37      49.641  21.486   7.246  1.00 60.58      I    C
ATOM    240  CG1 ILE I  37      47.726  20.118   6.461  1.00 61.47      I    C
ATOM    241  CD1 ILE I  37      46.656  21.150   6.106  1.00 63.20      I    C
ATOM    242  C   ILE I  37      48.015  18.316   8.735  1.00 64.55      I    C
ATOM    243  O   ILE I  37      47.844  17.247   8.163  1.00 64.40      I    O
ATOM    244  N   ASN I  38      47.249  18.723   9.757  1.00 67.19      I    N
ATOM    245  CA  ASN I  38      46.117  17.915  10.192  1.00 69.16      I    C
ATOM    246  CB  ASN I  38      45.872  18.200  11.675  1.00 71.48      I    C
ATOM    247  CG  ASN I  38      46.010  16.925  12.468  1.00 74.53      I    C
ATOM    248  OD1 ASN I  38      45.727  16.866  13.660  1.00 76.30      I    O
ATOM    249  ND2 ASN I  38      46.427  15.862  11.758  1.00 76.89      I    N
ATOM    250  C   ASN I  38      44.853  18.237   9.387  1.00 70.38      I    C
ATOM    251  O   ASN I  38      44.318  19.337   9.422  1.00 70.94      I    O
ATOM    252  N   LEU I  39      44.401  17.230   8.613  1.00 71.67      I    N
ATOM    253  CA  LEU I  39      43.191  17.403   7.817  1.00 73.26      I    C
ATOM    254  CB  LEU I  39      43.216  16.369   6.691  1.00 71.42      I    C
ATOM    255  CG  LEU I  39      44.416  16.557   5.761  1.00 70.72      I    C
ATOM    256  CD1 LEU I  39      44.567  15.415   4.753  1.00 69.87      I    C
ATOM    257  CD2 LEU I  39      44.331  17.845   4.944  1.00 68.56      I    C
ATOM    258  C   LEU I  39      41.924  17.225   8.662  1.00 74.76      I    C
ATOM    259  O   LEU I  39      40.887  16.763   8.201  1.00 75.68      I    O
ATOM    260  N   THR I  40      42.048  17.574   9.956  1.00 76.50      I    N
ATOM    261  CA  THR I  40      40.904  17.441  10.850  1.00 78.43      I    C
ATOM    262  CB  THR I  40      41.422  17.074  12.241  1.00 78.89      I    C
ATOM    263  OG1 THR I  40      40.752  17.875  13.216  1.00 80.37      I    O
ATOM    264  CG2 THR I  40      42.926  17.345  12.328  1.00 80.30      I    C
ATOM    265  C   THR I  40      40.086  18.734  10.919  1.00 78.70      I    C
ATOM    266  O   THR I  40      38.886  18.762  10.684  1.00 80.14      I    O
ATOM    267  N   ALA I  41      40.775  19.826  11.301  1.00 77.65      I    N
ATOM    268  CA  ALA I  41      40.097  21.115  11.376  1.00 76.51      I    C
ATOM    269  CB  ALA I  41      39.375  21.199  12.721  1.00 77.98      I    C
ATOM    270  C   ALA I  41      41.083  22.276  11.238  1.00 75.39      I    C
ATOM    271  O   ALA I  41      42.295  22.105  11.220  1.00 76.85      I    O
ATOM    272  N   GLY I  42      40.522  23.491  11.101  1.00 72.26      I    N
ATOM    273  CA  GLY I  42      41.385  24.649  10.911  1.00 67.39      I    C
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ATOM	274	C	GLY	I	42	42.460	24.359	9.862	1.00	65.34	I	C
ATOM	275	O	GLY	I	42	43.566	24.883	9.890	1.00	63.64	I	O
ATOM	276	N	MET	I	43	42.109	23.451	8.934	1.00	62.58	I	N
ATOM	277	CA	MET	I	43	43.066	23.063	7.907	1.00	61.81	I	C
ATOM	278	CB	MET	I	43	42.560	21.786	7.235	1.00	64.31	I	C
ATOM	279	CG	MET	I	43	42.556	21.887	5.709	1.00	67.10	I	C
ATOM	280	SD	MET	I	43	40.973	21.412	5.002	1.00	73.29	I	S
ATOM	281	CE	MET	I	43	41.014	22.487	3.561	1.00	70.95	I	C
ATOM	282	C	MET	I	43	43.264	24.166	6.865	1.00	58.78	I	C
ATOM	283	O	MET	I	43	44.344	24.362	6.323	1.00	59.66	I	O
ATOM	284	N	TYR	I	44	42.164	24.878	6.554	1.00	54.94	I	N
ATOM	285	CA	TYR	I	44	42.293	25.974	5.602	1.00	50.88	I	C
ATOM	286	CB	TYR	I	44	40.996	26.785	5.604	1.00	51.73	I	C
ATOM	287	CG	TYR	I	44	40.009	26.173	4.671	1.00	51.67	I	C
ATOM	288	CD1	TYR	I	44	40.411	25.757	3.403	1.00	51.08	I	C
ATOM	289	CE1	TYR	I	44	39.505	25.139	2.552	1.00	51.62	I	C
ATOM	290	CD2	TYR	I	44	38.687	25.980	5.071	1.00	51.42	I	C
ATOM	291	CE2	TYR	I	44	37.779	25.371	4.217	1.00	52.73	I	C
ATOM	292	CZ	TYR	I	44	38.183	24.952	2.963	1.00	53.13	I	C
ATOM	293	OH	TYR	I	44	37.296	24.302	2.126	1.00	54.49	I	O
ATOM	294	C	TYR	I	44	43.479	26.869	5.967	1.00	48.15	I	C
ATOM	295	O	TYR	I	44	44.371	27.131	5.170	1.00	45.25	I	O
ATOM	296	N	CYS	I	45	43.454	27.370	7.216	1.00	48.39	I	N
ATOM	297	CA	CYS	I	45	44.568	28.192	7.674	1.00	49.37	I	C
ATOM	298	C	CYS	I	45	45.863	27.379	7.767	1.00	49.62	I	C
ATOM	299	O	CYS	I	45	46.953	27.854	7.477	1.00	48.36	I	O
ATOM	300	CB	CYS	I	45	44.212	28.771	9.046	1.00	51.15	I	C
ATOM	301	SG	CYS	I	45	42.721	29.792	8.999	1.00	56.43	I	S
ATOM	302	N	ALA	I	46	45.720	26.119	8.223	1.00	49.15	I	N
ATOM	303	CA	ALA	I	46	46.898	25.272	8.376	1.00	47.97	I	C
ATOM	304	CB	ALA	I	46	46.475	23.966	9.051	1.00	47.77	I	C
ATOM	305	C	ALA	I	46	47.575	24.978	7.032	1.00	47.47	I	C
ATOM	306	O	ALA	I	46	48.792	24.976	6.904	1.00	47.08	I	O
ATOM	307	N	ALA	I	47	46.743	24.679	6.016	1.00	45.70	I	N
ATOM	308	CA	ALA	I	47	47.304	24.448	4.690	1.00	46.29	I	C
ATOM	309	CB	ALA	I	47	46.187	23.965	3.764	1.00	44.99	I	C
ATOM	310	C	ALA	I	47	47.937	25.724	4.131	1.00	46.25	I	C
ATOM	311	O	ALA	I	47	48.926	25.704	3.410	1.00	46.92	I	O
ATOM	312	N	LEU	I	48	47.298	26.864	4.459	1.00	45.80	I	N
ATOM	313	CA	LEU	I	48	47.863	28.149	4.062	1.00	44.83	I	C
ATOM	314	CB	LEU	I	48	46.891	29.252	4.496	1.00	43.51	I	C
ATOM	315	CG	LEU	I	48	47.494	30.657	4.381	1.00	42.29	I	C
ATOM	316	CD1	LEU	I	48	47.729	31.076	2.928	1.00	39.28	I	C
ATOM	317	CD2	LEU	I	48	46.606	31.740	4.998	1.00	41.45	I	C
ATOM	318	C	LEU	I	48	49.228	28.368	4.720	1.00	45.57	I	C
ATOM	319	O	LEU	I	48	50.204	28.759	4.093	1.00	45.62	I	O
ATOM	320	N	GLU	I	49	49.255	28.124	6.044	1.00	46.20	I	N
ATOM	321	CA	GLU	I	49	50.467	28.352	6.822	1.00	47.25	I	C
ATOM	322	CB	GLU	I	49	50.132	28.090	8.289	1.00	49.57	I	C
ATOM	323	CG	GLU	I	49	49.443	29.283	8.946	1.00	51.32	I	C
ATOM	324	CD	GLU	I	49	50.461	30.375	9.167	1.00	54.88	I	C
ATOM	325	OE1	GLU	I	49	51.143	30.341	10.181	1.00	58.35	I	O
ATOM	326	OE2	GLU	I	49	50.587	31.239	8.300	1.00	53.85	I	O
ATOM	327	C	GLU	I	49	51.617	27.442	6.388	1.00	48.23	I	C
ATOM	328	O	GLU	I	49	52.779	27.652	6.718	1.00	49.06	I	O
ATOM	329	N	SER	I	50	51.255	26.371	5.662	1.00	48.38	I	N
ATOM	330	CA	SER	I	50	52.363	25.494	5.298	1.00	48.77	I	C
ATOM	331	CB	SER	I	50	51.909	24.047	5.493	1.00	49.02	I	C
ATOM	332	OG	SER	I	50	52.793	23.175	4.786	1.00	49.21	I	O
ATOM	333	C	SER	I	50	52.802	25.712	3.847	1.00	48.18	I	C
ATOM	334	O	SER	I	50	53.961	25.559	3.484	1.00	48.73	I	O
ATOM	335	N	LEU	I	51	51.812	26.041	2.997	1.00	47.10	I	N
ATOM	336	CA	LEU	I	51	52.118	26.266	1.589	1.00	47.89	I	C
ATOM	337	CB	LEU	I	51	50.821	26.119	0.793	1.00	46.69	I	C
ATOM	338	CG	LEU	I	51	50.533	24.668	0.401	1.00	49.04	I	C
ATOM	339	CD1	LEU	I	51	49.442	24.556	-0.665	1.00	50.21	I	C
ATOM	340	CD2	LEU	I	51	51.760	23.952	-0.165	1.00	46.43	I	C
ATOM	341	C	LEU	I	51	52.712	27.658	1.358	1.00	48.63	I	C
ATOM	342	O	LEU	I	51	53.188	27.996	0.282	1.00	48.41	I	O

ATOM	343	N	ILE	I	52	52.637	28.491	2.413	1.00	49.30	I	N
ATOM	344	CA	ILE	I	52	53.124	29.859	2.285	1.00	50.61	I	C
ATOM	345	CB	ILE	I	52	52.519	30.688	3.419	1.00	49.79	I	C
ATOM	346	CG2	ILE	I	52	53.293	30.428	4.724	1.00	49.21	I	C
ATOM	347	CG1	ILE	I	52	52.627	32.181	3.098	1.00	48.59	I	C
ATOM	348	CD1	ILE	I	52	52.045	32.525	1.727	1.00	45.04	I	C
ATOM	349	C	ILE	I	52	54.652	29.931	2.341	1.00	51.05	I	C
ATOM	350	O	ILE	I	52	55.268	30.958	2.087	1.00	53.83	I	O
ATOM	351	N	ASN	I	53	55.265	28.798	2.730	1.00	51.02	I	N
ATOM	352	CA	ASN	I	53	56.720	28.765	2.818	1.00	51.33	I	C
ATOM	353	CB	ASN	I	53	57.111	27.732	3.876	1.00	47.60	I	C
ATOM	354	CG	ASN	I	53	56.768	28.261	5.244	1.00	47.65	I	C
ATOM	355	OD1	ASN	I	53	57.029	29.413	5.578	1.00	46.87	I	O
ATOM	356	ND2	ASN	I	53	56.161	27.379	6.056	1.00	45.54	I	N
ATOM	357	C	ASN	I	53	57.360	28.407	1.475	1.00	53.53	I	C
ATOM	358	O	ASN	I	53	58.573	28.418	1.313	1.00	55.03	I	O
ATOM	359	N	VAL	I	54	56.533	28.020	0.484	1.00	55.95	I	N
ATOM	360	CA	VAL	I	54	57.100	27.653	-0.810	1.00	57.77	I	C
ATOM	361	CB	VAL	I	54	55.997	27.031	-1.665	1.00	56.62	I	C
ATOM	362	CG1	VAL	I	54	56.544	26.690	-3.050	1.00	53.96	I	C
ATOM	363	CG2	VAL	I	54	55.484	25.765	-1.006	1.00	57.42	I	C
ATOM	364	C	VAL	I	54	57.696	28.866	-1.528	1.00	59.21	I	C
ATOM	365	O	VAL	I	54	57.025	29.846	-1.826	1.00	60.15	I	O
ATOM	366	N	SER	I	55	59.016	28.790	-1.772	1.00	60.64	I	N
ATOM	367	CA	SER	I	55	59.701	29.918	-2.390	1.00	63.25	I	C
ATOM	368	CB	SER	I	55	61.060	30.076	-1.702	1.00	62.79	I	C
ATOM	369	OG	SER	I	55	61.384	31.463	-1.600	1.00	63.77	I	O
ATOM	370	C	SER	I	55	59.902	29.717	-3.895	1.00	63.87	I	C
ATOM	371	O	SER	I	55	60.192	28.631	-4.378	1.00	64.14	I	O
ATOM	372	N	GLY	I	56	59.683	30.814	-4.647	1.00	65.44	I	N
ATOM	373	CA	GLY	I	56	60.020	30.814	-6.068	1.00	67.00	I	C
ATOM	374	C	GLY	I	56	59.271	29.742	-6.869	1.00	67.92	I	C
ATOM	375	O	GLY	I	56	59.850	28.975	-7.626	1.00	68.15	I	O
ATOM	376	N	CYS	I	57	57.942	29.687	-6.661	1.00	68.54	I	N
ATOM	377	CA	CYS	I	57	57.166	28.788	-7.503	1.00	68.81	I	C
ATOM	378	C	CYS	I	57	55.803	29.402	-7.865	1.00	67.61	I	C
ATOM	379	O	CYS	I	57	55.028	29.826	-7.003	1.00	66.76	I	O
ATOM	380	CB	CYS	I	57	56.999	27.498	-6.693	1.00	70.76	I	C
ATOM	381	SG	CYS	I	57	56.071	26.192	-7.524	1.00	75.77	I	S
ATOM	382	N	SER	I	58	55.726	29.762	-9.162	1.00	65.88	I	N
ATOM	383	CA	SER	I	58	54.578	30.538	-9.626	1.00	65.26	I	C
ATOM	384	CB	SER	I	58	54.958	31.236	-10.936	1.00	65.56	I	C
ATOM	385	OG	SER	I	58	55.073	30.270	-11.982	1.00	66.55	I	O
ATOM	386	C	SER	I	58	53.319	29.687	-9.825	1.00	64.15	I	C
ATOM	387	O	SER	I	58	52.266	30.169	-10.222	1.00	63.50	I	O
ATOM	388	N	ALA	I	59	53.455	28.375	-9.562	1.00	62.82	I	N
ATOM	389	CA	ALA	I	59	52.326	27.484	-9.813	1.00	62.09	I	C
ATOM	390	CB	ALA	I	59	52.868	26.101	-10.175	1.00	61.09	I	C
ATOM	391	C	ALA	I	59	51.366	27.384	-8.621	1.00	62.03	I	C
ATOM	392	O	ALA	I	59	50.187	27.091	-8.765	1.00	61.38	I	O
ATOM	393	N	ILE	I	60	51.906	27.598	-7.403	1.00	60.60	I	N
ATOM	394	CA	ILE	I	60	51.033	27.514	-6.233	1.00	61.29	I	C
ATOM	395	CB	ILE	I	60	51.743	26.744	-5.117	1.00	62.02	I	C
ATOM	396	CG2	ILE	I	60	51.257	25.284	-5.096	1.00	61.63	I	C
ATOM	397	CG1	ILE	I	60	53.256	26.741	-5.334	1.00	62.92	I	C
ATOM	398	CD1	ILE	I	60	53.948	27.890	-4.598	1.00	65.77	I	C
ATOM	399	C	ILE	I	60	50.602	28.887	-5.721	1.00	60.92	I	C
ATOM	400	O	ILE	I	60	49.867	29.018	-4.752	1.00	60.67	I	O
ATOM	401	N	GLU	I	61	51.112	29.943	-6.377	1.00	60.36	I	N
ATOM	402	CA	GLU	I	61	50.752	31.274	-5.910	1.00	59.69	I	C
ATOM	403	CB	GLU	I	61	51.397	32.318	-6.823	1.00	62.53	I	C
ATOM	404	CG	GLU	I	61	52.373	33.217	-6.060	1.00	68.64	I	C
ATOM	405	CD	GLU	I	61	52.334	34.612	-6.640	1.00	71.66	I	C
ATOM	406	OE1	GLU	I	61	51.637	35.456	-6.093	1.00	72.04	I	O
ATOM	407	OE2	GLU	I	61	53.018	34.848	-7.635	1.00	74.33	I	O
ATOM	408	C	GLU	I	61	49.231	31.460	-5.849	1.00	57.43	I	C
ATOM	409	O	GLU	I	61	48.677	31.954	-4.877	1.00	56.73	I	O
ATOM	410	N	LYS	I	62	48.550	31.067	-6.943	1.00	55.24	I	N
ATOM	411	CA	LYS	I	62	47.096	31.204	-6.956	1.00	54.11	I	C

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ATOM    412  CB  LYS I  62      46.570  30.752  -8.319  1.00 54.42      I    C
ATOM    413  CG  LYS I  62      45.070  31.016  -8.470  1.00 55.70      I    C
ATOM    414  CD  LYS I  62      44.591  30.848  -9.912  1.00 57.84      I    C
ATOM    415  CE  LYS I  62      43.078  30.621 -10.004  1.00 58.76      I    C
ATOM    416  NZ  LYS I  62      42.630  30.836 -11.379  1.00 59.46      I    N
ATOM    417  C   LYS I  62      46.431  30.389  -5.842  1.00 51.70      I    C
ATOM    418  O   LYS I  62      45.442  30.790  -5.243  1.00 51.21      I    O
ATOM    419  N   THR I  63      46.985  29.185  -5.602  1.00 49.68      I    N
ATOM    420  CA  THR I  63      46.452  28.355  -4.525  1.00 49.40      I    C
ATOM    421  CB  THR I  63      47.196  27.021  -4.530  1.00 49.66      I    C
ATOM    422  OG1 THR I  63      46.853  26.299  -5.714  1.00 49.02      I    O
ATOM    423  CG2 THR I  63      46.782  26.192  -3.310  1.00 48.32      I    C
ATOM    424  C   THR I  63      46.625  29.037  -3.168  1.00 49.94      I    C
ATOM    425  O   THR I  63      45.750  29.030  -2.312  1.00 49.16      I    O
ATOM    426  N   GLN I  64      47.828  29.601  -2.971  1.00 50.00      I    N
ATOM    427  CA  GLN I  64      48.064  30.380  -1.766  1.00 49.18      I    C
ATOM    428  CB  GLN I  64      49.444  31.026  -1.889  1.00 49.56      I    C
ATOM    429  CG  GLN I  64      50.577  30.038  -1.627  1.00 50.10      I    C
ATOM    430  CD  GLN I  64      51.901  30.746  -1.780  1.00 51.30      I    C
ATOM    431  OE1 GLN I  64      52.056  31.717  -2.504  1.00 53.24      I    O
ATOM    432  NE2 GLN I  64      52.891  30.211  -1.040  1.00 47.60      I    N
ATOM    433  C   GLN I  64      47.004  31.469  -1.597  1.00 49.30      I    C
ATOM    434  O   GLN I  64      46.492  31.724  -0.516  1.00 50.23      I    O
ATOM    435  N   ARG I  65      46.702  32.147  -2.718  1.00 49.37      I    N
ATOM    436  CA  ARG I  65      45.771  33.263  -2.639  1.00 49.52      I    C
ATOM    437  CB  ARG I  65      45.892  34.095  -3.919  1.00 52.37      I    C
ATOM    438  CG  ARG I  65      47.116  35.013  -3.869  1.00 55.43      I    C
ATOM    439  CD  ARG I  65      47.199  35.977  -5.060  1.00 58.20      I    C
ATOM    440  NE  ARG I  65      47.732  37.273  -4.625  1.00 61.26      I    N
ATOM    441  CZ  ARG I  65      49.032  37.535  -4.870  1.00 60.37      I    C
ATOM    442  NH1 ARG I  65      49.771  36.671  -5.541  1.00 62.13      I    N
ATOM    443  NH2 ARG I  65      49.595  38.624  -4.337  1.00 59.84      I    N
ATOM    444  C   ARG I  65      44.329  32.802  -2.402  1.00 47.23      I    C
ATOM    445  O   ARG I  65      43.526  33.477  -1.771  1.00 46.87      I    O
ATOM    446  N   MET I  66      43.996  31.620  -2.951  1.00 45.98      I    N
ATOM    447  CA  MET I  66      42.650  31.105  -2.732  1.00 45.22      I    C
ATOM    448  CB  MET I  66      42.402  29.953  -3.705  1.00 46.64      I    C
ATOM    449  CG  MET I  66      42.429  30.420  -5.162  1.00 48.54      I    C
ATOM    450  SD  MET I  66      42.132  29.076  -6.318  1.00 52.12      I    S
ATOM    451  CE  MET I  66      40.419  29.463  -6.708  1.00 51.79      I    C
ATOM    452  C   MET I  66      42.443  30.649  -1.284  1.00 43.95      I    C
ATOM    453  O   MET I  66      41.389  30.829  -0.688  1.00 41.50      I    O
ATOM    454  N   LEU I  67      43.485  30.009  -0.723  1.00 42.00      I    N
ATOM    455  CA  LEU I  67      43.402  29.630   0.683  1.00 42.22      I    C
ATOM    456  CB  LEU I  67      44.658  28.838   1.046  1.00 42.57      I    C
ATOM    457  CG  LEU I  67      44.687  27.464   0.376  1.00 44.35      I    C
ATOM    458  CD1 LEU I  67      46.052  26.785   0.490  1.00 41.18      I    C
ATOM    459  CD2 LEU I  67      43.670  26.491   0.974  1.00 42.25      I    C
ATOM    460  C   LEU I  67      43.271  30.860   1.583  1.00 41.42      I    C
ATOM    461  O   LEU I  67      42.550  30.875   2.572  1.00 39.85      I    O
ATOM    462  N   SER I  68      44.034  31.912   1.231  1.00 42.67      I    N
ATOM    463  CA  SER I  68      43.913  33.155   1.981  1.00 43.98      I    C
ATOM    464  CB  SER I  68      44.801  34.206   1.314  1.00 43.69      I    C
ATOM    465  OG  SER I  68      46.159  33.765   1.351  1.00 46.45      I    O
ATOM    466  C   SER I  68      42.460  33.632   2.008  1.00 44.59      I    C
ATOM    467  O   SER I  68      41.994  34.271   2.942  1.00 44.55      I    O
ATOM    468  N   GLY I  69      41.747  33.322   0.909  1.00 45.22      I    N
ATOM    469  CA  GLY I  69      40.335  33.675   0.838  1.00 46.25      I    C
ATOM    470  C   GLY I  69      39.526  32.989   1.942  1.00 48.08      I    C
ATOM    471  O   GLY I  69      38.600  33.548   2.515  1.00 48.24      I    O
ATOM    472  N   PHE I  70      39.880  31.716   2.206  1.00 48.01      I    N
ATOM    473  CA  PHE I  70      39.178  30.975   3.249  1.00 48.55      I    C
ATOM    474  CB  PHE I  70      39.423  29.481   3.022  1.00 49.37      I    C
ATOM    475  CG  PHE I  70      38.521  28.958   1.939  1.00 49.79      I    C
ATOM    476  CD1 PHE I  70      39.043  28.718   0.674  1.00 47.81      I    C
ATOM    477  CD2 PHE I  70      37.236  28.542   2.253  1.00 50.11      I    C
ATOM    478  CE1 PHE I  70      38.286  28.035  -0.269  1.00 47.12      I    C
ATOM    479  CE2 PHE I  70      36.483  27.857   1.302  1.00 49.17      I    C
ATOM    480  CZ  PHE I  70      37.006  27.596   0.041  1.00 47.05      I    C
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ATOM	481	C	PHE	I	70	39.674	31.371	4.644	1.00	49.59	I	C
ATOM	482	O	PHE	I	70	38.995	31.218	5.651	1.00	49.43	I	O
ATOM	483	N	CYS	I	71	40.929	31.858	4.679	1.00	50.98	I	N
ATOM	484	CA	CYS	I	71	41.534	32.251	5.952	1.00	51.34	I	C
ATOM	485	C	CYS	I	71	42.194	33.617	5.844	1.00	49.66	I	C
ATOM	486	O	CYS	I	71	43.418	33.763	5.815	1.00	48.07	I	O
ATOM	487	CB	CYS	I	71	42.572	31.188	6.320	1.00	52.25	I	C
ATOM	488	SG	CYS	I	71	43.274	31.439	7.967	1.00	56.38	I	S
ATOM	489	N	PRO	I	72	41.359	34.671	5.747	1.00	49.56	I	N
ATOM	490	CD	PRO	I	72	39.902	34.657	5.899	1.00	48.36	I	C
ATOM	491	CA	PRO	I	72	41.820	36.017	5.495	1.00	49.81	I	C
ATOM	492	CB	PRO	I	72	40.606	36.853	5.112	1.00	48.73	I	C
ATOM	493	CG	PRO	I	72	39.372	36.152	5.670	1.00	48.32	I	C
ATOM	494	C	PRO	I	72	42.483	36.612	6.738	1.00	50.31	I	C
ATOM	495	O	PRO	I	72	43.489	37.301	6.685	1.00	49.60	I	O
ATOM	496	N	HIS	I	73	41.834	36.347	7.885	1.00	52.63	I	N
ATOM	497	CA	HIS	I	73	42.366	36.834	9.148	1.00	54.75	I	C
ATOM	498	CB	HIS	I	73	41.189	37.292	10.003	1.00	53.22	I	C
ATOM	499	CG	HIS	I	73	40.877	38.728	9.705	1.00	51.21	I	C
ATOM	500	CD2	HIS	I	73	40.029	39.238	8.718	1.00	49.78	I	C
ATOM	501	ND1	HIS	I	73	41.443	39.765	10.369	1.00	50.07	I	N
ATOM	502	CE1	HIS	I	73	40.952	40.876	9.787	1.00	52.20	I	C
ATOM	503	NE2	HIS	I	73	40.103	40.590	8.796	1.00	50.88	I	N
ATOM	504	C	HIS	I	73	43.100	35.735	9.890	1.00	57.36	I	C
ATOM	505	O	HIS	I	73	42.525	34.738	10.310	1.00	56.89	I	O
ATOM	506	N	LYS	I	74	44.419	35.908	10.022	1.00	62.03	I	N
ATOM	507	CA	LYS	I	74	45.102	34.981	10.900	1.00	66.84	I	C
ATOM	508	CB	LYS	I	74	46.439	35.615	11.316	1.00	66.79	I	C
ATOM	509	CG	LYS	I	74	47.278	34.687	12.199	1.00	67.62	I	C
ATOM	510	CD	LYS	I	74	48.761	35.059	12.195	1.00	67.42	I	C
ATOM	511	CE	LYS	I	74	49.439	34.791	13.542	1.00	67.41	I	C
ATOM	512	NZ	LYS	I	74	49.380	35.994	14.372	1.00	66.83	I	N
ATOM	513	C	LYS	I	74	44.235	34.707	12.135	1.00	70.71	I	C
ATOM	514	O	LYS	I	74	44.166	35.504	13.065	1.00	72.13	I	O
ATOM	515	N	VAL	I	75	43.487	33.581	12.071	1.00	76.53	I	N
ATOM	516	CA	VAL	I	75	42.976	32.997	13.308	1.00	80.60	I	C
ATOM	517	CB	VAL	I	75	41.591	32.408	13.145	1.00	80.99	I	C
ATOM	518	CG1	VAL	I	75	41.658	31.357	12.040	1.00	80.41	I	C
ATOM	519	CG2	VAL	I	75	41.258	31.684	14.447	1.00	81.80	I	C
ATOM	520	C	VAL	I	75	43.835	31.838	13.734	1.00	83.10	I	C
ATOM	521	O	VAL	I	75	43.359	30.786	14.129	1.00	84.01	I	O
ATOM	522	N	SER	I	76	45.127	31.973	13.523	1.00	86.18	I	N
ATOM	523	CA	SER	I	76	45.963	31.363	14.531	1.00	88.83	I	C
ATOM	524	CB	SER	I	76	47.383	31.508	13.984	1.00	89.61	I	C
ATOM	525	OG	SER	I	76	47.404	30.931	12.653	1.00	89.51	I	O
ATOM	526	C	SER	I	76	45.692	32.232	15.775	1.00	90.59	I	C
ATOM	527	O	SER	I	76	45.810	33.452	15.712	1.00	91.56	I	O
ATOM	528	N	ALA	I	77	45.289	31.650	16.940	1.00	92.05	I	N
ATOM	529	CA	ALA	I	77	45.874	30.456	17.557	1.00	92.64	I	C
ATOM	530	CB	ALA	I	77	45.180	30.233	18.903	1.00	92.84	I	C
ATOM	531	C	ALA	I	77	45.853	29.186	16.729	1.00	92.83	I	C
ATOM	532	O	ALA	I	77	44.830	28.560	16.481	1.00	92.95	I	O
ATOM	533	N	GLY	I	78	47.061	28.804	16.299	1.00	93.00	I	N
ATOM	534	CA	GLY	I	78	47.152	27.662	15.397	1.00	92.73	I	C
ATOM	535	C	GLY	I	78	48.525	27.008	15.458	1.00	92.58	I	C
ATOM	536	O	GLY	I	78	48.765	26.088	16.231	1.00	93.01	I	O
ATOM	537	N	ALA	I	86	52.371	15.408	13.593	1.00	92.36	I	N
ATOM	538	CA	ALA	I	86	53.584	14.621	13.409	1.00	91.82	I	C
ATOM	539	CB	ALA	I	86	53.416	13.774	12.147	1.00	91.57	I	C
ATOM	540	C	ALA	I	86	54.820	15.513	13.278	1.00	90.72	I	C
ATOM	541	O	ALA	I	86	55.786	15.407	14.021	1.00	90.75	I	O
ATOM	542	N	ASP	I	87	54.779	16.393	12.260	1.00	89.29	I	N
ATOM	543	CA	ASP	I	87	55.907	17.291	12.040	1.00	86.83	I	C
ATOM	544	CB	ASP	I	87	56.616	17.505	13.377	1.00	87.75	I	C
ATOM	545	CG	ASP	I	87	56.638	18.991	13.702	1.00	89.12	I	C
ATOM	546	OD1	ASP	I	87	55.666	19.464	14.292	1.00	89.77	I	O
ATOM	547	OD2	ASP	I	87	57.616	19.655	13.367	1.00	88.95	I	O
ATOM	548	C	ASP	I	87	56.888	16.720	11.014	1.00	84.28	I	C
ATOM	549	O	ASP	I	87	58.074	16.550	11.267	1.00	83.94	I	O

ATOM	550	N	THR	I	88	56.342	16.382	9.831	1.00	80.90	I	N
ATOM	551	CA	THR	I	88	57.188	15.835	8.777	1.00	77.36	I	C
ATOM	552	CB	THR	I	88	56.652	14.452	8.405	1.00	77.25	I	C
ATOM	553	OG1	THR	I	88	55.390	14.602	7.753	1.00	77.90	I	O
ATOM	554	CG2	THR	I	88	56.458	13.608	9.668	1.00	77.01	I	C
ATOM	555	C	THR	I	88	57.202	16.739	7.543	1.00	74.91	I	C
ATOM	556	O	THR	I	88	56.322	17.561	7.324	1.00	75.04	I	O
ATOM	557	N	LYS	I	89	58.272	16.591	6.740	1.00	72.57	I	N
ATOM	558	CA	LYS	I	89	58.389	17.409	5.540	1.00	70.36	I	C
ATOM	559	CB	LYS	I	89	59.768	18.070	5.545	1.00	71.28	I	C
ATOM	560	CG	LYS	I	89	59.804	19.332	6.410	1.00	72.04	I	C
ATOM	561	CD	LYS	I	89	60.757	20.391	5.853	1.00	72.01	I	C
ATOM	562	CE	LYS	I	89	60.340	21.815	6.235	1.00	72.21	I	C
ATOM	563	NZ	LYS	I	89	61.031	22.776	5.378	1.00	73.09	I	N
ATOM	564	C	LYS	I	89	58.214	16.576	4.268	1.00	68.20	I	C
ATOM	565	O	LYS	I	89	59.084	15.823	3.853	1.00	69.41	I	O
ATOM	566	N	ILE	I	90	57.017	16.705	3.666	1.00	63.98	I	N
ATOM	567	CA	ILE	I	90	56.741	15.960	2.443	1.00	61.10	I	C
ATOM	568	CB	ILE	I	90	55.316	15.412	2.531	1.00	61.02	I	C
ATOM	569	CG2	ILE	I	90	55.218	14.395	3.683	1.00	60.62	I	C
ATOM	570	CG1	ILE	I	90	54.332	16.548	2.824	1.00	60.18	I	C
ATOM	571	CD1	ILE	I	90	52.892	16.049	2.958	1.00	58.72	I	C
ATOM	572	C	ILE	I	90	56.883	16.844	1.202	1.00	59.31	I	C
ATOM	573	O	ILE	I	90	56.947	18.064	1.280	1.00	60.19	I	O
ATOM	574	N	GLU	I	91	56.980	16.263	-0.006	1.00	57.27	I	N
ATOM	575	CA	GLU	I	91	57.016	17.108	-1.181	1.00	56.01	I	C
ATOM	576	CB	GLU	I	91	57.280	16.218	-2.392	1.00	55.94	I	C
ATOM	577	CG	GLU	I	91	58.646	15.539	-2.323	1.00	59.79	I	C
ATOM	578	CD	GLU	I	91	58.892	14.787	-3.605	1.00	61.27	I	C
ATOM	579	OE1	GLU	I	91	60.027	14.397	-3.857	1.00	64.11	I	O
ATOM	580	OE2	GLU	I	91	57.935	14.589	-4.343	1.00	62.33	I	O
ATOM	581	C	GLU	I	91	55.712	17.891	-1.355	1.00	54.80	I	C
ATOM	582	O	GLU	I	91	54.647	17.524	-0.873	1.00	55.53	I	O
ATOM	583	N	VAL	I	92	55.749	19.000	-2.106	1.00	53.36	I	N
ATOM	584	CA	VAL	I	92	54.578	19.821	-2.225	1.00	52.86	I	C
ATOM	585	CB	VAL	I	92	54.974	21.122	-2.945	1.00	53.89	I	C
ATOM	586	CG1	VAL	I	92	53.780	21.945	-3.400	1.00	54.86	I	C
ATOM	587	CG2	VAL	I	92	55.646	21.999	-1.985	1.00	53.89	I	C
ATOM	588	C	VAL	I	92	53.570	19.088	-3.112	1.00	52.07	I	C
ATOM	589	O	VAL	I	92	52.365	19.039	-2.775	1.00	49.54	I	O
ATOM	590	N	ALA	I	93	54.048	18.417	-4.204	1.00	50.82	I	N
ATOM	591	CA	ALA	I	93	53.158	17.505	-4.939	1.00	51.29	I	C
ATOM	592	CB	ALA	I	93	53.937	16.578	-5.759	1.00	51.50	I	C
ATOM	593	C	ALA	I	93	52.322	16.603	-4.072	1.00	51.78	I	C
ATOM	594	O	ALA	I	93	51.159	16.417	-4.285	1.00	52.02	I	O
ATOM	595	N	GLN	I	94	52.948	15.934	-3.132	1.00	51.82	I	N
ATOM	596	CA	GLN	I	94	52.222	15.013	-2.307	1.00	51.43	I	C
ATOM	597	CB	GLN	I	94	53.244	14.218	-1.468	1.00	51.33	I	C
ATOM	598	CG	GLN	I	94	52.539	13.173	-0.468	1.00	51.17	I	C
ATOM	599	CD	GLN	I	94	52.073	11.932	-1.233	1.00	53.13	I	C
ATOM	600	OE1	GLN	I	94	52.802	11.461	-1.968	1.00	53.01	I	O
ATOM	601	NE2	GLN	I	94	50.805	11.506	-1.078	1.00	52.92	I	N
ATOM	602	C	GLN	I	94	51.354	15.741	-1.330	1.00	50.67	I	C
ATOM	603	O	GLN	I	94	50.272	15.258	-0.945	1.00	51.69	I	O
ATOM	604	N	PHE	I	95	51.805	16.928	-0.896	1.00	48.96	I	N
ATOM	605	CA	PHE	I	95	50.927	17.774	0.055	1.00	46.81	I	C
ATOM	606	CB	PHE	I	95	51.688	19.007	0.444	1.00	44.76	I	C
ATOM	607	CG	PHE	I	95	50.936	19.912	1.508	1.00	45.45	I	C
ATOM	608	CD1	PHE	I	95	51.118	19.792	2.777	1.00	45.87	I	C
ATOM	609	CD2	PHE	I	95	49.931	20.752	1.114	1.00	45.94	I	C
ATOM	610	CE1	PHE	I	95	50.448	20.560	3.810	1.00	45.08	I	C
ATOM	611	CE2	PHE	I	95	49.271	21.524	2.109	1.00	45.21	I	C
ATOM	612	CZ	PHE	I	95	49.544	21.461	3.476	1.00	44.16	I	C
ATOM	613	C	PHE	I	95	49.687	18.134	-0.632	1.00	45.91	I	C
ATOM	614	O	PHE	I	95	48.534	17.993	-0.083	1.00	45.21	I	O
ATOM	615	N	VAL	I	96	49.843	18.547	-1.894	1.00	45.24	I	N
ATOM	616	CA	VAL	I	96	48.730	19.096	-2.577	1.00	46.36	I	C
ATOM	617	CB	VAL	I	96	49.099	19.856	-3.820	1.00	45.79	I	C
ATOM	618	CG1	VAL	I	96	47.855	20.215	-4.467	1.00	47.08	I	C

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ATOM    619  CG2 VAL I  96      49.696  21.210  -3.547  1.00 44.28      I    C
ATOM    620  C   VAL I  96      47.825  17.939  -2.988  1.00 47.34      I    C
ATOM    621  O   VAL I  96      46.517  18.044  -3.077  1.00 47.21      I    O
ATOM    622  N   LYS I  97      48.449  16.863  -3.353  1.00 49.09      I    N
ATOM    623  CA  LYS I  97      47.574  15.679  -3.793  1.00 51.55      I    C
ATOM    624  CB  LYS I  97      48.493  14.584  -4.189  1.00 54.17      I    C
ATOM    625  CG  LYS I  97      47.946  13.341  -4.887  1.00 60.40      I    C
ATOM    626  CD  LYS I  97      49.050  12.597  -6.011  1.00 62.67      I    C
ATOM    627  CE  LYS I  97      49.068  13.410  -7.468  1.00 66.05      I    C
ATOM    628  NZ  LYS I  97      50.343  13.646  -8.370  1.00 66.57      I    N
ATOM    629  C   LYS I  97      46.717  15.254  -2.591  1.00 51.16      I    C
ATOM    630  O   LYS I  97      45.447  15.000  -2.673  1.00 50.76      I    O
ATOM    631  N   ASP I  98      47.321  15.203  -1.392  1.00 52.09      I    N
ATOM    632  CA  ASP I  98      46.501  14.772  -0.216  1.00 52.20      I    C
ATOM    633  CB  ASP I  98      47.333  14.613   1.015  1.00 54.80      I    C
ATOM    634  CG  ASP I  98      48.374  13.440   0.980  1.00 59.19      I    C
ATOM    635  OD1 ASP I  98      49.308  13.489   1.921  1.00 61.38      I    O
ATOM    636  OD2 ASP I  98      48.382  12.502   0.119  1.00 61.58      I    O
ATOM    637  C   ASP I  98      45.449  15.883   0.089  1.00 51.39      I    C
ATOM    638  O   ASP I  98      44.352  15.575   0.548  1.00 51.71      I    O
ATOM    639  N   LEU I  99      45.774  17.198  -0.106  1.00 47.74      I    N
ATOM    640  CA  LEU I  99      44.840  18.251   0.339  1.00 47.45      I    C
ATOM    641  CB  LEU I  99      45.443  19.597   0.023  1.00 45.49      I    C
ATOM    642  CG  LEU I  99      44.829  20.833   0.627  1.00 44.89      I    C
ATOM    643  CD1 LEU I  99      45.245  22.154  -0.015  1.00 43.60      I    C
ATOM    644  CD2 LEU I  99      43.586  20.934   1.092  1.00 43.98      I    C
ATOM    645  C   LEU I  99      43.611  18.034  -0.533  1.00 46.93      I    C
ATOM    646  O   LEU I  99      42.468  18.230  -0.102  1.00 47.46      I    O
ATOM    647  N   LEU I 100      43.851  17.760  -1.794  1.00 45.76      I    N
ATOM    648  CA  LEU I 100      42.817  17.754  -2.807  1.00 44.53      I    C
ATOM    649  CB  LEU I 100      43.591  17.644  -4.248  1.00 43.55      I    C
ATOM    650  CG  LEU I 100      42.669  17.411  -5.353  1.00 43.64      I    C
ATOM    651  CD1 LEU I 100      41.718  18.519  -5.349  1.00 42.86      I    C
ATOM    652  CD2 LEU I 100      43.369  17.199  -6.753  1.00 40.11      I    C
ATOM    653  C   LEU I 100      41.890  16.646  -2.616  1.00 44.86      I    C
ATOM    654  O   LEU I 100      40.620  16.754  -2.540  1.00 45.24      I    O
ATOM    655  N   LEU I 101      42.441  15.498  -2.233  1.00 45.36      I    N
ATOM    656  CA  LEU I 101      41.532  14.416  -1.832  1.00 46.01      I    C
ATOM    657  CB  LEU I 101      42.304  13.119  -1.634  1.00 45.92      I    C
ATOM    658  CG  LEU I 101      42.851  12.537  -2.978  1.00 45.91      I    C
ATOM    659  CD1 LEU I 101      43.906  11.504  -2.808  1.00 46.51      I    C
ATOM    660  CD2 LEU I 101      41.696  11.862  -3.903  1.00 43.07      I    C
ATOM    661  C   LEU I 101      40.596  14.747  -0.682  1.00 46.66      I    C
ATOM    662  O   LEU I 101      39.288  14.481  -0.628  1.00 48.00      I    O
ATOM    663  N   HIS I 102      41.150  15.486   0.214  1.00 46.69      I    N
ATOM    664  CA  HIS I 102      40.320  15.789   1.334  1.00 48.31      I    C
ATOM    665  CB  HIS I 102      41.194  16.406   2.430  1.00 51.03      I    C
ATOM    666  CG  HIS I 102      40.434  16.774   3.641  1.00 51.82      I    C
ATOM    667  CD2 HIS I 102      40.061  17.963   4.107  1.00 53.23      I    C
ATOM    668  ND1 HIS I 102      40.122  15.873   4.610  1.00 53.12      I    N
ATOM    669  CE1 HIS I 102      39.380  16.456   5.518  1.00 54.50      I    C
ATOM    670  NE2 HIS I 102      39.373  17.741   5.260  1.00 56.06      I    N
ATOM    671  C   HIS I 102      39.281  16.813   0.903  1.00 48.41      I    C
ATOM    672  O   HIS I 102      38.102  16.806   1.343  1.00 46.87      I    O
ATOM    673  N   LEU I 103      39.724  17.763   0.094  1.00 48.47      I    N
ATOM    674  CA  LEU I 103      38.678  18.709  -0.307  1.00 49.56      I    C
ATOM    675  CB  LEU I 103      39.292  19.869  -1.094  1.00 48.48      I    C
ATOM    676  CG  LEU I 103      40.354  20.788  -0.467  1.00 49.09      I    C
ATOM    677  CD1 LEU I 103      41.044  21.809  -1.341  1.00 49.00      I    C
ATOM    678  CD2 LEU I 103      39.733  21.564   0.838  1.00 45.10      I    C
ATOM    679  C   LEU I 103      37.585  18.095  -1.176  1.00 50.10      I    C
ATOM    680  O   LEU I 103      36.461  18.432  -1.074  1.00 49.95      I    O
ATOM    681  N   LYS I 104      37.937  17.154  -2.005  1.00 50.85      I    N
ATOM    682  CA  LYS I 104      36.867  16.490  -2.802  1.00 50.86      I    C
ATOM    683  CB  LYS I 104      37.402  15.549  -3.797  1.00 49.12      I    C
ATOM    684  CG  LYS I 104      38.306  16.284  -4.777  1.00 48.40      I    C
ATOM    685  CD  LYS I 104      38.591  15.250  -5.921  1.00 47.57      I    C
ATOM    686  CE  LYS I 104      39.248  15.985  -7.140  1.00 48.88      I    C
ATOM    687  NZ  LYS I 104      39.306  15.204  -8.323  1.00 47.96      I    N
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ATOM    688  C   LYS I 104      35.925  15.737  -1.861  1.00 50.92      I    C
ATOM    689  O   LYS I 104      34.706  15.596  -2.147  1.00 50.71      I    O
ATOM    690  N   LYS I 105      36.454  15.185  -0.819  1.00 52.08      I    N
ATOM    691  CA  LYS I 105      35.547  14.557   0.142  1.00 54.25      I    C
ATOM    692  CB  LYS I 105      36.263  13.771   1.148  1.00 56.55      I    C
ATOM    693  CG  LYS I 105      35.474  13.493   2.486  1.00 60.33      I    C
ATOM    694  CD  LYS I 105      36.344  13.038   3.615  1.00 63.22      I    C
ATOM    695  CE  LYS I 105      36.799  11.582   3.364  1.00 66.16      I    C
ATOM    696  NZ  LYS I 105      37.722  11.200   4.601  1.00 71.27      I    N
ATOM    697  C   LYS I 105      34.658  15.480   0.879  1.00 54.66      I    C
ATOM    698  O   LYS I 105      33.426  15.193   0.899  1.00 54.59      I    O
ATOM    699  N   LEU I 106      35.161  16.673   1.347  1.00 55.31      I    N
ATOM    700  CA  LEU I 106      34.246  17.681   1.925  1.00 55.19      I    C
ATOM    701  CB  LEU I 106      35.016  18.909   2.367  1.00 55.63      I    C
ATOM    702  CG  LEU I 106      36.158  18.689   3.345  1.00 56.60      I    C
ATOM    703  CD1 LEU I 106      36.737  20.087   3.680  1.00 56.04      I    C
ATOM    704  CD2 LEU I 106      35.581  18.001   4.446  1.00 56.80      I    C
ATOM    705  C   LEU I 106      33.206  18.130   0.944  1.00 55.25      I    C
ATOM    706  O   LEU I 106      32.049  18.328   1.266  1.00 53.51      I    O
ATOM    707  N   PHE I 107      33.576  18.256  -0.333  1.00 55.92      I    N
ATOM    708  CA  PHE I 107      32.581  18.731  -1.318  1.00 56.04      I    C
ATOM    709  CB  PHE I 107      33.229  18.776  -2.639  1.00 53.89      I    C
ATOM    710  CG  PHE I 107      32.373  19.340  -3.734  1.00 52.39      I    C
ATOM    711  CD1 PHE I 107      32.040  20.666  -3.816  1.00 52.13      I    C
ATOM    712  CD2 PHE I 107      31.786  18.487  -4.567  1.00 52.09      I    C
ATOM    713  CE1 PHE I 107      31.227  21.177  -4.966  1.00 53.21      I    C
ATOM    714  CE2 PHE I 107      30.982  18.929  -5.609  1.00 52.54      I    C
ATOM    715  CZ  PHE I 107      30.726  20.235  -5.871  1.00 51.78      I    C
ATOM    716  C   PHE I 107      31.505  17.720  -1.389  1.00 57.69      I    C
ATOM    717  O   PHE I 107      30.309  17.986  -1.382  1.00 57.18      I    O
ATOM    718  N   ARG I 108      31.891  16.490  -1.534  1.00 60.03      I    N
ATOM    719  CA  ARG I 108      30.881  15.511  -1.665  1.00 63.96      I    C
ATOM    720  CB  ARG I 108      31.608  14.199  -2.008  1.00 65.15      I    C
ATOM    721  CG  ARG I 108      30.754  12.873  -2.025  1.00 67.16      I    C
ATOM    722  CD  ARG I 108      31.667  11.584  -2.519  1.00 68.85      I    C
ATOM    723  NE  ARG I 108      32.695  11.003  -1.599  1.00 70.00      I    N
ATOM    724  CZ  ARG I 108      34.069  11.182  -1.590  1.00 70.81      I    C
ATOM    725  NH1 ARG I 108      34.757  11.989  -2.451  1.00 70.77      I    N
ATOM    726  NH2 ARG I 108      34.784  10.519  -0.653  1.00 70.34      I    N
ATOM    727  C   ARG I 108      29.994  15.439  -0.290  1.00 66.09      I    C
ATOM    728  O   ARG I 108      28.819  15.168  -0.358  1.00 66.77      I    O
ATOM    729  N   GLU I 109      30.524  15.646   0.926  1.00 68.31      I    N
ATOM    730  CA  GLU I 109      29.675  15.629   2.113  1.00 70.48      I    C
ATOM    731  CB  GLU I 109      30.552  15.413   3.334  1.00 72.41      I    C
ATOM    732  CG  GLU I 109      31.156  14.032   3.348  1.00 74.96      I    C
ATOM    733  CD  GLU I 109      32.329  13.680   4.311  1.00 77.15      I    C
ATOM    734  OE1 GLU I 109      32.637  12.428   4.269  1.00 77.91      I    O
ATOM    735  OE2 GLU I 109      32.937  14.563   5.045  1.00 78.45      I    O
ATOM    736  C   GLU I 109      28.905  16.948   2.276  1.00 71.26      I    C
ATOM    737  O   GLU I 109      28.156  17.047   3.145  1.00 72.42      I    O
ATOM    738  N   GLY I 110      29.031  17.967   1.442  1.00 71.47      I    N
ATOM    739  CA  GLY I 110      28.285  19.190   1.716  1.00 72.78      I    C
ATOM    740  C   GLY I 110      28.749  20.232   2.811  1.00 73.70      I    C
ATOM    741  O   GLY I 110      27.929  20.900   3.473  1.00 73.73      I    O
ATOM    742  N   ARG I 111      30.065  20.280   3.036  1.00 74.76      I    N
ATOM    743  CA  ARG I 111      30.802  21.114   3.976  1.00 75.92      I    C
ATOM    744  CB  ARG I 111      31.695  20.202   4.816  1.00 76.34      I    C
ATOM    745  CG  ARG I 111      30.977  18.919   5.233  1.00 77.70      I    C
ATOM    746  CD  ARG I 111      31.331  18.500   6.664  1.00 79.60      I    C
ATOM    747  NE  ARG I 111      32.505  17.621   6.665  1.00 80.80      I    N
ATOM    748  CZ  ARG I 111      33.534  17.966   7.461  1.00 81.19      I    C
ATOM    749  NH1 ARG I 111      33.458  19.050   8.214  1.00 80.98      I    N
ATOM    750  NH2 ARG I 111      34.641  17.219   7.470  1.00 81.56      I    N
ATOM    751  C   ARG I 111      31.650  22.165   3.253  1.00 76.69      I    C
ATOM    752  O   ARG I 111      32.822  21.971   2.955  1.00 75.67      I    O
ATOM    753  N   PHE I 112      30.996  23.297   2.931  1.00 78.04      I    N
ATOM    754  CA  PHE I 112      31.701  24.365   2.230  1.00 79.36      I    C
ATOM    755  CB  PHE I 112      30.682  25.138   1.392  1.00 79.30      I    C
ATOM    756  CG  PHE I 112      30.167  24.261   0.290  1.00 78.67      I    C
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ATOM    757  CD1 PHE I 112      30.576  24.490  -1.018  1.00 78.26      I    C
ATOM    758  CD2 PHE I 112      29.326  23.201   0.586  1.00 78.46      I    C
ATOM    759  CE1 PHE I 112      30.147  23.643  -2.030  1.00 77.94      I    C
ATOM    760  CE2 PHE I 112      28.901  22.357  -0.435  1.00 79.06      I    C
ATOM    761  CZ  PHE I 112      29.311  22.571  -1.744  1.00 78.48      I    C
ATOM    762  C   PHE I 112      32.402  25.314   3.205  1.00 79.89      I    C
ATOM    763  O   PHE I 112      32.665  26.470   2.905  1.00 79.55      I    O
ATOM    764  OXT PHE I 112      32.729  24.958   4.329  1.00 81.92      I    O
ATOM    765  CB  PRO R  33      77.296   6.508  12.091  1.00109.80      R    C
ATOM    766  CG  PRO R  33      77.634   7.071  13.466  1.00109.72      R    C
ATOM    767  C   PRO R  33      75.600   7.448  10.489  1.00109.45      R    C
ATOM    768  O   PRO R  33      74.661   8.222  10.616  1.00109.75      R    O
ATOM    769  N   PRO R  33      76.843   8.883  12.021  1.00109.73      R    N
ATOM    770  CD  PRO R  33      76.862   8.467  13.415  1.00110.08      R    C
ATOM    771  CA  PRO R  33      76.935   7.688  11.188  1.00109.68      R    C
ATOM    772  N   PRO R  34      75.508   6.367   9.699  1.00108.90      R    N
ATOM    773  CD  PRO R  34      76.393   5.227   9.479  1.00108.56      R    C
ATOM    774  CA  PRO R  34      74.287   6.191   8.965  1.00108.17      R    C
ATOM    775  CB  PRO R  34      74.529   5.074   7.955  1.00108.27      R    C
ATOM    776  CG  PRO R  34      75.702   4.241   8.433  1.00108.37      R    C
ATOM    777  C   PRO R  34      73.222   5.747   9.912  1.00107.50      R    C
ATOM    778  O   PRO R  34      73.082   6.166  11.048  1.00107.84      R    O
ATOM    779  N   VAL R  35      72.413   4.851   9.403  1.00106.22      R    N
ATOM    780  CA  VAL R  35      71.466   4.319  10.308  1.00105.21      R    C
ATOM    781  CB  VAL R  35      70.057   4.467   9.738  1.00105.03      R    C
ATOM    782  CG1 VAL R  35      70.119   5.236   8.419  1.00104.78      R    C
ATOM    783  CG2 VAL R  35      69.432   3.095   9.498  1.00105.97      R    C
ATOM    784  C   VAL R  35      71.756   2.861  10.581  1.00104.36      R    C
ATOM    785  O   VAL R  35      72.155   2.089   9.684  1.00104.20      R    O
ATOM    786  N   THR R  36      71.618   2.545  11.858  1.00103.37      R    N
ATOM    787  CA  THR R  36      71.682   1.191  12.159  1.00101.83      R    C
ATOM    788  CB  THR R  36      72.110   0.938  13.626  1.00101.92      R    C
ATOM    789  OG1 THR R  36      73.534   0.821  13.586  1.00102.34      R    O
ATOM    790  CG2 THR R  36      71.552  -0.439  14.041  1.00101.87      R    C
ATOM    791  C   THR R  36      70.527   0.342  11.738  1.00100.49      R    C
ATOM    792  O   THR R  36      69.352   0.681  11.806  1.00100.30      R    O
ATOM    793  N   ASN R  37      71.068  -0.838  11.402  1.00 98.77      R    N
ATOM    794  CA  ASN R  37      70.689  -1.982  10.491  1.00 97.02      R    C
ATOM    795  CB  ASN R  37      69.950  -3.094  11.245  1.00 97.91      R    C
ATOM    796  CG  ASN R  37      69.677  -2.566  12.592  1.00 98.59      R    C
ATOM    797  OD1 ASN R  37      69.061  -1.530  12.693  1.00 99.04      R    O
ATOM    798  ND2 ASN R  37      70.269  -3.216  13.594  1.00 98.75      R    N
ATOM    799  C   ASN R  37      70.302  -1.704   9.042  1.00 95.59      R    C
ATOM    800  O   ASN R  37      71.128  -1.673   8.134  1.00 95.97      R    O
ATOM    801  N   LEU R  38      68.988  -1.564   8.942  1.00 92.71      R    N
ATOM    802  CA  LEU R  38      68.261  -1.183   7.691  1.00 89.88      R    C
ATOM    803  CB  LEU R  38      68.999  -0.241   6.719  1.00 89.18      R    C
ATOM    804  CG  LEU R  38      67.999   0.328   5.670  1.00 88.71      R    C
ATOM    805  CD1 LEU R  38      67.016   1.337   6.281  1.00 87.75      R    C
ATOM    806  CD2 LEU R  38      68.648   1.016   4.469  1.00 88.12      R    C
ATOM    807  C   LEU R  38      67.588  -2.346   6.945  1.00 88.31      R    C
ATOM    808  O   LEU R  38      68.101  -2.866   5.943  1.00 88.23      R    O
ATOM    809  N   SER R  39      66.424  -2.757   7.462  1.00 86.43      R    N
ATOM    810  CA  SER R  39      65.722  -3.927   6.933  1.00 85.04      R    C
ATOM    811  CB  SER R  39      65.446  -4.868   8.104  1.00 84.80      R    C
ATOM    812  OG  SER R  39      64.399  -4.315   8.906  1.00 84.68      R    O
ATOM    813  C   SER R  39      64.391  -3.565   6.246  1.00 83.83      R    C
ATOM    814  O   SER R  39      63.917  -2.438   6.301  1.00 83.04      R    O
ATOM    815  N   VAL R  40      63.820  -4.574   5.551  1.00 82.75      R    N
ATOM    816  CA  VAL R  40      62.586  -4.334   4.808  1.00 81.48      R    C
ATOM    817  CB  VAL R  40      62.951  -4.112   3.340  1.00 81.55      R    C
ATOM    818  CG1 VAL R  40      63.536  -5.391   2.743  1.00 81.22      R    C
ATOM    819  CG2 VAL R  40      61.713  -3.716   2.557  1.00 81.17      R    C
ATOM    820  C   VAL R  40      61.596  -5.496   4.936  1.00 80.97      R    C
ATOM    821  O   VAL R  40      61.958  -6.656   5.078  1.00 81.00      R    O
ATOM    822  N   SER R  41      60.299  -5.134   4.913  1.00 80.39      R    N
ATOM    823  CA  SER R  41      59.257  -6.146   5.056  1.00 79.03      R    C
ATOM    824  CB  SER R  41      58.695  -6.038   6.476  1.00 79.25      R    C
ATOM    825  OG  SER R  41      57.871  -7.172   6.744  1.00 80.21      R    O
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ATOM	826	C	SER	R	41	58.139	-5.936	4.032	1.00	78.20	R	C
ATOM	827	O	SER	R	41	58.133	-4.987	3.260	1.00	78.12	R	O
ATOM	828	N	VAL	R	42	57.188	-6.889	4.011	1.00	77.02	R	N
ATOM	829	CA	VAL	R	42	56.044	-6.727	3.122	1.00	75.75	R	C
ATOM	830	CB	VAL	R	42	56.345	-7.421	1.793	1.00	75.63	R	C
ATOM	831	CG1	VAL	R	42	55.040	-7.685	1.042	1.00	74.23	R	C
ATOM	832	CG2	VAL	R	42	57.239	-6.540	0.940	1.00	75.00	R	C
ATOM	833	C	VAL	R	42	54.757	-7.294	3.725	1.00	75.25	R	C
ATOM	834	O	VAL	R	42	54.456	-8.476	3.634	1.00	76.26	R	O
ATOM	835	N	GLU	R	43	54.009	-6.404	4.401	1.00	74.69	R	N
ATOM	836	CA	GLU	R	43	52.690	-6.791	4.879	1.00	74.33	R	C
ATOM	837	CB	GLU	R	43	52.364	-5.955	6.118	1.00	74.91	R	C
ATOM	838	CG	GLU	R	43	53.535	-5.884	7.101	1.00	76.67	R	C
ATOM	839	CD	GLU	R	43	53.105	-5.130	8.339	1.00	78.12	R	C
ATOM	840	OE1	GLU	R	43	52.040	-4.530	8.320	1.00	78.66	R	O
ATOM	841	OE2	GLU	R	43	53.849	-5.147	9.319	1.00	78.91	R	O
ATOM	842	C	GLU	R	43	51.628	-6.569	3.802	1.00	73.28	R	C
ATOM	843	O	GLU	R	43	51.886	-6.038	2.730	1.00	72.01	R	O
ATOM	844	N	ASN	R	44	50.404	-7.036	4.102	1.00	73.87	R	N
ATOM	845	CA	ASN	R	44	49.329	-6.870	3.133	1.00	73.91	R	C
ATOM	846	CB	ASN	R	44	49.105	-5.371	2.930	1.00	74.10	R	C
ATOM	847	CG	ASN	R	44	48.598	-4.762	4.211	1.00	73.66	R	C
ATOM	848	OD1	ASN	R	44	48.998	-3.674	4.615	1.00	73.71	R	O
ATOM	849	ND2	ASN	R	44	47.676	-5.493	4.861	1.00	72.65	R	N
ATOM	850	C	ASN	R	44	49.681	-7.528	1.798	1.00	74.25	R	C
ATOM	851	O	ASN	R	44	50.000	-8.706	1.712	1.00	74.82	R	O
ATOM	852	N	LEU	R	45	49.577	-6.724	0.725	1.00	74.52	R	N
ATOM	853	CA	LEU	R	45	49.894	-7.249	-0.598	1.00	73.93	R	C
ATOM	854	CB	LEU	R	45	48.630	-7.177	-1.455	1.00	75.60	R	C
ATOM	855	CG	LEU	R	45	48.034	-8.558	-1.742	1.00	77.31	R	C
ATOM	856	CD1	LEU	R	45	46.992	-8.520	-2.860	1.00	76.95	R	C
ATOM	857	CD2	LEU	R	45	49.086	-9.581	-2.172	1.00	77.38	R	C
ATOM	858	C	LEU	R	45	51.020	-6.452	-1.261	1.00	73.85	R	C
ATOM	859	O	LEU	R	45	51.867	-6.982	-1.968	1.00	73.55	R	O
ATOM	860	N	CYS	R	46	50.984	-5.124	-1.041	1.00	73.09	R	N
ATOM	861	CA	CYS	R	46	52.004	-4.267	-1.633	1.00	72.73	R	C
ATOM	862	CB	CYS	R	46	51.354	-3.448	-2.750	1.00	73.79	R	C
ATOM	863	SG	CYS	R	46	50.633	-4.496	-4.034	1.00	79.48	R	S
ATOM	864	C	CYS	R	46	52.629	-3.335	-0.593	1.00	71.57	R	C
ATOM	865	O	CYS	R	46	53.638	-2.680	-0.821	1.00	71.95	R	O
ATOM	866	N	THR	R	47	51.964	-3.262	0.575	1.00	70.15	R	N
ATOM	867	CA	THR	R	47	52.489	-2.429	1.650	1.00	69.21	R	C
ATOM	868	CB	THR	R	47	51.529	-2.523	2.836	1.00	69.25	R	C
ATOM	869	OG1	THR	R	47	50.203	-2.240	2.387	1.00	69.24	R	O
ATOM	870	CG2	THR	R	47	51.918	-1.501	3.909	1.00	68.49	R	C
ATOM	871	C	THR	R	47	53.886	-2.880	2.078	1.00	68.94	R	C
ATOM	872	O	THR	R	47	54.063	-3.827	2.834	1.00	69.53	R	O
ATOM	873	N	VAL	R	48	54.903	-2.190	1.526	1.00	68.05	R	N
ATOM	874	CA	VAL	R	48	56.280	-2.524	1.874	1.00	68.58	R	C
ATOM	875	CB	VAL	R	48	57.128	-2.444	0.603	1.00	67.24	R	C
ATOM	876	CG1	VAL	R	48	56.460	-1.520	-0.415	1.00	69.11	R	C
ATOM	877	CG2	VAL	R	48	58.510	-1.913	0.930	1.00	67.36	R	C
ATOM	878	C	VAL	R	48	56.831	-1.570	2.939	1.00	68.62	R	C
ATOM	879	O	VAL	R	48	56.755	-0.354	2.828	1.00	69.25	R	O
ATOM	880	N	ILE	R	49	57.366	-2.165	4.020	1.00	69.02	R	N
ATOM	881	CA	ILE	R	49	57.817	-1.346	5.141	1.00	68.84	R	C
ATOM	882	CB	ILE	R	49	57.145	-1.876	6.407	1.00	68.78	R	C
ATOM	883	CG2	ILE	R	49	57.520	-0.994	7.611	1.00	68.35	R	C
ATOM	884	CG1	ILE	R	49	55.621	-1.837	6.253	1.00	68.17	R	C
ATOM	885	CD1	ILE	R	49	54.895	-2.073	7.578	1.00	70.58	R	C
ATOM	886	C	ILE	R	49	59.340	-1.378	5.303	1.00	68.46	R	C
ATOM	887	O	ILE	R	49	59.988	-2.402	5.128	1.00	69.77	R	O
ATOM	888	N	TRP	R	50	59.880	-0.181	5.604	1.00	67.57	R	N
ATOM	889	CA	TRP	R	50	61.301	-0.080	5.915	1.00	67.76	R	C
ATOM	890	CB	TRP	R	50	61.923	1.007	5.035	1.00	65.27	R	C
ATOM	891	CG	TRP	R	50	62.451	0.431	3.778	1.00	63.09	R	C
ATOM	892	CD2	TRP	R	50	61.786	0.431	2.493	1.00	62.66	R	C
ATOM	893	CE2	TRP	R	50	62.701	-0.093	1.546	1.00	62.24	R	C
ATOM	894	CE3	TRP	R	50	60.515	0.815	2.077	1.00	61.27	R	C

ATOM	895	CD1	TRP	R	50	63.743	-0.102	3.562	1.00	63.41	R	C
ATOM	896	NE1	TRP	R	50	63.958	-0.433	2.260	1.00	61.66	R	N
ATOM	897	CZ2	TRP	R	50	62.320	-0.227	0.220	1.00	62.59	R	C
ATOM	898	CZ3	TRP	R	50	60.133	0.678	0.754	1.00	61.70	R	C
ATOM	899	CH2	TRP	R	50	61.045	0.158	-0.182	1.00	63.14	R	C
ATOM	900	C	TRP	R	50	61.514	0.280	7.383	1.00	69.60	R	C
ATOM	901	O	TRP	R	50	60.901	1.187	7.933	1.00	71.18	R	O
ATOM	902	N	THR	R	51	62.395	-0.499	8.030	1.00	71.70	R	N
ATOM	903	CA	THR	R	51	62.717	-0.217	9.414	1.00	73.55	R	C
ATOM	904	CB	THR	R	51	62.099	-1.313	10.283	1.00	72.56	R	C
ATOM	905	OG1	THR	R	51	62.465	-2.591	9.761	1.00	72.81	R	O
ATOM	906	CG2	THR	R	51	60.571	-1.190	10.271	1.00	72.22	R	C
ATOM	907	C	THR	R	51	64.221	-0.181	9.612	1.00	75.37	R	C
ATOM	908	O	THR	R	51	64.995	-0.852	8.937	1.00	75.38	R	O
ATOM	909	N	TRP	R	52	64.635	0.683	10.543	1.00	77.41	R	N
ATOM	910	CA	TRP	R	52	66.052	0.795	10.814	1.00	79.26	R	C
ATOM	911	CB	TRP	R	52	66.668	1.724	9.758	1.00	79.75	R	C
ATOM	912	CG	TRP	R	52	66.114	3.093	9.875	1.00	80.89	R	C
ATOM	913	CD2	TRP	R	52	65.067	3.675	9.057	1.00	81.56	R	C
ATOM	914	CE2	TRP	R	52	64.989	5.051	9.392	1.00	81.99	R	C
ATOM	915	CE3	TRP	R	52	64.192	3.155	8.106	1.00	81.29	R	C
ATOM	916	CD1	TRP	R	52	66.624	4.141	10.674	1.00	81.45	R	C
ATOM	917	NE1	TRP	R	52	66.009	5.331	10.431	1.00	81.21	R	N
ATOM	918	CZ2	TRP	R	52	64.052	5.864	8.772	1.00	81.96	R	C
ATOM	919	CZ3	TRP	R	52	63.255	3.967	7.488	1.00	81.08	R	C
ATOM	920	CH2	TRP	R	52	63.183	5.329	7.828	1.00	81.26	R	C
ATOM	921	C	TRP	R	52	66.293	1.345	12.208	1.00	80.42	R	C
ATOM	922	O	TRP	R	52	65.384	1.531	13.007	1.00	79.43	R	O
ATOM	923	N	ASN	R	53	67.563	1.568	12.523	1.00	82.95	R	N
ATOM	924	CA	ASN	R	53	67.829	2.105	13.838	1.00	85.26	R	C
ATOM	925	CB	ASN	R	53	68.545	1.040	14.660	1.00	86.57	R	C
ATOM	926	CG	ASN	R	53	67.526	0.038	15.127	1.00	88.41	R	C
ATOM	927	OD1	ASN	R	53	66.721	0.304	16.014	1.00	89.46	R	O
ATOM	928	ND2	ASN	R	53	67.493	-1.103	14.423	1.00	88.47	R	N
ATOM	929	C	ASN	R	53	68.657	3.371	13.780	1.00	85.99	R	C
ATOM	930	O	ASN	R	53	69.353	3.661	12.814	1.00	84.91	R	O
ATOM	931	N	PRO	R	54	68.513	4.161	14.854	1.00	87.46	R	N
ATOM	932	CD	PRO	R	54	67.558	4.031	15.939	1.00	87.13	R	C
ATOM	933	CA	PRO	R	54	69.367	5.306	15.068	1.00	88.96	R	C
ATOM	934	CB	PRO	R	54	69.022	5.900	16.433	1.00	88.51	R	C
ATOM	935	CG	PRO	R	54	67.670	5.336	16.857	1.00	87.81	R	C
ATOM	936	C	PRO	R	54	70.837	4.875	15.020	1.00	91.16	R	C
ATOM	937	O	PRO	R	54	71.225	3.786	15.408	1.00	91.95	R	O
ATOM	938	N	PRO	R	55	71.659	5.767	14.471	1.00	92.77	R	N
ATOM	939	CD	PRO	R	55	71.358	7.124	14.076	1.00	92.90	R	C
ATOM	940	CA	PRO	R	55	73.060	5.474	14.196	1.00	94.38	R	C
ATOM	941	CB	PRO	R	55	73.751	6.798	13.888	1.00	93.93	R	C
ATOM	942	CG	PRO	R	55	72.739	7.924	14.112	1.00	93.32	R	C
ATOM	943	C	PRO	R	55	73.761	4.774	15.365	1.00	96.19	R	C
ATOM	944	O	PRO	R	55	73.823	5.288	16.474	1.00	96.51	R	O
ATOM	945	N	CYS	R	62	71.151	15.108	19.860	1.00	97.98	R	N
ATOM	946	CA	CYS	R	62	70.420	15.510	18.664	1.00	99.92	R	C
ATOM	947	C	CYS	R	62	69.057	14.816	18.581	1.00100.12		R	C
ATOM	948	O	CYS	R	62	68.951	13.597	18.581	1.00100.53		R	O
ATOM	949	CB	CYS	R	62	71.268	15.154	17.437	1.00100.74		R	C
ATOM	950	SG	CYS	R	62	72.172	16.581	16.783	1.00104.16		R	S
ATOM	951	N	SER	R	63	68.001	15.643	18.514	1.00100.26		R	N
ATOM	952	CA	SER	R	63	66.749	15.214	17.866	1.00100.59		R	C
ATOM	953	CB	SER	R	63	65.737	16.344	18.003	1.00100.76		R	C
ATOM	954	OG	SER	R	63	65.282	16.394	19.352	1.00100.96		R	O
ATOM	955	C	SER	R	63	66.932	14.883	16.379	1.00100.67		R	C
ATOM	956	O	SER	R	63	67.014	15.751	15.524	1.00101.08		R	O
ATOM	957	N	LEU	R	64	66.995	13.572	16.071	1.00100.07		R	N
ATOM	958	CA	LEU	R	64	67.207	13.155	14.689	1.00 99.22		R	C
ATOM	959	CB	LEU	R	64	67.502	11.646	14.686	1.00 99.84		R	C
ATOM	960	CG	LEU	R	64	68.992	11.275	14.695	1.00100.27		R	C
ATOM	961	CD1	LEU	R	64	69.877	12.258	13.922	1.00100.39		R	C
ATOM	962	CD2	LEU	R	64	69.562	11.217	16.105	1.00 99.98		R	C
ATOM	963	C	LEU	R	64	65.974	13.412	13.822	1.00 98.40		R	C

ATOM	964	O	LEU	R	64	64.833	13.273	14.243	1.00	98.87	R	O
ATOM	965	N	TRP	R	65	66.237	13.854	12.578	1.00	97.03	R	N
ATOM	966	CA	TRP	R	65	65.271	13.627	11.509	1.00	95.83	R	C
ATOM	967	CB	TRP	R	65	64.793	14.956	10.924	1.00	96.96	R	C
ATOM	968	CG	TRP	R	65	63.709	15.532	11.742	1.00	97.91	R	C
ATOM	969	CD2	TRP	R	65	63.886	16.344	12.919	1.00	98.91	R	C
ATOM	970	CE2	TRP	R	65	62.596	16.735	13.354	1.00	99.15	R	C
ATOM	971	CE3	TRP	R	65	65.008	16.789	13.604	1.00	99.85	R	C
ATOM	972	CD1	TRP	R	65	62.321	15.447	11.506	1.00	98.14	R	C
ATOM	973	NE1	TRP	R	65	61.599	16.123	12.438	1.00	98.55	R	N
ATOM	974	CZ2	TRP	R	65	62.463	17.571	14.454	1.00	99.73	R	C
ATOM	975	CZ3	TRP	R	65	64.878	17.618	14.704	1.00	100.22	R	C
ATOM	976	CH2	TRP	R	65	63.596	18.021	15.124	1.00	100.03	R	C
ATOM	977	C	TRP	R	65	65.918	12.807	10.401	1.00	93.89	R	C
ATOM	978	O	TRP	R	65	67.010	13.086	9.927	1.00	93.86	R	O
ATOM	979	N	TYR	R	66	65.219	11.735	10.013	1.00	91.56	R	N
ATOM	980	CA	TYR	R	66	65.711	10.896	8.942	1.00	89.74	R	C
ATOM	981	CB	TYR	R	66	65.255	9.461	9.198	1.00	89.58	R	C
ATOM	982	CG	TYR	R	66	65.678	9.052	10.571	1.00	89.53	R	C
ATOM	983	CD1	TYR	R	66	64.721	8.814	11.553	1.00	89.38	R	C
ATOM	984	CE1	TYR	R	66	65.108	8.450	12.831	1.00	89.14	R	C
ATOM	985	CD2	TYR	R	66	67.034	8.931	10.887	1.00	89.34	R	C
ATOM	986	CE2	TYR	R	66	67.423	8.576	12.169	1.00	89.67	R	C
ATOM	987	CZ	TYR	R	66	66.465	8.343	13.139	1.00	89.51	R	C
ATOM	988	OH	TYR	R	66	66.843	8.009	14.424	1.00	88.93	R	O
ATOM	989	C	TYR	R	66	65.211	11.378	7.577	1.00	88.13	R	C
ATOM	990	O	TYR	R	66	64.039	11.673	7.369	1.00	87.44	R	O
ATOM	991	N	PHE	R	67	66.168	11.526	6.644	1.00	87.17	R	N
ATOM	992	CA	PHE	R	67	65.773	11.892	5.291	1.00	86.53	R	C
ATOM	993	CB	PHE	R	67	66.753	12.949	4.779	1.00	87.70	R	C
ATOM	994	CG	PHE	R	67	67.092	13.919	5.872	1.00	89.87	R	C
ATOM	995	CD1	PHE	R	67	68.425	14.185	6.150	1.00	90.91	R	C
ATOM	996	CD2	PHE	R	67	66.089	14.643	6.492	1.00	90.84	R	C
ATOM	997	CE1	PHE	R	67	68.756	15.197	7.037	1.00	90.97	R	C
ATOM	998	CE2	PHE	R	67	66.426	15.660	7.381	1.00	91.55	R	C
ATOM	999	CZ	PHE	R	67	67.760	15.945	7.653	1.00	90.84	R	C
ATOM	1000	C	PHE	R	67	65.810	10.660	4.373	1.00	85.67	R	C
ATOM	1001	O	PHE	R	67	66.804	9.959	4.298	1.00	85.43	R	O
ATOM	1002	N	SER	R	68	64.677	10.389	3.691	1.00	84.85	R	N
ATOM	1003	CA	SER	R	68	64.632	9.172	2.883	1.00	84.40	R	C
ATOM	1004	CB	SER	R	68	63.905	8.097	3.686	1.00	83.55	R	C
ATOM	1005	OG	SER	R	68	62.503	8.380	3.682	1.00	81.92	R	O
ATOM	1006	C	SER	R	68	63.983	9.341	1.491	1.00	84.96	R	C
ATOM	1007	O	SER	R	68	63.129	10.181	1.265	1.00	84.40	R	O
ATOM	1008	N	HIS	R	69	64.445	8.481	0.525	1.00	86.02	R	N
ATOM	1009	CA	HIS	R	69	63.828	8.461	-0.821	1.00	87.66	R	C
ATOM	1010	CB	HIS	R	69	64.392	9.619	-1.656	1.00	86.85	R	C
ATOM	1011	CG	HIS	R	69	65.902	9.628	-1.623	1.00	87.47	R	C
ATOM	1012	CD2	HIS	R	69	66.787	9.563	-2.709	1.00	87.58	R	C
ATOM	1013	ND1	HIS	R	69	66.610	9.974	-0.520	1.00	87.25	R	N
ATOM	1014	CE1	HIS	R	69	67.883	10.130	-0.934	1.00	87.23	R	C
ATOM	1015	NE2	HIS	R	69	68.019	9.890	-2.239	1.00	87.47	R	N
ATOM	1016	C	HIS	R	69	64.012	7.121	-1.574	1.00	88.70	R	C
ATOM	1017	O	HIS	R	69	64.850	6.294	-1.242	1.00	88.93	R	O
ATOM	1018	N	PHE	R	70	63.154	6.910	-2.611	1.00	90.78	R	N
ATOM	1019	CA	PHE	R	70	63.222	5.648	-3.369	1.00	92.92	R	C
ATOM	1020	CB	PHE	R	70	62.323	5.737	-4.605	1.00	93.71	R	C
ATOM	1021	CG	PHE	R	70	60.965	5.207	-4.259	1.00	95.17	R	C
ATOM	1022	CD1	PHE	R	70	60.568	5.203	-2.929	1.00	95.74	R	C
ATOM	1023	CD2	PHE	R	70	60.045	4.949	-5.264	1.00	96.23	R	C
ATOM	1024	CE1	PHE	R	70	59.237	4.992	-2.605	1.00	97.29	R	C
ATOM	1025	CE2	PHE	R	70	58.710	4.738	-4.930	1.00	96.90	R	C
ATOM	1026	CZ	PHE	R	70	58.300	4.771	-3.603	1.00	97.37	R	C
ATOM	1027	C	PHE	R	70	64.654	5.310	-3.771	1.00	94.26	R	C
ATOM	1028	O	PHE	R	70	65.224	4.313	-3.375	1.00	95.64	R	O
ATOM	1029	N	GLY	R	71	65.237	6.162	-4.615	1.00	94.58	R	N
ATOM	1030	CA	GLY	R	71	66.672	6.058	-4.768	1.00	95.51	R	C
ATOM	1031	C	GLY	R	71	67.219	7.024	-5.802	1.00	95.90	R	C
ATOM	1032	O	GLY	R	71	68.398	7.131	-6.054	1.00	96.57	R	O

ATOM	1033	N	ASP	R	72	66.304	7.682	-6.464	1.00	95.39	R	N
ATOM	1034	CA	ASP	R	72	66.687	8.452	-7.620	1.00	94.78	R	C
ATOM	1035	CB	ASP	R	72	66.031	7.782	-8.819	1.00	95.03	R	C
ATOM	1036	CG	ASP	R	72	64.672	7.271	-8.383	1.00	95.22	R	C
ATOM	1037	OD1	ASP	R	72	64.558	6.067	-8.149	1.00	95.40	R	O
ATOM	1038	OD2	ASP	R	72	63.782	8.089	-8.174	1.00	95.61	R	O
ATOM	1039	C	ASP	R	72	66.169	9.821	-7.374	1.00	94.54	R	C
ATOM	1040	O	ASP	R	72	66.092	10.692	-8.226	1.00	94.60	R	O
ATOM	1041	N	LYS	R	73	65.708	9.868	-6.120	1.00	93.66	R	N
ATOM	1042	CA	LYS	R	73	65.465	11.089	-5.397	1.00	92.22	R	C
ATOM	1043	CB	LYS	R	73	66.404	12.182	-5.890	1.00	92.75	R	C
ATOM	1044	CG	LYS	R	73	67.506	12.424	-4.860	1.00	93.40	R	C
ATOM	1045	CD	LYS	R	73	67.357	13.763	-4.135	1.00	93.68	R	C
ATOM	1046	CE	LYS	R	73	68.037	13.777	-2.762	1.00	93.89	R	C
ATOM	1047	NZ	LYS	R	73	69.488	13.668	-2.911	1.00	92.82	R	N
ATOM	1048	C	LYS	R	73	64.001	11.473	-5.442	1.00	90.85	R	C
ATOM	1049	O	LYS	R	73	63.600	12.621	-5.317	1.00	90.69	R	O
ATOM	1050	N	GLN	R	74	63.228	10.393	-5.600	1.00	89.30	R	N
ATOM	1051	CA	GLN	R	74	61.805	10.441	-5.868	1.00	87.34	R	C
ATOM	1052	CB	GLN	R	74	61.606	9.323	-6.899	1.00	88.25	R	C
ATOM	1053	CG	GLN	R	74	60.377	9.479	-7.787	1.00	89.67	R	C
ATOM	1054	CD	GLN	R	74	60.643	8.798	-9.116	1.00	91.54	R	C
ATOM	1055	OE1	GLN	R	74	61.026	9.404	-10.103	1.00	92.95	R	O
ATOM	1056	NE2	GLN	R	74	60.357	7.480	-9.127	1.00	91.90	R	N
ATOM	1057	C	GLN	R	74	61.033	10.092	-4.588	1.00	85.48	R	C
ATOM	1058	O	GLN	R	74	61.214	9.035	-4.000	1.00	85.72	R	O
ATOM	1059	N	ASP	R	75	60.185	11.039	-4.128	1.00	83.23	R	N
ATOM	1060	CA	ASP	R	75	59.332	10.746	-2.983	1.00	80.16	R	C
ATOM	1061	CB	ASP	R	75	58.981	9.261	-3.011	1.00	82.21	R	C
ATOM	1062	CG	ASP	R	75	57.502	9.096	-3.338	1.00	84.28	R	C
ATOM	1063	OD1	ASP	R	75	57.164	9.141	-4.521	1.00	85.14	R	O
ATOM	1064	OD2	ASP	R	75	56.720	8.862	-2.420	1.00	84.69	R	O
ATOM	1065	C	ASP	R	75	60.041	11.078	-1.661	1.00	77.76	R	C
ATOM	1066	O	ASP	R	75	60.008	10.338	-0.685	1.00	76.11	R	O
ATOM	1067	N	LYS	R	76	60.715	12.247	-1.666	1.00	75.72	R	N
ATOM	1068	CA	LYS	R	76	61.444	12.689	-0.481	1.00	73.28	R	C
ATOM	1069	CB	LYS	R	76	62.046	14.065	-0.791	1.00	73.94	R	C
ATOM	1070	CG	LYS	R	76	63.136	14.004	-1.863	1.00	73.68	R	C
ATOM	1071	CD	LYS	R	76	63.971	15.285	-1.911	1.00	73.77	R	C
ATOM	1072	CE	LYS	R	76	63.143	16.510	-2.309	1.00	74.55	R	C
ATOM	1073	NZ	LYS	R	76	62.828	16.449	-3.735	1.00	75.61	R	N
ATOM	1074	C	LYS	R	76	60.526	12.788	0.730	1.00	72.29	R	C
ATOM	1075	O	LYS	R	76	59.350	13.111	0.637	1.00	71.88	R	O
ATOM	1076	N	LYS	R	77	61.096	12.452	1.902	1.00	70.63	R	N
ATOM	1077	CA	LYS	R	77	60.330	12.588	3.133	1.00	69.48	R	C
ATOM	1078	CB	LYS	R	77	59.496	11.319	3.333	1.00	67.92	R	C
ATOM	1079	CG	LYS	R	77	58.863	11.259	4.727	1.00	67.24	R	C
ATOM	1080	CD	LYS	R	77	57.814	10.153	4.846	1.00	66.40	R	C
ATOM	1081	CE	LYS	R	77	56.879	10.358	6.044	1.00	66.77	R	C
ATOM	1082	NZ	LYS	R	77	55.637	9.616	5.830	1.00	67.40	R	N
ATOM	1083	C	LYS	R	77	61.247	12.796	4.340	1.00	69.93	R	C
ATOM	1084	O	LYS	R	77	62.297	12.187	4.479	1.00	70.78	R	O
ATOM	1085	N	ILE	R	78	60.836	13.727	5.215	1.00	69.90	R	N
ATOM	1086	CA	ILE	R	78	61.586	13.920	6.450	1.00	69.23	R	C
ATOM	1087	CB	ILE	R	78	62.195	15.319	6.435	1.00	70.19	R	C
ATOM	1088	CG2	ILE	R	78	63.156	15.475	7.627	1.00	70.90	R	C
ATOM	1089	CG1	ILE	R	78	63.001	15.527	5.152	1.00	70.70	R	C
ATOM	1090	CD1	ILE	R	78	63.489	16.969	5.006	1.00	68.74	R	C
ATOM	1091	C	ILE	R	78	60.694	13.746	7.680	1.00	68.68	R	C
ATOM	1092	O	ILE	R	78	59.701	14.435	7.869	1.00	67.88	R	O
ATOM	1093	N	ALA	R	79	61.060	12.756	8.517	1.00	68.91	R	N
ATOM	1094	CA	ALA	R	79	60.281	12.512	9.724	1.00	69.16	R	C
ATOM	1095	CB	ALA	R	79	59.107	11.601	9.360	1.00	68.88	R	C
ATOM	1096	C	ALA	R	79	61.129	11.860	10.819	1.00	70.08	R	C
ATOM	1097	O	ALA	R	79	62.184	11.289	10.576	1.00	69.58	R	O
ATOM	1098	N	PRO	R	80	60.650	11.997	12.070	1.00	70.73	R	N
ATOM	1099	CD	PRO	R	80	59.418	12.638	12.493	1.00	70.72	R	C
ATOM	1100	CA	PRO	R	80	61.365	11.478	13.228	1.00	71.37	R	C
ATOM	1101	CB	PRO	R	80	60.674	12.013	14.482	1.00	71.34	R	C

ATOM	1102	CG	PRO	R	80	59.556	12.963	14.052	1.00	71.52	R	C
ATOM	1103	C	PRO	R	80	61.366	9.949	13.255	1.00	71.72	R	C
ATOM	1104	O	PRO	R	80	62.344	9.298	13.601	1.00	71.37	R	O
ATOM	1105	N	GLU	R	81	60.199	9.377	12.912	1.00	71.96	R	N
ATOM	1106	CA	GLU	R	81	60.060	7.929	12.972	1.00	71.89	R	C
ATOM	1107	CB	GLU	R	81	58.701	7.554	12.380	1.00	71.77	R	C
ATOM	1108	C	GLU	R	81	61.171	7.213	12.203	1.00	72.33	R	C
ATOM	1109	O	GLU	R	81	61.605	7.627	11.135	1.00	72.11	R	O
ATOM	1110	N	THR	R	82	61.668	6.121	12.812	1.00	73.39	R	N
ATOM	1111	CA	THR	R	82	62.630	5.283	12.109	1.00	74.33	R	C
ATOM	1112	CB	THR	R	82	63.531	4.607	13.136	1.00	75.38	R	C
ATOM	1113	OG1	THR	R	82	62.729	3.844	14.038	1.00	76.17	R	O
ATOM	1114	CG2	THR	R	82	64.298	5.669	13.929	1.00	75.33	R	C
ATOM	1115	C	THR	R	82	61.892	4.218	11.297	1.00	73.70	R	C
ATOM	1116	O	THR	R	82	62.164	3.028	11.357	1.00	73.82	R	O
ATOM	1117	N	ARG	R	83	60.895	4.714	10.537	1.00	73.78	R	N
ATOM	1118	CA	ARG	R	83	59.978	3.835	9.819	1.00	73.66	R	C
ATOM	1119	CB	ARG	R	83	58.786	3.593	10.749	1.00	74.64	R	C
ATOM	1120	CG	ARG	R	83	58.272	2.154	10.702	1.00	76.22	R	C
ATOM	1121	CD	ARG	R	83	57.196	1.978	9.629	1.00	78.40	R	C
ATOM	1122	NE	ARG	R	83	55.847	1.899	10.201	1.00	79.66	R	N
ATOM	1123	CZ	ARG	R	83	54.934	2.805	9.789	1.00	80.93	R	C
ATOM	1124	NH1	ARG	R	83	55.312	3.854	9.074	1.00	80.54	R	N
ATOM	1125	NH2	ARG	R	83	53.636	2.491	9.860	1.00	80.52	R	N
ATOM	1126	C	ARG	R	83	59.488	4.525	8.542	1.00	72.68	R	C
ATOM	1127	O	ARG	R	83	59.068	5.673	8.542	1.00	72.88	R	O
ATOM	1128	N	ARG	R	84	59.598	3.805	7.411	1.00	70.90	R	N
ATOM	1129	CA	ARG	R	84	59.031	4.353	6.185	1.00	69.83	R	C
ATOM	1130	CB	ARG	R	84	60.154	4.823	5.262	1.00	69.23	R	C
ATOM	1131	CG	ARG	R	84	59.604	5.431	3.970	1.00	68.67	R	C
ATOM	1132	CD	ARG	R	84	59.507	6.960	4.043	1.00	69.89	R	C
ATOM	1133	NE	ARG	R	84	58.601	7.472	3.010	1.00	67.69	R	N
ATOM	1134	CZ	ARG	R	84	59.154	8.160	1.996	1.00	66.16	R	C
ATOM	1135	NH1	ARG	R	84	60.460	8.357	1.963	1.00	63.97	R	N
ATOM	1136	NH2	ARG	R	84	58.380	8.621	1.008	1.00	66.32	R	N
ATOM	1137	C	ARG	R	84	58.157	3.337	5.458	1.00	69.55	R	C
ATOM	1138	O	ARG	R	84	58.625	2.376	4.863	1.00	68.26	R	O
ATOM	1139	N	SER	R	85	56.836	3.565	5.554	1.00	69.16	R	N
ATOM	1140	CA	SER	R	85	55.906	2.676	4.881	1.00	69.24	R	C
ATOM	1141	CB	SER	R	85	54.733	2.413	5.824	1.00	68.28	R	C
ATOM	1142	OG	SER	R	85	53.828	1.499	5.204	1.00	66.67	R	O
ATOM	1143	C	SER	R	85	55.396	3.283	3.574	1.00	69.39	R	C
ATOM	1144	O	SER	R	85	55.016	4.444	3.493	1.00	69.33	R	O
ATOM	1145	N	ILE	R	86	55.437	2.458	2.511	1.00	70.46	R	N
ATOM	1146	CA	ILE	R	86	54.972	2.933	1.215	1.00	71.79	R	C
ATOM	1147	CB	ILE	R	86	56.195	3.312	0.379	1.00	71.58	R	C
ATOM	1148	CG2	ILE	R	86	55.744	3.879	-0.979	1.00	72.31	R	C
ATOM	1149	CG1	ILE	R	86	57.003	4.399	1.094	1.00	71.33	R	C
ATOM	1150	CD1	ILE	R	86	58.384	4.603	0.470	1.00	72.37	R	C
ATOM	1151	C	ILE	R	86	54.144	1.872	0.488	1.00	72.39	R	C
ATOM	1152	O	ILE	R	86	54.496	0.701	0.413	1.00	73.22	R	O
ATOM	1153	N	GLU	R	87	52.979	2.317	-0.019	1.00	73.42	R	N
ATOM	1154	CA	GLU	R	87	52.108	1.411	-0.758	1.00	74.10	R	C
ATOM	1155	CB	GLU	R	87	50.672	1.900	-0.574	1.00	73.40	R	C
ATOM	1156	CG	GLU	R	87	49.632	0.876	-1.028	1.00	75.07	R	C
ATOM	1157	CD	GLU	R	87	48.275	1.302	-0.517	1.00	75.32	R	C
ATOM	1158	OE1	GLU	R	87	47.877	0.841	0.543	1.00	76.51	R	O
ATOM	1159	OE2	GLU	R	87	47.644	2.136	-1.165	1.00	74.90	R	O
ATOM	1160	C	GLU	R	87	52.467	1.398	-2.246	1.00	75.06	R	C
ATOM	1161	O	GLU	R	87	51.997	2.201	-3.041	1.00	75.38	R	O
ATOM	1162	N	VAL	R	88	53.367	0.464	-2.601	1.00	76.09	R	N
ATOM	1163	CA	VAL	R	88	53.874	0.431	-3.967	1.00	77.64	R	C
ATOM	1164	CB	VAL	R	88	55.369	0.746	-3.908	1.00	77.48	R	C
ATOM	1165	CG1	VAL	R	88	56.029	0.416	-5.245	1.00	77.35	R	C
ATOM	1166	CG2	VAL	R	88	55.580	2.216	-3.591	1.00	78.41	R	C
ATOM	1167	C	VAL	R	88	53.667	-0.949	-4.611	1.00	78.83	R	C
ATOM	1168	O	VAL	R	88	53.779	-1.982	-3.975	1.00	79.09	R	O
ATOM	1169	N	PRO	R	89	53.310	-0.918	-5.909	1.00	79.58	R	N
ATOM	1170	CD	PRO	R	89	53.005	0.231	-6.738	1.00	79.45	R	C

ATOM	1171	CA	PRO	R	89	53.177	-2.154	-6.677	1.00	80.36	R	C
ATOM	1172	CB	PRO	R	89	52.607	-1.797	-8.049	1.00	79.98	R	C
ATOM	1173	CG	PRO	R	89	52.642	-0.279	-8.214	1.00	80.10	R	C
ATOM	1174	C	PRO	R	89	54.529	-2.853	-6.830	1.00	80.61	R	C
ATOM	1175	O	PRO	R	89	55.539	-2.256	-7.177	1.00	80.05	R	O
ATOM	1176	N	LEU	R	90	54.535	-4.163	-6.517	1.00	82.18	R	N
ATOM	1177	CA	LEU	R	90	55.798	-4.893	-6.473	1.00	83.61	R	C
ATOM	1178	CB	LEU	R	90	55.669	-5.986	-5.411	1.00	83.45	R	C
ATOM	1179	CG	LEU	R	90	56.915	-6.102	-4.531	1.00	83.26	R	C
ATOM	1180	CD1	LEU	R	90	58.057	-5.205	-5.012	1.00	82.85	R	C
ATOM	1181	CD2	LEU	R	90	56.649	-5.716	-3.077	1.00	83.25	R	C
ATOM	1182	C	LEU	R	90	56.149	-5.531	-7.818	1.00	84.45	R	C
ATOM	1183	O	LEU	R	90	56.305	-6.740	-7.946	1.00	84.45	R	O
ATOM	1184	N	ASN	R	91	56.249	-4.678	-8.851	1.00	85.73	R	N
ATOM	1185	CA	ASN	R	91	56.525	-5.209	-10.180	1.00	86.79	R	C
ATOM	1186	CB	ASN	R	91	55.775	-4.350	-11.198	1.00	87.26	R	C
ATOM	1187	CG	ASN	R	91	54.294	-4.616	-11.082	1.00	87.64	R	C
ATOM	1188	OD1	ASN	R	91	53.855	-5.727	-10.799	1.00	88.26	R	O
ATOM	1189	ND2	ASN	R	91	53.504	-3.552	-11.309	1.00	88.14	R	N
ATOM	1190	C	ASN	R	91	58.026	-5.224	-10.486	1.00	87.60	R	C
ATOM	1191	O	ASN	R	91	58.464	-5.525	-11.588	1.00	87.91	R	O
ATOM	1192	N	GLU	R	92	58.824	-4.841	-9.468	1.00	88.44	R	N
ATOM	1193	CA	GLU	R	92	60.272	-4.903	-9.638	1.00	89.44	R	C
ATOM	1194	CB	GLU	R	92	60.628	-4.319	-11.005	1.00	91.03	R	C
ATOM	1195	CG	GLU	R	92	60.945	-2.825	-10.947	1.00	92.82	R	C
ATOM	1196	CD	GLU	R	92	60.923	-2.262	-12.349	1.00	94.79	R	C
ATOM	1197	OE1	GLU	R	92	61.180	-1.078	-12.510	1.00	95.91	R	O
ATOM	1198	OE2	GLU	R	92	60.644	-3.020	-13.277	1.00	95.77	R	O
ATOM	1199	C	GLU	R	92	61.038	-4.180	-8.523	1.00	89.16	R	C
ATOM	1200	O	GLU	R	92	60.486	-3.467	-7.695	1.00	89.19	R	O
ATOM	1201	N	ARG	R	93	62.364	-4.423	-8.510	1.00	88.70	R	N
ATOM	1202	CA	ARG	R	93	63.203	-3.932	-7.420	1.00	88.39	R	C
ATOM	1203	CB	ARG	R	93	64.665	-4.113	-7.829	1.00	87.82	R	C
ATOM	1204	C	ARG	R	93	62.939	-2.465	-7.066	1.00	87.79	R	C
ATOM	1205	O	ARG	R	93	62.856	-1.587	-7.915	1.00	87.40	R	O
ATOM	1206	N	ILE	R	94	62.769	-2.230	-5.749	1.00	87.29	R	N
ATOM	1207	CA	ILE	R	94	62.664	-0.862	-5.252	1.00	86.37	R	C
ATOM	1208	CB	ILE	R	94	61.253	-0.652	-4.696	1.00	86.45	R	C
ATOM	1209	CG2	ILE	R	94	61.094	0.802	-4.220	1.00	86.59	R	C
ATOM	1210	CG1	ILE	R	94	60.207	-0.907	-5.784	1.00	86.32	R	C
ATOM	1211	CD1	ILE	R	94	58.881	-1.413	-5.208	1.00	86.05	R	C
ATOM	1212	C	ILE	R	94	63.695	-0.604	-4.147	1.00	85.38	R	C
ATOM	1213	O	ILE	R	94	63.836	-1.364	-3.198	1.00	84.68	R	O
ATOM	1214	N	CYS	R	95	64.457	0.492	-4.319	1.00	85.21	R	N
ATOM	1215	CA	CYS	R	95	65.507	0.790	-3.358	1.00	85.65	R	C
ATOM	1216	C	CYS	R	95	65.252	2.112	-2.629	1.00	85.09	R	C
ATOM	1217	O	CYS	R	95	64.956	3.144	-3.216	1.00	86.18	R	O
ATOM	1218	CB	CYS	R	95	66.840	0.862	-4.097	1.00	85.94	R	C
ATOM	1219	SG	CYS	R	95	67.232	-0.692	-4.935	1.00	87.89	R	S
ATOM	1220	N	LEU	R	96	65.336	2.029	-1.288	1.00	83.68	R	N
ATOM	1221	CA	LEU	R	96	65.177	3.219	-0.460	1.00	82.89	R	C
ATOM	1222	CB	LEU	R	96	64.174	2.881	0.646	1.00	83.32	R	C
ATOM	1223	CG	LEU	R	96	63.814	4.096	1.504	1.00	84.29	R	C
ATOM	1224	CD1	LEU	R	96	62.885	3.732	2.664	1.00	84.58	R	C
ATOM	1225	CD2	LEU	R	96	65.036	4.766	2.130	1.00	84.50	R	C
ATOM	1226	C	LEU	R	96	66.513	3.625	0.164	1.00	82.63	R	C
ATOM	1227	O	LEU	R	96	67.326	2.802	0.561	1.00	82.88	R	O
ATOM	1228	N	GLN	R	97	66.746	4.949	0.200	1.00	81.96	R	N
ATOM	1229	CA	GLN	R	97	67.965	5.448	0.831	1.00	81.67	R	C
ATOM	1230	CB	GLN	R	97	68.768	6.217	-0.219	1.00	82.00	R	C
ATOM	1231	CG	GLN	R	97	68.849	5.471	-1.553	1.00	83.05	R	C
ATOM	1232	CD	GLN	R	97	69.895	6.119	-2.429	1.00	84.66	R	C
ATOM	1233	OE1	GLN	R	97	70.197	7.298	-2.343	1.00	85.58	R	O
ATOM	1234	NE2	GLN	R	97	70.450	5.278	-3.324	1.00	85.66	R	N
ATOM	1235	C	GLN	R	97	67.641	6.363	2.015	1.00	81.37	R	C
ATOM	1236	O	GLN	R	97	66.796	7.246	1.945	1.00	81.46	R	O
ATOM	1237	N	VAL	R	98	68.323	6.104	3.149	1.00	80.64	R	N
ATOM	1238	CA	VAL	R	98	67.991	6.848	4.359	1.00	80.06	R	C
ATOM	1239	CB	VAL	R	98	67.544	5.854	5.429	1.00	79.37	R	C

ATOM	1240	CG1	VAL	R	98	67.098	6.608	6.681	1.00	79.32	R	C
ATOM	1241	CG2	VAL	R	98	66.385	5.026	4.909	1.00	78.50	R	C
ATOM	1242	C	VAL	R	98	69.157	7.690	4.880	1.00	81.16	R	C
ATOM	1243	O	VAL	R	98	70.318	7.298	4.862	1.00	81.24	R	O
ATOM	1244	N	GLY	R	99	68.812	8.909	5.331	1.00	81.88	R	N
ATOM	1245	CA	GLY	R	99	69.837	9.776	5.891	1.00	82.68	R	C
ATOM	1246	C	GLY	R	99	69.464	10.232	7.305	1.00	84.10	R	C
ATOM	1247	O	GLY	R	99	68.411	9.924	7.841	1.00	83.64	R	O
ATOM	1248	N	SER	R	100	70.396	10.959	7.931	1.00	85.90	R	N
ATOM	1249	CA	SER	R	100	70.121	11.415	9.284	1.00	87.83	R	C
ATOM	1250	CB	SER	R	100	70.710	10.397	10.265	1.00	87.47	R	C
ATOM	1251	OG	SER	R	100	71.800	9.715	9.644	1.00	88.31	R	O
ATOM	1252	C	SER	R	100	70.709	12.796	9.550	1.00	89.25	R	C
ATOM	1253	O	SER	R	100	71.786	13.162	9.082	1.00	89.46	R	O
ATOM	1254	N	GLN	R	101	69.936	13.598	10.288	1.00	91.48	R	N
ATOM	1255	CA	GLN	R	101	70.425	14.879	10.717	1.00	93.60	R	C
ATOM	1256	CB	GLN	R	101	70.213	15.904	9.576	1.00	94.44	R	C
ATOM	1257	CG	GLN	R	101	71.127	17.132	9.692	1.00	96.46	R	C
ATOM	1258	CD	GLN	R	101	71.264	17.819	8.347	1.00	98.38	R	C
ATOM	1259	OE1	GLN	R	101	72.104	18.676	8.125	1.00	98.68	R	O
ATOM	1260	NE2	GLN	R	101	70.364	17.416	7.428	1.00	99.02	R	N
ATOM	1261	C	GLN	R	101	69.730	15.338	11.984	1.00	94.64	R	C
ATOM	1262	O	GLN	R	101	68.847	14.680	12.548	1.00	94.60	R	O
ATOM	1263	N	CYS	R	102	70.231	16.468	12.502	1.00	96.32	R	N
ATOM	1264	CA	CYS	R	102	69.461	17.283	13.413	1.00	98.14	R	C
ATOM	1265	C	CYS	R	102	68.847	18.509	12.703	1.00	98.53	R	C
ATOM	1266	O	CYS	R	102	69.462	19.202	11.916	1.00	98.75	R	O
ATOM	1267	CB	CYS	R	102	70.380	17.718	14.572	1.00	100.07	R	C
ATOM	1268	SG	CYS	R	102	71.772	16.589	14.795	1.00	103.24	R	S
ATOM	1269	N	SER	R	103	67.548	18.696	12.995	1.00	98.95	R	N
ATOM	1270	CA	SER	R	103	66.595	19.624	12.355	1.00	99.38	R	C
ATOM	1271	CB	SER	R	103	66.606	20.940	13.115	1.00	98.08	R	C
ATOM	1272	OG	SER	R	103	65.536	20.923	14.065	1.00	96.68	R	O
ATOM	1273	C	SER	R	103	66.688	19.831	10.821	1.00	99.93	R	C
ATOM	1274	O	SER	R	103	67.649	20.353	10.244	1.00	99.98	R	O
ATOM	1275	N	THR	R	104	65.642	19.195	10.439	1.00	99.96	R	N
ATOM	1276	CA	THR	R	104	65.032	19.704	9.178	1.00	99.76	R	C
ATOM	1277	CB	THR	R	104	64.043	20.795	9.529	1.00	100.10	R	C
ATOM	1278	C	THR	R	104	66.026	20.149	8.072	1.00	100.47	R	C
ATOM	1279	O	THR	R	104	65.699	20.769	7.076	1.00	100.37	R	O
ATOM	1280	N	ASN	R	105	67.276	19.782	7.996	1.00	100.21	R	N
ATOM	1281	CA	ASN	R	105	68.419	20.151	7.115	1.00	99.27	R	C
ATOM	1282	CB	ASN	R	105	69.653	19.323	7.589	1.00	97.89	R	C
ATOM	1283	C	ASN	R	105	68.288	19.916	5.567	1.00	99.40	R	C
ATOM	1284	O	ASN	R	105	67.455	19.207	5.023	1.00	100.19	R	O
ATOM	1285	N	PRO	R	110	72.314	16.855	4.636	1.00	100.55	R	N
ATOM	1286	CA	PRO	R	110	72.840	15.913	5.617	1.00	100.45	R	C
ATOM	1287	CB	PRO	R	110	71.986	14.672	5.770	1.00	101.19	R	C
ATOM	1288	C	PRO	R	110	73.978	15.072	5.036	1.00	101.27	R	C
ATOM	1289	O	PRO	R	110	74.344	15.403	3.916	1.00	101.62	R	O
ATOM	1290	N	SER	R	111	74.750	14.116	5.919	1.00	100.19	R	N
ATOM	1291	CA	SER	R	111	75.399	13.143	5.074	1.00	99.29	R	C
ATOM	1292	CB	SER	R	111	76.872	13.512	4.960	1.00	97.71	R	C
ATOM	1293	C	SER	R	111	75.341	11.764	5.668	1.00	98.69	R	C
ATOM	1294	O	SER	R	111	75.754	11.461	6.807	1.00	98.52	R	O
ATOM	1295	N	ILE	R	112	74.746	10.922	4.840	1.00	99.04	R	N
ATOM	1296	CA	ILE	R	112	75.165	9.539	4.751	1.00	99.58	R	C
ATOM	1297	CB	ILE	R	112	76.692	9.451	4.699	1.00	99.70	R	C
ATOM	1298	C	ILE	R	112	74.419	8.805	3.609	1.00	99.23	R	C
ATOM	1299	O	ILE	R	112	74.281	9.299	2.486	1.00	100.32	R	O
ATOM	1300	N	LEU	R	113	73.927	7.616	3.933	1.00	97.67	R	N
ATOM	1301	CA	LEU	R	113	72.906	7.051	3.045	1.00	94.72	R	C
ATOM	1302	CB	LEU	R	113	72.909	7.791	1.691	1.00	93.23	R	C
ATOM	1303	CG	LEU	R	113	72.331	9.214	1.777	1.00	92.82	R	C
ATOM	1304	CD1	LEU	R	113	71.476	9.616	0.561	1.00	91.70	R	C
ATOM	1305	CD2	LEU	R	113	71.410	9.399	3.013	1.00	91.48	R	C
ATOM	1306	C	LEU	R	113	73.160	5.560	2.873	1.00	93.45	R	C
ATOM	1307	O	LEU	R	113	74.056	5.139	2.154	1.00	93.20	R	O
ATOM	1308	N	VAL	R	114	72.380	4.736	3.637	1.00	91.73	R	N

ATOM	1309	CA	VAL	R	114	72.514	3.279	3.525	1.00	90.61	R	C
ATOM	1310	CB	VAL	R	114	72.534	2.706	4.935	1.00	89.74	R	C
ATOM	1311	CG1	VAL	R	114	72.373	3.859	5.915	1.00	89.47	R	C
ATOM	1312	CG2	VAL	R	114	71.374	1.750	5.134	1.00	88.54	R	C
ATOM	1313	C	VAL	R	114	71.342	2.683	2.746	1.00	90.72	R	C
ATOM	1314	O	VAL	R	114	70.199	2.822	3.164	1.00	91.38	R	O
ATOM	1315	N	GLU	R	115	71.712	2.188	1.554	1.00	90.13	R	N
ATOM	1316	CA	GLU	R	115	70.695	1.671	0.650	1.00	89.00	R	C
ATOM	1317	CB	GLU	R	115	71.318	1.546	-0.742	1.00	89.81	R	C
ATOM	1318	CG	GLU	R	115	70.350	1.942	-1.858	1.00	92.85	R	C
ATOM	1319	CD	GLU	R	115	71.063	1.864	-3.189	1.00	94.83	R	C
ATOM	1320	OE1	GLU	R	115	72.217	1.458	-3.213	1.00	95.98	R	O
ATOM	1321	OE2	GLU	R	115	70.456	2.217	-4.199	1.00	96.12	R	O
ATOM	1322	C	GLU	R	115	70.185	0.306	1.110	1.00	87.30	R	C
ATOM	1323	O	GLU	R	115	70.909	-0.514	1.660	1.00	87.71	R	O
ATOM	1324	N	LYS	R	116	68.874	0.096	0.916	1.00	85.67	R	N
ATOM	1325	CA	LYS	R	116	68.332	-1.235	1.126	1.00	84.17	R	C
ATOM	1326	CB	LYS	R	116	67.757	-1.337	2.534	1.00	83.58	R	C
ATOM	1327	CG	LYS	R	116	67.431	-2.785	2.904	1.00	83.44	R	C
ATOM	1328	CD	LYS	R	116	67.624	-3.735	1.718	1.00	84.45	R	C
ATOM	1329	CE	LYS	R	116	68.553	-4.910	2.046	1.00	85.52	R	C
ATOM	1330	NZ	LYS	R	116	69.779	-4.808	1.255	1.00	85.59	R	N
ATOM	1331	C	LYS	R	116	67.248	-1.545	0.097	1.00	83.73	R	C
ATOM	1332	O	LYS	R	116	66.214	-0.904	0.017	1.00	83.67	R	O
ATOM	1333	N	CYS	R	117	67.530	-2.544	-0.747	1.00	83.52	R	N
ATOM	1334	CA	CYS	R	117	66.550	-2.801	-1.795	1.00	83.42	R	C
ATOM	1335	C	CYS	R	117	65.652	-3.988	-1.441	1.00	82.84	R	C
ATOM	1336	O	CYS	R	117	65.897	-4.726	-0.495	1.00	82.32	R	O
ATOM	1337	CB	CYS	R	117	67.306	-3.088	-3.094	1.00	84.02	R	C
ATOM	1338	SG	CYS	R	117	68.355	-1.705	-3.595	1.00	86.02	R	S
ATOM	1339	N	ILE	R	118	64.545	-4.039	-2.208	1.00	82.77	R	N
ATOM	1340	CA	ILE	R	118	63.714	-5.216	-2.171	1.00	82.48	R	C
ATOM	1341	CB	ILE	R	118	62.480	-5.009	-1.286	1.00	81.38	R	C
ATOM	1342	CG2	ILE	R	118	61.646	-3.807	-1.763	1.00	80.82	R	C
ATOM	1343	CG1	ILE	R	118	61.620	-6.260	-1.436	1.00	80.74	R	C
ATOM	1344	CD1	ILE	R	118	60.414	-6.308	-0.523	1.00	80.72	R	C
ATOM	1345	C	ILE	R	118	63.304	-5.663	-3.565	1.00	83.51	R	C
ATOM	1346	O	ILE	R	118	62.966	-4.886	-4.439	1.00	82.68	R	O
ATOM	1347	N	SER	R	119	63.361	-6.981	-3.749	1.00	85.39	R	N
ATOM	1348	CA	SER	R	119	63.152	-7.476	-5.110	1.00	87.60	R	C
ATOM	1349	CB	SER	R	119	64.288	-8.446	-5.451	1.00	87.46	R	C
ATOM	1350	OG	SER	R	119	65.357	-7.750	-6.088	1.00	88.64	R	O
ATOM	1351	C	SER	R	119	61.834	-8.220	-5.234	1.00	89.11	R	C
ATOM	1352	O	SER	R	119	61.298	-8.757	-4.272	1.00	89.37	R	O
ATOM	1353	N	PRO	R	120	61.292	-8.233	-6.467	1.00	90.55	R	N
ATOM	1354	CD	PRO	R	120	61.793	-7.579	-7.673	1.00	90.50	R	C
ATOM	1355	CA	PRO	R	120	60.061	-8.965	-6.760	1.00	91.85	R	C
ATOM	1356	CB	PRO	R	120	59.837	-8.901	-8.271	1.00	91.34	R	C
ATOM	1357	CG	PRO	R	120	61.078	-8.283	-8.926	1.00	90.81	R	C
ATOM	1358	C	PRO	R	120	60.195	-10.427	-6.337	1.00	93.40	R	C
ATOM	1359	O	PRO	R	120	61.246	-10.897	-5.963	1.00	93.51	R	O
ATOM	1360	N	PRO	R	121	59.052	-11.126	-6.319	1.00	94.80	R	N
ATOM	1361	CD	PRO	R	121	57.679	-10.642	-6.320	1.00	95.24	R	C
ATOM	1362	CA	PRO	R	121	59.031	-12.588	-6.186	1.00	95.66	R	C
ATOM	1363	CB	PRO	R	121	57.585	-13.050	-6.073	1.00	95.53	R	C
ATOM	1364	CG	PRO	R	121	56.733	-11.825	-5.792	1.00	95.40	R	C
ATOM	1365	C	PRO	R	121	59.710	-13.314	-7.354	1.00	96.27	R	C
ATOM	1366	O	PRO	R	121	60.232	-12.728	-8.290	1.00	96.65	R	O
ATOM	1367	N	GLU	R	122	59.712	-14.654	-7.263	1.00	96.69	R	N
ATOM	1368	CA	GLU	R	122	60.466	-15.436	-8.239	1.00	97.64	R	C
ATOM	1369	CB	GLU	R	122	60.754	-16.811	-7.647	1.00	98.18	R	C
ATOM	1370	C	GLU	R	122	59.750	-15.566	-9.580	1.00	97.83	R	C
ATOM	1371	O	GLU	R	122	58.765	-14.900	-9.861	1.00	98.16	R	O
ATOM	1372	N	GLY	R	123	60.290	-16.456	-10.440	1.00	98.23	R	N
ATOM	1373	CA	GLY	R	123	59.903	-16.367	-11.846	1.00	98.34	R	C
ATOM	1374	C	GLY	R	123	60.096	-14.924	-12.276	1.00	98.41	R	C
ATOM	1375	O	GLY	R	123	60.612	-14.096	-11.527	1.00	97.99	R	O
ATOM	1376	N	ASP	R	124	59.740	-14.604	-13.517	1.00	98.66	R	N
ATOM	1377	CA	ASP	R	124	59.442	-15.503	-14.620	1.00	98.83	R	C

ATOM	1378	CB	ASP	R	124	59.960	-16.929	-14.423	1.00	98.61	R	C
ATOM	1379	C	ASP	R	124	59.663	-14.888	-15.999	1.00	98.97	R	C
ATOM	1380	O	ASP	R	124	59.298	-15.411	-17.040	1.00	98.84	R	O
ATOM	1381	N	PRO	R	125	60.276	-13.683	-15.943	1.00	99.06	R	N
ATOM	1382	CD	PRO	R	125	60.842	-13.053	-14.762	1.00	99.07	R	C
ATOM	1383	CA	PRO	R	125	60.488	-12.806	-17.076	1.00	99.15	R	C
ATOM	1384	CB	PRO	R	125	61.557	-11.780	-16.757	1.00	98.98	R	C
ATOM	1385	CG	PRO	R	125	61.684	-11.758	-15.228	1.00	99.03	R	C
ATOM	1386	C	PRO	R	125	59.183	-12.245	-17.658	1.00	98.89	R	C
ATOM	1387	O	PRO	R	125	58.874	-11.068	-17.541	1.00	98.69	R	O
ATOM	1388	N	GLU	R	126	58.446	-13.145	-18.351	1.00	98.52	R	N
ATOM	1389	CA	GLU	R	126	57.012	-12.938	-18.505	1.00	98.29	R	C
ATOM	1390	CB	GLU	R	126	56.502	-13.566	-19.812	1.00	99.27	R	C
ATOM	1391	CG	GLU	R	126	56.541	-12.662	-21.043	1.00	102.26	R	C
ATOM	1392	CD	GLU	R	126	55.852	-11.335	-20.795	1.00	105.09	R	C
ATOM	1393	OE1	GLU	R	126	54.628	-11.301	-20.704	1.00	106.59	R	O
ATOM	1394	OE2	GLU	R	126	56.540	-10.316	-20.869	1.00	105.98	R	O
ATOM	1395	C	GLU	R	126	56.272	-13.649	-17.392	1.00	97.16	R	C
ATOM	1396	O	GLU	R	126	56.659	-13.635	-16.227	1.00	97.88	R	O
ATOM	1397	N	SER	R	127	55.187	-14.322	-17.835	1.00	95.40	R	N
ATOM	1398	CA	SER	R	127	54.401	-15.089	-16.897	1.00	93.82	R	C
ATOM	1399	CB	SER	R	127	55.389	-15.802	-15.987	1.00	93.96	R	C
ATOM	1400	OG	SER	R	127	56.514	-14.940	-15.779	1.00	94.37	R	O
ATOM	1401	C	SER	R	127	53.518	-14.151	-16.082	1.00	92.55	R	C
ATOM	1402	O	SER	R	127	52.410	-14.462	-15.681	1.00	92.49	R	O
ATOM	1403	N	ALA	R	128	54.072	-12.966	-15.792	1.00	91.22	R	N
ATOM	1404	CA	ALA	R	128	53.280	-11.874	-15.294	1.00	89.83	R	C
ATOM	1405	CB	ALA	R	128	54.233	-10.749	-14.877	1.00	90.27	R	C
ATOM	1406	C	ALA	R	128	52.291	-11.385	-16.357	1.00	89.00	R	C
ATOM	1407	O	ALA	R	128	52.593	-11.270	-17.547	1.00	89.71	R	O
ATOM	1408	N	VAL	R	129	51.043	-11.174	-15.890	1.00	87.77	R	N
ATOM	1409	CA	VAL	R	129	50.001	-10.665	-16.765	1.00	86.32	R	C
ATOM	1410	CB	VAL	R	129	48.672	-10.733	-16.005	1.00	86.35	R	C
ATOM	1411	CG1	VAL	R	129	48.937	-11.160	-14.558	1.00	86.60	R	C
ATOM	1412	CG2	VAL	R	129	48.001	-9.372	-16.008	1.00	87.18	R	C
ATOM	1413	C	VAL	R	129	50.293	-9.209	-17.159	1.00	84.92	R	C
ATOM	1414	O	VAL	R	129	51.181	-8.563	-16.623	1.00	84.48	R	O
ATOM	1415	N	THR	R	130	49.543	-8.723	-18.164	1.00	83.78	R	N
ATOM	1416	CA	THR	R	130	49.720	-7.344	-18.604	1.00	83.06	R	C
ATOM	1417	CB	THR	R	130	50.487	-7.341	-19.933	1.00	83.42	R	C
ATOM	1418	OG1	THR	R	130	49.697	-7.975	-20.935	1.00	85.56	R	O
ATOM	1419	CG2	THR	R	130	51.791	-8.120	-19.765	1.00	84.04	R	C
ATOM	1420	C	THR	R	130	48.388	-6.605	-18.755	1.00	82.58	R	C
ATOM	1421	O	THR	R	130	47.346	-7.176	-19.059	1.00	81.67	R	O
ATOM	1422	N	GLU	R	131	48.453	-5.287	-18.472	1.00	82.27	R	N
ATOM	1423	CA	GLU	R	131	47.280	-4.438	-18.639	1.00	81.66	R	C
ATOM	1424	CB	GLU	R	131	46.754	-4.623	-20.063	1.00	84.16	R	C
ATOM	1425	CG	GLU	R	131	47.786	-4.215	-21.115	1.00	87.93	R	C
ATOM	1426	CD	GLU	R	131	47.177	-4.323	-22.494	1.00	89.79	R	C
ATOM	1427	OE1	GLU	R	131	46.187	-5.025	-22.643	1.00	91.97	R	O
ATOM	1428	OE2	GLU	R	131	47.707	-3.706	-23.417	1.00	90.84	R	O
ATOM	1429	C	GLU	R	131	46.192	-4.785	-17.621	1.00	79.25	R	C
ATOM	1430	O	GLU	R	131	45.052	-5.087	-17.952	1.00	78.94	R	O
ATOM	1431	N	LEU	R	132	46.601	-4.772	-16.340	1.00	76.59	R	N
ATOM	1432	CA	LEU	R	132	45.667	-5.109	-15.275	1.00	74.32	R	C
ATOM	1433	CB	LEU	R	132	46.444	-5.852	-14.186	1.00	72.56	R	C
ATOM	1434	CG	LEU	R	132	45.695	-5.895	-12.852	1.00	72.22	R	C
ATOM	1435	CD1	LEU	R	132	44.557	-6.918	-12.857	1.00	70.16	R	C
ATOM	1436	CD2	LEU	R	132	46.600	-6.269	-11.679	1.00	70.71	R	C
ATOM	1437	C	LEU	R	132	45.014	-3.859	-14.684	1.00	73.89	R	C
ATOM	1438	O	LEU	R	132	45.555	-3.191	-13.812	1.00	73.40	R	O
ATOM	1439	N	GLN	R	133	43.829	-3.521	-15.225	1.00	74.00	R	N
ATOM	1440	CA	GLN	R	133	43.092	-2.388	-14.678	1.00	73.58	R	C
ATOM	1441	CB	GLN	R	133	42.967	-1.312	-15.759	1.00	76.12	R	C
ATOM	1442	CG	GLN	R	133	42.873	-1.889	-17.172	1.00	79.10	R	C
ATOM	1443	CD	GLN	R	133	43.181	-0.798	-18.172	1.00	81.25	R	C
ATOM	1444	OE1	GLN	R	133	42.316	-0.179	-18.770	1.00	82.23	R	O
ATOM	1445	NE2	GLN	R	133	44.499	-0.562	-18.329	1.00	81.66	R	N
ATOM	1446	C	GLN	R	133	41.702	-2.801	-14.184	1.00	71.52	R	C

ATOM	1447	O	GLN	R	133	41.087	-3.744	-14.665	1.00	72.04	R	O
ATOM	1448	N	CYS	R	134	41.232	-2.078	-13.152	1.00	68.85	R	N
ATOM	1449	CA	CYS	R	134	39.920	-2.382	-12.597	1.00	66.75	R	C
ATOM	1450	C	CYS	R	134	38.960	-1.204	-12.765	1.00	64.31	R	C
ATOM	1451	O	CYS	R	134	39.351	-0.096	-13.109	1.00	63.78	R	O
ATOM	1452	CB	CYS	R	134	40.101	-2.704	-11.113	1.00	68.38	R	C
ATOM	1453	SG	CYS	R	134	41.160	-4.144	-10.850	1.00	70.34	R	S
ATOM	1454	N	ILE	R	135	37.670	-1.507	-12.551	1.00	61.85	R	N
ATOM	1455	CA	ILE	R	135	36.651	-0.466	-12.585	1.00	58.36	R	C
ATOM	1456	CB	ILE	R	135	35.924	-0.554	-13.929	1.00	57.94	R	C
ATOM	1457	CG2	ILE	R	135	34.513	0.051	-13.804	1.00	54.74	R	C
ATOM	1458	CG1	ILE	R	135	36.684	0.235	-15.002	1.00	57.50	R	C
ATOM	1459	CD1	ILE	R	135	36.044	0.094	-16.383	1.00	58.96	R	C
ATOM	1460	C	ILE	R	135	35.652	-0.668	-11.443	1.00	57.95	R	C
ATOM	1461	O	ILE	R	135	35.214	-1.773	-11.154	1.00	58.25	R	O
ATOM	1462	N	TRP	R	136	35.325	0.439	-10.754	1.00	56.24	R	N
ATOM	1463	CA	TRP	R	136	34.426	0.325	-9.612	1.00	56.61	R	C
ATOM	1464	CB	TRP	R	136	34.890	1.306	-8.532	1.00	55.50	R	C
ATOM	1465	CG	TRP	R	136	34.309	0.949	-7.214	1.00	53.54	R	C
ATOM	1466	CD2	TRP	R	136	34.362	1.749	-6.011	1.00	54.02	R	C
ATOM	1467	CE2	TRP	R	136	33.698	1.024	-4.991	1.00	54.07	R	C
ATOM	1468	CE3	TRP	R	136	34.884	3.007	-5.728	1.00	55.35	R	C
ATOM	1469	CD1	TRP	R	136	33.613	-0.236	-6.877	1.00	54.39	R	C
ATOM	1470	NE1	TRP	R	136	33.229	-0.260	-5.572	1.00	54.86	R	N
ATOM	1471	CZ2	TRP	R	136	33.579	1.569	-3.722	1.00	54.29	R	C
ATOM	1472	CZ3	TRP	R	136	34.763	3.552	-4.462	1.00	55.57	R	C
ATOM	1473	CH2	TRP	R	136	34.101	2.830	-3.454	1.00	54.57	R	C
ATOM	1474	C	TRP	R	136	32.972	0.614	-10.000	1.00	56.90	R	C
ATOM	1475	O	TRP	R	136	32.566	1.751	-10.199	1.00	58.05	R	O
ATOM	1476	N	HIS	R	137	32.172	-0.466	-10.142	1.00	56.91	R	N
ATOM	1477	CA	HIS	R	137	30.800	-0.300	-10.621	1.00	56.03	R	C
ATOM	1478	CB	HIS	R	137	30.303	-1.640	-11.161	1.00	55.23	R	C
ATOM	1479	CG	HIS	R	137	30.875	-1.874	-12.533	1.00	54.71	R	C
ATOM	1480	CD2	HIS	R	137	30.191	-2.030	-13.744	1.00	55.22	R	C
ATOM	1481	ND1	HIS	R	137	32.201	-2.030	-12.764	1.00	55.84	R	N
ATOM	1482	CE1	HIS	R	137	32.312	-2.281	-14.080	1.00	55.03	R	C
ATOM	1483	NE2	HIS	R	137	31.126	-2.287	-14.693	1.00	56.00	R	N
ATOM	1484	C	HIS	R	137	29.840	0.183	-9.529	1.00	56.49	R	C
ATOM	1485	O	HIS	R	137	29.586	-0.487	-8.535	1.00	58.18	R	O
ATOM	1486	N	ASN	R	138	29.330	1.415	-9.739	1.00	56.21	R	N
ATOM	1487	CA	ASN	R	138	28.227	1.922	-8.924	1.00	57.44	R	C
ATOM	1488	CB	ASN	R	138	26.999	1.050	-9.197	1.00	58.23	R	C
ATOM	1489	CG	ASN	R	138	25.749	1.805	-8.827	1.00	60.13	R	C
ATOM	1490	OD1	ASN	R	138	24.829	1.272	-8.212	1.00	61.30	R	O
ATOM	1491	ND2	ASN	R	138	25.729	3.095	-9.205	1.00	59.12	R	N
ATOM	1492	C	ASN	R	138	28.559	1.952	-7.426	1.00	58.33	R	C
ATOM	1493	O	ASN	R	138	27.689	1.976	-6.563	1.00	57.09	R	O
ATOM	1494	N	LEU	R	139	29.881	1.931	-7.145	1.00	59.77	R	N
ATOM	1495	CA	LEU	R	139	30.374	1.919	-5.763	1.00	60.87	R	C
ATOM	1496	CB	LEU	R	139	29.862	3.163	-5.020	1.00	59.70	R	C
ATOM	1497	CG	LEU	R	139	30.334	4.505	-5.599	1.00	59.75	R	C
ATOM	1498	CD1	LEU	R	139	29.998	5.673	-4.669	1.00	57.96	R	C
ATOM	1499	CD2	LEU	R	139	31.841	4.582	-5.839	1.00	58.45	R	C
ATOM	1500	C	LEU	R	139	29.939	0.651	-5.005	1.00	62.49	R	C
ATOM	1501	O	LEU	R	139	29.739	0.662	-3.799	1.00	63.40	R	O
ATOM	1502	N	SER	R	140	29.775	-0.460	-5.765	1.00	63.81	R	N
ATOM	1503	CA	SER	R	140	29.161	-1.676	-5.226	1.00	65.20	R	C
ATOM	1504	CB	SER	R	140	27.857	-1.904	-6.005	1.00	65.90	R	C
ATOM	1505	OG	SER	R	140	26.752	-1.372	-5.276	1.00	68.36	R	O
ATOM	1506	C	SER	R	140	30.048	-2.920	-5.404	1.00	65.22	R	C
ATOM	1507	O	SER	R	140	30.173	-3.762	-4.521	1.00	66.71	R	O
ATOM	1508	N	TYR	R	141	30.561	-3.062	-6.650	1.00	64.75	R	N
ATOM	1509	CA	TYR	R	141	31.504	-4.140	-6.975	1.00	64.42	R	C
ATOM	1510	CB	TYR	R	141	30.764	-5.360	-7.555	1.00	65.04	R	C
ATOM	1511	CG	TYR	R	141	30.270	-5.103	-8.947	1.00	66.11	R	C
ATOM	1512	CD1	TYR	R	141	31.014	-5.507	-10.064	1.00	66.95	R	C
ATOM	1513	CE1	TYR	R	141	30.470	-5.399	-11.345	1.00	67.61	R	C
ATOM	1514	CD2	TYR	R	141	28.984	-4.600	-9.136	1.00	67.12	R	C
ATOM	1515	CE2	TYR	R	141	28.448	-4.488	-10.409	1.00	68.39	R	C

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ATOM   1516  CZ  TYR R 141      29.187  -4.867 -11.512  1.00 69.06      R    C
ATOM   1517  OH  TYR R 141      28.686  -4.663 -12.784  1.00 70.63      R    O
ATOM   1518  C   TYR R 141      32.562  -3.673  -7.969  1.00 64.10      R    C
ATOM   1519  O   TYR R 141      32.363  -2.768  -8.768  1.00 62.44      R    O
ATOM   1520  N   MET R 142      33.729  -4.322  -7.860  1.00 63.99      R    N
ATOM   1521  CA  MET R 142      34.866  -3.989  -8.702  1.00 65.48      R    C
ATOM   1522  CB  MET R 142      36.087  -3.829  -7.792  1.00 67.21      R    C
ATOM   1523  CG  MET R 142      37.378  -3.604  -8.578  1.00 70.81      R    C
ATOM   1524  SD  MET R 142      38.408  -2.330  -7.838  1.00 77.72      R    S
ATOM   1525  CE  MET R 142      37.167  -1.030  -7.767  1.00 73.36      R    C
ATOM   1526  C   MET R 142      35.114  -5.094  -9.727  1.00 66.17      R    C
ATOM   1527  O   MET R 142      35.148  -6.274  -9.414  1.00 66.91      R    O
ATOM   1528  N   LYS R 143      35.228  -4.675 -10.996  1.00 66.36      R    N
ATOM   1529  CA  LYS R 143      35.483  -5.639 -12.054  1.00 67.05      R    C
ATOM   1530  CB  LYS R 143      34.401  -5.434 -13.123  1.00 67.92      R    C
ATOM   1531  CG  LYS R 143      34.352  -6.571 -14.136  1.00 69.19      R    C
ATOM   1532  CD  LYS R 143      34.202  -6.060 -15.569  1.00 71.27      R    C
ATOM   1533  CE  LYS R 143      33.224  -6.905 -16.390  1.00 71.16      R    C
ATOM   1534  NZ  LYS R 143      31.854  -6.602 -15.994  1.00 71.43      R    N
ATOM   1535  C   LYS R 143      36.885  -5.425 -12.641  1.00 66.66      R    C
ATOM   1536  O   LYS R 143      37.241  -4.354 -13.113  1.00 65.97      R    O
ATOM   1537  N   CYS R 144      37.717  -6.477 -12.519  1.00 67.07      R    N
ATOM   1538  CA  CYS R 144      39.090  -6.377 -12.994  1.00 68.28      R    C
ATOM   1539  C   CYS R 144      39.334  -7.295 -14.192  1.00 68.24      R    C
ATOM   1540  O   CYS R 144      38.754  -8.366 -14.315  1.00 68.16      R    O
ATOM   1541  CB  CYS R 144      40.022  -6.762 -11.845  1.00 68.98      R    C
ATOM   1542  SG  CYS R 144      39.869  -5.642 -10.436  1.00 71.30      R    S
ATOM   1543  N   SER R 145      40.189  -6.811 -15.106  1.00 69.43      R    N
ATOM   1544  CA  SER R 145      40.555  -7.578 -16.284  1.00 71.06      R    C
ATOM   1545  CB  SER R 145      40.243  -6.718 -17.511  1.00 70.62      R    C
ATOM   1546  OG  SER R 145      38.849  -6.438 -17.578  1.00 70.80      R    O
ATOM   1547  C   SER R 145      42.055  -7.818 -16.286  1.00 73.04      R    C
ATOM   1548  O   SER R 145      42.769  -7.484 -15.352  1.00 74.36      R    O
ATOM   1549  N   TRP R 146      42.526  -8.426 -17.386  1.00 74.61      R    N
ATOM   1550  CA  TRP R 146      43.959  -8.386 -17.558  1.00 76.46      R    C
ATOM   1551  CB  TRP R 146      44.624  -8.758 -16.236  1.00 74.01      R    C
ATOM   1552  CG  TRP R 146      44.418 -10.196 -15.951  1.00 72.34      R    C
ATOM   1553  CD2 TRP R 146      43.481 -10.743 -14.999  1.00 70.76      R    C
ATOM   1554  CE2 TRP R 146      43.658 -12.150 -14.994  1.00 69.26      R    C
ATOM   1555  CE3 TRP R 146      42.532 -10.170 -14.162  1.00 69.78      R    C
ATOM   1556  CD1 TRP R 146      45.120 -11.294 -16.505  1.00 71.24      R    C
ATOM   1557  NE1 TRP R 146      44.718 -12.484 -15.980  1.00 69.89      R    N
ATOM   1558  CZ2 TRP R 146      42.907 -12.940 -14.138  1.00 69.54      R    C
ATOM   1559  CZ3 TRP R 146      41.777 -10.959 -13.310  1.00 70.52      R    C
ATOM   1560  CH2 TRP R 146      41.967 -12.353 -13.296  1.00 70.22      R    C
ATOM   1561  C   TRP R 146      44.364  -9.384 -18.607  1.00 78.90      R    C
ATOM   1562  O   TRP R 146      43.596 -10.217 -19.071  1.00 78.80      R    O
ATOM   1563  N   LEU R 147      45.628  -9.261 -19.008  1.00 81.83      R    N
ATOM   1564  CA  LEU R 147      46.095 -10.155 -20.040  1.00 84.15      R    C
ATOM   1565  CB  LEU R 147      46.536  -9.336 -21.253  1.00 84.22      R    C
ATOM   1566  CG  LEU R 147      45.336  -8.822 -22.059  1.00 84.97      R    C
ATOM   1567  CD1 LEU R 147      45.717  -7.748 -23.080  1.00 84.53      R    C
ATOM   1568  CD2 LEU R 147      44.630  -9.929 -22.834  1.00 84.27      R    C
ATOM   1569  C   LEU R 147      47.217 -11.057 -19.564  1.00 85.74      R    C
ATOM   1570  O   LEU R 147      47.902 -10.801 -18.580  1.00 85.98      R    O
ATOM   1571  N   PRO R 148      47.344 -12.163 -20.303  1.00 87.39      R    N
ATOM   1572  CD  PRO R 148      46.558 -12.564 -21.455  1.00 87.86      R    C
ATOM   1573  CA  PRO R 148      48.403 -13.171 -20.129  1.00 88.19      R    C
ATOM   1574  CB  PRO R 148      47.965 -14.454 -20.828  1.00 88.40      R    C
ATOM   1575  CG  PRO R 148      46.691 -14.155 -21.610  1.00 88.42      R    C
ATOM   1576  C   PRO R 148      49.756 -12.659 -20.686  1.00 89.62      R    C
ATOM   1577  O   PRO R 148      49.806 -11.662 -21.387  1.00 89.77      R    O
ATOM   1578  N   GLY R 149      50.874 -13.358 -20.341  1.00 91.18      R    N
ATOM   1579  CA  GLY R 149      52.145 -12.622 -20.211  1.00 92.51      R    C
ATOM   1580  C   GLY R 149      53.242 -12.878 -21.246  1.00 93.62      R    C
ATOM   1581  O   GLY R 149      54.234 -12.169 -21.354  1.00 94.74      R    O
ATOM   1582  N   ARG R 150      53.062 -13.955 -22.026  1.00 93.01      R    N
ATOM   1583  CA  ARG R 150      54.181 -14.608 -22.661  1.00 92.26      R    C
ATOM   1584  CB  ARG R 150      54.955 -13.873 -23.754  1.00 91.41      R    C
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ATOM   1585  C   ARG R 150      54.122 -16.106 -22.658  1.00 91.84       R    C
ATOM   1586  O   ARG R 150      53.431 -16.717 -23.454  1.00 92.36       R    O
ATOM   1587  N   THR R 151      54.916 -16.690 -21.738  1.00 90.45       R    N
ATOM   1588  CA  THR R 151      54.475 -17.936 -21.146  1.00 89.19       R    C
ATOM   1589  CB  THR R 151      55.384 -18.215 -19.955  1.00 88.80       R    C
ATOM   1590  C   THR R 151      53.030 -17.751 -20.676  1.00 87.94       R    C
ATOM   1591  O   THR R 151      52.703 -17.915 -19.507  1.00 88.05       R    O
ATOM   1592  N   ASN R 157      46.432 -21.051 -14.609  1.00 85.88       R    N
ATOM   1593  CA  ASN R 157      45.112 -20.618 -14.145  1.00 84.20       R    C
ATOM   1594  CB  ASN R 157      44.314 -21.852 -13.723  1.00 84.00       R    C
ATOM   1595  C   ASN R 157      45.245 -19.634 -12.976  1.00 82.50       R    C
ATOM   1596  O   ASN R 157      46.051 -19.808 -12.081  1.00 82.32       R    O
ATOM   1597  N   TYR R 158      44.433 -18.554 -13.024  1.00 79.53       R    N
ATOM   1598  CA  TYR R 158      44.676 -17.413 -12.133  1.00 77.43       R    C
ATOM   1599  CB  TYR R 158      44.579 -16.126 -12.968  1.00 76.44       R    C
ATOM   1600  CG  TYR R 158      45.402 -16.255 -14.214  1.00 75.20       R    C
ATOM   1601  CD1 TYR R 158      44.764 -16.400 -15.442  1.00 74.38       R    C
ATOM   1602  CE1 TYR R 158      45.492 -16.312 -16.622  1.00 74.67       R    C
ATOM   1603  CD2 TYR R 158      46.783 -16.050 -14.174  1.00 75.41       R    C
ATOM   1604  CE2 TYR R 158      47.512 -15.976 -15.356  1.00 75.52       R    C
ATOM   1605  CZ  TYR R 158      46.869 -16.109 -16.571  1.00 75.14       R    C
ATOM   1606  OH  TYR R 158      47.584 -16.043 -17.752  1.00 76.43       R    O
ATOM   1607  C   TYR R 158      43.742 -17.356 -10.910  1.00 75.97       R    C
ATOM   1608  O   TYR R 158      42.577 -17.732 -10.921  1.00 75.96       R    O
ATOM   1609  N   THR R 159      44.406 -16.859  -9.850  1.00 74.64       R    N
ATOM   1610  CA  THR R 159      43.628 -16.313  -8.746  1.00 73.18       R    C
ATOM   1611  CB  THR R 159      43.872 -17.106  -7.471  1.00 73.25       R    C
ATOM   1612  OG1 THR R 159      43.453 -18.448  -7.690  1.00 73.03       R    O
ATOM   1613  CG2 THR R 159      43.035 -16.509  -6.329  1.00 72.72       R    C
ATOM   1614  C   THR R 159      43.978 -14.858  -8.503  1.00 71.48       R    C
ATOM   1615  O   THR R 159      45.137 -14.475  -8.413  1.00 71.07       R    O
ATOM   1616  N   LEU R 160      42.912 -14.036  -8.456  1.00 69.18       R    N
ATOM   1617  CA  LEU R 160      43.081 -12.640  -8.082  1.00 67.26       R    C
ATOM   1618  CB  LEU R 160      42.093 -11.786  -8.887  1.00 66.01       R    C
ATOM   1619  CG  LEU R 160      42.181 -10.300  -8.500  1.00 63.77       R    C
ATOM   1620  CD1 LEU R 160      41.758  -9.348  -9.625  1.00 61.55       R    C
ATOM   1621  CD2 LEU R 160      41.328  -9.945  -7.286  1.00 61.91       R    C
ATOM   1622  C   LEU R 160      42.823 -12.446  -6.590  1.00 66.34       R    C
ATOM   1623  O   LEU R 160      41.823 -12.896  -6.047  1.00 65.01       R    O
ATOM   1624  N   TYR R 161      43.827 -11.837  -5.927  1.00 66.57       R    N
ATOM   1625  CA  TYR R 161      43.678 -11.470  -4.522  1.00 66.28       R    C
ATOM   1626  CB  TYR R 161      44.905 -11.973  -3.713  1.00 66.76       R    C
ATOM   1627  CG  TYR R 161      45.181 -13.444  -3.882  1.00 68.38       R    C
ATOM   1628  CD1 TYR R 161      46.049 -13.864  -4.886  1.00 68.35       R    C
ATOM   1629  CE1 TYR R 161      46.379 -15.212  -5.022  1.00 69.74       R    C
ATOM   1630  CD2 TYR R 161      44.679 -14.394  -2.979  1.00 69.17       R    C
ATOM   1631  CE2 TYR R 161      45.000 -15.739  -3.120  1.00 69.18       R    C
ATOM   1632  CZ  TYR R 161      45.829 -16.155  -4.154  1.00 69.89       R    C
ATOM   1633  OH  TYR R 161      46.083 -17.501  -4.369  1.00 70.29       R    O
ATOM   1634  C   TYR R 161      43.617  -9.948  -4.413  1.00 65.45       R    C
ATOM   1635  O   TYR R 161      44.104  -9.205  -5.258  1.00 64.16       R    O
ATOM   1636  N   TYR R 162      42.954  -9.480  -3.355  1.00 64.72       R    N
ATOM   1637  CA  TYR R 162      42.865  -8.045  -3.159  1.00 66.48       R    C
ATOM   1638  CB  TYR R 162      41.659  -7.510  -3.938  1.00 65.27       R    C
ATOM   1639  CG  TYR R 162      40.390  -8.009  -3.338  1.00 63.11       R    C
ATOM   1640  CD1 TYR R 162      39.795  -7.315  -2.288  1.00 61.94       R    C
ATOM   1641  CE1 TYR R 162      38.587  -7.747  -1.761  1.00 61.74       R    C
ATOM   1642  CD2 TYR R 162      39.766  -9.144  -3.854  1.00 62.34       R    C
ATOM   1643  CE2 TYR R 162      38.564  -9.584  -3.321  1.00 60.23       R    C
ATOM   1644  CZ  TYR R 162      37.979  -8.896  -2.274  1.00 60.10       R    C
ATOM   1645  OH  TYR R 162      36.794  -9.345  -1.719  1.00 58.65       R    O
ATOM   1646  C   TYR R 162      42.729  -7.701  -1.680  1.00 68.03       R    C
ATOM   1647  O   TYR R 162      42.155  -8.431  -0.884  1.00 67.34       R    O
ATOM   1648  N   TRP R 163      43.337  -6.564  -1.311  1.00 69.63       R    N
ATOM   1649  CA  TRP R 163      43.260  -6.139   0.061  1.00 71.19       R    C
ATOM   1650  CB  TRP R 163      44.636  -6.324   0.712  1.00 71.77       R    C
ATOM   1651  CG  TRP R 163      44.601  -5.849   2.122  1.00 71.55       R    C
ATOM   1652  CD2 TRP R 163      45.077  -4.565   2.603  1.00 71.76       R    C
ATOM   1653  CE2 TRP R 163      44.873  -4.558   4.011  1.00 71.73       R    C
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ATOM   1654  CE3 TRP R 163      45.624  -3.452   1.985  1.00 72.15      R    C
ATOM   1655  CD1 TRP R 163      44.145  -6.563   3.247  1.00 71.65      R    C
ATOM   1656  NE1 TRP R 163      44.281  -5.856   4.401  1.00 72.21      R    N
ATOM   1657  CZ2 TRP R 163      45.232  -3.438   4.748  1.00 72.72      R    C
ATOM   1658  CZ3 TRP R 163      45.982  -2.334   2.723  1.00 72.41      R    C
ATOM   1659  CH2 TRP R 163      45.778  -2.329   4.115  1.00 72.89      R    C
ATOM   1660  C   TRP R 163      42.820  -4.677   0.156  1.00 72.31      R    C
ATOM   1661  O   TRP R 163      43.177  -3.825  -0.642  1.00 72.04      R    O
ATOM   1662  N   HIS R 164      41.961  -4.446   1.146  1.00 73.99      R    N
ATOM   1663  CA  HIS R 164      41.637  -3.058   1.506  1.00 76.09      R    C
ATOM   1664  CB  HIS R 164      40.202  -2.794   1.057  1.00 77.41      R    C
ATOM   1665  CG  HIS R 164      39.841  -1.359   1.320  1.00 78.45      R    C
ATOM   1666  CD2 HIS R 164      40.543  -0.215   0.941  1.00 78.66      R    C
ATOM   1667  ND1 HIS R 164      38.685  -0.978   1.921  1.00 78.84      R    N
ATOM   1668  CE1 HIS R 164      38.691   0.369   1.887  1.00 77.98      R    C
ATOM   1669  NE2 HIS R 164      39.792   0.853   1.305  1.00 78.68      R    N
ATOM   1670  C   HIS R 164      41.748  -2.882   3.018  1.00 76.77      R    C
ATOM   1671  O   HIS R 164      41.503  -3.805   3.773  1.00 77.29      R    O
ATOM   1672  N   ARG R 165      42.179  -1.699   3.483  1.00 77.80      R    N
ATOM   1673  CA  ARG R 165      42.376  -1.632   4.928  1.00 79.12      R    C
ATOM   1674  CB  ARG R 165      42.925  -0.263   5.317  1.00 77.22      R    C
ATOM   1675  C   ARG R 165      41.073  -1.920   5.680  1.00 80.09      R    C
ATOM   1676  O   ARG R 165      41.038  -2.137   6.877  1.00 80.16      R    O
ATOM   1677  N   SER R 166      39.956  -1.909   4.929  1.00 81.21      R    N
ATOM   1678  CA  SER R 166      38.685  -2.195   5.589  1.00 82.09      R    C
ATOM   1679  CB  SER R 166      37.532  -1.790   4.665  1.00 82.11      R    C
ATOM   1680  OG  SER R 166      36.554  -1.082   5.425  1.00 83.17      R    O
ATOM   1681  C   SER R 166      38.567  -3.676   5.946  1.00 83.27      R    C
ATOM   1682  O   SER R 166      37.607  -4.135   6.554  1.00 83.85      R    O
ATOM   1683  N   LEU R 167      39.580  -4.444   5.517  1.00 83.51      R    N
ATOM   1684  CA  LEU R 167      39.570  -5.871   5.804  1.00 83.71      R    C
ATOM   1685  CB  LEU R 167      39.571  -6.633   4.480  1.00 84.23      R    C
ATOM   1686  CG  LEU R 167      38.694  -5.962   3.422  1.00 84.47      R    C
ATOM   1687  CD1 LEU R 167      39.283  -6.081   2.015  1.00 84.80      R    C
ATOM   1688  CD2 LEU R 167      37.288  -6.558   3.353  1.00 85.44      R    C
ATOM   1689  C   LEU R 167      40.770  -6.292   6.650  1.00 84.08      R    C
ATOM   1690  O   LEU R 167      41.704  -5.535   6.885  1.00 84.12      R    O
ATOM   1691  N   GLU R 168      40.699  -7.540   7.146  1.00 84.44      R    N
ATOM   1692  CA  GLU R 168      41.780  -8.060   7.970  1.00 84.36      R    C
ATOM   1693  CB  GLU R 168      41.167  -9.007   9.000  1.00 83.89      R    C
ATOM   1694  C   GLU R 168      42.805  -8.814   7.124  1.00 84.52      R    C
ATOM   1695  O   GLU R 168      44.001  -8.559   7.171  1.00 84.96      R    O
ATOM   1696  N   LYS R 169      42.272  -9.807   6.400  1.00 84.09      R    N
ATOM   1697  CA  LYS R 169      43.134 -10.648   5.594  1.00 83.45      R    C
ATOM   1698  CB  LYS R 169      42.898 -12.101   6.008  1.00 83.34      R    C
ATOM   1699  C   LYS R 169      42.830 -10.475   4.108  1.00 82.71      R    C
ATOM   1700  O   LYS R 169      41.740 -10.102   3.691  1.00 83.06      R    O
ATOM   1701  N   ILE R 170      43.881 -10.711   3.315  1.00 81.31      R    N
ATOM   1702  CA  ILE R 170      43.701 -10.725   1.882  1.00 80.46      R    C
ATOM   1703  CB  ILE R 170      44.982 -11.284   1.273  1.00 79.74      R    C
ATOM   1704  CG2 ILE R 170      44.812 -11.438  -0.252  1.00 79.29      R    C
ATOM   1705  CG1 ILE R 170      46.135 -10.307   1.515  1.00 79.81      R    C
ATOM   1706  CD1 ILE R 170      47.446 -11.014   1.859  1.00 78.12      R    C
ATOM   1707  C   ILE R 170      42.504 -11.587   1.506  1.00 80.50      R    C
ATOM   1708  O   ILE R 170      42.231 -12.629   2.089  1.00 80.85      R    O
ATOM   1709  N   HIS R 171      41.736 -11.076   0.529  1.00 80.29      R    N
ATOM   1710  CA  HIS R 171      40.561 -11.808   0.038  1.00 80.32      R    C
ATOM   1711  CB  HIS R 171      39.373 -10.829  -0.014  1.00 80.10      R    C
ATOM   1712  CG  HIS R 171      38.684 -10.796   1.332  1.00 80.18      R    C
ATOM   1713  CD2 HIS R 171      37.447 -11.354   1.702  1.00 80.29      R    C
ATOM   1714  ND1 HIS R 171      39.175 -10.114   2.395  1.00 81.10      R    N
ATOM   1715  CE1 HIS R 171      38.260 -10.249   3.376  1.00 80.58      R    C
ATOM   1716  NE2 HIS R 171      37.215 -10.986   2.991  1.00 80.44      R    N
ATOM   1717  C   HIS R 171      40.793 -12.475  -1.345  1.00 81.25      R    C
ATOM   1718  O   HIS R 171      41.752 -12.194  -2.063  1.00 80.73      R    O
ATOM   1719  N   GLN R 172      39.891 -13.443  -1.669  1.00 82.69      R    N
ATOM   1720  CA  GLN R 172      39.959 -14.228  -2.915  1.00 84.35      R    C
ATOM   1721  CB  GLN R 172      39.799 -15.694  -2.481  1.00 85.66      R    C
ATOM   1722  CG  GLN R 172      41.095 -16.484  -2.365  1.00 86.79      R    C
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ATOM   1723  CD  GLN R 172      40.758 -17.862  -1.831  1.00 87.26      R    C
ATOM   1724  OE1 GLN R 172      39.851 -18.545  -2.282  1.00 86.59      R    O
ATOM   1725  NE2 GLN R 172      41.512 -18.244  -0.781  1.00 86.84      R    N
ATOM   1726  C   GLN R 172      38.770 -13.889  -3.826  1.00 85.75      R    C
ATOM   1727  O   GLN R 172      37.613 -14.003  -3.434  1.00 86.57      R    O
ATOM   1728  N   CYS R 173      39.045 -13.461  -5.085  1.00 87.06      R    N
ATOM   1729  CA  CYS R 173      37.947 -13.228  -6.011  1.00 88.58      R    C
ATOM   1730  C   CYS R 173      37.521 -14.514  -6.734  1.00 89.45      R    C
ATOM   1731  O   CYS R 173      38.331 -15.375  -7.055  1.00 89.20      R    O
ATOM   1732  CB  CYS R 173      38.413 -12.180  -7.026  1.00 88.12      R    C
ATOM   1733  SG  CYS R 173      37.186 -11.883  -8.320  1.00 88.29      R    S
ATOM   1734  N   GLU R 174      36.183 -14.625  -6.935  1.00 91.09      R    N
ATOM   1735  CA  GLU R 174      35.649 -15.956  -7.092  1.00 93.06      R    C
ATOM   1736  CB  GLU R 174      35.515 -16.476  -5.655  1.00 92.78      R    C
ATOM   1737  C   GLU R 174      34.294 -16.121  -7.778  1.00 94.86      R    C
ATOM   1738  O   GLU R 174      33.315 -16.337  -7.070  1.00 95.21      R    O
ATOM   1739  N   ASN R 175      34.122 -15.983  -9.167  1.00 96.51      R    N
ATOM   1740  CA  ASN R 175      34.649 -15.056 -10.196  1.00 98.10      R    C
ATOM   1741  CB  ASN R 175      34.102 -13.645 -10.052  1.00 97.69      R    C
ATOM   1742  CG  ASN R 175      32.619 -13.789  -9.833  1.00 98.11      R    C
ATOM   1743  OD1 ASN R 175      31.941 -14.534 -10.541  1.00 98.85      R    O
ATOM   1744  ND2 ASN R 175      32.123 -13.187  -8.731  1.00 97.61      R    N
ATOM   1745  C   ASN R 175      34.794 -15.623 -11.650  1.00 98.91      R    C
ATOM   1746  O   ASN R 175      33.903 -16.274 -12.194  1.00 99.60      R    O
ATOM   1747  N   ILE R 176      35.935 -15.304 -12.313  1.00 99.69      R    N
ATOM   1748  CA  ILE R 176      36.241 -16.076 -13.533  1.00100.40      R    C
ATOM   1749  CB  ILE R 176      36.442 -17.553 -13.218  1.00101.08      R    C
ATOM   1750  CG2 ILE R 176      37.888 -17.994 -13.527  1.00101.79      R    C
ATOM   1751  CG1 ILE R 176      36.217 -17.776 -11.719  1.00100.88      R    C
ATOM   1752  CD1 ILE R 176      35.835 -19.220 -11.403  1.00101.03      R    C
ATOM   1753  C   ILE R 176      37.282 -15.435 -14.470  1.00100.57      R    C
ATOM   1754  O   ILE R 176      38.471 -15.481 -14.194  1.00100.09      R    O
ATOM   1755  N   PHE R 177      36.851 -14.872 -15.645  1.00100.98      R    N
ATOM   1756  CA  PHE R 177      35.533 -15.078 -16.267  1.00101.31      R    C
ATOM   1757  CB  PHE R 177      34.526 -14.079 -15.684  1.00101.94      R    C
ATOM   1758  CG  PHE R 177      34.896 -12.665 -16.040  1.00103.06      R    C
ATOM   1759  CD1 PHE R 177      34.852 -12.249 -17.367  1.00103.48      R    C
ATOM   1760  CD2 PHE R 177      35.120 -11.739 -15.031  1.00103.36      R    C
ATOM   1761  CE1 PHE R 177      35.012 -10.906 -17.678  1.00102.99      R    C
ATOM   1762  CE2 PHE R 177      35.275 -10.393 -15.350  1.00103.34      R    C
ATOM   1763  CZ  PHE R 177      35.217  -9.969 -16.673  1.00103.07      R    C
ATOM   1764  C   PHE R 177      35.636 -14.881 -17.792  1.00101.05      R    C
ATOM   1765  O   PHE R 177      34.670 -14.993 -18.554  1.00100.84      R    O
ATOM   1766  N   ARG R 178      36.857 -14.522 -18.227  1.00101.03      R    N
ATOM   1767  CA  ARG R 178      37.185 -14.362 -19.648  1.00101.14      R    C
ATOM   1768  CB  ARG R 178      37.436 -15.735 -20.265  1.00101.04      R    C
ATOM   1769  CG  ARG R 178      38.351 -15.629 -21.483  1.00101.47      R    C
ATOM   1770  CD  ARG R 178      39.345 -16.797 -21.562  1.00102.67      R    C
ATOM   1771  NE  ARG R 178      38.683 -17.951 -22.159  1.00104.10      R    N
ATOM   1772  CZ  ARG R 178      38.991 -18.243 -23.433  1.00104.33      R    C
ATOM   1773  NH1 ARG R 178      40.221 -18.048 -23.871  1.00104.55      R    N
ATOM   1774  NH2 ARG R 178      37.999 -18.428 -24.310  1.00104.03      R    N
ATOM   1775  C   ARG R 178      36.151 -13.580 -20.471  1.00101.18      R    C
ATOM   1776  O   ARG R 178      34.970 -13.903 -20.532  1.00101.57      R    O
ATOM   1777  N   GLU R 179      36.638 -12.501 -21.117  1.00100.71      R    N
ATOM   1778  CA  GLU R 179      35.773 -11.734 -22.012  1.00100.14      R    C
ATOM   1779  CB  GLU R 179      35.405 -10.413 -21.330  1.00100.45      R    C
ATOM   1780  CG  GLU R 179      33.999 -10.453 -20.727  1.00100.59      R    C
ATOM   1781  CD  GLU R 179      33.678  -9.128 -20.073  1.00100.07      R    C
ATOM   1782  OE1 GLU R 179      34.583  -8.325 -19.891  1.00100.09      R    O
ATOM   1783  OE2 GLU R 179      32.512  -8.909 -19.746  1.00 99.84      R    O
ATOM   1784  C   GLU R 179      36.455 -11.453 -23.353  1.00 99.72      R    C
ATOM   1785  O   GLU R 179      36.833 -10.331 -23.662  1.00 99.74      R    O
ATOM   1786  N   GLY R 180      36.592 -12.538 -24.139  1.00 98.92      R    N
ATOM   1787  CA  GLY R 180      37.421 -12.461 -25.343  1.00 97.33      R    C
ATOM   1788  C   GLY R 180      38.812 -13.017 -25.044  1.00 96.44      R    C
ATOM   1789  O   GLY R 180      38.987 -14.171 -24.678  1.00 96.81      R    O
ATOM   1790  N   GLN R 181      39.818 -12.151 -25.221  1.00 95.64      R    N
ATOM   1791  CA  GLN R 181      41.190 -12.569 -24.929  1.00 94.60      R    C
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ATOM	1792	CB	GLN	R	181	42.135	-11.897	-25.932	1.00	93.48	R	C
ATOM	1793	CG	GLN	R	181	43.453	-12.656	-26.116	1.00	91.79	R	C
ATOM	1794	CD	GLN	R	181	44.435	-11.767	-26.849	1.00	91.05	R	C
ATOM	1795	OE1	GLN	R	181	45.600	-12.075	-27.043	1.00	90.47	R	O
ATOM	1796	NE2	GLN	R	181	43.907	-10.593	-27.251	1.00	91.76	R	N
ATOM	1797	C	GLN	R	181	41.594	-12.197	-23.501	1.00	94.47	R	C
ATOM	1798	O	GLN	R	181	42.564	-12.693	-22.947	1.00	94.04	R	O
ATOM	1799	N	TYR	R	182	40.835	-11.252	-22.922	1.00	93.91	R	N
ATOM	1800	CA	TYR	R	182	41.114	-10.850	-21.550	1.00	92.81	R	C
ATOM	1801	CB	TYR	R	182	40.414	-9.515	-21.292	1.00	93.02	R	C
ATOM	1802	CG	TYR	R	182	40.892	-8.460	-22.224	1.00	92.82	R	C
ATOM	1803	CD1	TYR	R	182	39.960	-7.756	-22.982	1.00	92.48	R	C
ATOM	1804	CE1	TYR	R	182	40.309	-6.563	-23.595	1.00	92.44	R	C
ATOM	1805	CD2	TYR	R	182	42.199	-7.976	-22.127	1.00	93.13	R	C
ATOM	1806	CE2	TYR	R	182	42.553	-6.787	-22.749	1.00	92.71	R	C
ATOM	1807	CZ	TYR	R	182	41.613	-6.079	-23.476	1.00	92.01	R	C
ATOM	1808	OH	TYR	R	182	41.935	-4.857	-24.029	1.00	91.15	R	O
ATOM	1809	C	TYR	R	182	40.586	-11.879	-20.547	1.00	92.26	R	C
ATOM	1810	O	TYR	R	182	39.683	-12.660	-20.826	1.00	92.36	R	O
ATOM	1811	N	PHE	R	183	41.217	-11.890	-19.356	1.00	91.37	R	N
ATOM	1812	CA	PHE	R	183	40.649	-12.619	-18.222	1.00	90.25	R	C
ATOM	1813	CB	PHE	R	183	41.700	-13.609	-17.704	1.00	90.91	R	C
ATOM	1814	CG	PHE	R	183	41.817	-14.796	-18.620	1.00	91.41	R	C
ATOM	1815	CD1	PHE	R	183	42.561	-14.689	-19.789	1.00	91.78	R	C
ATOM	1816	CD2	PHE	R	183	41.313	-16.027	-18.226	1.00	91.12	R	C
ATOM	1817	CE1	PHE	R	183	42.812	-15.822	-20.556	1.00	91.36	R	C
ATOM	1818	CE2	PHE	R	183	41.570	-17.158	-18.999	1.00	91.13	R	C
ATOM	1819	CZ	PHE	R	183	42.321	-17.061	-20.164	1.00	91.26	R	C
ATOM	1820	C	PHE	R	183	40.282	-11.627	-17.109	1.00	89.14	R	C
ATOM	1821	O	PHE	R	183	40.918	-10.596	-16.931	1.00	88.98	R	O
ATOM	1822	N	GLY	R	184	39.199	-11.934	-16.373	1.00	87.72	R	N
ATOM	1823	CA	GLY	R	184	38.721	-10.948	-15.388	1.00	86.34	R	C
ATOM	1824	C	GLY	R	184	38.097	-11.592	-14.131	1.00	85.86	R	C
ATOM	1825	O	GLY	R	184	38.003	-12.806	-14.001	1.00	86.34	R	O
ATOM	1826	N	CYS	R	185	37.690	-10.718	-13.175	1.00	85.14	R	N
ATOM	1827	CA	CYS	R	185	37.169	-11.211	-11.888	1.00	83.61	R	C
ATOM	1828	C	CYS	R	185	36.513	-10.091	-11.058	1.00	81.56	R	C
ATOM	1829	O	CYS	R	185	37.072	-9.024	-10.855	1.00	81.30	R	O
ATOM	1830	CB	CYS	R	185	38.351	-11.784	-11.104	1.00	85.14	R	C
ATOM	1831	SG	CYS	R	185	37.842	-12.999	-9.871	1.00	89.00	R	S
ATOM	1832	N	SER	R	186	35.267	-10.349	-10.589	1.00	78.90	R	N
ATOM	1833	CA	SER	R	186	34.553	-9.318	-9.830	1.00	76.87	R	C
ATOM	1834	CB	SER	R	186	33.162	-9.134	-10.442	1.00	75.93	R	C
ATOM	1835	OG	SER	R	186	33.288	-8.740	-11.808	1.00	75.39	R	O
ATOM	1836	C	SER	R	186	34.414	-9.655	-8.338	1.00	76.01	R	C
ATOM	1837	O	SER	R	186	34.220	-10.797	-7.939	1.00	77.16	R	O
ATOM	1838	N	PHE	R	187	34.558	-8.610	-7.499	1.00	74.92	R	N
ATOM	1839	CA	PHE	R	187	34.277	-8.787	-6.077	1.00	74.79	R	C
ATOM	1840	CB	PHE	R	187	35.596	-9.010	-5.328	1.00	73.25	R	C
ATOM	1841	CG	PHE	R	187	36.588	-7.932	-5.661	1.00	72.03	R	C
ATOM	1842	CD1	PHE	R	187	37.503	-8.143	-6.686	1.00	70.77	R	C
ATOM	1843	CD2	PHE	R	187	36.720	-6.833	-4.825	1.00	71.76	R	C
ATOM	1844	CE1	PHE	R	187	38.562	-7.262	-6.861	1.00	70.31	R	C
ATOM	1845	CE2	PHE	R	187	37.785	-5.952	-5.009	1.00	70.79	R	C
ATOM	1846	CZ	PHE	R	187	38.709	-6.164	-6.023	1.00	70.25	R	C
ATOM	1847	C	PHE	R	187	33.533	-7.590	-5.486	1.00	75.47	R	C
ATOM	1848	O	PHE	R	187	33.632	-6.461	-5.948	1.00	75.75	R	O
ATOM	1849	N	ASP	R	188	32.732	-7.881	-4.446	1.00	76.38	R	N
ATOM	1850	CA	ASP	R	188	31.943	-6.820	-3.832	1.00	77.29	R	C
ATOM	1851	CB	ASP	R	188	30.992	-7.454	-2.819	1.00	77.97	R	C
ATOM	1852	CG	ASP	R	188	29.933	-8.252	-3.559	1.00	79.71	R	C
ATOM	1853	OD1	ASP	R	188	29.265	-9.057	-2.910	1.00	79.83	R	O
ATOM	1854	OD2	ASP	R	188	29.792	-8.069	-4.765	1.00	80.40	R	O
ATOM	1855	C	ASP	R	188	32.812	-5.775	-3.137	1.00	78.25	R	C
ATOM	1856	O	ASP	R	188	33.707	-6.088	-2.352	1.00	77.98	R	O
ATOM	1857	N	LEU	R	189	32.531	-4.502	-3.479	1.00	79.81	R	N
ATOM	1858	CA	LEU	R	189	33.321	-3.580	-2.691	1.00	81.28	R	C
ATOM	1859	CB	LEU	R	189	34.356	-2.914	-3.632	1.00	79.95	R	C
ATOM	1860	CG	LEU	R	189	35.761	-2.840	-3.015	1.00	78.56	R	C

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ATOM   1861  CD1 LEU R 189      36.648  -1.751  -3.654  1.00 77.86           R     C
ATOM   1862  CD2 LEU R 189      35.742  -2.541  -1.516  1.00 78.01           R     C
ATOM   1863  C   LEU R 189      32.391  -2.574  -2.088  1.00 83.89           R     C
ATOM   1864  O   LEU R 189      32.422  -1.413  -2.462  1.00 85.14           R     O
ATOM   1865  N   THR R 190      31.453  -3.061  -1.220  1.00 85.99           R     N
ATOM   1866  CA  THR R 190      30.489  -2.291  -0.756  1.00 89.32           R     C
ATOM   1867  CB  THR R 190      29.056  -2.733  -0.767  1.00 90.54           R     C
ATOM   1868  OG1 THR R 190      28.694  -3.084  -2.088  1.00 92.85           R     O
ATOM   1869  CG2 THR R 190      28.164  -1.538  -0.343  1.00 90.98           R     C
ATOM   1870  C   THR R 190      30.843  -1.908   0.579  1.00 90.52           R     C
ATOM   1871  O   THR R 190      31.437  -2.489   1.468  1.00 89.93           R     O
ATOM   1872  N   LYS R 191      30.407  -0.782   0.535  1.00 91.79           R     N
ATOM   1873  CA  LYS R 191      30.894   0.095   1.314  1.00 92.71           R     C
ATOM   1874  CB  LYS R 191      32.426  -0.031   1.665  1.00 92.75           R     C
ATOM   1875  CG  LYS R 191      33.388  -0.275   0.516  1.00 93.39           R     C
ATOM   1876  CD  LYS R 191      34.855  -0.386   1.011  1.00 94.00           R     C
ATOM   1877  CE  LYS R 191      34.968  -0.069   2.504  1.00 94.65           R     C
ATOM   1878  NZ  LYS R 191      36.364   0.035   2.909  1.00 95.24           R     N
ATOM   1879  C   LYS R 191      30.462   1.359   0.829  1.00 93.06           R     C
ATOM   1880  O   LYS R 191      30.062   1.604  -0.322  1.00 94.38           R     O
ATOM   1881  N   VAL R 192      30.297   1.991   1.873  1.00 93.44           R     N
ATOM   1882  CA  VAL R 192      31.280   2.942   2.087  1.00 93.53           R     C
ATOM   1883  CB  VAL R 192      31.435   3.571   0.713  1.00 93.72           R     C
ATOM   1884  CG1 VAL R 192      30.322   4.534   0.286  1.00 92.98           R     C
ATOM   1885  CG2 VAL R 192      32.731   4.246   0.833  1.00 93.28           R     C
ATOM   1886  C   VAL R 192      30.689   3.764   3.176  1.00 93.63           R     C
ATOM   1887  O   VAL R 192      29.651   3.300   3.700  1.00 93.63           R     O
ATOM   1888  N   SER R 195      34.830   5.067   5.044  1.00 93.32           R     N
ATOM   1889  CA  SER R 195      35.900   5.619   5.890  1.00 93.73           R     C
ATOM   1890  CB  SER R 195      35.430   6.367   7.141  1.00 92.62           R     C
ATOM   1891  C   SER R 195      37.171   6.115   5.185  1.00 92.89           R     C
ATOM   1892  O   SER R 195      37.818   7.054   5.590  1.00 92.98           R     O
ATOM   1893  N   SER R 196      37.582   5.349   4.160  1.00 92.61           R     N
ATOM   1894  CA  SER R 196      38.282   5.902   3.006  1.00 92.21           R     C
ATOM   1895  CB  SER R 196      39.563   6.681   3.449  1.00 92.18           R     C
ATOM   1896  C   SER R 196      38.603   4.704   2.105  1.00 92.05           R     C
ATOM   1897  O   SER R 196      38.832   3.608   2.597  1.00 91.91           R     O
ATOM   1898  N   PHE R 197      38.653   4.865   0.787  1.00 91.69           R     N
ATOM   1899  CA  PHE R 197      39.379   6.028   0.271  1.00 89.94           R     C
ATOM   1900  CB  PHE R 197      38.673   6.751  -0.864  1.00 89.28           R     C
ATOM   1901  C   PHE R 197      40.855   5.709   0.058  1.00 89.62           R     C
ATOM   1902  O   PHE R 197      41.507   6.163  -0.868  1.00 89.86           R     O
ATOM   1903  N   PHE R 198      41.368   4.919   1.039  1.00 88.15           R     N
ATOM   1904  CA  PHE R 198      42.553   4.082   0.851  1.00 87.68           R     C
ATOM   1905  CB  PHE R 198      42.844   3.415   2.196  1.00 88.99           R     C
ATOM   1906  CG  PHE R 198      42.938   4.418   3.273  1.00 90.06           R     C
ATOM   1907  CD1 PHE R 198      42.004   4.407   4.300  1.00 90.80           R     C
ATOM   1908  CD2 PHE R 198      44.030   5.260   3.324  1.00 90.39           R     C
ATOM   1909  CE1 PHE R 198      42.162   5.265   5.381  1.00 91.26           R     C
ATOM   1910  CE2 PHE R 198      44.185   6.111   4.405  1.00 90.95           R     C
ATOM   1911  CZ  PHE R 198      43.260   6.120   5.439  1.00 91.49           R     C
ATOM   1912  C   PHE R 198      42.231   2.909  -0.085  1.00 86.57           R     C
ATOM   1913  O   PHE R 198      41.270   2.156   0.109  1.00 86.67           R     O
ATOM   1914  N   GLU R 199      43.093   2.726  -1.119  1.00 84.73           R     N
ATOM   1915  CA  GLU R 199      42.683   1.886  -2.249  1.00 82.61           R     C
ATOM   1916  CB  GLU R 199      43.575   2.234  -3.415  1.00 83.35           R     C
ATOM   1917  CG  GLU R 199      43.829   3.732  -3.497  1.00 85.78           R     C
ATOM   1918  CD  GLU R 199      45.319   3.957  -3.496  1.00 88.88           R     C
ATOM   1919  OE1 GLU R 199      46.028   3.143  -2.922  1.00 91.39           R     O
ATOM   1920  OE2 GLU R 199      45.762   4.943  -4.082  1.00 88.27           R     O
ATOM   1921  C   GLU R 199      42.773   0.369  -1.990  1.00 79.66           R     C
ATOM   1922  O   GLU R 199      43.549  -0.104  -1.171  1.00 80.10           R     O
ATOM   1923  N   GLN R 200      41.885  -0.402  -2.688  1.00 77.56           R     N
ATOM   1924  CA  GLN R 200      42.204  -1.807  -2.879  1.00 75.22           R     C
ATOM   1925  CB  GLN R 200      41.174  -2.437  -3.820  1.00 74.17           R     C
ATOM   1926  C   GLN R 200      43.612  -1.900  -3.458  1.00 73.89           R     C
ATOM   1927  O   GLN R 200      43.967  -1.288  -4.445  1.00 73.99           R     O
ATOM   1928  N   HIS R 201      44.285  -2.810  -2.734  1.00 72.01           R     N
ATOM   1929  CA  HIS R 201      45.391  -3.514  -3.381  1.00 69.70           R     C
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ATOM   1930  CB  HIS R 201      46.851  -3.159  -3.012  1.00 72.07      R    C
ATOM   1931  CG  HIS R 201      47.274  -3.528  -1.597  1.00 74.38      R    C
ATOM   1932  CD2 HIS R 201      46.774  -2.989  -0.388  1.00 75.58      R    C
ATOM   1933  ND1 HIS R 201      48.592  -3.870  -1.379  1.00 75.68      R    N
ATOM   1934  CE1 HIS R 201      48.907  -3.380  -0.174  1.00 75.89      R    C
ATOM   1935  NE2 HIS R 201      47.848  -2.827   0.437  1.00 76.65      R    N
ATOM   1936  C   HIS R 201      45.003  -4.779  -4.170  1.00 67.12      R    C
ATOM   1937  O   HIS R 201      44.002  -5.417  -3.872  1.00 65.87      R    O
ATOM   1938  N   SER R 202      45.751  -5.050  -5.270  1.00 65.76      R    N
ATOM   1939  CA  SER R 202      45.327  -6.188  -6.091  1.00 65.49      R    C
ATOM   1940  CB  SER R 202      44.495  -5.649  -7.263  1.00 65.59      R    C
ATOM   1941  OG  SER R 202      43.098  -5.779  -6.969  1.00 66.07      R    O
ATOM   1942  C   SER R 202      46.535  -6.973  -6.619  1.00 65.89      R    C
ATOM   1943  O   SER R 202      47.599  -6.431  -6.871  1.00 64.15      R    O
ATOM   1944  N   GLN R 203      46.327  -8.302  -6.744  1.00 66.75      R    N
ATOM   1945  CA  GLN R 203      47.399  -9.168  -7.251  1.00 67.38      R    C
ATOM   1946  CB  GLN R 203      48.204  -9.679  -6.053  1.00 66.69      R    C
ATOM   1947  C   GLN R 203      46.855 -10.371  -8.053  1.00 68.36      R    C
ATOM   1948  O   GLN R 203      45.854 -10.977  -7.702  1.00 66.91      R    O
ATOM   1949  N   ILE R 204      47.509 -10.732  -9.173  1.00 70.11      R    N
ATOM   1950  CA  ILE R 204      47.017 -11.891  -9.892  1.00 72.85      R    C
ATOM   1951  CB  ILE R 204      46.510 -11.420 -11.254  1.00 71.76      R    C
ATOM   1952  C   ILE R 204      48.130 -12.914 -10.099  1.00 74.05      R    C
ATOM   1953  O   ILE R 204      49.095 -12.693 -10.811  1.00 73.69      R    O
ATOM   1954  N   MET R 205      47.999 -14.052  -9.402  1.00 75.96      R    N
ATOM   1955  CA  MET R 205      48.967 -15.105  -9.673  1.00 78.62      R    C
ATOM   1956  CB  MET R 205      49.965 -15.225  -8.509  1.00 79.44      R    C
ATOM   1957  CG  MET R 205      49.402 -15.843  -7.222  1.00 81.81      R    C
ATOM   1958  SD  MET R 205      50.703 -16.108  -6.007  1.00 82.92      R    S
ATOM   1959  CE  MET R 205      49.674 -16.308  -4.546  1.00 82.58      R    C
ATOM   1960  C   MET R 205      48.319 -16.438 -10.013  1.00 79.83      R    C
ATOM   1961  O   MET R 205      47.111 -16.605 -10.058  1.00 79.06      R    O
ATOM   1962  N   VAL R 206      49.208 -17.383 -10.328  1.00 81.92      R    N
ATOM   1963  CA  VAL R 206      48.799 -18.755 -10.495  1.00 84.18      R    C
ATOM   1964  CB  VAL R 206      49.721 -19.384 -11.537  1.00 84.11      R    C
ATOM   1965  CG1 VAL R 206      49.508 -18.739 -12.903  1.00 84.53      R    C
ATOM   1966  CG2 VAL R 206      51.157 -19.192 -11.105  1.00 84.63      R    C
ATOM   1967  C   VAL R 206      48.967 -19.544  -9.205  1.00 85.81      R    C
ATOM   1968  O   VAL R 206      49.967 -19.462  -8.501  1.00 85.71      R    O
ATOM   1969  N   LYS R 207      47.908 -20.307  -8.873  1.00 87.72      R    N
ATOM   1970  CA  LYS R 207      48.237 -21.691  -8.645  1.00 89.82      R    C
ATOM   1971  CB  LYS R 207      46.928 -22.445  -8.381  1.00 88.83      R    C
ATOM   1972  CG  LYS R 207      45.916 -21.599  -7.591  1.00 87.18      R    C
ATOM   1973  CD  LYS R 207      44.806 -21.024  -8.473  1.00 84.32      R    C
ATOM   1974  CE  LYS R 207      43.626 -21.989  -8.659  1.00 83.21      R    C
ATOM   1975  NZ  LYS R 207      42.370 -21.243  -8.795  1.00 81.54      R    N
ATOM   1976  C   LYS R 207      48.838 -22.108  -9.996  1.00 91.87      R    C
ATOM   1977  O   LYS R 207      48.713 -21.364 -10.971  1.00 92.75      R    O
ATOM   1978  N   ASP R 208      49.540 -23.245 -10.062  1.00 93.36      R    N
ATOM   1979  CA  ASP R 208      49.966 -24.006  -8.913  1.00 94.52      R    C
ATOM   1980  CB  ASP R 208      49.743 -25.487  -9.287  1.00 95.14      R    C
ATOM   1981  CG  ASP R 208      50.314 -26.476  -8.267  1.00 94.52      R    C
ATOM   1982  OD1 ASP R 208      50.551 -26.079  -7.124  1.00 95.08      R    O
ATOM   1983  OD2 ASP R 208      50.425 -27.653  -8.606  1.00 94.46      R    O
ATOM   1984  C   ASP R 208      51.439 -23.684  -8.693  1.00 95.30      R    C
ATOM   1985  O   ASP R 208      52.313 -24.168  -9.392  1.00 95.25      R    O
ATOM   1986  N   ASN R 209      51.688 -22.736  -7.775  1.00 95.46      R    N
ATOM   1987  CA  ASN R 209      53.074 -22.593  -7.285  1.00 95.80      R    C
ATOM   1988  CB  ASN R 209      53.647 -23.981  -6.970  1.00 95.91      R    C
ATOM   1989  C   ASN R 209      53.914 -21.882  -8.310  1.00 95.80      R    C
ATOM   1990  O   ASN R 209      55.114 -21.672  -8.150  1.00 96.45      R    O
ATOM   1991  N   ALA R 210      53.272 -21.535  -9.471  1.00 94.72      R    N
ATOM   1992  CA  ALA R 210      53.984 -20.679 -10.372  1.00 94.16      R    C
ATOM   1993  CB  ALA R 210      55.324 -20.490  -9.802  1.00 93.34      R    C
ATOM   1994  C   ALA R 210      54.173 -21.188 -11.727  1.00 94.18      R    C
ATOM   1995  O   ALA R 210      54.019 -22.340 -12.136  1.00 94.20      R    O
ATOM   1996  N   GLY R 211      54.350 -20.070 -12.407  1.00 94.38      R    N
ATOM   1997  CA  GLY R 211      55.687 -19.730 -12.616  1.00 94.63      R    C
ATOM   1998  C   GLY R 211      55.979 -18.821 -13.853  1.00 95.21      R    C
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ATOM   1999  O   GLY R 211      57.147 -18.479 -14.185  1.00 96.27      R    O
ATOM   2000  N   LYS R 212      54.946 -18.419 -14.628  1.00 94.97      R    N
ATOM   2001  CA  LYS R 212      53.509 -18.475 -14.380  1.00 94.25      R    C
ATOM   2002  CB  LYS R 212      52.637 -18.475 -15.650  1.00 94.92      R    C
ATOM   2003  C   LYS R 212      53.083 -17.372 -13.420  1.00 93.59      R    C
ATOM   2004  O   LYS R 212      52.082 -16.687 -13.538  1.00 93.83      R    O
ATOM   2005  N   ILE R 213      53.894 -17.246 -12.371  1.00 92.42      R    N
ATOM   2006  CA  ILE R 213      54.088 -15.920 -11.881  1.00 91.16      R    C
ATOM   2007  CB  ILE R 213      54.454 -16.057 -10.403  1.00 91.36      R    C
ATOM   2008  C   ILE R 213      55.216 -15.382 -12.781  1.00 90.27      R    C
ATOM   2009  O   ILE R 213      55.931 -16.146 -13.391  1.00 91.19      R    O
ATOM   2010  N   LYS R 214      55.449 -14.078 -12.885  1.00 88.61      R    N
ATOM   2011  CA  LYS R 214      55.517 -13.243 -11.735  1.00 86.29      R    C
ATOM   2012  CB  LYS R 214      56.288 -12.003 -12.189  1.00 86.22      R    C
ATOM   2013  C   LYS R 214      54.163 -12.841 -11.268  1.00 84.26      R    C
ATOM   2014  O   LYS R 214      53.269 -12.542 -12.049  1.00 84.28      R    O
ATOM   2015  N   PRO R 215      53.988 -12.879  -9.968  1.00 81.59      R    N
ATOM   2016  CD  PRO R 215      54.698 -13.643  -8.962  1.00 80.19      R    C
ATOM   2017  CA  PRO R 215      52.980 -12.057  -9.392  1.00 79.54      R    C
ATOM   2018  CB  PRO R 215      53.302 -11.929  -7.903  1.00 80.09      R    C
ATOM   2019  CG  PRO R 215      54.360 -12.976  -7.554  1.00 80.43      R    C
ATOM   2020  C   PRO R 215      53.026 -10.687 -10.110  1.00 77.50      R    C
ATOM   2021  O   PRO R 215      54.099 -10.107 -10.259  1.00 77.69      R    O
ATOM   2022  N   SER R 216      51.828 -10.243 -10.616  1.00 75.99      R    N
ATOM   2023  CA  SER R 216      51.660  -8.826 -11.042  1.00 74.40      R    C
ATOM   2024  CB  SER R 216      51.054  -8.795 -12.451  1.00 74.52      R    C
ATOM   2025  OG  SER R 216      51.361  -7.546 -13.070  1.00 75.58      R    O
ATOM   2026  C   SER R 216      50.712  -8.058 -10.081  1.00 73.20      R    C
ATOM   2027  O   SER R 216      49.594  -8.459  -9.784  1.00 72.12      R    O
ATOM   2028  N   PHE R 217      51.253  -6.957  -9.506  1.00 72.00      R    N
ATOM   2029  CA  PHE R 217      50.463  -6.155  -8.580  1.00 71.16      R    C
ATOM   2030  CB  PHE R 217      51.351  -5.718  -7.410  1.00 71.05      R    C
ATOM   2031  CG  PHE R 217      52.005  -6.881  -6.740  1.00 71.64      R    C
ATOM   2032  CD1 PHE R 217      53.247  -7.331  -7.192  1.00 72.43      R    C
ATOM   2033  CD2 PHE R 217      51.379  -7.498  -5.662  1.00 71.96      R    C
ATOM   2034  CE1 PHE R 217      53.872  -8.369  -6.543  1.00 71.92      R    C
ATOM   2035  CE2 PHE R 217      52.024  -8.545  -5.008  1.00 72.65      R    C
ATOM   2036  CZ  PHE R 217      53.284  -8.979  -5.431  1.00 72.45      R    C
ATOM   2037  C   PHE R 217      49.876  -4.897  -9.226  1.00 69.71      R    C
ATOM   2038  O   PHE R 217      50.434  -4.318 -10.167  1.00 69.81      R    O
ATOM   2039  N   ASN R 218      48.709  -4.460  -8.796  1.00 69.22      R    N
ATOM   2040  CA  ASN R 218      48.378  -3.039  -9.002  1.00 67.82      R    C
ATOM   2041  CB  ASN R 218      47.499  -3.078 -10.262  1.00 68.56      R    C
ATOM   2042  CG  ASN R 218      47.411  -1.735 -11.083  1.00 69.14      R    C
ATOM   2043  OD1 ASN R 218      46.282  -1.290 -11.316  1.00 68.24      R    O
ATOM   2044  ND2 ASN R 218      48.550  -1.234 -11.638  1.00 69.11      R    N
ATOM   2045  C   ASN R 218      47.685  -2.335  -7.829  1.00 67.04      R    C
ATOM   2046  O   ASN R 218      46.882  -2.948  -7.054  1.00 67.27      R    O
ATOM   2047  N   ILE R 219      47.882  -1.008  -7.739  1.00 65.28      R    N
ATOM   2048  CA  ILE R 219      47.072  -0.257  -6.782  1.00 62.22      R    C
ATOM   2049  CB  ILE R 219      47.889   0.718  -6.154  1.00 61.26      R    C
ATOM   2050  CG2 ILE R 219      47.089   1.423  -5.015  1.00 60.00      R    C
ATOM   2051  CG1 ILE R 219      49.245   0.171  -5.849  1.00 60.74      R    C
ATOM   2052  CD1 ILE R 219      49.142  -0.750  -4.532  1.00 61.59      R    C
ATOM   2053  C   ILE R 219      45.912   0.453  -7.427  1.00 60.80      R    C
ATOM   2054  O   ILE R 219      46.063   1.318  -8.100  1.00 60.85      R    O
ATOM   2055  N   VAL R 220      44.725   0.274  -6.972  1.00 59.05      R    N
ATOM   2056  CA  VAL R 220      43.615   0.807  -7.625  1.00 58.49      R    C
ATOM   2057  CB  VAL R 220      42.595  -0.222  -7.732  1.00 58.24      R    C
ATOM   2058  CG1 VAL R 220      41.264   0.389  -7.943  1.00 57.03      R    C
ATOM   2059  CG2 VAL R 220      42.879  -1.176  -8.784  1.00 58.45      R    C
ATOM   2060  C   VAL R 220      43.046   1.823  -6.630  1.00 59.18      R    C
ATOM   2061  O   VAL R 220      42.640   1.446  -5.576  1.00 58.01      R    O
ATOM   2062  N   PRO R 221      43.019   3.098  -6.931  1.00 59.22      R    N
ATOM   2063  CD  PRO R 221      43.756   3.682  -8.065  1.00 59.51      R    C
ATOM   2064  CA  PRO R 221      42.377   4.080  -6.016  1.00 59.09      R    C
ATOM   2065  CB  PRO R 221      43.035   5.431  -6.332  1.00 59.17      R    C
ATOM   2066  CG  PRO R 221      43.602   5.276  -7.714  1.00 60.65      R    C
ATOM   2067  C   PRO R 221      40.916   4.053  -6.228  1.00 58.55      R    C
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ATOM	2068	O	PRO	R	221	40.365	3.642	-7.271	1.00	57.97	R O
ATOM	2069	N	LEU	R	222	40.307	4.324	-5.110	1.00	58.65	R N
ATOM	2070	CA	LEU	R	222	38.862	4.396	-4.976	1.00	59.43	R C
ATOM	2071	CB	LEU	R	222	38.401	3.880	-3.581	1.00	59.09	R C
ATOM	2072	CG	LEU	R	222	38.866	2.400	-3.381	1.00	59.86	R C
ATOM	2073	CD1	LEU	R	222	38.159	2.093	-2.020	1.00	59.90	R C
ATOM	2074	CD2	LEU	R	222	38.427	1.312	-4.282	1.00	59.54	R C
ATOM	2075	C	LEU	R	222	38.335	5.826	-5.198	1.00	59.51	R C
ATOM	2076	O	LEU	R	222	37.141	6.194	-4.797	1.00	60.14	R O
ATOM	2077	N	THR	R	223	39.177	6.628	-5.887	1.00	59.04	R N
ATOM	2078	CA	THR	R	223	38.769	8.017	-6.126	1.00	60.53	R C
ATOM	2079	CB	THR	R	223	39.803	8.955	-5.469	1.00	60.13	R C
ATOM	2080	OG1	THR	R	223	41.112	8.701	-6.077	1.00	58.81	R O
ATOM	2081	CG2	THR	R	223	39.943	8.602	-3.942	1.00	59.96	R C
ATOM	2082	C	THR	R	223	38.586	8.352	-7.661	1.00	61.12	R C
ATOM	2083	O	THR	R	223	38.600	9.585	-7.991	1.00	62.12	R O
ATOM	2084	N	SER	R	224	38.761	7.327	-8.481	1.00	60.44	R N
ATOM	2085	CA	SER	R	224	38.631	7.431	-9.949	1.00	60.05	R C
ATOM	2086	CB	SER	R	224	39.940	7.844	-10.698	1.00	59.15	R C
ATOM	2087	OG	SER	R	224	40.975	7.094	-10.323	1.00	58.96	R O
ATOM	2088	C	SER	R	224	38.190	6.157	-10.509	1.00	60.34	R C
ATOM	2089	O	SER	R	224	37.994	5.195	-9.813	1.00	60.32	R O
ATOM	2090	N	ARG	R	225	37.989	6.198	-11.805	1.00	60.24	R N
ATOM	2091	CA	ARG	R	225	37.473	4.990	-12.554	1.00	60.06	R C
ATOM	2092	CB	ARG	R	225	38.651	4.004	-12.686	1.00	61.47	R C
ATOM	2093	CG	ARG	R	225	39.769	4.381	-13.915	1.00	62.36	R C
ATOM	2094	CD	ARG	R	225	41.050	3.677	-13.667	1.00	64.74	R C
ATOM	2095	NE	ARG	R	225	40.782	2.359	-14.166	1.00	68.21	R N
ATOM	2096	CZ	ARG	R	225	40.836	2.004	-15.433	1.00	69.76	R C
ATOM	2097	NH1	ARG	R	225	41.215	2.854	-16.406	1.00	70.99	R N
ATOM	2098	NH2	ARG	R	225	40.462	0.799	-15.754	1.00	68.97	R N
ATOM	2099	C	ARG	R	225	36.261	4.370	-11.811	1.00	58.98	R C
ATOM	2100	O	ARG	R	225	36.180	3.187	-11.400	1.00	58.24	R O
ATOM	2101	N	VAL	R	226	35.242	5.198	-11.679	1.00	58.09	R N
ATOM	2102	CA	VAL	R	226	33.963	4.757	-11.138	1.00	57.67	R C
ATOM	2103	CB	VAL	R	226	33.581	5.553	-9.962	1.00	57.05	R C
ATOM	2104	CG1	VAL	R	226	32.230	5.098	-9.412	1.00	57.97	R C
ATOM	2105	CG2	VAL	R	226	34.626	5.400	-9.019	1.00	56.30	R C
ATOM	2106	C	VAL	R	226	32.929	4.899	-12.171	1.00	57.20	R C
ATOM	2107	O	VAL	R	226	32.683	5.977	-12.594	1.00	57.69	R O
ATOM	2108	N	LYS	R	227	32.277	3.803	-12.432	1.00	56.07	R N
ATOM	2109	CA	LYS	R	227	31.173	3.677	-13.343	1.00	55.34	R C
ATOM	2110	CB	LYS	R	227	31.412	2.625	-14.480	1.00	56.41	R C
ATOM	2111	CG	LYS	R	227	30.200	2.673	-15.576	1.00	58.70	R C
ATOM	2112	CD	LYS	R	227	30.323	1.372	-16.396	1.00	60.42	R C
ATOM	2113	CE	LYS	R	227	29.315	1.215	-17.612	1.00	61.76	R C
ATOM	2114	NZ	LYS	R	227	29.788	0.113	-18.509	1.00	64.37	R N
ATOM	2115	C	LYS	R	227	29.725	3.609	-12.754	1.00	54.15	R C
ATOM	2116	O	LYS	R	227	29.399	2.631	-12.202	1.00	53.75	R O
ATOM	2117	N	PRO	R	228	28.953	4.718	-12.738	1.00	52.91	R N
ATOM	2118	CD	PRO	R	228	29.263	6.094	-13.221	1.00	51.97	R C
ATOM	2119	CA	PRO	R	228	27.716	4.690	-12.075	1.00	52.45	R C
ATOM	2120	CB	PRO	R	228	27.255	6.125	-12.135	1.00	52.90	R C
ATOM	2121	CG	PRO	R	228	28.408	7.011	-12.531	1.00	52.61	R C
ATOM	2122	C	PRO	R	228	26.782	3.857	-12.908	1.00	52.98	R C
ATOM	2123	O	PRO	R	228	26.949	3.618	-14.112	1.00	53.18	R O
ATOM	2124	N	ASP	R	229	25.778	3.467	-12.223	1.00	53.47	R N
ATOM	2125	CA	ASP	R	229	24.575	2.942	-12.833	1.00	53.83	R C
ATOM	2126	CB	ASP	R	229	23.619	2.451	-11.626	1.00	54.59	R C
ATOM	2127	CG	ASP	R	229	23.773	0.904	-11.364	1.00	55.86	R C
ATOM	2128	OD1	ASP	R	229	22.857	0.403	-10.684	1.00	56.05	R O
ATOM	2129	OD2	ASP	R	229	24.745	0.178	-11.874	1.00	54.82	R O
ATOM	2130	C	ASP	R	229	23.875	4.007	-13.620	1.00	53.79	R C
ATOM	2131	O	ASP	R	229	24.155	5.197	-13.521	1.00	54.18	R O
ATOM	2132	N	PRO	R	230	22.902	3.626	-14.361	1.00	53.39	R N
ATOM	2133	CD	PRO	R	230	22.655	2.234	-14.865	1.00	52.47	R C
ATOM	2134	CA	PRO	R	230	22.149	4.642	-15.096	1.00	51.12	R C
ATOM	2135	CB	PRO	R	230	21.618	3.824	-16.264	1.00	52.08	R C
ATOM	2136	CG	PRO	R	230	21.439	2.553	-15.823	1.00	53.31	R C

ATOM	2137	C	PRO	R	230	21.032	5.316	-14.361	1.00	50.11	R	C
ATOM	2138	O	PRO	R	230	20.585	4.913	-13.309	1.00	49.02	R	O
ATOM	2139	N	PRO	R	231	20.645	6.470	-14.824	1.00	49.41	R	N
ATOM	2140	CD	PRO	R	231	21.209	7.201	-15.948	1.00	47.62	R	C
ATOM	2141	CA	PRO	R	231	19.558	7.155	-14.158	1.00	49.23	R	C
ATOM	2142	CB	PRO	R	231	19.820	8.559	-14.487	1.00	48.55	R	C
ATOM	2143	CG	PRO	R	231	20.363	8.402	-15.906	1.00	48.87	R	C
ATOM	2144	C	PRO	R	231	18.225	6.726	-14.621	1.00	50.36	R	C
ATOM	2145	O	PRO	R	231	18.108	5.913	-15.535	1.00	49.57	R	O
ATOM	2146	N	HIS	R	232	17.184	7.294	-14.050	1.00	51.65	R	N
ATOM	2147	CA	HIS	R	232	15.898	6.777	-14.461	1.00	55.01	R	C
ATOM	2148	CB	HIS	R	232	15.326	5.916	-13.298	1.00	58.75	R	C
ATOM	2149	CG	HIS	R	232	16.040	4.570	-13.111	1.00	64.23	R	C
ATOM	2150	CD2	HIS	R	232	17.226	4.301	-12.418	1.00	66.01	R	C
ATOM	2151	ND1	HIS	R	232	15.509	3.378	-13.508	1.00	66.21	R	N
ATOM	2152	CE1	HIS	R	232	16.394	2.428	-13.135	1.00	66.33	R	C
ATOM	2153	NE2	HIS	R	232	17.424	2.951	-12.477	1.00	67.23	R	N
ATOM	2154	C	HIS	R	232	14.984	7.987	-14.716	1.00	54.86	R	C
ATOM	2155	O	HIS	R	232	14.789	8.823	-13.855	1.00	55.11	R	O
ATOM	2156	N	ILE	R	233	14.490	8.130	-15.957	1.00	55.90	R	N
ATOM	2157	CA	ILE	R	233	13.668	9.309	-16.230	1.00	57.90	R	C
ATOM	2158	CB	ILE	R	233	13.488	9.425	-17.746	1.00	55.99	R	C
ATOM	2159	CG2	ILE	R	233	12.523	10.592	-18.052	1.00	54.70	R	C
ATOM	2160	CG1	ILE	R	233	14.820	9.768	-18.450	1.00	54.05	R	C
ATOM	2161	CD1	ILE	R	233	14.821	9.352	-19.932	1.00	51.18	R	C
ATOM	2162	C	ILE	R	233	12.296	9.207	-15.516	1.00	59.58	R	C
ATOM	2163	O	ILE	R	233	11.658	8.168	-15.524	1.00	60.77	R	O
ATOM	2164	N	LYS	R	234	11.885	10.306	-14.815	1.00	62.94	R	N
ATOM	2165	CA	LYS	R	234	10.553	10.308	-14.137	1.00	66.66	R	C
ATOM	2166	CB	LYS	R	234	10.612	11.067	-12.787	1.00	67.92	R	C
ATOM	2167	CG	LYS	R	234	11.368	10.348	-11.657	1.00	71.28	R	C
ATOM	2168	CD	LYS	R	234	11.312	11.168	-10.373	1.00	73.35	R	C
ATOM	2169	CE	LYS	R	234	11.778	10.430	-9.129	1.00	75.77	R	C
ATOM	2170	NZ	LYS	R	234	12.379	11.410	-8.240	1.00	77.02	R	N
ATOM	2171	C	LYS	R	234	9.421	10.914	-15.004	1.00	68.02	R	C
ATOM	2172	O	LYS	R	234	8.393	10.292	-15.238	1.00	68.12	R	O
ATOM	2173	N	ASN	R	235	9.597	12.200	-15.425	1.00	69.38	R	N
ATOM	2174	CA	ASN	R	235	8.652	12.746	-16.405	1.00	72.11	R	C
ATOM	2175	CB	ASN	R	235	7.476	13.438	-15.735	1.00	73.57	R	C
ATOM	2176	CG	ASN	R	235	6.324	13.450	-16.725	1.00	75.24	R	C
ATOM	2177	OD1	ASN	R	235	5.944	12.424	-17.277	1.00	77.18	R	O
ATOM	2178	ND2	ASN	R	235	5.708	14.635	-16.867	1.00	75.83	R	N
ATOM	2179	C	ASN	R	235	9.298	13.669	-17.448	1.00	72.52	R	C
ATOM	2180	O	ASN	R	235	10.396	14.173	-17.321	1.00	73.58	R	O
ATOM	2181	N	LEU	R	236	8.528	13.806	-18.543	1.00	72.32	R	N
ATOM	2182	CA	LEU	R	236	8.782	14.830	-19.552	1.00	72.18	R	C
ATOM	2183	CB	LEU	R	236	9.080	14.173	-20.879	1.00	71.35	R	C
ATOM	2184	CG	LEU	R	236	10.173	13.126	-20.782	1.00	70.86	R	C
ATOM	2185	CD1	LEU	R	236	10.182	12.196	-21.988	1.00	69.29	R	C
ATOM	2186	CD2	LEU	R	236	11.542	13.777	-20.782	1.00	70.35	R	C
ATOM	2187	C	LEU	R	236	7.523	15.666	-19.730	1.00	72.55	R	C
ATOM	2188	O	LEU	R	236	6.399	15.210	-19.575	1.00	72.54	R	O
ATOM	2189	N	SER	R	237	7.699	16.922	-20.088	1.00	72.99	R	N
ATOM	2190	CA	SER	R	237	6.545	17.784	-20.314	1.00	74.18	R	C
ATOM	2191	CB	SER	R	237	5.836	18.006	-18.979	1.00	72.83	R	C
ATOM	2192	OG	SER	R	237	6.739	18.620	-18.060	1.00	72.56	R	O
ATOM	2193	C	SER	R	237	6.951	19.125	-20.925	1.00	76.06	R	C
ATOM	2194	O	SER	R	237	8.116	19.510	-20.949	1.00	76.03	R	O
ATOM	2195	N	PHE	R	238	5.936	19.820	-21.477	1.00	77.57	R	N
ATOM	2196	CA	PHE	R	238	6.223	21.066	-22.176	1.00	79.64	R	C
ATOM	2197	CB	PHE	R	238	5.311	21.142	-23.399	1.00	77.79	R	C
ATOM	2198	CG	PHE	R	238	5.618	20.018	-24.344	1.00	76.60	R	C
ATOM	2199	CD1	PHE	R	238	4.694	18.993	-24.509	1.00	75.57	R	C
ATOM	2200	CD2	PHE	R	238	6.752	20.072	-25.139	1.00	76.20	R	C
ATOM	2201	CE1	PHE	R	238	4.900	18.029	-25.485	1.00	74.70	R	C
ATOM	2202	CE2	PHE	R	238	6.951	19.100	-26.117	1.00	75.82	R	C
ATOM	2203	CZ	PHE	R	238	6.026	18.079	-26.297	1.00	75.62	R	C
ATOM	2204	C	PHE	R	238	5.992	22.291	-21.290	1.00	81.71	R	C
ATOM	2205	O	PHE	R	238	5.041	22.374	-20.523	1.00	82.54	R	O

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ATOM   2206  N   HIS R 239      6.933  23.247 -21.387  1.00 84.05      R    N
ATOM   2207  CA  HIS R 239      6.730  24.522 -20.723  1.00 86.76      R    C
ATOM   2208  CB  HIS R 239      7.562  24.539 -19.451  1.00 88.55      R    C
ATOM   2209  CG  HIS R 239      8.087  25.935 -19.238  1.00 90.57      R    C
ATOM   2210  CD2 HIS R 239      9.335  26.327 -18.739  1.00 91.49      R    C
ATOM   2211  ND1 HIS R 239      7.373  27.051 -19.528  1.00 91.70      R    N
ATOM   2212  CE1 HIS R 239      8.164  28.090 -19.201  1.00 92.58      R    C
ATOM   2213  NE2 HIS R 239      9.347  27.689 -18.726  1.00 92.43      R    N
ATOM   2214  C   HIS R 239      7.180  25.668 -21.621  1.00 87.52      R    C
ATOM   2215  O   HIS R 239      8.347  25.994 -21.715  1.00 87.44      R    O
ATOM   2216  N   ASN R 240      6.204  26.256 -22.310  1.00 88.29      R    N
ATOM   2217  CA  ASN R 240      6.572  27.235 -23.314  1.00 88.24      R    C
ATOM   2218  CB  ASN R 240      7.705  28.079 -22.739  1.00 88.25      R    C
ATOM   2219  C   ASN R 240      7.026  26.486 -24.568  1.00 88.02      R    C
ATOM   2220  O   ASN R 240      6.444  25.488 -24.980  1.00 88.51      R    O
ATOM   2221  N   ASP R 241      8.086  26.970 -25.210  1.00 87.16      R    N
ATOM   2222  CA  ASP R 241      8.400  26.251 -26.430  1.00 86.30      R    C
ATOM   2223  CB  ASP R 241      8.645  27.275 -27.532  1.00 87.95      R    C
ATOM   2224  CG  ASP R 241      7.339  28.063 -27.722  1.00 87.67      R    C
ATOM   2225  OD1 ASP R 241      6.295  27.510 -27.353  1.00 88.15      R    O
ATOM   2226  OD2 ASP R 241      7.367  29.216 -28.150  1.00 88.12      R    O
ATOM   2227  C   ASP R 241      9.531  25.218 -26.253  1.00 85.04      R    C
ATOM   2228  O   ASP R 241     10.205  24.828 -27.191  1.00 85.17      R    O
ATOM   2229  N   ASP R 242      9.583  24.714 -25.000  1.00 82.57      R    N
ATOM   2230  CA  ASP R 242     10.706  23.872 -24.616  1.00 80.06      R    C
ATOM   2231  CB  ASP R 242     11.390  24.580 -23.455  1.00 80.43      R    C
ATOM   2232  CG  ASP R 242     12.185  25.775 -23.943  1.00 81.48      R    C
ATOM   2233  OD1 ASP R 242     12.368  25.864 -25.151  1.00 81.91      R    O
ATOM   2234  OD2 ASP R 242     12.603  26.595 -23.124  1.00 81.63      R    O
ATOM   2235  C   ASP R 242     10.272  22.492 -24.112  1.00 78.44      R    C
ATOM   2236  O   ASP R 242      9.123  22.088 -24.167  1.00 79.46      R    O
ATOM   2237  N   LEU R 243     11.276  21.763 -23.574  1.00 75.69      R    N
ATOM   2238  CA  LEU R 243     11.000  20.446 -23.006  1.00 73.52      R    C
ATOM   2239  CB  LEU R 243     11.458  19.394 -24.018  1.00 72.84      R    C
ATOM   2240  CG  LEU R 243     10.788  18.034 -23.804  1.00 72.09      R    C
ATOM   2241  CD1 LEU R 243     11.612  16.882 -24.382  1.00 71.29      R    C
ATOM   2242  CD2 LEU R 243     10.574  17.709 -22.327  1.00 72.11      R    C
ATOM   2243  C   LEU R 243     11.741  20.241 -21.680  1.00 72.81      R    C
ATOM   2244  O   LEU R 243     12.963  20.186 -21.631  1.00 73.08      R    O
ATOM   2245  N   TYR R 244     10.928  20.170 -20.611  1.00 71.27      R    N
ATOM   2246  CA  TYR R 244     11.479  19.957 -19.278  1.00 70.19      R    C
ATOM   2247  CB  TYR R 244     10.477  20.516 -18.267  1.00 72.06      R    C
ATOM   2248  CG  TYR R 244     11.149  20.761 -16.963  1.00 74.30      R    C
ATOM   2249  CD1 TYR R 244     12.307  21.534 -16.907  1.00 75.35      R    C
ATOM   2250  CE1 TYR R 244     12.891  21.829 -15.679  1.00 76.01      R    C
ATOM   2251  CD2 TYR R 244     10.590  20.273 -15.782  1.00 75.12      R    C
ATOM   2252  CE2 TYR R 244     11.178  20.559 -14.558  1.00 74.79      R    C
ATOM   2253  CZ  TYR R 244     12.323  21.329 -14.503  1.00 75.92      R    C
ATOM   2254  OH  TYR R 244     12.891  21.640 -13.282  1.00 75.92      R    O
ATOM   2255  C   TYR R 244     11.696  18.468 -18.999  1.00 68.92      R    C
ATOM   2256  O   TYR R 244     10.784  17.653 -19.015  1.00 67.48      R    O
ATOM   2257  N   VAL R 245     12.972  18.115 -18.762  1.00 68.19      R    N
ATOM   2258  CA  VAL R 245     13.238  16.721 -18.435  1.00 66.99      R    C
ATOM   2259  CB  VAL R 245     14.344  16.187 -19.341  1.00 67.14      R    C
ATOM   2260  CG1 VAL R 245     14.629  14.717 -19.009  1.00 65.54      R    C
ATOM   2261  CG2 VAL R 245     13.902  16.280 -20.790  1.00 65.15      R    C
ATOM   2262  C   VAL R 245     13.573  16.529 -16.954  1.00 66.24      R    C
ATOM   2263  O   VAL R 245     14.270  17.314 -16.315  1.00 66.44      R    O
ATOM   2264  N   GLN R 246     12.997  15.441 -16.403  1.00 65.56      R    N
ATOM   2265  CA  GLN R 246     13.115  15.140 -14.975  1.00 65.49      R    C
ATOM   2266  CB  GLN R 246     11.739  15.396 -14.333  1.00 67.51      R    C
ATOM   2267  CG  GLN R 246     11.831  15.846 -12.870  1.00 70.06      R    C
ATOM   2268  CD  GLN R 246     10.691  16.796 -12.544  1.00 71.11      R    C
ATOM   2269  OE1 GLN R 246      9.698  16.922 -13.247  1.00 70.54      R    O
ATOM   2270  NE2 GLN R 246     10.872  17.488 -11.400  1.00 70.86      R    N
ATOM   2271  C   GLN R 246     13.551  13.684 -14.765  1.00 64.64      R    C
ATOM   2272  O   GLN R 246     13.068  12.760 -15.412  1.00 65.52      R    O
ATOM   2273  N   TRP R 247     14.536  13.493 -13.858  1.00 63.78      R    N
ATOM   2274  CA  TRP R 247     15.092  12.144 -13.688  1.00 62.34      R    C
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ATOM	2275	CB	TRP	R	247	16.108	11.890	-14.805	1.00	61.18	R C
ATOM	2276	CG	TRP	R	247	17.394	12.599	-14.573	1.00	60.79	R C
ATOM	2277	CD2	TRP	R	247	17.796	13.862	-15.156	1.00	60.06	R C
ATOM	2278	CE2	TRP	R	247	19.140	14.100	-14.767	1.00	60.10	R C
ATOM	2279	CE3	TRP	R	247	17.140	14.798	-15.948	1.00	58.87	R C
ATOM	2280	CD1	TRP	R	247	18.522	12.107	-13.876	1.00	60.74	R N
ATOM	2281	NE1	TRP	R	247	19.596	12.942	-13.960	1.00	59.43	R C
ATOM	2282	CZ2	TRP	R	247	19.780	15.266	-15.160	1.00	58.49	R C
ATOM	2283	CZ3	TRP	R	247	17.783	15.957	-16.349	1.00	57.78	R C
ATOM	2284	CH2	TRP	R	247	19.107	16.198	-15.942	1.00	57.93	R C
ATOM	2285	C	TRP	R	247	15.735	11.884	-12.316	1.00	62.27	R C
ATOM	2286	O	TRP	R	247	16.012	12.776	-11.535	1.00	61.13	R O
ATOM	2287	N	GLU	R	248	15.929	10.577	-12.040	1.00	62.92	R N
ATOM	2288	CA	GLU	R	248	16.487	10.148	-10.767	1.00	64.61	R C
ATOM	2289	CB	GLU	R	248	15.536	9.101	-10.183	1.00	66.82	R C
ATOM	2290	CG	GLU	R	248	16.044	8.487	-8.879	1.00	72.44	R C
ATOM	2291	CD	GLU	R	248	15.069	7.423	-8.426	1.00	75.78	R C
ATOM	2292	OE1	GLU	R	248	14.881	7.271	-7.227	1.00	76.82	R O
ATOM	2293	OE2	GLU	R	248	14.483	6.766	-9.286	1.00	77.17	R O
ATOM	2294	C	GLU	R	248	17.881	9.547	-10.959	1.00	63.40	R C
ATOM	2295	O	GLU	R	248	18.079	8.578	-11.678	1.00	62.30	R O
ATOM	2296	N	ASN	R	249	18.882	10.192	-10.330	1.00	63.16	R N
ATOM	2297	CA	ASN	R	249	20.228	9.638	-10.413	1.00	63.41	R C
ATOM	2298	CB	ASN	R	249	21.207	10.669	-9.845	1.00	61.84	R C
ATOM	2299	CG	ASN	R	249	21.375	11.809	-10.817	1.00	61.58	R C
ATOM	2300	OD1	ASN	R	249	21.437	11.627	-12.030	1.00	61.61	R O
ATOM	2301	ND2	ASN	R	249	21.469	13.026	-10.253	1.00	61.70	R N
ATOM	2302	C	ASN	R	249	20.331	8.340	-9.611	1.00	63.66	R C
ATOM	2303	O	ASN	R	249	19.469	8.000	-8.814	1.00	63.48	R O
ATOM	2304	N	PRO	R	250	21.409	7.584	-9.878	1.00	63.57	R N
ATOM	2305	CD	PRO	R	250	22.444	7.800	-10.874	1.00	63.27	R C
ATOM	2306	CA	PRO	R	250	21.674	6.361	-9.133	1.00	64.11	R C
ATOM	2307	CB	PRO	R	250	22.946	5.737	-9.701	1.00	63.59	R C
ATOM	2308	CG	PRO	R	250	23.260	6.432	-11.023	1.00	63.95	R C
ATOM	2309	C	PRO	R	250	21.840	6.661	-7.639	1.00	65.15	R C
ATOM	2310	O	PRO	R	250	22.533	7.580	-7.229	1.00	64.73	R O
ATOM	2311	N	GLN	R	251	21.135	5.861	-6.818	1.00	66.03	R N
ATOM	2312	CA	GLN	R	251	21.045	6.167	-5.391	1.00	66.28	R C
ATOM	2313	CB	GLN	R	251	20.367	4.987	-4.687	1.00	69.33	R C
ATOM	2314	CG	GLN	R	251	19.467	5.423	-3.526	1.00	74.19	R C
ATOM	2315	CD	GLN	R	251	18.810	4.207	-2.909	1.00	75.95	R C
ATOM	2316	OE1	GLN	R	251	17.614	4.144	-2.674	1.00	76.89	R O
ATOM	2317	NE2	GLN	R	251	19.669	3.204	-2.634	1.00	76.36	R N
ATOM	2318	C	GLN	R	251	22.406	6.500	-4.729	1.00	63.78	R C
ATOM	2319	O	GLN	R	251	22.511	7.392	-3.905	1.00	63.33	R O
ATOM	2320	N	ASN	R	252	23.454	5.723	-5.102	1.00	61.66	R N
ATOM	2321	CA	ASN	R	252	24.780	5.877	-4.463	1.00	60.52	R C
ATOM	2322	CB	ASN	R	252	25.678	4.714	-4.874	1.00	59.39	R C
ATOM	2323	CG	ASN	R	252	25.160	3.386	-4.394	1.00	59.91	R C
ATOM	2324	OD1	ASN	R	252	25.580	2.328	-4.860	1.00	58.57	R O
ATOM	2325	ND2	ASN	R	252	24.281	3.436	-3.381	1.00	57.39	R N
ATOM	2326	C	ASN	R	252	25.513	7.161	-4.868	1.00	60.26	R C
ATOM	2327	O	ASN	R	252	26.552	7.522	-4.312	1.00	59.23	R O
ATOM	2328	N	PHE	R	253	25.003	7.814	-5.924	1.00	59.77	R N
ATOM	2329	CA	PHE	R	253	25.624	9.048	-6.322	1.00	59.18	R C
ATOM	2330	CB	PHE	R	253	25.933	9.038	-7.808	1.00	56.76	R C
ATOM	2331	CG	PHE	R	253	26.911	7.957	-8.123	1.00	55.92	R C
ATOM	2332	CD1	PHE	R	253	26.452	6.655	-8.263	1.00	55.78	R C
ATOM	2333	CD2	PHE	R	253	28.269	8.256	-8.278	1.00	55.39	R C
ATOM	2334	CE1	PHE	R	253	27.360	5.635	-8.533	1.00	55.18	R C
ATOM	2335	CE2	PHE	R	253	29.164	7.221	-8.566	1.00	56.05	R C
ATOM	2336	CZ	PHE	R	253	28.712	5.920	-8.691	1.00	56.84	R C
ATOM	2337	C	PHE	R	253	24.723	10.189	-6.034	1.00	59.89	R C
ATOM	2338	O	PHE	R	253	23.509	10.088	-5.964	1.00	61.22	R O
ATOM	2339	N	ILE	R	254	25.384	11.301	-5.843	1.00	60.15	R N
ATOM	2340	CA	ILE	R	254	24.684	12.483	-5.501	1.00	59.95	R C
ATOM	2341	CB	ILE	R	254	25.335	12.928	-4.205	1.00	62.03	R C
ATOM	2342	CG2	ILE	R	254	26.791	12.411	-4.197	1.00	63.18	R C
ATOM	2343	CG1	ILE	R	254	25.389	14.447	-4.172	1.00	62.64	R C

ATOM	2344	CD1	ILE	R	254	26.001	14.971	-2.876	1.00	62.24	R C
ATOM	2345	C	ILE	R	254	24.926	13.483	-6.590	1.00	59.07	R C
ATOM	2346	O	ILE	R	254	25.969	13.482	-7.255	1.00	59.16	R O
ATOM	2347	N	SER	R	255	23.996	14.309	-6.862	1.00	58.74	R N
ATOM	2348	CA	SER	R	255	23.956	15.080	-8.086	1.00	58.94	R C
ATOM	2349	CB	SER	R	255	22.644	15.831	-8.045	1.00	58.94	R C
ATOM	2350	OG	SER	R	255	22.458	16.746	-9.147	1.00	62.51	R O
ATOM	2351	C	SER	R	255	25.122	15.995	-8.454	1.00	58.42	R C
ATOM	2352	O	SER	R	255	25.599	16.070	-9.628	1.00	58.51	R O
ATOM	2353	N	ARG	R	256	25.583	16.759	-7.484	1.00	57.50	R N
ATOM	2354	CA	ARG	R	256	26.653	17.643	-7.758	1.00	55.75	R C
ATOM	2355	CB	ARG	R	256	26.808	18.702	-6.582	1.00	57.39	R C
ATOM	2356	CG	ARG	R	256	27.236	18.154	-5.258	1.00	58.42	R C
ATOM	2357	CD	ARG	R	256	27.694	19.178	-4.274	1.00	58.58	R C
ATOM	2358	NE	ARG	R	256	27.686	18.482	-2.990	1.00	60.41	R N
ATOM	2359	CZ	ARG	R	256	26.577	18.201	-2.279	1.00	60.88	R C
ATOM	2360	NH1	ARG	R	256	25.360	18.530	-2.655	1.00	59.81	R N
ATOM	2361	NH2	ARG	R	256	26.693	17.611	-1.141	1.00	60.03	R N
ATOM	2362	C	ARG	R	256	27.938	16.926	-8.025	1.00	53.84	R C
ATOM	2363	O	ARG	R	256	28.885	17.569	-8.396	1.00	52.44	R O
ATOM	2364	N	CYS	R	257	27.983	15.636	-7.866	1.00	52.68	R N
ATOM	2365	CA	CYS	R	257	29.166	14.845	-8.206	1.00	52.72	R C
ATOM	2366	C	CYS	R	257	29.178	14.290	-9.641	1.00	51.14	R C
ATOM	2367	O	CYS	R	257	30.145	13.655	-10.058	1.00	50.47	R O
ATOM	2368	CB	CYS	R	257	29.186	13.673	-7.249	1.00	54.19	R C
ATOM	2369	SG	CYS	R	257	29.650	14.132	-5.568	1.00	60.74	R S
ATOM	2370	N	LEU	R	258	28.143	14.511	-10.377	1.00	48.40	R N
ATOM	2371	CA	LEU	R	258	27.918	13.913	-11.614	1.00	47.82	R C
ATOM	2372	CB	LEU	R	258	26.655	13.157	-11.529	1.00	46.62	R C
ATOM	2373	CG	LEU	R	258	26.504	11.934	-10.673	1.00	47.57	R C
ATOM	2374	CD1	LEU	R	258	25.160	11.346	-10.859	1.00	48.25	R C
ATOM	2375	CD2	LEU	R	258	27.535	10.901	-11.209	1.00	45.86	R C
ATOM	2376	C	LEU	R	258	27.783	14.984	-12.653	1.00	47.12	R C
ATOM	2377	O	LEU	R	258	27.275	16.075	-12.364	1.00	46.63	R O
ATOM	2378	N	PHE	R	259	28.101	14.607	-13.826	1.00	45.55	R N
ATOM	2379	CA	PHE	R	259	27.739	15.318	-15.113	1.00	45.70	R C
ATOM	2380	CB	PHE	R	259	28.971	15.748	-15.963	1.00	46.66	R C
ATOM	2381	CG	PHE	R	259	29.726	17.012	-15.450	1.00	49.54	R C
ATOM	2382	CD1	PHE	R	259	29.244	17.725	-14.274	1.00	49.69	R C
ATOM	2383	CD2	PHE	R	259	30.981	17.457	-16.045	1.00	50.86	R C
ATOM	2384	CE1	PHE	R	259	29.902	18.916	-13.682	1.00	50.58	R C
ATOM	2385	CE2	PHE	R	259	31.690	18.722	-15.533	1.00	50.28	R C
ATOM	2386	CZ	PHE	R	259	31.152	19.366	-14.260	1.00	50.45	R C
ATOM	2387	C	PHE	R	259	26.845	14.450	-15.962	1.00	46.12	R C
ATOM	2388	O	PHE	R	259	26.928	13.262	-15.914	1.00	46.40	R O
ATOM	2389	N	TYR	R	260	26.097	15.063	-16.918	1.00	45.23	R N
ATOM	2390	CA	TYR	R	260	25.091	14.347	-17.606	1.00	45.84	R C
ATOM	2391	CB	TYR	R	260	23.650	14.675	-17.082	1.00	46.70	R C
ATOM	2392	CG	TYR	R	260	23.579	14.806	-15.612	1.00	49.36	R C
ATOM	2393	CD1	TYR	R	260	23.861	15.967	-15.000	1.00	50.50	R C
ATOM	2394	CE1	TYR	R	260	23.852	16.066	-13.479	1.00	52.78	R C
ATOM	2395	CD2	TYR	R	260	23.241	13.718	-14.809	1.00	49.26	R C
ATOM	2396	CE2	TYR	R	260	23.133	13.831	-13.473	1.00	51.55	R C
ATOM	2397	CZ	TYR	R	260	23.544	14.925	-12.762	1.00	53.08	R C
ATOM	2398	OH	TYR	R	260	23.422	14.967	-11.316	1.00	56.10	R O
ATOM	2399	C	TYR	R	260	25.158	14.463	-19.098	1.00	45.82	R C
ATOM	2400	O	TYR	R	260	25.518	15.477	-19.703	1.00	46.96	R O
ATOM	2401	N	GLU	R	261	24.649	13.439	-19.772	1.00	45.39	R N
ATOM	2402	CA	GLU	R	261	24.356	13.555	-21.222	1.00	44.70	R C
ATOM	2403	CB	GLU	R	261	25.294	12.703	-21.907	1.00	42.68	R C
ATOM	2404	CG	GLU	R	261	26.123	13.417	-22.942	1.00	46.04	R C
ATOM	2405	CD	GLU	R	261	27.233	12.676	-23.736	1.00	48.58	R C
ATOM	2406	OE1	GLU	R	261	28.384	13.293	-23.854	1.00	48.48	R O
ATOM	2407	OE2	GLU	R	261	26.918	11.551	-24.307	1.00	50.76	R O
ATOM	2408	C	GLU	R	261	22.852	13.311	-21.527	1.00	44.68	R C
ATOM	2409	O	GLU	R	261	22.356	12.280	-21.353	1.00	44.51	R O
ATOM	2410	N	VAL	R	262	22.148	14.288	-22.026	1.00	43.07	R N
ATOM	2411	CA	VAL	R	262	20.816	14.139	-22.348	1.00	44.29	R C
ATOM	2412	CB	VAL	R	262	20.003	15.258	-21.830	1.00	43.85	R C

ATOM	2413	CG1	VAL	R	262	18.561	15.075	-22.070	1.00	43.87	R	C
ATOM	2414	CG2	VAL	R	262	20.244	15.536	-20.345	1.00	43.73	R	C
ATOM	2415	C	VAL	R	262	20.661	14.112	-23.893	1.00	45.69	R	C
ATOM	2416	O	VAL	R	262	20.808	15.105	-24.535	1.00	45.95	R	O
ATOM	2417	N	GLU	R	263	20.264	12.971	-24.382	1.00	47.42	R	N
ATOM	2418	CA	GLU	R	263	19.855	12.647	-25.633	1.00	49.96	R	C
ATOM	2419	CB	GLU	R	263	20.217	11.119	-25.870	1.00	51.56	R	C
ATOM	2420	CG	GLU	R	263	20.072	10.749	-27.461	1.00	53.01	R	C
ATOM	2421	CD	GLU	R	263	19.925	9.223	-27.656	1.00	55.42	R	C
ATOM	2422	OE1	GLU	R	263	20.906	8.628	-28.122	1.00	56.59	R	O
ATOM	2423	OE2	GLU	R	263	18.855	8.513	-27.239	1.00	57.62	R	O
ATOM	2424	C	GLU	R	263	18.340	12.852	-26.019	1.00	50.75	R	C
ATOM	2425	O	GLU	R	263	17.385	12.312	-25.460	1.00	48.99	R	O
ATOM	2426	N	VAL	R	264	18.129	13.621	-27.087	1.00	52.50	R	N
ATOM	2427	CA	VAL	R	264	16.773	13.878	-27.641	1.00	54.11	R	C
ATOM	2428	CB	VAL	R	264	16.295	15.309	-27.377	1.00	53.62	R	C
ATOM	2429	CG1	VAL	R	264	14.771	15.521	-27.633	1.00	51.79	R	C
ATOM	2430	CG2	VAL	R	264	16.569	15.771	-25.785	1.00	52.95	R	C
ATOM	2431	C	VAL	R	264	16.711	13.636	-29.117	1.00	55.80	R	C
ATOM	2432	O	VAL	R	264	17.429	14.292	-29.756	1.00	56.07	R	O
ATOM	2433	N	ASN	R	265	15.831	12.729	-29.615	1.00	58.16	R	N
ATOM	2434	CA	ASN	R	265	15.491	12.533	-31.017	1.00	61.43	R	C
ATOM	2435	CB	ASN	R	265	15.626	11.064	-31.500	1.00	60.70	R	C
ATOM	2436	CG	ASN	R	265	16.969	10.489	-31.183	1.00	61.63	R	C
ATOM	2437	OD1	ASN	R	265	17.775	11.218	-30.646	1.00	61.76	R	O
ATOM	2438	ND2	ASN	R	265	17.227	9.190	-31.394	1.00	61.47	R	N
ATOM	2439	C	ASN	R	265	14.086	13.023	-31.342	1.00	63.85	R	C
ATOM	2440	O	ASN	R	265	13.083	12.831	-30.585	1.00	64.60	R	O
ATOM	2441	N	ASN	R	266	13.994	13.722	-32.460	1.00	66.73	R	N
ATOM	2442	CA	ASN	R	266	12.742	14.154	-33.058	1.00	69.50	R	C
ATOM	2443	CB	ASN	R	266	12.925	15.589	-33.554	1.00	71.22	R	C
ATOM	2444	CG	ASN	R	266	11.579	16.255	-33.675	1.00	73.17	R	C
ATOM	2445	OD1	ASN	R	266	10.774	15.938	-34.546	1.00	74.20	R	O
ATOM	2446	ND2	ASN	R	266	11.330	17.204	-32.755	1.00	73.74	R	N
ATOM	2447	C	ASN	R	266	12.354	13.248	-34.221	1.00	71.29	R	C
ATOM	2448	O	ASN	R	266	12.975	13.234	-35.275	1.00	70.99	R	O
ATOM	2449	N	SER	R	267	11.313	12.431	-33.987	1.00	73.90	R	N
ATOM	2450	CA	SER	R	267	10.880	11.511	-35.034	1.00	76.24	R	C
ATOM	2451	CB	SER	R	267	9.778	10.618	-34.462	1.00	76.17	R	C
ATOM	2452	OG	SER	R	267	10.139	10.204	-33.149	1.00	78.71	R	O
ATOM	2453	C	SER	R	267	10.350	12.269	-36.255	1.00	77.66	R	C
ATOM	2454	O	SER	R	267	10.318	11.773	-37.370	1.00	78.45	R	O
ATOM	2455	N	GLN	R	268	9.893	13.507	-35.990	1.00	79.01	R	N
ATOM	2456	CA	GLN	R	268	9.325	14.312	-37.060	1.00	80.98	R	C
ATOM	2457	CB	GLN	R	268	8.546	15.459	-36.429	1.00	83.07	R	C
ATOM	2458	CG	GLN	R	268	7.176	15.013	-35.922	1.00	86.65	R	C
ATOM	2459	CD	GLN	R	268	6.383	16.235	-35.535	1.00	88.88	R	C
ATOM	2460	OE1	GLN	R	268	5.232	16.191	-35.127	1.00	89.31	R	O
ATOM	2461	NE2	GLN	R	268	7.068	17.380	-35.696	1.00	89.89	R	N
ATOM	2462	C	GLN	R	268	10.393	14.852	-38.017	1.00	81.08	R	C
ATOM	2463	O	GLN	R	268	10.331	14.664	-39.228	1.00	81.44	R	O
ATOM	2464	N	THR	R	269	11.368	15.591	-37.453	1.00	80.39	R	N
ATOM	2465	CA	THR	R	269	12.446	16.091	-38.304	1.00	78.88	R	C
ATOM	2466	CB	THR	R	269	12.978	17.415	-37.738	1.00	79.42	R	C
ATOM	2467	OG1	THR	R	269	13.483	17.219	-36.420	1.00	79.08	R	O
ATOM	2468	CG2	THR	R	269	11.846	18.446	-37.673	1.00	78.99	R	C
ATOM	2469	C	THR	R	269	13.559	15.049	-38.477	1.00	77.19	R	C
ATOM	2470	O	THR	R	269	14.251	14.995	-39.482	1.00	76.91	R	O
ATOM	2471	N	GLU	R	270	13.698	14.183	-37.451	1.00	75.45	R	N
ATOM	2472	CA	GLU	R	270	14.706	13.132	-37.519	1.00	73.85	R	C
ATOM	2473	CB	GLU	R	270	14.895	12.737	-38.984	1.00	76.06	R	C
ATOM	2474	CG	GLU	R	270	15.160	11.241	-39.154	1.00	79.07	R	C
ATOM	2475	CD	GLU	R	270	14.611	10.783	-40.487	1.00	80.62	R	C
ATOM	2476	OE1	GLU	R	270	15.308	10.067	-41.194	1.00	81.22	R	O
ATOM	2477	OE2	GLU	R	270	13.486	11.157	-40.814	1.00	81.18	R	O
ATOM	2478	C	GLU	R	270	16.031	13.604	-36.920	1.00	71.07	R	C
ATOM	2479	O	GLU	R	270	17.053	12.934	-36.983	1.00	69.75	R	O
ATOM	2480	N	THR	R	271	15.990	14.826	-36.359	1.00	68.27	R	N
ATOM	2481	CA	THR	R	271	17.189	15.387	-35.747	1.00	66.22	R	C

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ATOM   2482  CB  THR R 271      16.966  16.889 -35.574  1.00 67.03      R    C
ATOM   2483  OG1 THR R 271      17.016  17.518 -36.856  1.00 69.01      R    O
ATOM   2484  CG2 THR R 271      18.059  17.487 -34.685  1.00 66.87      R    C
ATOM   2485  C   THR R 271      17.481  14.743 -34.389  1.00 63.55      R    C
ATOM   2486  O   THR R 271      16.584  14.416 -33.623  1.00 62.52      R    O
ATOM   2487  N   HIS R 272      18.743  14.504 -34.137  1.00 62.01      R    N
ATOM   2488  CA  HIS R 272      19.355  13.780 -33.016  1.00 60.41      R    C
ATOM   2489  CB  HIS R 272      20.146  12.614 -33.522  1.00 60.09      R    C
ATOM   2490  CG  HIS R 272      20.925  11.930 -32.476  1.00 64.26      R    C
ATOM   2491  CD2 HIS R 272      20.641  11.652 -31.186  1.00 65.40      R    C
ATOM   2492  ND1 HIS R 272      22.234  11.563 -32.644  1.00 66.46      R    N
ATOM   2493  CE1 HIS R 272      22.721  11.079 -31.508  1.00 66.77      R    C
ATOM   2494  NE2 HIS R 272      21.753  11.080 -30.622  1.00 65.74      R    N
ATOM   2495  C   HIS R 272      20.212  14.860 -32.362  1.00 58.50      R    C
ATOM   2496  O   HIS R 272      21.117  15.411 -32.924  1.00 57.95      R    O
ATOM   2497  N   ASN R 273      19.853  15.196 -31.198  1.00 56.75      R    N
ATOM   2498  CA  ASN R 273      20.636  16.051 -30.290  1.00 56.29      R    C
ATOM   2499  CB  ASN R 273      19.719  17.140 -29.794  1.00 57.24      R    C
ATOM   2500  CG  ASN R 273      19.529  18.290 -30.791  1.00 59.20      R    C
ATOM   2501  OD1 ASN R 273      18.437  18.683 -31.010  1.00 60.99      R    O
ATOM   2502  ND2 ASN R 273      20.618  18.821 -31.401  1.00 61.33      R    N
ATOM   2503  C   ASN R 273      21.205  15.359 -28.972  1.00 54.78      R    C
ATOM   2504  O   ASN R 273      20.592  14.472 -28.332  1.00 54.60      R    O
ATOM   2505  N   VAL R 274      22.395  15.849 -28.533  1.00 52.12      R    N
ATOM   2506  CA  VAL R 274      23.079  15.410 -27.426  1.00 49.18      R    C
ATOM   2507  CB  VAL R 274      24.216  14.505 -27.781  1.00 49.10      R    C
ATOM   2508  CG1 VAL R 274      24.845  14.060 -26.519  1.00 47.67      R    C
ATOM   2509  CG2 VAL R 274      23.756  13.114 -28.509  1.00 47.62      R    C
ATOM   2510  C   VAL R 274      23.485  16.648 -26.596  1.00 48.00      R    C
ATOM   2511  O   VAL R 274      24.321  17.401 -27.074  1.00 48.15      R    O
ATOM   2512  N   PHE R 275      22.898  16.838 -25.430  1.00 46.02      R    N
ATOM   2513  CA  PHE R 275      23.223  17.997 -24.604  1.00 46.97      R    C
ATOM   2514  CB  PHE R 275      22.043  18.598 -23.942  1.00 45.65      R    C
ATOM   2515  CG  PHE R 275      21.058  19.190 -24.895  1.00 47.42      R    C
ATOM   2516  CD1 PHE R 275      20.129  18.361 -25.638  1.00 46.46      R    C
ATOM   2517  CD2 PHE R 275      21.162  20.508 -25.191  1.00 46.21      R    C
ATOM   2518  CE1 PHE R 275      19.178  18.931 -26.577  1.00 46.27      R    C
ATOM   2519  CE2 PHE R 275      20.316  21.057 -26.240  1.00 45.90      R    C
ATOM   2520  CZ  PHE R 275      19.245  20.320 -26.842  1.00 46.37      R    C
ATOM   2521  C   PHE R 275      24.080  17.489 -23.421  1.00 48.11      R    C
ATOM   2522  O   PHE R 275      23.804  16.462 -22.790  1.00 47.90      R    O
ATOM   2523  N   TYR R 276      25.205  18.120 -23.289  1.00 48.11      R    N
ATOM   2524  CA  TYR R 276      26.132  17.892 -22.206  1.00 49.41      R    C
ATOM   2525  CB  TYR R 276      27.556  18.113 -22.781  1.00 51.00      R    C
ATOM   2526  CG  TYR R 276      28.687  17.896 -21.890  1.00 52.00      R    C
ATOM   2527  CD1 TYR R 276      29.180  18.909 -21.024  1.00 53.82      R    C
ATOM   2528  CE1 TYR R 276      30.356  18.592 -20.072  1.00 54.29      R    C
ATOM   2529  CD2 TYR R 276      29.218  16.669 -21.773  1.00 52.53      R    C
ATOM   2530  CE2 TYR R 276      30.255  16.322 -20.863  1.00 53.11      R    C
ATOM   2531  CZ  TYR R 276      30.780  17.252 -19.988  1.00 54.24      R    C
ATOM   2532  OH  TYR R 276      31.868  16.862 -19.341  1.00 56.13      R    O
ATOM   2533  C   TYR R 276      25.880  18.902 -21.133  1.00 49.44      R    C
ATOM   2534  O   TYR R 276      26.056  20.049 -21.242  1.00 47.42      R    O
ATOM   2535  N   VAL R 277      25.490  18.395 -19.987  1.00 51.00      R    N
ATOM   2536  CA  VAL R 277      25.051  19.280 -18.964  1.00 52.54      R    C
ATOM   2537  CB  VAL R 277      23.458  19.284 -18.838  1.00 53.05      R    C
ATOM   2538  CG1 VAL R 277      22.640  18.569 -19.923  1.00 51.02      R    C
ATOM   2539  CG2 VAL R 277      22.965  19.091 -17.483  1.00 52.55      R    C
ATOM   2540  C   VAL R 277      25.751  19.142 -17.613  1.00 54.64      R    C
ATOM   2541  O   VAL R 277      25.862  18.026 -17.077  1.00 53.39      R    O
ATOM   2542  N   GLN R 278      26.333  20.223 -17.123  1.00 57.64      R    N
ATOM   2543  CA  GLN R 278      27.081  20.216 -15.792  1.00 60.92      R    C
ATOM   2544  CB  GLN R 278      28.210  21.082 -15.824  1.00 62.64      R    C
ATOM   2545  CG  GLN R 278      28.680  21.292 -17.239  1.00 66.68      R    C
ATOM   2546  CD  GLN R 278      30.278  21.646 -17.406  1.00 68.72      R    C
ATOM   2547  OE1 GLN R 278      31.062  21.601 -16.435  1.00 69.80      R    O
ATOM   2548  NE2 GLN R 278      30.682  22.000 -18.645  1.00 69.14      R    N
ATOM   2549  C   GLN R 278      26.264  20.455 -14.545  1.00 61.75      R    C
ATOM   2550  O   GLN R 278      26.522  20.013 -13.532  1.00 61.88      R    O
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ATOM	2551	N	GLU	R	279	25.160	21.102	-14.739	1.00	63.48	R	N
ATOM	2552	CA	GLU	R	279	24.333	21.641	-13.721	1.00	65.20	R	C
ATOM	2553	CB	GLU	R	279	24.469	23.152	-13.731	1.00	65.02	R	C
ATOM	2554	C	GLU	R	279	22.905	21.254	-14.034	1.00	66.40	R	C
ATOM	2555	O	GLU	R	279	22.318	21.601	-15.055	1.00	66.33	R	O
ATOM	2556	N	ALA	R	280	22.345	20.440	-13.145	1.00	68.12	R	N
ATOM	2557	CA	ALA	R	280	20.986	20.030	-13.386	1.00	70.55	R	C
ATOM	2558	CB	ALA	R	280	20.995	18.527	-13.699	1.00	68.51	R	C
ATOM	2559	C	ALA	R	280	20.177	20.253	-12.142	1.00	72.94	R	C
ATOM	2560	O	ALA	R	280	19.634	19.327	-11.575	1.00	72.68	R	O
ATOM	2561	N	LYS	R	281	20.159	21.537	-11.689	1.00	75.96	R	N
ATOM	2562	CA	LYS	R	281	19.418	21.812	-10.474	1.00	79.54	R	C
ATOM	2563	CB	LYS	R	281	19.816	23.160	-9.886	1.00	79.86	R	C
ATOM	2564	CG	LYS	R	281	19.897	23.025	-8.363	1.00	80.01	R	C
ATOM	2565	CD	LYS	R	281	20.945	23.937	-7.726	1.00	79.40	R	C
ATOM	2566	CE	LYS	R	281	22.361	23.389	-7.882	1.00	79.46	R	C
ATOM	2567	NZ	LYS	R	281	23.266	24.502	-8.130	1.00	79.43	R	N
ATOM	2568	C	LYS	R	281	17.923	21.719	-10.689	1.00	82.08	R	C
ATOM	2569	O	LYS	R	281	17.290	22.454	-11.445	1.00	81.67	R	O
ATOM	2570	N	CYS	R	282	17.338	20.710	-10.049	1.00	84.54	R	N
ATOM	2571	CA	CYS	R	282	15.930	20.563	-10.411	1.00	86.72	R	C
ATOM	2572	C	CYS	R	282	15.074	21.633	-9.740	1.00	88.49	R	C
ATOM	2573	O	CYS	R	282	14.287	21.367	-8.834	1.00	89.72	R	O
ATOM	2574	CB	CYS	R	282	15.473	19.183	-9.941	1.00	86.35	R	C
ATOM	2575	SG	CYS	R	282	14.708	18.208	-11.254	1.00	88.45	R	S
ATOM	2576	N	GLU	R	283	15.265	22.886	-10.178	1.00	90.11	R	N
ATOM	2577	CA	GLU	R	283	14.567	23.943	-9.463	1.00	92.03	R	C
ATOM	2578	CB	GLU	R	283	14.600	23.581	-7.981	1.00	92.46	R	C
ATOM	2579	CG	GLU	R	283	14.683	24.814	-7.078	1.00	93.73	R	C
ATOM	2580	CD	GLU	R	283	13.454	25.660	-7.294	1.00	95.07	R	C
ATOM	2581	OE1	GLU	R	283	13.554	26.872	-7.195	1.00	95.36	R	O
ATOM	2582	OE2	GLU	R	283	12.407	25.093	-7.596	1.00	95.10	R	O
ATOM	2583	C	GLU	R	283	15.219	25.319	-9.637	1.00	93.03	R	C
ATOM	2584	O	GLU	R	283	16.389	25.531	-9.343	1.00	93.42	R	O
ATOM	2585	N	ASN	R	284	14.440	26.266	-10.203	1.00	94.22	R	N
ATOM	2586	CA	ASN	R	284	13.147	25.899	-10.787	1.00	95.83	R	C
ATOM	2587	CB	ASN	R	284	12.279	27.158	-10.865	1.00	95.79	R	C
ATOM	2588	C	ASN	R	284	13.304	25.291	-12.185	1.00	97.36	R	C
ATOM	2589	O	ASN	R	284	14.158	24.452	-12.440	1.00	98.00	R	O
ATOM	2590	N	PRO	R	285	12.396	25.707	-13.095	1.00	98.24	R	N
ATOM	2591	CD	PRO	R	285	12.412	25.484	-14.529	1.00	98.86	R	C
ATOM	2592	CA	PRO	R	285	11.267	26.543	-12.732	1.00	99.16	R	C
ATOM	2593	CB	PRO	R	285	10.547	26.976	-14.000	1.00	98.54	R	C
ATOM	2594	CG	PRO	R	285	11.139	26.213	-15.175	1.00	98.67	R	C
ATOM	2595	C	PRO	R	285	10.275	25.842	-11.797	1.00	99.89	R	C
ATOM	2596	O	PRO	R	285	10.314	24.647	-11.549	1.00	99.92	R	O
ATOM	2597	N	GLU	R	286	9.353	26.690	-11.303	1.00100.79		R	N
ATOM	2598	CA	GLU	R	286	8.546	26.374	-10.125	1.00102.10		R	C
ATOM	2599	CB	GLU	R	286	8.208	27.715	-9.500	1.00103.19		R	C
ATOM	2600	CG	GLU	R	286	9.398	28.655	-9.739	1.00106.31		R	C
ATOM	2601	CD	GLU	R	286	9.043	30.101	-9.504	1.00109.22		R	C
ATOM	2602	OE1	GLU	R	286	8.023	30.541	-10.005	1.00110.82		R	O
ATOM	2603	OE2	GLU	R	286	9.891	30.817	-8.965	1.00109.63		R	O
ATOM	2604	C	GLU	R	286	7.297	25.553	-10.455	1.00101.95		R	C
ATOM	2605	O	GLU	R	286	6.579	25.070	-9.602	1.00102.44		R	O
ATOM	2606	N	PHE	R	287	7.049	25.392	-11.760	1.00101.53		R	N
ATOM	2607	CA	PHE	R	287	6.017	24.441	-12.168	1.00101.39		R	C
ATOM	2608	CB	PHE	R	287	6.246	24.166	-13.655	1.00100.97		R	C
ATOM	2609	CG	PHE	R	287	5.519	25.184	-14.443	1.00100.24		R	C
ATOM	2610	CD1	PHE	R	287	5.083	26.324	-13.787	1.00100.27		R	C
ATOM	2611	CD2	PHE	R	287	5.407	25.073	-15.813	1.00	99.82	R	C
ATOM	2612	CE1	PHE	R	287	4.554	27.379	-14.516	1.00100.42		R	C
ATOM	2613	CE2	PHE	R	287	4.877	26.135	-16.534	1.00	99.79	R	C
ATOM	2614	CZ	PHE	R	287	4.453	27.296	-15.891	1.00	99.91	R	C
ATOM	2615	C	PHE	R	287	6.231	23.106	-11.495	1.00101.27		R	C
ATOM	2616	O	PHE	R	287	5.662	22.768	-10.455	1.00101.94		R	O
ATOM	2617	N	GLU	R	288	7.071	22.346	-12.238	1.00100.02		R	N
ATOM	2618	CA	GLU	R	288	7.559	21.018	-11.927	1.00	98.61	R	C
ATOM	2619	CB	GLU	R	288	8.364	20.608	-13.169	1.00	98.36	R	C

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ATOM   2620  CG  GLU R 288       8.288  21.663 -14.287  1.00 96.79       R    C
ATOM   2621  CD  GLU R 288       7.189  21.296 -15.253  1.00 96.23       R    C
ATOM   2622  OE1 GLU R 288       6.418  20.383 -14.968  1.00 95.74       R    O
ATOM   2623  OE2 GLU R 288       7.114  21.939 -16.289  1.00 95.82       R    O
ATOM   2624  C   GLU R 288       8.475  20.990 -10.695  1.00 98.28       R    C
ATOM   2625  O   GLU R 288       8.806  21.999 -10.105  1.00 99.09       R    O
ATOM   2626  N   ASN R 293      15.776  13.988  -4.556  1.00 96.30       R    N
ATOM   2627  CA  ASN R 293      16.678  13.056  -5.247  1.00 94.19       R    C
ATOM   2628  CB  ASN R 293      16.082  11.655  -5.105  1.00 94.17       R    C
ATOM   2629  C   ASN R 293      16.848  13.400  -6.723  1.00 93.16       R    C
ATOM   2630  O   ASN R 293      17.584  12.788  -7.497  1.00 93.06       R    O
ATOM   2631  N   THR R 294      16.059  14.403  -7.132  1.00 91.21       R    N
ATOM   2632  CA  THR R 294      15.794  14.564  -8.540  1.00 89.29       R    C
ATOM   2633  CB  THR R 294      14.284  14.787  -8.711  1.00 89.60       R    C
ATOM   2634  OG1 THR R 294      13.617  13.719  -8.060  1.00 90.25       R    O
ATOM   2635  CG2 THR R 294      13.874  14.837 -10.198  1.00 89.47       R    C
ATOM   2636  C   THR R 294      16.596  15.682  -9.162  1.00 87.98       R    C
ATOM   2637  O   THR R 294      17.329  16.461  -8.558  1.00 88.24       R    O
ATOM   2638  N   SER R 295      16.502  15.680 -10.483  1.00 85.90       R    N
ATOM   2639  CA  SER R 295      17.297  16.611 -11.209  1.00 83.53       R    C
ATOM   2640  CB  SER R 295      18.671  15.968 -11.391  1.00 83.77       R    C
ATOM   2641  OG  SER R 295      19.141  15.529 -10.111  1.00 83.53       R    O
ATOM   2642  C   SER R 295      16.643  16.780 -12.538  1.00 81.72       R    C
ATOM   2643  O   SER R 295      15.926  15.900 -12.998  1.00 81.17       R    O
ATOM   2644  N   CYS R 296      16.885  17.964 -13.112  1.00 80.55       R    N
ATOM   2645  CA  CYS R 296      16.281  18.168 -14.431  1.00 79.65       R    C
ATOM   2646  C   CYS R 296      16.939  19.321 -15.191  1.00 77.11       R    C
ATOM   2647  O   CYS R 296      17.746  20.071 -14.657  1.00 76.87       R    O
ATOM   2648  CB  CYS R 296      14.793  18.467 -14.245  1.00 82.55       R    C
ATOM   2649  SG  CYS R 296      14.487  19.494 -12.793  1.00 87.30       R    S
ATOM   2650  N   PHE R 297      16.583  19.327 -16.478  1.00 74.68       R    N
ATOM   2651  CA  PHE R 297      17.301  20.129 -17.437  1.00 72.94       R    C
ATOM   2652  CB  PHE R 297      18.463  19.266 -17.930  1.00 69.47       R    C
ATOM   2653  CG  PHE R 297      18.954  19.781 -19.242  1.00 66.15       R    C
ATOM   2654  CD1 PHE R 297      19.634  20.988 -19.284  1.00 64.52       R    C
ATOM   2655  CD2 PHE R 297      18.663  19.094 -20.408  1.00 65.09       R    C
ATOM   2656  CE1 PHE R 297      20.028  21.514 -20.507  1.00 63.49       R    C
ATOM   2657  CE2 PHE R 297      19.061  19.625 -21.633  1.00 64.98       R    C
ATOM   2658  CZ  PHE R 297      19.742  20.836 -21.686  1.00 63.88       R    C
ATOM   2659  C   PHE R 297      16.370  20.482 -18.598  1.00 73.41       R    C
ATOM   2660  O   PHE R 297      15.776  19.621 -19.241  1.00 73.80       R    O
ATOM   2661  N   MET R 298      16.197  21.802 -18.807  1.00 74.36       R    N
ATOM   2662  CA  MET R 298      15.244  22.231 -19.825  1.00 74.98       R    C
ATOM   2663  CB  MET R 298      14.809  23.660 -19.491  1.00 78.07       R    C
ATOM   2664  CG  MET R 298      13.351  23.736 -19.032  1.00 81.75       R    C
ATOM   2665  SD  MET R 298      12.238  24.191 -20.368  1.00 87.08       R    S
ATOM   2666  CE  MET R 298      10.798  23.265 -19.817  1.00 85.81       R    C
ATOM   2667  C   MET R 298      15.850  22.186 -21.235  1.00 73.57       R    C
ATOM   2668  O   MET R 298      16.835  22.840 -21.542  1.00 72.23       R    O
ATOM   2669  N   VAL R 299      15.243  21.340 -22.087  1.00 73.62       R    N
ATOM   2670  CA  VAL R 299      15.682  21.263 -23.476  1.00 74.43       R    C
ATOM   2671  CB  VAL R 299      15.274  19.896 -24.016  1.00 74.27       R    C
ATOM   2672  CG1 VAL R 299      15.621  19.794 -25.502  1.00 73.21       R    C
ATOM   2673  CG2 VAL R 299      15.969  18.788 -23.253  1.00 73.35       R    C
ATOM   2674  C   VAL R 299      14.984  22.332 -24.307  1.00 75.41       R    C
ATOM   2675  O   VAL R 299      13.754  22.362 -24.417  1.00 76.00       R    O
ATOM   2676  N   PRO R 300      15.766  23.256 -24.877  1.00 76.10       R    N
ATOM   2677  CD  PRO R 300      17.231  23.367 -24.920  1.00 75.65       R    C
ATOM   2678  CA  PRO R 300      15.182  24.338 -25.621  1.00 76.85       R    C
ATOM   2679  CB  PRO R 300      16.211  25.445 -25.714  1.00 75.84       R    C
ATOM   2680  CG  PRO R 300      17.584  24.885 -25.326  1.00 76.48       R    C
ATOM   2681  C   PRO R 300      14.788  23.872 -27.029  1.00 77.72       R    C
ATOM   2682  O   PRO R 300      15.439  23.062 -27.659  1.00 77.18       R    O
ATOM   2683  N   GLY R 301      13.653  24.369 -27.508  1.00 79.03       R    N
ATOM   2684  CA  GLY R 301      13.330  24.157 -28.925  1.00 80.40       R    C
ATOM   2685  C   GLY R 301      12.452  22.923 -29.217  1.00 82.28       R    C
ATOM   2686  O   GLY R 301      12.762  22.105 -30.061  1.00 82.07       R    O
ATOM   2687  N   VAL R 302      11.340  22.803 -28.482  1.00 83.95       R    N
ATOM   2688  CA  VAL R 302      10.336  21.802 -28.727  1.00 86.24       R    C
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ATOM	2689	CB	VAL	R	302	10.530	20.719	-27.697	1.00	85.51	R	C
ATOM	2690	CG1	VAL	R	302	10.253	19.323	-28.323	1.00	84.83	R	C
ATOM	2691	CG2	VAL	R	302	12.009	20.744	-27.282	1.00	84.47	R	C
ATOM	2692	C	VAL	R	302	8.905	22.365	-28.811	1.00	87.97	R	C
ATOM	2693	O	VAL	R	302	8.717	23.561	-29.002	1.00	88.68	R	O
ATOM	2694	N	LEU	R	303	7.882	21.462	-28.616	1.00	90.03	R	N
ATOM	2695	CA	LEU	R	303	6.591	21.538	-29.421	1.00	91.47	R	C
ATOM	2696	CB	LEU	R	303	6.528	20.691	-30.692	1.00	92.45	R	C
ATOM	2697	CG	LEU	R	303	7.913	20.421	-31.277	1.00	93.46	R	C
ATOM	2698	CD1	LEU	R	303	7.925	19.130	-32.088	1.00	93.46	R	C
ATOM	2699	CD2	LEU	R	303	8.437	21.518	-32.194	1.00	93.79	R	C
ATOM	2700	C	LEU	R	303	5.161	21.816	-28.787	1.00	92.36	R	C
ATOM	2701	O	LEU	R	303	5.009	22.832	-28.151	1.00	92.58	R	O
ATOM	2702	N	PRO	R	304	4.117	20.908	-28.913	1.00	92.77	R	N
ATOM	2703	CD	PRO	R	304	2.701	21.191	-29.072	1.00	93.52	R	C
ATOM	2704	CA	PRO	R	304	4.243	19.458	-28.646	1.00	92.92	R	C
ATOM	2705	CB	PRO	R	304	2.973	19.087	-27.857	1.00	92.91	R	C
ATOM	2706	CG	PRO	R	304	1.865	20.024	-28.339	1.00	93.42	R	C
ATOM	2707	C	PRO	R	304	4.280	18.542	-29.935	1.00	92.84	R	C
ATOM	2708	O	PRO	R	304	3.308	17.898	-30.245	1.00	92.36	R	O
ATOM	2709	N	ASP	R	305	5.401	18.532	-30.664	1.00	92.50	R	N
ATOM	2710	CA	ASP	R	305	5.465	18.034	-32.072	1.00	91.71	R	C
ATOM	2711	CB	ASP	R	305	6.433	18.867	-32.899	1.00	92.01	R	C
ATOM	2712	C	ASP	R	305	6.286	16.789	-32.066	1.00	90.87	R	C
ATOM	2713	O	ASP	R	305	7.420	16.623	-32.600	1.00	91.22	R	O
ATOM	2714	N	THR	R	306	6.020	16.044	-30.999	1.00	89.25	R	N
ATOM	2715	CA	THR	R	306	6.861	15.107	-30.538	1.00	87.16	R	C
ATOM	2716	CB	THR	R	306	6.120	15.104	-29.244	1.00	87.79	R	C
ATOM	2717	C	THR	R	306	6.536	14.110	-31.632	1.00	85.68	R	C
ATOM	2718	O	THR	R	306	6.144	14.642	-32.721	1.00	86.73	R	O
ATOM	2719	N	LEU	R	307	6.647	12.740	-31.554	1.00	83.46	R	N
ATOM	2720	CA	LEU	R	307	7.670	12.045	-30.710	1.00	81.38	R	C
ATOM	2721	CB	LEU	R	307	7.861	10.885	-31.609	1.00	83.33	R	C
ATOM	2722	CG	LEU	R	307	7.911	9.727	-30.735	1.00	84.50	R	C
ATOM	2723	CD1	LEU	R	307	7.057	9.946	-29.505	1.00	85.37	R	C
ATOM	2724	CD2	LEU	R	307	7.478	8.454	-31.417	1.00	84.85	R	C
ATOM	2725	C	LEU	R	307	9.024	12.795	-30.662	1.00	78.72	R	C
ATOM	2726	O	LEU	R	307	9.802	12.910	-31.602	1.00	77.76	R	O
ATOM	2727	N	ASN	R	308	9.241	13.110	-29.379	1.00	74.87	R	N
ATOM	2728	CA	ASN	R	308	10.604	13.198	-28.882	1.00	70.88	R	C
ATOM	2729	CB	ASN	R	308	10.764	14.553	-28.180	1.00	71.05	R	C
ATOM	2730	CG	ASN	R	308	10.584	15.666	-29.187	1.00	71.32	R	C
ATOM	2731	OD1	ASN	R	308	11.524	16.086	-29.860	1.00	69.42	R	O
ATOM	2732	ND2	ASN	R	308	9.330	16.145	-29.307	1.00	72.76	R	N
ATOM	2733	C	ASN	R	308	10.837	12.039	-27.921	1.00	67.32	R	C
ATOM	2734	O	ASN	R	308	10.101	11.855	-26.960	1.00	66.33	R	O
ATOM	2735	N	THR	R	309	11.943	11.335	-28.154	1.00	63.68	R	N
ATOM	2736	CA	THR	R	309	12.474	10.361	-27.219	1.00	60.57	R	C
ATOM	2737	CB	THR	R	309	12.801	9.120	-27.933	1.00	61.54	R	C
ATOM	2738	OG1	THR	R	309	11.548	8.609	-28.443	1.00	61.79	R	O
ATOM	2739	CG2	THR	R	309	13.202	8.074	-26.978	1.00	60.41	R	C
ATOM	2740	C	THR	R	309	13.709	10.821	-26.516	1.00	57.31	R	C
ATOM	2741	O	THR	R	309	14.518	11.399	-27.106	1.00	56.57	R	O
ATOM	2742	N	VAL	R	310	13.719	10.662	-25.207	1.00	54.47	R	N
ATOM	2743	CA	VAL	R	310	14.811	10.972	-24.379	1.00	52.38	R	C
ATOM	2744	CB	VAL	R	310	14.650	12.236	-23.544	1.00	51.82	R	C
ATOM	2745	CG1	VAL	R	310	13.410	12.691	-23.283	1.00	52.41	R	C
ATOM	2746	CG2	VAL	R	310	15.644	12.478	-22.538	1.00	47.67	R	C
ATOM	2747	C	VAL	R	310	15.498	9.854	-23.760	1.00	52.00	R	C
ATOM	2748	O	VAL	R	310	14.832	8.965	-23.452	1.00	51.06	R	O
ATOM	2749	N	ARG	R	311	16.844	9.881	-23.680	1.00	50.39	R	N
ATOM	2750	CA	ARG	R	311	17.636	9.044	-22.827	1.00	50.34	R	C
ATOM	2751	CB	ARG	R	311	18.382	8.071	-23.685	1.00	49.77	R	C
ATOM	2752	CG	ARG	R	311	17.466	7.131	-24.231	1.00	50.33	R	C
ATOM	2753	CD	ARG	R	311	18.225	5.951	-24.887	1.00	48.25	R	C
ATOM	2754	NE	ARG	R	311	19.164	6.449	-25.845	1.00	48.40	R	N
ATOM	2755	CZ	ARG	R	311	20.094	5.686	-26.333	1.00	47.77	R	C
ATOM	2756	NH1	ARG	R	311	20.286	4.483	-25.817	1.00	47.01	R	N
ATOM	2757	NH2	ARG	R	311	20.930	6.183	-27.166	1.00	44.86	R	N

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ATOM   2758  C   ARG R 311      18.638   9.873 -22.106  1.00 50.05      R    C
ATOM   2759  O   ARG R 311      19.160  10.849 -22.564  1.00 50.01      R    O
ATOM   2760  N   ILE R 312      19.005   9.397 -20.972  1.00 49.27      R    N
ATOM   2761  CA  ILE R 312      20.054  10.009 -20.194  1.00 48.58      R    C
ATOM   2762  CB  ILE R 312      19.425  10.760 -18.938  1.00 48.15      R    C
ATOM   2763  CG2 ILE R 312      20.437  11.526 -18.285  1.00 45.62      R    C
ATOM   2764  CG1 ILE R 312      18.335  11.630 -19.384  1.00 47.07      R    C
ATOM   2765  CD1 ILE R 312      17.552  12.196 -18.148  1.00 47.91      R    C
ATOM   2766  C   ILE R 312      21.130   9.104 -19.668  1.00 47.90      R    C
ATOM   2767  O   ILE R 312      20.812   8.075 -19.145  1.00 48.77      R    O
ATOM   2768  N   ARG R 313      22.397   9.485 -19.792  1.00 46.57      R    N
ATOM   2769  CA  ARG R 313      23.455   8.761 -19.035  1.00 46.06      R    C
ATOM   2770  CB  ARG R 313      24.443   8.114 -20.054  1.00 45.95      R    C
ATOM   2771  CG  ARG R 313      25.120   8.994 -20.854  1.00 43.85      R    C
ATOM   2772  CD  ARG R 313      25.770   8.153 -22.104  1.00 45.64      R    C
ATOM   2773  NE  ARG R 313      26.641   8.967 -22.942  1.00 47.51      R    N
ATOM   2774  CZ  ARG R 313      27.615   8.467 -23.644  1.00 48.52      R    C
ATOM   2775  NH1 ARG R 313      27.780   7.223 -23.634  1.00 48.93      R    N
ATOM   2776  NH2 ARG R 313      28.440   9.211 -24.327  1.00 48.72      R    N
ATOM   2777  C   ARG R 313      24.216   9.675 -18.156  1.00 46.35      R    C
ATOM   2778  O   ARG R 313      24.101  10.926 -18.315  1.00 44.37      R    O
ATOM   2779  N   VAL R 314      25.221   9.158 -17.462  1.00 45.29      R    N
ATOM   2780  CA  VAL R 314      25.783   9.929 -16.364  1.00 45.74      R    C
ATOM   2781  CB  VAL R 314      24.867   9.539 -15.130  1.00 46.13      R    C
ATOM   2782  CG1 VAL R 314      25.561   9.400 -13.942  1.00 47.48      R    C
ATOM   2783  CG2 VAL R 314      23.644  10.474 -15.035  1.00 44.87      R    C
ATOM   2784  C   VAL R 314      27.213   9.495 -16.103  1.00 45.86      R    C
ATOM   2785  O   VAL R 314      27.549   8.410 -16.273  1.00 45.19      R    O
ATOM   2786  N   LYS R 315      28.012  10.410 -15.597  1.00 45.17      R    N
ATOM   2787  CA  LYS R 315      29.411  10.186 -15.205  1.00 45.60      R    C
ATOM   2788  CB  LYS R 315      30.396  10.453 -16.373  1.00 45.36      R    C
ATOM   2789  CG  LYS R 315      30.500  11.871 -16.660  1.00 47.28      R    C
ATOM   2790  CD  LYS R 315      31.601  12.117 -17.811  1.00 47.54      R    C
ATOM   2791  CE  LYS R 315      31.724  13.600 -18.055  1.00 48.20      R    C
ATOM   2792  NZ  LYS R 315      32.778  13.957 -19.216  1.00 47.70      R    N
ATOM   2793  C   LYS R 315      29.860  10.915 -14.049  1.00 44.27      R    C
ATOM   2794  O   LYS R 315      29.239  11.844 -13.662  1.00 45.27      R    O
ATOM   2795  N   THR R 316      30.993  10.563 -13.451  1.00 43.47      R    N
ATOM   2796  CA  THR R 316      31.399  11.337 -12.235  1.00 42.83      R    C
ATOM   2797  CB  THR R 316      32.394  10.587 -11.331  1.00 42.26      R    C
ATOM   2798  OG1 THR R 316      33.362  10.177 -12.194  1.00 42.09      R    O
ATOM   2799  CG2 THR R 316      31.767   9.355 -10.816  1.00 40.88      R    C
ATOM   2800  C   THR R 316      32.110  12.606 -12.705  1.00 43.10      R    C
ATOM   2801  O   THR R 316      32.803  12.506 -13.640  1.00 41.11      R    O
ATOM   2802  N   ASN R 317      31.873  13.816 -12.092  1.00 43.52      R    N
ATOM   2803  CA  ASN R 317      32.661  14.997 -12.130  1.00 46.38      R    C
ATOM   2804  CB  ASN R 317      32.123  16.013 -10.778  1.00 46.56      R    C
ATOM   2805  CG  ASN R 317      31.132  16.678 -11.276  1.00 50.66      R    C
ATOM   2806  OD1 ASN R 317      31.227  16.780 -12.543  1.00 54.75      R    O
ATOM   2807  ND2 ASN R 317      30.170  17.164 -10.603  1.00 51.29      R    N
ATOM   2808  C   ASN R 317      34.136  14.786 -11.786  1.00 47.72      R    C
ATOM   2809  O   ASN R 317      34.335  13.899 -11.074  1.00 47.46      R    O
ATOM   2810  N   LYS R 318      34.945  15.799 -11.916  1.00 48.90      R    N
ATOM   2811  CA  LYS R 318      36.301  15.935 -11.309  1.00 50.22      R    C
ATOM   2812  CB  LYS R 318      37.303  16.666 -12.338  1.00 52.02      R    C
ATOM   2813  CG  LYS R 318      37.001  18.223 -12.395  1.00 54.66      R    C
ATOM   2814  CD  LYS R 318      38.028  19.020 -13.178  1.00 56.69      R    C
ATOM   2815  CE  LYS R 318      37.332  19.973 -14.178  1.00 60.37      R    C
ATOM   2816  NZ  LYS R 318      38.027  21.279 -14.250  1.00 62.52      R    N
ATOM   2817  C   LYS R 318      36.319  16.583  -9.871  1.00 49.36      R    C
ATOM   2818  O   LYS R 318      37.357  16.477  -9.205  1.00 47.93      R    O
ATOM   2819  N   LEU R 319      35.118  16.836  -9.312  1.00 49.14      R    N
ATOM   2820  CA  LEU R 319      34.979  17.469  -8.010  1.00 50.76      R    C
ATOM   2821  CB  LEU R 319      33.815  18.468  -8.032  1.00 49.52      R    C
ATOM   2822  CG  LEU R 319      33.842  19.321  -9.298  1.00 49.50      R    C
ATOM   2823  CD1 LEU R 319      32.549  20.109  -9.435  1.00 51.14      R    C
ATOM   2824  CD2 LEU R 319      34.945  20.362  -9.298  1.00 49.08      R    C
ATOM   2825  C   LEU R 319      34.826  16.488  -6.821  1.00 51.66      R    C
ATOM   2826  O   LEU R 319      35.153  16.826  -5.671  1.00 52.10      R    O
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ATOM	2827	N	CYS	R	320	34.255	15.280	-7.087	1.00	52.91	R N
ATOM	2828	CA	CYS	R	320	34.143	14.287	-6.015	1.00	54.27	R C
ATOM	2829	C	CYS	R	320	35.100	13.111	-6.283	1.00	54.38	R C
ATOM	2830	O	CYS	R	320	35.793	12.594	-5.408	1.00	54.35	R O
ATOM	2831	CB	CYS	R	320	32.670	13.787	-5.987	1.00	54.57	R C
ATOM	2832	SG	CYS	R	320	31.444	15.094	-5.670	1.00	55.67	R S
ATOM	2833	N	TYR	R	321	35.052	12.647	-7.540	1.00	55.44	R N
ATOM	2834	CA	TYR	R	321	35.921	11.566	-7.924	1.00	57.49	R C
ATOM	2835	CB	TYR	R	321	35.038	10.437	-8.520	1.00	57.62	R C
ATOM	2836	CG	TYR	R	321	34.109	9.835	-7.496	1.00	57.79	R C
ATOM	2837	CD1	TYR	R	321	34.556	8.880	-6.570	1.00	58.25	R C
ATOM	2838	CE1	TYR	R	321	33.703	8.424	-5.563	1.00	58.54	R C
ATOM	2839	CD2	TYR	R	321	32.779	10.271	-7.435	1.00	57.08	R C
ATOM	2840	CE2	TYR	R	321	31.940	9.831	-6.417	1.00	58.22	R C
ATOM	2841	CZ	TYR	R	321	32.377	8.910	-5.496	1.00	58.87	R C
ATOM	2842	OH	TYR	R	321	31.560	8.536	-4.446	1.00	60.59	R O
ATOM	2843	C	TYR	R	321	36.869	12.128	-8.981	1.00	58.70	R C
ATOM	2844	O	TYR	R	321	37.605	13.095	-8.757	1.00	59.32	R O
ATOM	2845	N	GLU	R	322	36.780	11.530	-10.162	1.00	60.73	R N
ATOM	2846	CA	GLU	R	322	37.583	12.049	-11.231	1.00	62.41	R C
ATOM	2847	CB	GLU	R	322	38.796	11.128	-11.294	1.00	64.08	R C
ATOM	2848	CG	GLU	R	322	39.983	11.698	-12.070	1.00	70.34	R C
ATOM	2849	CD	GLU	R	322	41.272	11.321	-11.396	1.00	74.50	R C
ATOM	2850	OE1	GLU	R	322	42.167	10.866	-12.082	1.00	77.21	R O
ATOM	2851	OE2	GLU	R	322	41.371	11.497	-10.186	1.00	76.90	R O
ATOM	2852	C	GLU	R	322	36.754	11.978	-12.512	1.00	61.99	R C
ATOM	2853	O	GLU	R	322	35.916	11.105	-12.684	1.00	61.32	R O
ATOM	2854	N	ASP	R	323	36.944	12.970	-13.403	1.00	62.19	R N
ATOM	2855	CA	ASP	R	323	36.259	12.864	-14.685	1.00	61.61	R C
ATOM	2856	CB	ASP	R	323	36.043	14.277	-15.247	1.00	61.34	R C
ATOM	2857	CG	ASP	R	323	35.390	14.308	-16.635	1.00	62.54	R C
ATOM	2858	OD1	ASP	R	323	35.228	13.261	-17.257	1.00	61.23	R O
ATOM	2859	OD2	ASP	R	323	35.086	15.409	-17.097	1.00	62.92	R O
ATOM	2860	C	ASP	R	323	37.139	12.053	-15.616	1.00	60.90	R C
ATOM	2861	O	ASP	R	323	37.947	12.567	-16.354	1.00	61.75	R O
ATOM	2862	N	ASP	R	324	36.753	10.813	-15.617	1.00	59.09	R N
ATOM	2863	CA	ASP	R	324	37.332	9.795	-16.458	1.00	59.54	R C
ATOM	2864	CB	ASP	R	324	37.447	8.433	-15.700	1.00	58.18	R C
ATOM	2865	CG	ASP	R	324	38.404	8.540	-14.456	1.00	58.12	R C
ATOM	2866	OD1	ASP	R	324	39.614	8.828	-14.657	1.00	55.65	R O
ATOM	2867	OD2	ASP	R	324	37.944	8.405	-13.275	1.00	57.00	R O
ATOM	2868	C	ASP	R	324	36.554	9.666	-17.764	1.00	59.69	R C
ATOM	2869	O	ASP	R	324	36.891	8.855	-18.629	1.00	59.37	R O
ATOM	2870	N	LYS	R	325	35.502	10.483	-17.906	1.00	59.38	R N
ATOM	2871	CA	LYS	R	325	34.622	10.260	-19.064	1.00	58.80	R C
ATOM	2872	CB	LYS	R	325	35.382	10.517	-20.361	1.00	59.63	R C
ATOM	2873	CG	LYS	R	325	36.262	11.761	-20.325	1.00	63.37	R C
ATOM	2874	CD	LYS	R	325	36.858	12.029	-21.703	1.00	65.79	R C
ATOM	2875	CE	LYS	R	325	37.800	13.230	-21.724	1.00	68.06	R C
ATOM	2876	NZ	LYS	R	325	37.884	13.752	-23.087	1.00	70.49	R N
ATOM	2877	C	LYS	R	325	34.087	8.839	-19.095	1.00	57.15	R C
ATOM	2878	O	LYS	R	325	33.972	8.198	-20.135	1.00	58.69	R O
ATOM	2879	N	LEU	R	326	33.803	8.331	-17.897	1.00	55.16	R N
ATOM	2880	CA	LEU	R	326	33.319	6.971	-17.802	1.00	52.10	R C
ATOM	2881	CB	LEU	R	326	33.986	6.352	-16.573	1.00	54.79	R C
ATOM	2882	CG	LEU	R	326	34.495	4.932	-16.818	1.00	55.97	R C
ATOM	2883	CD1	LEU	R	326	34.879	4.213	-15.523	1.00	57.62	R C
ATOM	2884	CD2	LEU	R	326	33.462	4.049	-17.512	1.00	54.38	R C
ATOM	2885	C	LEU	R	326	31.808	6.992	-17.637	1.00	50.09	R C
ATOM	2886	O	LEU	R	326	31.281	7.045	-16.536	1.00	48.96	R O
ATOM	2887	N	TRP	R	327	31.102	7.012	-18.793	1.00	47.72	R N
ATOM	2888	CA	TRP	R	327	29.654	7.144	-18.732	1.00	47.24	R C
ATOM	2889	CB	TRP	R	327	29.148	7.466	-20.138	1.00	44.70	R C
ATOM	2890	CG	TRP	R	327	29.596	8.808	-20.562	1.00	42.51	R C
ATOM	2891	CD2	TRP	R	327	29.042	10.068	-20.137	1.00	40.90	R C
ATOM	2892	CE2	TRP	R	327	29.664	11.088	-20.904	1.00	40.28	R C
ATOM	2893	CE3	TRP	R	327	28.087	10.423	-19.188	1.00	38.85	R C
ATOM	2894	CD1	TRP	R	327	30.540	9.107	-21.567	1.00	38.56	R C
ATOM	2895	NE1	TRP	R	327	30.616	10.435	-21.836	1.00	39.52	R N

ATOM	2896	CZ2	TRP	R	327	29.329	12.415	-20.704	1.00	38.74	R	C
ATOM	2897	CZ3	TRP	R	327	27.747	11.747	-18.988	1.00	38.32	R	C
ATOM	2898	CH2	TRP	R	327	28.375	12.752	-19.752	1.00	39.26	R	C
ATOM	2899	C	TRP	R	327	28.982	5.859	-18.245	1.00	48.40	R	C
ATOM	2900	O	TRP	R	327	29.460	4.746	-18.442	1.00	48.70	R	O
ATOM	2901	N	SER	R	328	27.844	6.041	-17.554	1.00	48.50	R	N
ATOM	2902	CA	SER	R	328	26.995	4.889	-17.304	1.00	49.05	R	C
ATOM	2903	CB	SER	R	328	25.930	5.296	-16.287	1.00	46.82	R	C
ATOM	2904	OG	SER	R	328	24.983	6.165	-16.912	1.00	46.96	R	O
ATOM	2905	C	SER	R	328	26.326	4.464	-18.609	1.00	49.92	R	C
ATOM	2906	O	SER	R	328	26.388	5.155	-19.623	1.00	50.22	R	O
ATOM	2907	N	ASN	R	329	25.712	3.267	-18.579	1.00	49.23	R	N
ATOM	2908	CA	ASN	R	329	24.870	2.894	-19.704	1.00	48.88	R	C
ATOM	2909	CB	ASN	R	329	24.267	1.523	-19.395	1.00	49.16	R	C
ATOM	2910	CG	ASN	R	329	25.347	0.476	-19.454	1.00	50.84	R	C
ATOM	2911	OD1	ASN	R	329	26.343	0.615	-20.156	1.00	51.96	R	O
ATOM	2912	ND2	ASN	R	329	25.126	-0.613	-18.698	1.00	49.44	R	N
ATOM	2913	C	ASN	R	329	23.743	3.915	-19.869	1.00	48.95	R	C
ATOM	2914	O	ASN	R	329	23.352	4.605	-18.938	1.00	48.39	R	O
ATOM	2915	N	TRP	R	330	23.240	4.032	-21.113	1.00	48.80	R	N
ATOM	2916	CA	TRP	R	330	22.086	4.893	-21.323	1.00	48.88	R	C
ATOM	2917	CB	TRP	R	330	21.711	4.851	-22.808	1.00	48.23	R	C
ATOM	2918	CG	TRP	R	330	22.688	5.621	-23.615	1.00	47.23	R	C
ATOM	2919	CD2	TRP	R	330	22.784	7.064	-23.719	1.00	47.22	R	C
ATOM	2920	CE2	TRP	R	330	23.799	7.348	-24.670	1.00	46.29	R	C
ATOM	2921	CE3	TRP	R	330	22.123	8.119	-23.095	1.00	46.83	R	C
ATOM	2922	CD1	TRP	R	330	23.645	5.091	-24.508	1.00	47.29	R	C
ATOM	2923	NE1	TRP	R	330	24.333	6.058	-25.170	1.00	47.42	R	N
ATOM	2924	CZ2	TRP	R	330	24.116	8.662	-24.973	1.00	45.44	R	C
ATOM	2925	CZ3	TRP	R	330	22.440	9.433	-23.398	1.00	46.73	R	C
ATOM	2926	CH2	TRP	R	330	23.448	9.704	-24.340	1.00	44.89	R	C
ATOM	2927	C	TRP	R	330	20.902	4.414	-20.481	1.00	48.65	R	C
ATOM	2928	O	TRP	R	330	20.674	3.224	-20.306	1.00	50.55	R	O
ATOM	2929	N	SER	R	331	20.152	5.378	-19.917	1.00	49.56	R	N
ATOM	2930	CA	SER	R	331	18.928	4.997	-19.225	1.00	50.78	R	C
ATOM	2931	CB	SER	R	331	18.324	6.262	-18.613	1.00	49.15	R	C
ATOM	2932	OG	SER	R	331	17.739	7.052	-19.650	1.00	47.98	R	O
ATOM	2933	C	SER	R	331	17.935	4.392	-20.213	1.00	53.51	R	C
ATOM	2934	O	SER	R	331	18.126	4.413	-21.421	1.00	54.38	R	O
ATOM	2935	N	GLN	R	332	16.863	3.797	-19.663	1.00	55.70	R	N
ATOM	2936	CA	GLN	R	332	15.769	3.410	-20.539	1.00	58.54	R	C
ATOM	2937	CB	GLN	R	332	14.796	2.547	-19.739	1.00	59.23	R	C
ATOM	2938	CG	GLN	R	332	15.428	1.227	-19.293	1.00	63.58	R	C
ATOM	2939	CD	GLN	R	332	15.638	0.339	-20.497	1.00	66.03	R	C
ATOM	2940	OE1	GLN	R	332	14.717	-0.152	-21.127	1.00	68.61	R	O
ATOM	2941	NE2	GLN	R	332	16.935	0.132	-20.801	1.00	66.39	R	N
ATOM	2942	C	GLN	R	332	15.071	4.664	-21.056	1.00	58.92	R	C
ATOM	2943	O	GLN	R	332	15.113	5.728	-20.452	1.00	58.59	R	O
ATOM	2944	N	GLU	R	333	14.454	4.539	-22.238	1.00	59.74	R	N
ATOM	2945	CA	GLU	R	333	13.906	5.743	-22.834	1.00	61.05	R	C
ATOM	2946	CB	GLU	R	333	13.842	5.582	-24.354	1.00	60.90	R	C
ATOM	2947	CG	GLU	R	333	13.447	4.175	-24.795	1.00	63.18	R	C
ATOM	2948	CD	GLU	R	333	13.527	4.097	-26.303	1.00	64.95	R	C
ATOM	2949	OE1	GLU	R	333	12.589	4.523	-26.962	1.00	65.07	R	O
ATOM	2950	OE2	GLU	R	333	14.549	3.637	-26.810	1.00	65.85	R	O
ATOM	2951	C	GLU	R	333	12.531	6.097	-22.286	1.00	61.41	R	C
ATOM	2952	O	GLU	R	333	11.874	5.339	-21.585	1.00	62.10	R	O
ATOM	2953	N	MET	R	334	12.146	7.340	-22.587	1.00	61.90	R	N
ATOM	2954	CA	MET	R	334	10.780	7.764	-22.370	1.00	63.08	R	C
ATOM	2955	CB	MET	R	334	10.672	8.375	-20.973	1.00	63.01	R	C
ATOM	2956	CG	MET	R	334	9.392	9.195	-20.797	1.00	63.17	R	C
ATOM	2957	SD	MET	R	334	9.099	9.651	-19.083	1.00	65.16	R	S
ATOM	2958	CE	MET	R	334	9.266	8.012	-18.359	1.00	62.36	R	C
ATOM	2959	C	MET	R	334	10.413	8.803	-23.418	1.00	63.76	R	C
ATOM	2960	O	MET	R	334	11.200	9.678	-23.756	1.00	63.58	R	O
ATOM	2961	N	SER	R	335	9.262	8.748	-24.104	1.00	64.91	R	N
ATOM	2962	CA	SER	R	335	8.835	9.719	-25.151	1.00	66.20	R	C
ATOM	2963	CB	SER	R	335	8.655	9.130	-26.526	1.00	66.23	R	C
ATOM	2964	OG	SER	R	335	8.514	7.778	-26.432	1.00	68.31	R	O

ATOM	2965	C	SER	R	335	7.623	10.532	-24.740	1.00	67.14	R	C
ATOM	2966	O	SER	R	335	7.164	10.355	-23.583	1.00	66.71	R	O
ATOM	2967	N	ILE	R	336	7.284	11.530	-25.565	1.00	68.37	R	N
ATOM	2968	CA	ILE	R	336	6.234	12.514	-25.362	1.00	70.69	R	C
ATOM	2969	CB	ILE	R	336	6.666	13.696	-24.423	1.00	70.06	R	C
ATOM	2970	CG2	ILE	R	336	7.733	14.619	-25.063	1.00	69.34	R	C
ATOM	2971	CG1	ILE	R	336	5.485	14.609	-24.079	1.00	69.89	R	C
ATOM	2972	CD1	ILE	R	336	5.781	15.765	-23.018	1.00	69.80	R	C
ATOM	2973	C	ILE	R	336	5.835	13.142	-26.728	1.00	73.10	R	C
ATOM	2974	O	ILE	R	336	6.690	13.231	-27.607	1.00	73.37	R	O
ATOM	2975	N	GLY	R	337	4.574	13.597	-26.834	1.00	75.30	R	N
ATOM	2976	CA	GLY	R	337	3.906	14.093	-28.019	1.00	77.98	R	C
ATOM	2977	C	GLY	R	337	3.582	12.991	-28.991	1.00	80.70	R	C
ATOM	2978	O	GLY	R	337	3.771	11.830	-28.623	1.00	80.91	R	O
ATOM	2979	N	LYS	R	338	3.080	13.348	-30.199	1.00	83.73	R	N
ATOM	2980	CA	LYS	R	338	2.940	12.390	-31.351	1.00	86.40	R	C
ATOM	2981	CB	LYS	R	338	1.772	11.391	-31.148	1.00	87.18	R	C
ATOM	2982	CG	LYS	R	338	2.124	9.953	-31.819	1.00	88.18	R	C
ATOM	2983	CD	LYS	R	338	2.463	8.709	-30.943	1.00	89.20	R	C
ATOM	2984	CE	LYS	R	338	2.614	7.349	-31.841	1.00	90.05	R	C
ATOM	2985	NZ	LYS	R	338	3.830	7.108	-32.718	1.00	90.07	R	N
ATOM	2986	C	LYS	R	338	3.012	12.883	-32.821	1.00	87.92	R	C
ATOM	2987	O	LYS	R	338	3.053	14.078	-33.092	1.00	88.32	R	O
ATOM	2988	N	LYS	R	339	3.244	11.860	-33.664	1.00	89.43	R	N
ATOM	2989	CA	LYS	R	339	2.989	11.514	-35.098	1.00	90.66	R	C
ATOM	2990	CB	LYS	R	339	3.608	12.487	-36.108	1.00	90.65	R	C
ATOM	2991	C	LYS	R	339	3.687	10.064	-35.124	1.00	91.59	R	C
ATOM	2992	O	LYS	R	339	4.948	9.729	-35.171	1.00	92.23	R	O
ATOM	2993	OXT	LYS	R	339	2.966	9.031	-34.894	1.00	92.68	R	O
ATOM	2994	CB	ASP	L	1	45.108	47.536	19.263	1.00	55.28	L	C
ATOM	2995	CG	ASP	L	1	43.772	47.248	19.777	1.00	57.07	L	C
ATOM	2996	OD1	ASP	L	1	43.684	46.206	20.486	1.00	58.59	L	O
ATOM	2997	OD2	ASP	L	1	42.739	47.833	19.390	1.00	58.03	L	O
ATOM	2998	C	ASP	L	1	47.516	47.071	19.380	1.00	53.88	L	C
ATOM	2999	O	ASP	L	1	48.114	47.863	19.920	1.00	53.80	L	O
ATOM	3000	N	ASP	L	1	45.989	46.823	21.353	1.00	54.39	L	N
ATOM	3001	CA	ASP	L	1	46.148	46.658	19.903	1.00	53.85	L	C
ATOM	3002	N	ILE	L	2	48.035	46.579	18.249	1.00	53.02	L	N
ATOM	3003	CA	ILE	L	2	49.273	47.069	17.763	1.00	51.46	L	C
ATOM	3004	CB	ILE	L	2	49.731	46.111	16.746	1.00	51.89	L	C
ATOM	3005	CG2	ILE	L	2	50.966	46.534	15.919	1.00	50.86	L	C
ATOM	3006	CG1	ILE	L	2	50.075	44.848	17.388	1.00	51.86	L	C
ATOM	3007	CD1	ILE	L	2	50.600	43.743	16.271	1.00	52.35	L	C
ATOM	3008	C	ILE	L	2	49.161	48.486	17.264	1.00	50.87	L	C
ATOM	3009	O	ILE	L	2	48.216	48.806	16.492	1.00	52.29	L	O
ATOM	3010	N	VAL	L	3	50.048	49.374	17.741	1.00	49.99	L	N
ATOM	3011	CA	VAL	L	3	50.093	50.795	17.349	1.00	47.23	L	C
ATOM	3012	CB	VAL	L	3	50.385	51.693	18.564	1.00	45.72	L	C
ATOM	3013	CG1	VAL	L	3	50.543	53.219	18.192	1.00	40.75	L	C
ATOM	3014	CG2	VAL	L	3	49.243	51.541	19.551	1.00	44.61	L	C
ATOM	3015	C	VAL	L	3	51.288	50.934	16.439	1.00	46.87	L	C
ATOM	3016	O	VAL	L	3	52.288	50.411	16.719	1.00	47.44	L	O
ATOM	3017	N	LEU	L	4	51.115	51.549	15.306	1.00	45.47	L	N
ATOM	3018	CA	LEU	L	4	52.177	51.740	14.342	1.00	46.51	L	C
ATOM	3019	CB	LEU	L	4	51.794	51.273	12.801	1.00	46.37	L	C
ATOM	3020	CG	LEU	L	4	51.205	49.853	12.683	1.00	47.87	L	C
ATOM	3021	CD1	LEU	L	4	50.966	49.673	11.414	1.00	47.17	L	C
ATOM	3022	CD2	LEU	L	4	52.111	48.792	13.310	1.00	47.09	L	C
ATOM	3023	C	LEU	L	4	52.378	53.271	14.306	1.00	45.92	L	C
ATOM	3024	O	LEU	L	4	51.514	53.995	14.010	1.00	45.62	L	O
ATOM	3025	N	THR	L	5	53.595	53.665	14.404	1.00	45.95	L	N
ATOM	3026	CA	THR	L	5	54.023	55.006	14.373	1.00	46.85	L	C
ATOM	3027	CB	THR	L	5	54.812	55.199	15.705	1.00	46.65	L	C
ATOM	3028	OG1	THR	L	5	53.831	54.993	16.770	1.00	47.07	L	O
ATOM	3029	CG2	THR	L	5	55.159	56.615	15.835	1.00	45.76	L	C
ATOM	3030	C	THR	L	5	54.846	55.321	13.123	1.00	46.19	L	C
ATOM	3031	O	THR	L	5	55.915	54.893	13.007	1.00	47.94	L	O
ATOM	3032	N	GLN	L	6	54.395	56.190	12.249	1.00	45.30	L	N
ATOM	3033	CA	GLN	L	6	55.271	56.497	11.051	1.00	44.84	L	C

ATOM	3034	CB	GLN	L	6	54.334	56.787	9.868	1.00	44.65	L	C
ATOM	3035	CG	GLN	L	6	53.377	55.566	9.584	1.00	42.77	L	C
ATOM	3036	CD	GLN	L	6	52.678	55.622	8.399	1.00	43.26	L	C
ATOM	3037	OE1	GLN	L	6	51.527	55.138	8.442	1.00	40.72	L	O
ATOM	3038	NE2	GLN	L	6	53.311	56.196	7.285	1.00	40.31	L	N
ATOM	3039	C	GLN	L	6	56.164	57.684	11.332	1.00	44.60	L	C
ATOM	3040	O	GLN	L	6	55.834	58.708	12.138	1.00	44.62	L	O
ATOM	3041	N	SER	L	7	57.360	57.613	10.803	1.00	44.40	L	N
ATOM	3042	CA	SER	L	7	58.136	58.881	10.869	1.00	44.64	L	C
ATOM	3043	CB	SER	L	7	59.139	58.836	11.990	1.00	45.02	L	C
ATOM	3044	OG	SER	L	7	59.810	57.747	12.082	1.00	43.10	L	O
ATOM	3045	C	SER	L	7	58.931	58.984	9.567	1.00	44.16	L	C
ATOM	3046	O	SER	L	7	59.211	57.952	9.121	1.00	43.07	L	O
ATOM	3047	N	PRO	L	8	59.208	60.157	9.001	1.00	44.18	L	N
ATOM	3048	CD	PRO	L	8	59.790	60.409	7.682	1.00	42.55	L	C
ATOM	3049	CA	PRO	L	8	58.763	61.394	9.582	1.00	44.95	L	C
ATOM	3050	CB	PRO	L	8	59.465	62.429	8.780	1.00	45.54	L	C
ATOM	3051	CG	PRO	L	8	59.469	61.921	7.428	1.00	43.82	L	C
ATOM	3052	C	PRO	L	8	57.272	61.528	9.399	1.00	46.33	L	C
ATOM	3053	O	PRO	L	8	56.761	60.744	8.659	1.00	45.84	L	O
ATOM	3054	N	ALA	L	9	56.624	62.578	9.923	1.00	46.67	L	N
ATOM	3055	CA	ALA	L	9	55.199	62.817	9.692	1.00	47.31	L	C
ATOM	3056	CB	ALA	L	9	54.666	63.799	10.774	1.00	44.86	L	C
ATOM	3057	C	ALA	L	9	54.997	63.494	8.291	1.00	47.65	L	C
ATOM	3058	O	ALA	L	9	53.994	63.269	7.637	1.00	47.24	L	O
ATOM	3059	N	SER	L	10	55.954	64.256	7.850	1.00	47.39	L	N
ATOM	3060	CA	SER	L	10	55.865	64.857	6.396	1.00	47.27	L	C
ATOM	3061	CB	SER	L	10	55.188	66.124	6.377	1.00	47.86	L	C
ATOM	3062	OG	SER	L	10	55.940	67.005	7.153	1.00	52.42	L	O
ATOM	3063	C	SER	L	10	57.249	65.126	5.893	1.00	46.24	L	C
ATOM	3064	O	SER	L	10	58.220	65.199	6.713	1.00	45.57	L	O
ATOM	3065	N	LEU	L	11	57.436	65.116	4.556	1.00	45.55	L	N
ATOM	3066	CA	LEU	L	11	58.696	65.349	4.051	1.00	47.02	L	C
ATOM	3067	CB	LEU	L	11	59.677	64.273	4.174	1.00	46.19	L	C
ATOM	3068	CG	LEU	L	11	59.455	62.842	3.681	1.00	48.73	L	C
ATOM	3069	CD1	LEU	L	11	58.223	62.745	3.064	1.00	48.29	L	C
ATOM	3070	CD2	LEU	L	11	60.627	62.242	2.868	1.00	47.04	L	C
ATOM	3071	C	LEU	L	11	58.582	65.890	2.664	1.00	47.80	L	C
ATOM	3072	O	LEU	L	11	57.628	65.515	2.026	1.00	49.05	L	O
ATOM	3073	N	ALA	L	12	59.590	66.695	2.255	1.00	48.67	L	N
ATOM	3074	CA	ALA	L	12	59.682	67.388	0.926	1.00	49.18	L	C
ATOM	3075	CB	ALA	L	12	59.624	68.839	1.108	1.00	47.86	L	C
ATOM	3076	C	ALA	L	12	61.038	66.951	0.353	1.00	49.73	L	C
ATOM	3077	O	ALA	L	12	62.069	66.973	1.136	1.00	50.03	L	O
ATOM	3078	N	VAL	L	13	61.019	66.499	-0.936	1.00	49.69	L	N
ATOM	3079	CA	VAL	L	13	62.096	65.902	-1.610	1.00	49.56	L	C
ATOM	3080	CB	VAL	L	13	61.867	64.417	-1.751	1.00	50.10	L	C
ATOM	3081	CG1	VAL	L	13	63.090	63.700	-2.535	1.00	49.03	L	C
ATOM	3082	CG2	VAL	L	13	61.881	63.650	-0.385	1.00	48.49	L	C
ATOM	3083	C	VAL	L	13	62.081	66.387	-3.096	1.00	49.81	L	C
ATOM	3084	O	VAL	L	13	60.965	66.532	-3.673	1.00	48.90	L	O
ATOM	3085	N	SER	L	14	63.266	66.552	-3.698	1.00	51.08	L	N
ATOM	3086	CA	SER	L	14	63.372	67.112	-5.090	1.00	52.59	L	C
ATOM	3087	CB	SER	L	14	64.664	67.798	-5.413	1.00	53.64	L	C
ATOM	3088	OG	SER	L	14	65.034	68.809	-4.530	1.00	57.54	L	O
ATOM	3089	C	SER	L	14	63.196	66.058	-6.019	1.00	52.19	L	C
ATOM	3090	O	SER	L	14	63.395	64.859	-5.695	1.00	50.20	L	O
ATOM	3091	N	LEU	L	15	62.698	66.434	-7.134	1.00	53.27	L	N
ATOM	3092	CA	LEU	L	15	62.574	65.390	-8.237	1.00	54.53	L	C
ATOM	3093	CB	LEU	L	15	62.142	66.024	-9.524	1.00	55.40	L	C
ATOM	3094	CG	LEU	L	15	60.716	66.501	-9.429	1.00	58.56	L	C
ATOM	3095	CD1	LEU	L	15	59.911	67.289	-10.574	1.00	58.01	L	C
ATOM	3096	CD2	LEU	L	15	60.005	65.204	-9.238	1.00	60.27	L	C
ATOM	3097	C	LEU	L	15	63.914	64.654	-8.459	1.00	55.55	L	C
ATOM	3098	O	LEU	L	15	64.930	65.289	-8.375	1.00	55.36	L	O
ATOM	3099	N	GLY	L	16	63.795	63.337	-8.663	1.00	56.75	L	N
ATOM	3100	CA	GLY	L	16	64.822	62.284	-8.802	1.00	58.63	L	C
ATOM	3101	C	GLY	L	16	65.683	61.943	-7.633	1.00	60.16	L	C
ATOM	3102	O	GLY	L	16	66.674	61.253	-7.795	1.00	61.71	L	O

ATOM	3103	N	GLN	L	17	65.434	62.607	-6.519	1.00	60.61	L	N
ATOM	3104	CA	GLN	L	17	65.963	62.217	-5.216	1.00	60.86	L	C
ATOM	3105	CB	GLN	L	17	65.978	63.455	-4.328	1.00	61.98	L	C
ATOM	3106	CG	GLN	L	17	66.931	64.635	-4.734	1.00	63.16	L	C
ATOM	3107	CD	GLN	L	17	68.419	64.089	-5.008	1.00	65.17	L	C
ATOM	3108	OE1	GLN	L	17	69.148	63.567	-4.073	1.00	65.16	L	O
ATOM	3109	NE2	GLN	L	17	68.787	64.108	-6.313	1.00	64.55	L	N
ATOM	3110	C	GLN	L	17	65.173	61.036	-4.565	1.00	60.56	L	C
ATOM	3111	O	GLN	L	17	64.239	60.498	-5.052	1.00	60.18	L	O
ATOM	3112	N	ARG	L	18	65.618	60.659	-3.379	1.00	60.22	L	N
ATOM	3113	CA	ARG	L	18	65.179	59.485	-2.698	1.00	60.54	L	C
ATOM	3114	CB	ARG	L	18	66.356	58.697	-2.216	1.00	62.33	L	C
ATOM	3115	CG	ARG	L	18	65.975	57.341	-1.777	1.00	66.77	L	C
ATOM	3116	CD	ARG	L	18	67.139	56.520	-1.168	1.00	68.42	L	C
ATOM	3117	NE	ARG	L	18	67.633	57.422	-0.155	1.00	71.65	L	N
ATOM	3118	CZ	ARG	L	18	68.200	57.067	0.931	1.00	73.04	L	C
ATOM	3119	NH1	ARG	L	18	68.376	55.781	1.210	1.00	74.42	L	N
ATOM	3120	NH2	ARG	L	18	68.597	58.027	1.771	1.00	73.52	L	N
ATOM	3121	C	ARG	L	18	64.423	59.827	-1.432	1.00	59.73	L	C
ATOM	3122	O	ARG	L	18	64.878	60.597	-0.565	1.00	59.95	L	O
ATOM	3123	N	ALA	L	19	63.285	59.225	-1.304	1.00	57.66	L	N
ATOM	3124	CA	ALA	L	19	62.597	59.398	-0.115	1.00	56.97	L	C
ATOM	3125	CB	ALA	L	19	61.261	59.878	-0.465	1.00	56.41	L	C
ATOM	3126	C	ALA	L	19	62.473	58.120	0.563	1.00	56.01	L	C
ATOM	3127	O	ALA	L	19	62.181	57.057	-0.083	1.00	55.90	L	O
ATOM	3128	N	THR	L	20	62.553	58.230	1.861	1.00	54.57	L	N
ATOM	3129	CA	THR	L	20	62.530	57.145	2.729	1.00	54.71	L	C
ATOM	3130	CB	THR	L	20	63.976	56.984	3.320	1.00	55.31	L	C
ATOM	3131	OG1	THR	L	20	64.811	56.247	2.349	1.00	58.52	L	O
ATOM	3132	CG2	THR	L	20	63.997	55.982	4.450	1.00	54.15	L	C
ATOM	3133	C	THR	L	20	61.488	57.301	3.965	1.00	54.23	L	C
ATOM	3134	O	THR	L	20	61.495	58.250	4.662	1.00	55.01	L	O
ATOM	3135	N	ILE	L	21	60.594	56.353	4.184	1.00	52.55	L	N
ATOM	3136	CA	ILE	L	21	59.478	56.571	5.138	1.00	51.39	L	C
ATOM	3137	CB	ILE	L	21	58.267	56.531	4.332	1.00	51.03	L	C
ATOM	3138	CG2	ILE	L	21	57.101	56.522	5.229	1.00	50.72	L	C
ATOM	3139	CG1	ILE	L	21	58.199	57.829	3.513	1.00	50.62	L	C
ATOM	3140	CD1	ILE	L	21	56.828	57.893	2.664	1.00	51.38	L	C
ATOM	3141	C	ILE	L	21	59.550	55.393	6.102	1.00	50.89	L	C
ATOM	3142	O	ILE	L	21	59.654	54.245	5.588	1.00	50.75	L	O
ATOM	3143	N	SER	L	22	59.500	55.604	7.412	1.00	48.72	L	N
ATOM	3144	CA	SER	L	22	59.530	54.455	8.218	1.00	49.28	L	C
ATOM	3145	CB	SER	L	22	60.870	54.319	8.753	1.00	50.79	L	C
ATOM	3146	OG	SER	L	22	61.230	55.479	9.171	1.00	54.83	L	O
ATOM	3147	C	SER	L	22	58.395	54.153	9.139	1.00	48.61	L	C
ATOM	3148	O	SER	L	22	57.519	55.017	9.484	1.00	48.61	L	O
ATOM	3149	N	CYS	L	23	58.280	52.943	9.516	1.00	48.09	L	N
ATOM	3150	CA	CYS	L	23	57.217	52.634	10.437	1.00	49.40	L	C
ATOM	3151	C	CYS	L	23	57.811	51.946	11.667	1.00	49.17	L	C
ATOM	3152	O	CYS	L	23	58.420	50.962	11.568	1.00	50.55	L	O
ATOM	3153	CB	CYS	L	23	56.230	51.648	9.696	1.00	47.98	L	C
ATOM	3154	SG	CYS	L	23	54.576	51.056	10.342	1.00	52.95	L	S
ATOM	3155	N	LYS	L	24	57.261	52.210	12.742	1.00	48.85	L	N
ATOM	3156	CA	LYS	L	24	57.583	51.323	14.012	1.00	49.76	L	C
ATOM	3157	CB	LYS	L	24	58.391	52.158	14.922	1.00	50.72	L	C
ATOM	3158	CG	LYS	L	24	58.429	51.726	16.593	1.00	52.19	L	C
ATOM	3159	CD	LYS	L	24	59.897	51.577	16.954	1.00	55.36	L	C
ATOM	3160	CE	LYS	L	24	60.182	50.188	17.675	1.00	56.92	L	C
ATOM	3161	NZ	LYS	L	24	61.602	49.679	17.499	1.00	58.53	L	N
ATOM	3162	C	LYS	L	24	56.402	50.795	14.619	1.00	49.31	L	C
ATOM	3163	O	LYS	L	24	55.435	51.454	14.980	1.00	49.16	L	O
ATOM	3164	N	ALA	L	25	56.376	49.572	14.892	1.00	49.30	L	N
ATOM	3165	CA	ALA	L	25	55.234	49.028	15.546	1.00	49.48	L	C
ATOM	3166	CB	ALA	L	25	54.953	47.724	14.762	1.00	47.96	L	C
ATOM	3167	C	ALA	L	25	55.445	48.694	17.022	1.00	50.20	L	C
ATOM	3168	O	ALA	L	25	56.480	48.267	17.399	1.00	49.44	L	O
ATOM	3169	N	SER	L	26	54.398	48.740	17.797	1.00	51.08	L	N
ATOM	3170	CA	SER	L	26	54.567	48.567	19.242	1.00	53.13	L	C
ATOM	3171	CB	SER	L	26	53.332	49.105	19.920	1.00	52.28	L	C

ATOM	3172	OG	SER	L	26	52.243	48.435	19.292	1.00	52.65	L	O
ATOM	3173	C	SER	L	26	54.774	47.175	19.632	1.00	55.40	L	C
ATOM	3174	O	SER	L	26	55.013	46.923	20.721	1.00	55.86	L	O
ATOM	3175	N	GLU	L	27	54.637	46.243	18.729	1.00	56.96	L	N
ATOM	3176	CA	GLU	L	27	54.838	44.861	18.928	1.00	57.52	L	C
ATOM	3177	CB	GLU	L	27	53.453	44.334	19.153	1.00	60.89	L	C
ATOM	3178	CG	GLU	L	27	53.153	43.582	20.429	1.00	66.03	L	C
ATOM	3179	CD	GLU	L	27	52.824	44.531	21.585	1.00	70.45	L	C
ATOM	3180	OE1	GLU	L	27	51.607	44.914	21.710	1.00	73.02	L	O
ATOM	3181	OE2	GLU	L	27	53.793	44.893	22.334	1.00	72.02	L	O
ATOM	3182	C	GLU	L	27	55.191	44.233	17.624	1.00	56.33	L	C
ATOM	3183	O	GLU	L	27	54.884	44.731	16.612	1.00	54.86	L	O
ATOM	3184	N	SER	L	28	55.715	43.027	17.631	1.00	56.67	L	N
ATOM	3185	CA	SER	L	28	56.161	42.382	16.351	1.00	55.27	L	C
ATOM	3186	CB	SER	L	28	56.723	41.077	16.656	1.00	53.96	L	C
ATOM	3187	OG	SER	L	28	57.529	40.535	15.622	1.00	56.49	L	O
ATOM	3188	C	SER	L	28	55.000	42.100	15.481	1.00	54.43	L	C
ATOM	3189	O	SER	L	28	54.124	41.630	15.977	1.00	54.12	L	O
ATOM	3190	N	VAL	L	29	55.162	42.207	14.141	1.00	53.99	L	N
ATOM	3191	CA	VAL	L	29	54.170	41.736	13.189	1.00	53.99	L	C
ATOM	3192	CB	VAL	L	29	53.760	42.905	12.246	1.00	52.07	L	C
ATOM	3193	CG1	VAL	L	29	53.450	44.030	13.131	1.00	50.61	L	C
ATOM	3194	CG2	VAL	L	29	54.794	43.332	11.216	1.00	50.81	L	C
ATOM	3195	C	VAL	L	29	54.684	40.567	12.449	1.00	55.43	L	C
ATOM	3196	O	VAL	L	29	54.029	40.128	11.565	1.00	55.80	L	O
ATOM	3197	N	ASP	L	30A	55.823	39.964	12.809	1.00	55.85	L	N
ATOM	3198	CA	ASP	L	30A	56.207	38.724	12.097	1.00	56.24	L	C
ATOM	3199	CB	ASP	L	30A	57.610	38.437	12.307	1.00	57.40	L	C
ATOM	3200	CG	ASP	L	30A	58.540	39.376	11.585	1.00	60.95	L	C
ATOM	3201	OD1	ASP	L	30A	59.709	39.192	11.915	1.00	63.22	L	O
ATOM	3202	OD2	ASP	L	30A	58.262	40.297	10.706	1.00	60.76	L	O
ATOM	3203	C	ASP	L	30A	55.441	37.453	12.548	1.00	55.44	L	C
ATOM	3204	O	ASP	L	30A	55.032	37.344	13.692	1.00	54.11	L	O
ATOM	3205	N	ASN	L	30B	55.172	36.561	11.637	1.00	56.01	L	N
ATOM	3206	CA	ASN	L	30B	54.376	35.290	11.874	1.00	56.75	L	C
ATOM	3207	CB	ASN	L	30B	53.122	35.263	11.102	1.00	57.19	L	C
ATOM	3208	CG	ASN	L	30B	52.338	33.978	11.310	1.00	57.97	L	C
ATOM	3209	OD1	ASN	L	30B	52.062	33.581	12.461	1.00	56.40	L	O
ATOM	3210	ND2	ASN	L	30B	52.051	33.231	10.119	1.00	56.26	L	N
ATOM	3211	C	ASN	L	30B	55.197	34.018	11.810	1.00	57.63	L	C
ATOM	3212	O	ASN	L	30B	55.549	33.299	12.907	1.00	59.38	L	O
ATOM	3213	N	TYR	L	30C	55.972	33.851	10.826	1.00	58.12	L	N
ATOM	3214	CA	TYR	L	30C	56.966	32.728	11.255	1.00	57.56	L	C
ATOM	3215	CB	TYR	L	30C	56.393	31.318	10.871	1.00	59.59	L	C
ATOM	3216	CG	TYR	L	30C	55.804	30.433	11.997	1.00	62.38	L	C
ATOM	3217	CD1	TYR	L	30C	56.575	29.521	12.651	1.00	63.98	L	C
ATOM	3218	CE1	TYR	L	30C	56.062	28.868	13.663	1.00	65.37	L	C
ATOM	3219	CD2	TYR	L	30C	54.516	30.530	12.335	1.00	62.73	L	C
ATOM	3220	CE2	TYR	L	30C	53.994	29.934	13.359	1.00	65.31	L	C
ATOM	3221	CZ	TYR	L	30C	54.751	29.057	14.043	1.00	66.28	L	C
ATOM	3222	OH	TYR	L	30C	54.177	28.331	15.161	1.00	67.53	L	O
ATOM	3223	C	TYR	L	30C	58.014	32.886	10.322	1.00	56.78	L	C
ATOM	3224	O	TYR	L	30C	57.979	32.197	9.221	1.00	56.52	L	O
ATOM	3225	N	GLY	L	30D	58.707	33.978	10.516	1.00	55.18	L	N
ATOM	3226	CA	GLY	L	30D	59.595	34.468	9.451	1.00	53.84	L	C
ATOM	3227	C	GLY	L	30D	58.974	35.386	8.429	1.00	53.10	L	C
ATOM	3228	O	GLY	L	30D	59.696	35.905	7.594	1.00	52.98	L	O
ATOM	3229	N	LYS	L	30E	57.655	35.574	8.425	1.00	52.44	L	N
ATOM	3230	CA	LYS	L	30E	57.221	36.521	7.395	1.00	51.96	L	C
ATOM	3231	CB	LYS	L	30E	56.282	35.893	6.222	1.00	53.54	L	C
ATOM	3232	CG	LYS	L	30E	56.499	34.508	5.741	1.00	52.86	L	C
ATOM	3233	CD	LYS	L	30E	55.680	33.333	6.760	1.00	52.44	L	C
ATOM	3234	CE	LYS	L	30E	56.238	32.000	6.799	1.00	53.21	L	C
ATOM	3235	NZ	LYS	L	30E	55.917	30.965	7.780	1.00	52.68	L	N
ATOM	3236	C	LYS	L	30E	56.619	37.756	8.105	1.00	50.72	L	C
ATOM	3237	O	LYS	L	30E	56.010	37.576	9.096	1.00	51.31	L	O
ATOM	3238	N	SER	L	31	56.795	38.955	7.602	1.00	47.57	L	N
ATOM	3239	CA	SER	L	31	56.368	40.158	8.308	1.00	46.85	L	C
ATOM	3240	CB	SER	L	31	57.408	41.265	8.194	1.00	47.13	L	C

ATOM	3241	OG	SER	L	31	58.776	40.786	8.489	1.00	49.94	L	O
ATOM	3242	C	SER	L	31	55.073	40.596	7.675	1.00	46.30	L	C
ATOM	3243	O	SER	L	31	55.007	40.931	6.496	1.00	47.15	L	O
ATOM	3244	N	LEU	L	32	54.082	40.732	8.542	1.00	45.54	L	N
ATOM	3245	CA	LEU	L	32	52.707	40.890	8.042	1.00	44.95	L	C
ATOM	3246	CB	LEU	L	32	51.658	40.126	8.959	1.00	43.45	L	C
ATOM	3247	CG	LEU	L	32	51.951	38.635	9.078	1.00	42.44	L	C
ATOM	3248	CD1	LEU	L	32	50.943	37.801	9.742	1.00	40.43	L	C
ATOM	3249	CD2	LEU	L	32	52.063	38.084	7.588	1.00	40.35	L	C
ATOM	3250	C	LEU	L	32	52.494	42.421	8.128	1.00	45.90	L	C
ATOM	3251	O	LEU	L	32	51.620	42.800	8.861	1.00	45.96	L	O
ATOM	3252	N	MET	L	33	53.135	43.182	7.215	1.00	44.68	L	N
ATOM	3253	CA	MET	L	33	53.114	44.629	7.195	1.00	46.62	L	C
ATOM	3254	CB	MET	L	33	54.453	45.212	7.636	1.00	48.40	L	C
ATOM	3255	CG	MET	L	33	54.706	46.723	7.347	1.00	51.53	L	C
ATOM	3256	SD	MET	L	33	53.565	47.476	8.816	1.00	57.60	L	S
ATOM	3257	CE	MET	L	33	54.234	47.188	10.430	1.00	55.27	L	C
ATOM	3258	C	MET	L	33	52.978	44.924	5.655	1.00	45.90	L	C
ATOM	3259	O	MET	L	33	53.599	44.269	4.780	1.00	45.80	L	O
ATOM	3260	N	HIS	L	34	52.113	45.875	5.332	1.00	43.80	L	N
ATOM	3261	CA	HIS	L	34	51.930	46.321	3.910	1.00	43.27	L	C
ATOM	3262	CB	HIS	L	34	50.514	45.888	3.633	1.00	42.70	L	C
ATOM	3263	CG	HIS	L	34	50.190	44.505	4.049	1.00	41.65	L	C
ATOM	3264	CD2	HIS	L	34	49.217	44.047	4.864	1.00	44.21	L	C
ATOM	3265	ND1	HIS	L	34	50.838	43.400	3.574	1.00	42.76	L	N
ATOM	3266	CE1	HIS	L	34	50.297	42.330	4.140	1.00	43.50	L	C
ATOM	3267	NE2	HIS	L	34	49.304	42.711	4.907	1.00	42.79	L	N
ATOM	3268	C	HIS	L	34	51.890	47.798	3.859	1.00	42.81	L	C
ATOM	3269	O	HIS	L	34	51.722	48.488	4.923	1.00	44.23	L	O
ATOM	3270	N	TRP	L	35	52.117	48.370	2.676	1.00	41.84	L	N
ATOM	3271	CA	TRP	L	35	52.202	49.815	2.481	1.00	41.57	L	C
ATOM	3272	CB	TRP	L	35	53.559	50.142	2.025	1.00	40.46	L	C
ATOM	3273	CG	TRP	L	35	54.525	50.108	3.172	1.00	41.35	L	C
ATOM	3274	CD2	TRP	L	35	54.944	51.224	3.971	1.00	41.73	L	C
ATOM	3275	CE2	TRP	L	35	56.052	50.760	4.800	1.00	41.68	L	C
ATOM	3276	CE3	TRP	L	35	54.491	52.502	4.165	1.00	40.10	L	C
ATOM	3277	CD1	TRP	L	35	55.573	49.170	3.306	1.00	41.34	L	C
ATOM	3278	NE1	TRP	L	35	56.439	49.548	4.300	1.00	41.83	L	N
ATOM	3279	CZ2	TRP	L	35	56.704	51.592	5.736	1.00	41.45	L	C
ATOM	3280	CZ3	TRP	L	35	55.082	53.332	5.309	1.00	41.11	L	C
ATOM	3281	CH2	TRP	L	35	56.169	52.825	6.002	1.00	41.44	L	C
ATOM	3282	C	TRP	L	35	51.210	50.279	1.457	1.00	42.23	L	C
ATOM	3283	O	TRP	L	35	51.012	49.567	0.372	1.00	43.53	L	O
ATOM	3284	N	TYR	L	36	50.489	51.384	1.725	1.00	40.06	L	N
ATOM	3285	CA	TYR	L	36	49.548	51.881	0.769	1.00	39.58	L	C
ATOM	3286	CB	TYR	L	36	48.068	51.823	1.298	1.00	38.10	L	C
ATOM	3287	CG	TYR	L	36	47.633	50.524	1.872	1.00	39.65	L	C
ATOM	3288	CD1	TYR	L	36	48.018	50.099	3.040	1.00	37.47	L	C
ATOM	3289	CE1	TYR	L	36	47.728	48.721	3.438	1.00	37.52	L	C
ATOM	3290	CD2	TYR	L	36	47.005	49.647	1.020	1.00	36.92	L	C
ATOM	3291	CE2	TYR	L	36	46.662	48.284	1.426	1.00	36.87	L	C
ATOM	3292	CZ	TYR	L	36	47.070	47.850	2.651	1.00	37.75	L	C
ATOM	3293	OH	TYR	L	36	46.782	46.544	3.043	1.00	39.29	L	O
ATOM	3294	C	TYR	L	36	49.883	53.400	0.509	1.00	40.31	L	C
ATOM	3295	O	TYR	L	36	50.509	54.086	1.359	1.00	38.66	L	O
ATOM	3296	N	GLN	L	37	49.535	53.818	-0.725	1.00	39.96	L	N
ATOM	3297	CA	GLN	L	37	49.704	55.158	-1.255	1.00	40.83	L	C
ATOM	3298	CB	GLN	L	37	50.186	55.133	-2.658	1.00	39.79	L	C
ATOM	3299	CG	GLN	L	37	50.494	56.431	-3.274	1.00	42.07	L	C
ATOM	3300	CD	GLN	L	37	51.024	56.484	-4.754	1.00	44.50	L	C
ATOM	3301	OE1	GLN	L	37	50.377	56.066	-5.645	1.00	47.36	L	O
ATOM	3302	NE2	GLN	L	37	52.180	57.013	-4.930	1.00	43.45	L	N
ATOM	3303	C	GLN	L	37	48.324	55.765	-1.490	1.00	40.88	L	C
ATOM	3304	O	GLN	L	37	47.497	55.064	-2.111	1.00	39.82	L	O
ATOM	3305	N	GLN	L	38	48.031	56.962	-0.927	1.00	41.63	L	N
ATOM	3306	CA	GLN	L	38	46.767	57.644	-1.200	1.00	42.50	L	C
ATOM	3307	CB	GLN	L	38	45.989	57.803	0.033	1.00	42.26	L	C
ATOM	3308	CG	GLN	L	38	44.570	58.433	-0.190	1.00	41.96	L	C
ATOM	3309	CD	GLN	L	38	43.661	58.451	1.068	1.00	42.42	L	C

ATOM	3310	OE1	GLN	L	38	44.153	58.584	2.191	1.00	40.92	L	O
ATOM	3311	NE2	GLN	L	38	42.275	58.205	0.809	1.00	41.03	L	N
ATOM	3312	C	GLN	L	38	47.132	59.057	-1.704	1.00	43.48	L	C
ATOM	3313	O	GLN	L	38	47.433	59.962	-0.961	1.00	43.75	L	O
ATOM	3314	N	LYS	L	39	47.003	59.229	-2.988	1.00	45.16	L	N
ATOM	3315	CA	LYS	L	39	47.000	60.502	-3.632	1.00	46.88	L	C
ATOM	3316	CB	LYS	L	39	47.079	60.354	-5.121	1.00	48.09	L	C
ATOM	3317	CG	LYS	L	39	48.104	59.370	-5.531	1.00	50.07	L	C
ATOM	3318	CD	LYS	L	39	48.627	59.508	-6.952	1.00	53.52	L	C
ATOM	3319	CE	LYS	L	39	48.304	58.426	-7.919	1.00	56.25	L	C
ATOM	3320	NZ	LYS	L	39	49.534	58.012	-8.719	1.00	56.24	L	N
ATOM	3321	C	LYS	L	39	45.820	61.324	-3.269	1.00	47.86	L	C
ATOM	3322	O	LYS	L	39	44.811	60.782	-2.807	1.00	47.17	L	O
ATOM	3323	N	PRO	L	40	45.967	62.651	-3.375	1.00	48.23	L	N
ATOM	3324	CD	PRO	L	40	47.119	63.387	-3.934	1.00	48.78	L	C
ATOM	3325	CA	PRO	L	40	44.892	63.548	-3.036	1.00	48.38	L	C
ATOM	3326	CB	PRO	L	40	45.487	64.858	-3.472	1.00	49.68	L	C
ATOM	3327	CG	PRO	L	40	46.955	64.694	-3.202	1.00	50.16	L	C
ATOM	3328	C	PRO	L	40	43.592	63.400	-3.829	1.00	48.85	L	C
ATOM	3329	O	PRO	L	40	43.605	63.329	-5.042	1.00	48.79	L	O
ATOM	3330	N	GLY	L	41	42.472	63.239	-3.114	1.00	49.59	L	N
ATOM	3331	CA	GLY	L	41	41.156	62.982	-3.786	1.00	50.02	L	C
ATOM	3332	C	GLY	L	41	40.830	61.537	-4.182	1.00	50.71	L	C
ATOM	3333	O	GLY	L	41	39.765	61.195	-4.532	1.00	50.67	L	O
ATOM	3334	N	GLN	L	42	41.824	60.716	-4.258	1.00	50.87	L	N
ATOM	3335	CA	GLN	L	42	41.796	59.300	-4.507	1.00	51.75	L	C
ATOM	3336	CB	GLN	L	42	43.039	59.072	-5.281	1.00	52.91	L	C
ATOM	3337	CG	GLN	L	42	42.948	59.658	-6.822	1.00	55.22	L	C
ATOM	3338	CD	GLN	L	42	44.150	59.256	-7.607	1.00	56.68	L	C
ATOM	3339	OE1	GLN	L	42	44.755	60.170	-8.261	1.00	58.21	L	O
ATOM	3340	NE2	GLN	L	42	44.623	57.918	-7.519	1.00	57.44	L	N
ATOM	3341	C	GLN	L	42	41.764	58.317	-3.141	1.00	50.97	L	C
ATOM	3342	O	GLN	L	42	41.808	58.707	-2.045	1.00	51.08	L	O
ATOM	3343	N	SER	L	43	41.523	57.062	-3.326	1.00	49.35	L	N
ATOM	3344	CA	SER	L	43	41.337	56.114	-2.324	1.00	48.11	L	C
ATOM	3345	CB	SER	L	43	40.209	55.257	-2.712	1.00	50.00	L	C
ATOM	3346	OG	SER	L	43	40.679	54.393	-3.771	1.00	52.62	L	O
ATOM	3347	C	SER	L	43	42.800	55.404	-2.199	1.00	46.70	L	C
ATOM	3348	O	SER	L	43	43.674	55.641	-3.047	1.00	45.07	L	O
ATOM	3349	N	PRO	L	44	43.118	54.829	-1.039	1.00	46.29	L	N
ATOM	3350	CD	PRO	L	44	42.200	54.695	0.070	1.00	47.19	L	C
ATOM	3351	CA	PRO	L	44	44.345	54.129	-0.843	1.00	46.37	L	C
ATOM	3352	CB	PRO	L	44	44.180	53.413	0.387	1.00	46.52	L	C
ATOM	3353	CG	PRO	L	44	43.084	54.301	1.176	1.00	47.07	L	C
ATOM	3354	C	PRO	L	44	44.586	53.048	-1.945	1.00	46.83	L	C
ATOM	3355	O	PRO	L	44	43.649	52.520	-2.368	1.00	47.16	L	O
ATOM	3356	N	LYS	L	45	45.807	52.795	-2.306	1.00	46.19	L	N
ATOM	3357	CA	LYS	L	45	46.236	51.816	-3.267	1.00	47.13	L	C
ATOM	3358	CB	LYS	L	45	46.560	52.566	-4.574	1.00	46.21	L	C
ATOM	3359	CG	LYS	L	45	47.534	51.931	-5.593	1.00	49.79	L	C
ATOM	3360	CD	LYS	L	45	47.328	52.729	-7.044	1.00	53.61	L	C
ATOM	3361	CE	LYS	L	45	48.384	52.372	-8.178	1.00	55.08	L	C
ATOM	3362	NZ	LYS	L	45	48.007	51.167	-9.072	1.00	59.14	L	N
ATOM	3363	C	LYS	L	45	47.439	51.035	-2.780	1.00	46.15	L	C
ATOM	3364	O	LYS	L	45	48.367	51.601	-2.208	1.00	47.27	L	O
ATOM	3365	N	LEU	L	46	47.439	49.780	-3.087	1.00	45.46	L	N
ATOM	3366	CA	LEU	L	46	48.420	48.871	-2.462	1.00	44.63	L	C
ATOM	3367	CB	LEU	L	46	47.967	47.354	-2.414	1.00	43.94	L	C
ATOM	3368	CG	LEU	L	46	49.091	46.349	-1.995	1.00	44.18	L	C
ATOM	3369	CD1	LEU	L	46	49.245	46.386	-0.548	1.00	41.71	L	C
ATOM	3370	CD2	LEU	L	46	48.519	44.936	-2.299	1.00	43.61	L	C
ATOM	3371	C	LEU	L	46	49.719	48.986	-3.187	1.00	44.28	L	C
ATOM	3372	O	LEU	L	46	49.784	48.755	-4.415	1.00	44.85	L	O
ATOM	3373	N	LEU	L	47	50.822	49.188	-2.491	1.00	43.91	L	N
ATOM	3374	CA	LEU	L	47	52.117	49.289	-3.171	1.00	44.11	L	C
ATOM	3375	CB	LEU	L	47	52.822	50.500	-2.533	1.00	44.54	L	C
ATOM	3376	CG	LEU	L	47	52.343	51.886	-2.865	1.00	45.79	L	C
ATOM	3377	CD1	LEU	L	47	53.215	52.805	-1.949	1.00	43.54	L	C
ATOM	3378	CD2	LEU	L	47	52.645	52.217	-4.259	1.00	44.99	L	C

ATOM	3379	C	LEU	L	47	52.920	48.061	-2.889	1.00	43.22	L	C
ATOM	3380	O	LEU	L	47	53.660	47.582	-3.804	1.00	43.02	L	O
ATOM	3381	N	ILE	L	48	53.024	47.708	-1.562	1.00	42.64	L	N
ATOM	3382	CA	ILE	L	48	53.893	46.659	-1.077	1.00	44.20	L	C
ATOM	3383	CB	ILE	L	48	55.148	47.296	-0.472	1.00	44.06	L	C
ATOM	3384	CG2	ILE	L	48	56.083	46.170	-0.035	1.00	42.39	L	C
ATOM	3385	CG1	ILE	L	48	55.895	48.103	-1.540	1.00	43.43	L	C
ATOM	3386	CD1	ILE	L	48	57.123	47.375	-2.060	1.00	45.86	L	C
ATOM	3387	C	ILE	L	48	53.169	45.824	-0.013	1.00	44.86	L	C
ATOM	3388	O	ILE	L	48	52.713	46.305	0.993	1.00	44.44	L	O
ATOM	3389	N	TYR	L	49	53.069	44.523	-0.336	1.00	43.51	L	N
ATOM	3390	CA	TYR	L	49	52.544	43.575	0.646	1.00	44.25	L	C
ATOM	3391	CB	TYR	L	49	51.447	42.725	-0.007	1.00	44.43	L	C
ATOM	3392	CG	TYR	L	49	51.998	41.866	-1.095	1.00	47.66	L	C
ATOM	3393	CD1	TYR	L	49	52.302	40.531	-0.831	1.00	48.71	L	C
ATOM	3394	CE1	TYR	L	49	52.574	39.656	-1.873	1.00	48.62	L	C
ATOM	3395	CD2	TYR	L	49	51.996	42.319	-2.415	1.00	46.74	L	C
ATOM	3396	CE2	TYR	L	49	52.278	41.447	-3.456	1.00	47.16	L	C
ATOM	3397	CZ	TYR	L	49	52.567	40.122	-3.189	1.00	47.68	L	C
ATOM	3398	OH	TYR	L	49	52.841	39.246	-4.221	1.00	49.06	L	O
ATOM	3399	C	TYR	L	49	53.626	42.684	1.269	1.00	44.97	L	C
ATOM	3400	O	TYR	L	49	54.695	42.452	0.719	1.00	44.07	L	O
ATOM	3401	N	ARG	L	50	53.318	42.219	2.485	1.00	44.80	L	N
ATOM	3402	CA	ARG	L	50	54.318	41.356	3.209	1.00	46.52	L	C
ATOM	3403	CB	ARG	L	50	54.263	39.963	2.609	1.00	47.86	L	C
ATOM	3404	CG	ARG	L	50	54.273	38.890	3.685	1.00	49.22	L	C
ATOM	3405	CD	ARG	L	50	54.342	37.481	3.085	1.00	49.53	L	C
ATOM	3406	NE	ARG	L	50	53.536	37.403	1.865	1.00	51.67	L	N
ATOM	3407	CZ	ARG	L	50	53.801	36.394	1.017	1.00	52.68	L	C
ATOM	3408	NH1	ARG	L	50	54.765	35.533	1.290	1.00	53.20	L	N
ATOM	3409	NH2	ARG	L	50	53.036	36.226	-0.066	1.00	52.22	L	N
ATOM	3410	C	ARG	L	50	55.780	41.844	3.283	1.00	46.28	L	C
ATOM	3411	O	ARG	L	50	56.760	41.090	3.136	1.00	48.61	L	O
ATOM	3412	N	ALA	L	51	55.831	43.166	3.535	1.00	45.86	L	N
ATOM	3413	CA	ALA	L	51	56.996	44.060	3.797	1.00	44.82	L	C
ATOM	3414	CB	ALA	L	51	57.806	43.478	4.954	1.00	45.10	L	C
ATOM	3415	C	ALA	L	51	58.054	44.322	2.684	1.00	46.14	L	C
ATOM	3416	O	ALA	L	51	58.836	45.259	2.765	1.00	47.35	L	O
ATOM	3417	N	SER	L	52	58.146	43.438	1.650	1.00	44.64	L	N
ATOM	3418	CA	SER	L	52	59.178	43.624	0.583	1.00	45.96	L	C
ATOM	3419	CB	SER	L	52	60.482	42.894	0.955	1.00	42.75	L	C
ATOM	3420	OG	SER	L	52	60.249	41.539	1.329	1.00	43.62	L	O
ATOM	3421	C	SER	L	52	58.718	43.186	-0.849	1.00	47.19	L	C
ATOM	3422	O	SER	L	52	59.467	43.297	-1.810	1.00	48.38	L	O
ATOM	3423	N	ASN	L	53	57.403	42.790	-0.932	1.00	49.20	L	N
ATOM	3424	CA	ASN	L	53	56.750	42.272	-2.150	1.00	51.26	L	C
ATOM	3425	CB	ASN	L	53	55.792	41.115	-1.787	1.00	52.80	L	C
ATOM	3426	CG	ASN	L	53	56.547	39.817	-1.926	1.00	55.58	L	C
ATOM	3427	OD1	ASN	L	53	57.180	39.538	-2.944	1.00	59.69	L	O
ATOM	3428	ND2	ASN	L	53	56.499	39.018	-0.851	1.00	55.79	L	N
ATOM	3429	C	ASN	L	53	55.998	43.325	-2.976	1.00	51.90	L	C
ATOM	3430	O	ASN	L	53	54.932	43.818	-2.633	1.00	53.16	L	O
ATOM	3431	N	LEU	L	54	56.626	43.651	-4.141	1.00	52.01	L	N
ATOM	3432	CA	LEU	L	54	56.044	44.648	-5.060	1.00	53.38	L	C
ATOM	3433	CB	LEU	L	54	57.080	44.978	-6.148	1.00	54.15	L	C
ATOM	3434	CG	LEU	L	54	56.676	46.173	-7.022	1.00	54.46	L	C
ATOM	3435	CD1	LEU	L	54	56.434	47.437	-6.202	1.00	55.09	L	C
ATOM	3436	CD2	LEU	L	54	57.738	46.540	-8.068	1.00	56.24	L	C
ATOM	3437	C	LEU	L	54	54.749	44.151	-5.720	1.00	53.72	L	C
ATOM	3438	O	LEU	L	54	54.701	43.107	-6.358	1.00	54.45	L	O
ATOM	3439	N	GLU	L	55	53.626	44.859	-5.601	1.00	53.51	L	N
ATOM	3440	CA	GLU	L	55	52.368	44.478	-6.116	1.00	55.11	L	C
ATOM	3441	CB	GLU	L	55	51.294	45.404	-5.592	1.00	55.21	L	C
ATOM	3442	CG	GLU	L	55	49.971	45.205	-6.300	1.00	55.64	L	C
ATOM	3443	CD	GLU	L	55	49.169	43.969	-5.835	1.00	57.19	L	C
ATOM	3444	OE1	GLU	L	55	49.769	43.078	-5.176	1.00	57.60	L	O
ATOM	3445	OE2	GLU	L	55	47.885	43.884	-6.132	1.00	56.57	L	O
ATOM	3446	C	GLU	L	55	52.360	44.662	-7.650	1.00	55.90	L	C
ATOM	3447	O	GLU	L	55	52.870	45.532	-8.219	1.00	55.81	L	O

ATOM	3448	N	SER	L	56	51.750	43.781	-8.303	1.00	56.80	L	N
ATOM	3449	CA	SER	L	56	51.755	43.837	-9.703	1.00	58.42	L	C
ATOM	3450	CB	SER	L	56	50.933	42.610	-10.158	1.00	58.40	L	C
ATOM	3451	OG	SER	L	56	50.926	42.846	-11.533	1.00	62.54	L	O
ATOM	3452	C	SER	L	56	51.163	45.190	-10.225	1.00	57.30	L	C
ATOM	3453	O	SER	L	56	50.186	45.761	-9.731	1.00	57.56	L	O
ATOM	3454	N	GLY	L	57	51.874	45.796	-11.127	1.00	57.37	L	N
ATOM	3455	CA	GLY	L	57	51.424	47.049	-11.688	1.00	56.96	L	C
ATOM	3456	C	GLY	L	57	52.204	48.193	-11.119	1.00	56.79	L	C
ATOM	3457	O	GLY	L	57	52.157	49.231	-11.753	1.00	58.79	L	O
ATOM	3458	N	ILE	L	58	52.895	48.026	-9.960	1.00	55.41	L	N
ATOM	3459	CA	ILE	L	58	53.508	49.177	-9.257	1.00	53.96	L	C
ATOM	3460	CB	ILE	L	58	53.534	48.875	-7.833	1.00	51.43	L	C
ATOM	3461	CG2	ILE	L	58	54.205	49.855	-7.156	1.00	50.04	L	C
ATOM	3462	CG1	ILE	L	58	52.121	48.769	-7.308	1.00	51.25	L	C
ATOM	3463	CD1	ILE	L	58	51.212	50.082	-7.601	1.00	50.72	L	C
ATOM	3464	C	ILE	L	58	54.878	49.294	-9.751	1.00	54.15	L	C
ATOM	3465	O	ILE	L	58	55.493	48.283	-9.888	1.00	55.21	L	O
ATOM	3466	N	PRO	L	59	55.399	50.473	-10.051	1.00	53.53	L	N
ATOM	3467	CD	PRO	L	59	54.706	51.752	-10.212	1.00	52.32	L	C
ATOM	3468	CA	PRO	L	59	56.800	50.603	-10.428	1.00	53.60	L	C
ATOM	3469	CB	PRO	L	59	56.943	52.058	-10.742	1.00	51.95	L	C
ATOM	3470	CG	PRO	L	59	55.586	52.664	-10.254	1.00	51.28	L	C
ATOM	3471	C	PRO	L	59	57.867	50.269	-9.460	1.00	54.47	L	C
ATOM	3472	O	PRO	L	59	57.709	50.423	-8.128	1.00	55.96	L	O
ATOM	3473	N	ALA	L	60	58.970	49.767	-10.063	1.00	54.31	L	N
ATOM	3474	CA	ALA	L	60	60.165	49.330	-9.309	1.00	54.02	L	C
ATOM	3475	CB	ALA	L	60	61.266	48.623	-10.235	1.00	53.41	L	C
ATOM	3476	C	ALA	L	60	60.854	50.494	-8.512	1.00	53.88	L	C
ATOM	3477	O	ALA	L	60	61.789	50.225	-7.714	1.00	53.56	L	O
ATOM	3478	N	ARG	L	61	60.503	51.752	-8.815	1.00	53.46	L	N
ATOM	3479	CA	ARG	L	61	60.979	52.803	-7.943	1.00	52.97	L	C
ATOM	3480	CB	ARG	L	61	60.491	54.163	-8.394	1.00	54.39	L	C
ATOM	3481	CG	ARG	L	61	60.284	54.239	-9.802	1.00	55.57	L	C
ATOM	3482	CD	ARG	L	61	59.850	55.654	-10.234	1.00	58.75	L	C
ATOM	3483	NE	ARG	L	61	58.422	55.955	-10.333	1.00	60.43	L	N
ATOM	3484	CZ	ARG	L	61	57.733	56.569	-9.387	1.00	61.42	L	C
ATOM	3485	NH1	ARG	L	61	58.344	56.916	-8.329	1.00	61.49	L	N
ATOM	3486	NH2	ARG	L	61	56.475	56.905	-9.543	1.00	60.78	L	N
ATOM	3487	C	ARG	L	61	60.565	52.561	-6.456	1.00	51.50	L	C
ATOM	3488	O	ARG	L	61	61.109	53.120	-5.595	1.00	51.57	L	O
ATOM	3489	N	PHE	L	62	59.529	51.811	-6.212	1.00	50.00	L	N
ATOM	3490	CA	PHE	L	62	59.032	51.632	-4.935	1.00	49.93	L	C
ATOM	3491	CB	PHE	L	62	57.467	51.469	-4.961	1.00	47.93	L	C
ATOM	3492	CG	PHE	L	62	56.737	52.754	-5.178	1.00	48.92	L	C
ATOM	3493	CD1	PHE	L	62	56.522	53.651	-4.150	1.00	48.20	L	C
ATOM	3494	CD2	PHE	L	62	56.365	53.122	-6.376	1.00	48.67	L	C
ATOM	3495	CE1	PHE	L	62	55.873	54.853	-4.358	1.00	48.82	L	C
ATOM	3496	CE2	PHE	L	62	55.859	54.350	-6.619	1.00	49.21	L	C
ATOM	3497	CZ	PHE	L	62	55.528	55.210	-5.657	1.00	47.07	L	C
ATOM	3498	C	PHE	L	62	59.627	50.305	-4.485	1.00	50.05	L	C
ATOM	3499	O	PHE	L	62	59.369	49.281	-5.181	1.00	51.12	L	O
ATOM	3500	N	SER	L	63	60.115	50.244	-3.287	1.00	48.79	L	N
ATOM	3501	CA	SER	L	63	60.627	49.031	-2.616	1.00	49.33	L	C
ATOM	3502	CB	SER	L	63	62.221	48.902	-2.650	1.00	48.44	L	C
ATOM	3503	OG	SER	L	63	62.867	50.204	-2.559	1.00	52.96	L	O
ATOM	3504	C	SER	L	63	60.387	49.146	-1.139	1.00	49.52	L	C
ATOM	3505	O	SER	L	63	60.260	50.204	-0.588	1.00	50.14	L	O
ATOM	3506	N	GLY	L	64	60.505	48.022	-0.459	1.00	49.55	L	N
ATOM	3507	CA	GLY	L	64	60.236	47.981	0.966	1.00	49.92	L	C
ATOM	3508	C	GLY	L	64	61.159	46.980	1.657	1.00	50.31	L	C
ATOM	3509	O	GLY	L	64	61.708	46.063	1.050	1.00	51.49	L	O
ATOM	3510	N	SER	L	65	61.365	47.192	2.967	1.00	50.12	L	N
ATOM	3511	CA	SER	L	65	62.186	46.237	3.707	1.00	51.65	L	C
ATOM	3512	CB	SER	L	65	63.669	46.486	3.393	1.00	51.79	L	C
ATOM	3513	OG	SER	L	65	63.903	47.880	3.197	1.00	54.65	L	O
ATOM	3514	C	SER	L	65	61.942	46.325	5.240	1.00	52.23	L	C
ATOM	3515	O	SER	L	65	61.163	47.105	5.722	1.00	51.50	L	O
ATOM	3516	N	GLY	L	66	62.640	45.355	5.896	1.00	53.83	L	N

ATOM	3517	CA	GLY	L	66	62.944	45.167	7.285	1.00	54.65	L	C
ATOM	3518	C	GLY	L	66	62.097	44.044	7.895	1.00	55.40	L	C
ATOM	3519	O	GLY	L	66	61.401	43.294	7.225	1.00	56.17	L	O
ATOM	3520	N	SER	L	67	62.236	43.937	9.219	1.00	56.74	L	N
ATOM	3521	CA	SER	L	67	61.469	42.901	9.898	1.00	57.00	L	C
ATOM	3522	CB	SER	L	67	62.289	41.610	9.899	1.00	56.12	L	C
ATOM	3523	OG	SER	L	67	63.440	41.777	10.728	1.00	52.42	L	O
ATOM	3524	C	SER	L	67	61.112	43.301	11.330	1.00	58.80	L	C
ATOM	3525	O	SER	L	67	61.566	44.299	11.869	1.00	58.14	L	O
ATOM	3526	N	ARG	L	68	60.226	42.492	11.938	1.00	60.14	L	N
ATOM	3527	CA	ARG	L	68	59.752	42.799	13.284	1.00	62.85	L	C
ATOM	3528	CB	ARG	L	68	60.943	42.830	14.243	1.00	66.36	L	C
ATOM	3529	CG	ARG	L	68	60.579	42.311	15.635	1.00	71.20	L	C
ATOM	3530	CD	ARG	L	68	61.290	40.988	15.902	1.00	75.53	L	C
ATOM	3531	NE	ARG	L	68	62.250	40.757	14.819	1.00	79.27	L	N
ATOM	3532	CZ	ARG	L	68	62.796	39.537	14.706	1.00	81.84	L	C
ATOM	3533	NH1	ARG	L	68	62.477	38.584	15.563	1.00	81.92	L	N
ATOM	3534	NH2	ARG	L	68	63.640	39.287	13.702	1.00	82.11	L	N
ATOM	3535	C	ARG	L	68	59.054	44.151	13.354	1.00	62.53	L	C
ATOM	3536	O	ARG	L	68	58.092	44.438	12.659	1.00	63.47	L	O
ATOM	3537	N	THR	L	69	59.568	44.980	14.275	1.00	61.15	L	N
ATOM	3538	CA	THR	L	69	58.935	46.256	14.555	1.00	58.99	L	C
ATOM	3539	CB	THR	L	69	59.128	46.541	16.044	1.00	60.19	L	C
ATOM	3540	OG1	THR	L	69	60.474	46.226	16.405	1.00	62.69	L	O
ATOM	3541	CG2	THR	L	69	58.185	45.666	16.872	1.00	59.57	L	C
ATOM	3542	C	THR	L	69	59.549	47.398	13.734	1.00	56.96	L	C
ATOM	3543	O	THR	L	69	59.270	48.573	13.949	1.00	58.32	L	O
ATOM	3544	N	ASP	L	70	60.444	47.031	12.793	1.00	54.09	L	N
ATOM	3545	CA	ASP	L	70	61.095	48.083	12.018	1.00	52.20	L	C
ATOM	3546	CB	ASP	L	70	62.565	48.163	12.433	1.00	55.60	L	C
ATOM	3547	CG	ASP	L	70	62.648	48.807	13.817	1.00	58.39	L	C
ATOM	3548	OD1	ASP	L	70	62.032	49.860	13.992	1.00	59.55	L	O
ATOM	3549	OD2	ASP	L	70	63.304	48.254	14.694	1.00	61.45	L	O
ATOM	3550	C	ASP	L	70	60.963	47.857	10.511	1.00	50.32	L	C
ATOM	3551	O	ASP	L	70	61.438	46.878	9.956	1.00	50.21	L	O
ATOM	3552	N	PHE	L	71	60.236	48.803	9.855	1.00	47.22	L	N
ATOM	3553	CA	PHE	L	71	60.062	48.762	8.391	1.00	45.44	L	C
ATOM	3554	CB	PHE	L	71	58.633	48.313	8.064	1.00	43.23	L	C
ATOM	3555	CG	PHE	L	71	58.375	46.958	8.652	1.00	43.34	L	C
ATOM	3556	CD1	PHE	L	71	57.803	46.861	9.913	1.00	41.62	L	C
ATOM	3557	CD2	PHE	L	71	58.728	45.818	7.952	1.00	42.49	L	C
ATOM	3558	CE1	PHE	L	71	57.594	45.613	10.480	1.00	40.34	L	C
ATOM	3559	CE2	PHE	L	71	58.515	44.567	8.526	1.00	41.49	L	C
ATOM	3560	CZ	PHE	L	71	57.955	44.461	9.794	1.00	41.13	L	C
ATOM	3561	C	PHE	L	71	60.331	50.125	7.733	1.00	45.21	L	C
ATOM	3562	O	PHE	L	71	60.172	51.183	8.328	1.00	46.58	L	O
ATOM	3563	N	THR	L	72	60.799	50.060	6.469	1.00	44.20	L	N
ATOM	3564	CA	THR	L	72	60.899	51.279	5.668	1.00	45.03	L	C
ATOM	3565	CB	THR	L	72	62.369	51.709	5.571	1.00	46.32	L	C
ATOM	3566	OG1	THR	L	72	63.003	51.009	4.500	1.00	52.20	L	O
ATOM	3567	CG2	THR	L	72	63.107	51.390	6.874	1.00	45.31	L	C
ATOM	3568	C	THR	L	72	60.311	51.079	4.266	1.00	43.73	L	C
ATOM	3569	O	THR	L	72	60.368	50.004	3.684	1.00	43.76	L	O
ATOM	3570	N	LEU	L	73	59.865	52.169	3.622	1.00	41.77	L	N
ATOM	3571	CA	LEU	L	73	59.338	52.202	2.296	1.00	40.47	L	C
ATOM	3572	CB	LEU	L	73	57.998	52.828	2.268	1.00	40.24	L	C
ATOM	3573	CG	LEU	L	73	57.448	53.062	0.879	1.00	40.67	L	C
ATOM	3574	CD1	LEU	L	73	57.165	51.769	0.237	1.00	40.50	L	C
ATOM	3575	CD2	LEU	L	73	56.164	53.766	0.848	1.00	39.57	L	C
ATOM	3576	C	LEU	L	73	60.244	53.239	1.573	1.00	41.39	L	C
ATOM	3577	O	LEU	L	73	60.489	54.296	2.145	1.00	40.33	L	O
ATOM	3578	N	THR	L	74	60.745	52.910	0.402	1.00	41.41	L	N
ATOM	3579	CA	THR	L	74	61.678	53.807	-0.355	1.00	44.65	L	C
ATOM	3580	CB	THR	L	74	63.014	53.054	-0.458	1.00	45.29	L	C
ATOM	3581	OG1	THR	L	74	63.448	52.846	0.943	1.00	47.02	L	O
ATOM	3582	CG2	THR	L	74	64.004	53.738	-1.237	1.00	41.87	L	C
ATOM	3583	C	THR	L	74	61.192	54.069	-1.791	1.00	46.11	L	C
ATOM	3584	O	THR	L	74	60.575	53.156	-2.361	1.00	48.07	L	O
ATOM	3585	N	ILE	L	75	61.239	55.345	-2.184	1.00	46.93	L	N

ATOM	3586	CA	ILE	L	75	60.824	55.801	-3.394	1.00	49.37	L	C
ATOM	3587	CB	ILE	L	75	59.716	56.813	-3.255	1.00	49.66	L	C
ATOM	3588	CG2	ILE	L	75	59.075	57.029	-4.756	1.00	48.29	L	C
ATOM	3589	CG1	ILE	L	75	58.597	56.280	-2.371	1.00	49.08	L	C
ATOM	3590	CD1	ILE	L	75	57.615	57.253	-2.112	1.00	49.44	L	C
ATOM	3591	C	ILE	L	75	62.057	56.414	-4.104	1.00	51.18	L	C
ATOM	3592	O	ILE	L	75	62.647	57.343	-3.656	1.00	49.95	L	O
ATOM	3593	N	ASN	L	76	62.551	55.697	-5.093	1.00	54.36	L	N
ATOM	3594	CA	ASN	L	76	63.754	56.088	-5.754	1.00	56.06	L	C
ATOM	3595	CB	ASN	L	76	64.910	55.467	-5.119	1.00	56.78	L	C
ATOM	3596	CG	ASN	L	76	66.156	56.228	-5.432	1.00	58.44	L	C
ATOM	3597	OD1	ASN	L	76	66.083	57.367	-5.916	1.00	61.35	L	O
ATOM	3598	ND2	ASN	L	76	67.262	55.617	-5.265	1.00	57.10	L	N
ATOM	3599	C	ASN	L	76	63.854	55.739	-7.120	1.00	56.03	L	C
ATOM	3600	O	ASN	L	76	63.964	54.552	-7.421	1.00	57.71	L	O
ATOM	3601	N	PRO	L	77	63.827	56.689	-7.994	1.00	55.48	L	N
ATOM	3602	CD	PRO	L	77	64.022	56.425	-9.423	1.00	54.95	L	C
ATOM	3603	CA	PRO	L	77	63.654	58.118	-7.725	1.00	55.35	L	C
ATOM	3604	CB	PRO	L	77	64.191	58.743	-9.015	1.00	54.21	L	C
ATOM	3605	CG	PRO	L	77	63.679	57.741	-10.056	1.00	54.17	L	C
ATOM	3606	C	PRO	L	77	62.202	58.627	-7.678	1.00	55.61	L	C
ATOM	3607	O	PRO	L	77	61.249	58.102	-8.307	1.00	55.40	L	O
ATOM	3608	N	VAL	L	78	62.090	59.733	-6.904	1.00	55.66	L	N
ATOM	3609	CA	VAL	L	78	60.826	60.404	-6.770	1.00	55.06	L	C
ATOM	3610	CB	VAL	L	78	60.878	61.341	-5.622	1.00	55.08	L	C
ATOM	3611	CG1	VAL	L	78	59.649	62.191	-5.632	1.00	54.52	L	C
ATOM	3612	CG2	VAL	L	78	60.814	60.506	-4.300	1.00	53.19	L	C
ATOM	3613	C	VAL	L	78	60.384	61.046	-8.097	1.00	54.90	L	C
ATOM	3614	O	VAL	L	78	61.125	61.666	-8.805	1.00	55.13	L	O
ATOM	3615	N	GLU	L	79	59.115	61.027	-8.313	1.00	53.45	L	N
ATOM	3616	CA	GLU	L	79	58.568	61.857	-9.363	1.00	53.76	L	C
ATOM	3617	CB	GLU	L	79	58.064	60.856	-10.490	1.00	55.61	L	C
ATOM	3618	CG	GLU	L	79	59.101	59.872	-10.986	1.00	59.25	L	C
ATOM	3619	CD	GLU	L	79	58.606	58.946	-12.112	1.00	61.38	L	C
ATOM	3620	OE1	GLU	L	79	59.547	58.243	-12.667	1.00	62.40	L	O
ATOM	3621	OE2	GLU	L	79	57.390	59.009	-12.468	1.00	61.93	L	O
ATOM	3622	C	GLU	L	79	57.313	62.583	-8.913	1.00	52.66	L	C
ATOM	3623	O	GLU	L	79	56.708	62.213	-7.941	1.00	52.31	L	O
ATOM	3624	N	ALA	L	80	56.865	63.435	-9.740	1.00	52.07	L	N
ATOM	3625	CA	ALA	L	80	55.877	64.405	-9.435	1.00	52.18	L	C
ATOM	3626	CB	ALA	L	80	55.736	65.167	-10.630	1.00	52.09	L	C
ATOM	3627	C	ALA	L	80	54.499	63.900	-9.041	1.00	51.76	L	C
ATOM	3628	O	ALA	L	80	53.863	64.489	-8.186	1.00	49.52	L	O
ATOM	3629	N	ASP	L	81	54.106	62.824	-9.738	1.00	51.07	L	N
ATOM	3630	CA	ASP	L	81	52.991	62.079	-9.383	1.00	52.00	L	C
ATOM	3631	CB	ASP	L	81	52.635	61.150	-10.581	1.00	54.54	L	C
ATOM	3632	CG	ASP	L	81	51.245	60.565	-10.455	1.00	57.32	L	C
ATOM	3633	OD1	ASP	L	81	50.181	61.322	-10.285	1.00	58.70	L	O
ATOM	3634	OD2	ASP	L	81	51.146	59.343	-10.407	1.00	59.75	L	O
ATOM	3635	C	ASP	L	81	53.025	61.238	-8.054	1.00	50.63	L	C
ATOM	3636	O	ASP	L	81	52.030	60.675	-7.720	1.00	49.73	L	O
ATOM	3637	N	ASP	L	82	54.075	61.308	-7.279	1.00	48.83	L	N
ATOM	3638	CA	ASP	L	82	54.144	60.597	-6.012	1.00	48.89	L	C
ATOM	3639	CB	ASP	L	82	55.588	60.276	-5.666	1.00	49.88	L	C
ATOM	3640	CG	ASP	L	82	56.240	59.342	-6.753	1.00	52.14	L	C
ATOM	3641	OD1	ASP	L	82	55.485	58.500	-7.287	1.00	52.41	L	O
ATOM	3642	OD2	ASP	L	82	57.442	59.343	-6.965	1.00	54.56	L	O
ATOM	3643	C	ASP	L	82	53.673	61.396	-4.814	1.00	48.65	L	C
ATOM	3644	O	ASP	L	82	53.819	60.947	-3.655	1.00	48.04	L	O
ATOM	3645	N	VAL	L	83	53.079	62.560	-5.096	1.00	47.12	L	N
ATOM	3646	CA	VAL	L	83	52.638	63.357	-4.005	1.00	46.76	L	C
ATOM	3647	CB	VAL	L	83	52.165	64.848	-4.323	1.00	47.54	L	C
ATOM	3648	CG1	VAL	L	83	53.180	65.486	-5.076	1.00	48.00	L	C
ATOM	3649	CG2	VAL	L	83	51.050	64.877	-5.086	1.00	48.87	L	C
ATOM	3650	C	VAL	L	83	51.408	62.654	-3.519	1.00	45.32	L	C
ATOM	3651	O	VAL	L	83	50.459	62.419	-4.303	1.00	45.55	L	O
ATOM	3652	N	ALA	L	84	51.466	62.377	-2.239	1.00	43.63	L	N
ATOM	3653	CA	ALA	L	84	50.503	61.592	-1.600	1.00	42.80	L	C
ATOM	3654	CB	ALA	L	84	50.563	60.211	-2.223	1.00	43.11	L	C

ATOM	3655	C	ALA	L	84	50.774	61.441	-0.101	1.00	41.61	L	C
ATOM	3656	O	ALA	L	84	51.894	61.700	0.329	1.00	42.11	L	O
ATOM	3657	N	THR	L	85	49.863	60.727	0.565	1.00	39.60	L	N
ATOM	3658	CA	THR	L	85	50.123	60.302	1.982	1.00	41.07	L	C
ATOM	3659	CB	THR	L	85	48.924	60.597	2.859	1.00	41.88	L	C
ATOM	3660	OG1	THR	L	85	48.909	61.984	2.953	1.00	43.50	L	O
ATOM	3661	CG2	THR	L	85	49.099	60.169	4.220	1.00	42.73	L	C
ATOM	3662	C	THR	L	85	50.389	58.812	1.925	1.00	41.86	L	C
ATOM	3663	O	THR	L	85	49.688	58.201	1.232	1.00	42.14	L	O
ATOM	3664	N	TYR	L	86	51.335	58.228	2.692	1.00	41.17	L	N
ATOM	3665	CA	TYR	L	86	51.669	56.827	2.666	1.00	42.15	L	C
ATOM	3666	CB	TYR	L	86	53.123	56.644	2.243	1.00	40.67	L	C
ATOM	3667	CG	TYR	L	86	53.481	57.131	0.849	1.00	40.33	L	C
ATOM	3668	CD1	TYR	L	86	53.696	58.456	0.561	1.00	37.56	L	C
ATOM	3669	CE1	TYR	L	86	53.913	58.828	-0.781	1.00	38.35	L	C
ATOM	3670	CD2	TYR	L	86	53.330	56.289	-0.211	1.00	38.76	L	C
ATOM	3671	CE2	TYR	L	86	53.525	56.769	-1.598	1.00	37.31	L	C
ATOM	3672	CZ	TYR	L	86	53.794	58.033	-1.809	1.00	40.02	L	C
ATOM	3673	OH	TYR	L	86	53.888	58.480	-3.251	1.00	37.67	L	O
ATOM	3674	C	TYR	L	86	51.398	56.221	3.934	1.00	44.14	L	C
ATOM	3675	O	TYR	L	86	51.819	56.826	5.017	1.00	46.29	L	O
ATOM	3676	N	TYR	L	87	50.679	55.064	3.945	1.00	42.51	L	N
ATOM	3677	CA	TYR	L	87	50.454	54.392	5.249	1.00	42.40	L	C
ATOM	3678	CB	TYR	L	87	48.946	54.323	5.530	1.00	41.06	L	C
ATOM	3679	CG	TYR	L	87	48.195	55.573	5.499	1.00	39.25	L	C
ATOM	3680	CD1	TYR	L	87	47.708	56.110	4.322	1.00	37.90	L	C
ATOM	3681	CE1	TYR	L	87	46.929	57.277	4.400	1.00	37.86	L	C
ATOM	3682	CD2	TYR	L	87	47.710	56.086	6.696	1.00	39.45	L	C
ATOM	3683	CE2	TYR	L	87	47.057	57.273	6.743	1.00	37.41	L	C
ATOM	3684	CZ	TYR	L	87	46.626	57.829	5.430	1.00	37.62	L	C
ATOM	3685	OH	TYR	L	87	45.851	58.916	5.440	1.00	40.72	L	O
ATOM	3686	C	TYR	L	87	50.917	52.985	5.331	1.00	43.25	L	C
ATOM	3687	O	TYR	L	87	50.962	52.298	4.273	1.00	42.87	L	O
ATOM	3688	N	CYS	L	88	51.324	52.585	6.557	1.00	44.13	L	N
ATOM	3689	CA	CYS	L	88	51.632	51.249	6.833	1.00	44.88	L	C
ATOM	3690	C	CYS	L	88	50.505	50.617	7.597	1.00	44.55	L	C
ATOM	3691	O	CYS	L	88	49.622	51.295	8.129	1.00	43.38	L	O
ATOM	3692	CB	CYS	L	88	52.986	51.039	7.654	1.00	44.75	L	C
ATOM	3693	SG	CYS	L	88	52.928	52.042	9.185	1.00	45.57	L	S
ATOM	3694	N	GLN	L	89	50.460	49.282	7.528	1.00	44.18	L	N
ATOM	3695	CA	GLN	L	89	49.292	48.540	8.105	1.00	44.10	L	C
ATOM	3696	CB	GLN	L	89	48.125	48.523	7.140	1.00	42.71	L	C
ATOM	3697	CG	GLN	L	89	46.971	47.793	7.704	1.00	42.27	L	C
ATOM	3698	CD	GLN	L	89	46.825	46.370	6.956	1.00	42.95	L	C
ATOM	3699	OE1	GLN	L	89	46.839	46.258	5.730	1.00	41.37	L	O
ATOM	3700	NE2	GLN	L	89	46.888	45.307	7.793	1.00	38.44	L	N
ATOM	3701	C	GLN	L	89	49.756	47.136	8.424	1.00	45.06	L	C
ATOM	3702	O	GLN	L	89	50.446	46.580	7.598	1.00	44.95	L	O
ATOM	3703	N	GLN	L	90	49.475	46.672	9.633	1.00	44.17	L	N
ATOM	3704	CA	GLN	L	90	49.737	45.307	10.051	1.00	44.79	L	C
ATOM	3705	CB	GLN	L	90	50.491	45.296	11.398	1.00	42.34	L	C
ATOM	3706	CG	GLN	L	90	49.625	45.801	12.585	1.00	44.52	L	C
ATOM	3707	CD	GLN	L	90	48.654	44.710	13.155	1.00	46.51	L	C
ATOM	3708	OE1	GLN	L	90	48.921	43.583	13.018	1.00	46.93	L	O
ATOM	3709	NE2	GLN	L	90	47.546	45.105	13.756	1.00	46.47	L	N
ATOM	3710	C	GLN	L	90	48.505	44.352	10.090	1.00	45.80	L	C
ATOM	3711	O	GLN	L	90	47.331	44.706	10.396	1.00	44.66	L	O
ATOM	3712	N	SER	L	91	48.793	43.072	9.763	1.00	47.04	L	N
ATOM	3713	CA	SER	L	91	47.841	42.007	9.605	1.00	50.24	L	C
ATOM	3714	CB	SER	L	91	47.991	41.516	8.052	1.00	50.88	L	C
ATOM	3715	OG	SER	L	91	47.148	42.515	7.448	1.00	51.62	L	O
ATOM	3716	C	SER	L	91	48.260	40.852	10.535	1.00	51.03	L	C
ATOM	3717	O	SER	L	91	47.818	39.741	10.359	1.00	51.43	L	O
ATOM	3718	N	ASN	L	92	49.096	41.136	11.526	1.00	51.69	L	N
ATOM	3719	CA	ASN	L	92	49.553	40.106	12.404	1.00	52.68	L	C
ATOM	3720	CB	ASN	L	92	50.955	40.293	12.867	1.00	53.64	L	C
ATOM	3721	CG	ASN	L	92	51.439	39.102	13.659	1.00	54.66	L	C
ATOM	3722	OD1	ASN	L	92	51.345	38.022	13.199	1.00	55.46	L	O
ATOM	3723	ND2	ASN	L	92	52.089	39.337	14.773	1.00	53.66	L	N

ATOM	3724	C	ASN	L	92	48.650	39.774	13.452	1.00	52.84	L	C
ATOM	3725	O	ASN	L	92	48.547	38.677	13.787	1.00	51.48	L	O
ATOM	3726	N	GLU	L	93	47.867	40.694	13.784	1.00	54.21	L	N
ATOM	3727	CA	GLU	L	93	46.917	40.511	14.847	1.00	56.33	L	C
ATOM	3728	CB	GLU	L	93	47.664	40.794	16.127	1.00	58.27	L	C
ATOM	3729	CG	GLU	L	93	46.781	41.352	17.225	1.00	64.91	L	C
ATOM	3730	CD	GLU	L	93	47.570	41.631	18.613	1.00	69.27	L	C
ATOM	3731	OE1	GLU	L	93	47.033	42.328	19.596	1.00	69.83	L	O
ATOM	3732	OE2	GLU	L	93	48.753	41.164	18.679	1.00	71.16	L	O
ATOM	3733	C	GLU	L	93	45.693	41.403	14.792	1.00	55.46	L	C
ATOM	3734	O	GLU	L	93	45.830	42.487	14.512	1.00	55.13	L	O
ATOM	3735	N	ASP	L	94	44.532	40.975	15.329	1.00	54.53	L	N
ATOM	3736	CA	ASP	L	94	43.346	41.750	15.364	1.00	53.23	L	C
ATOM	3737	CB	ASP	L	94	42.142	40.809	15.294	1.00	54.70	L	C
ATOM	3738	CG	ASP	L	94	42.076	39.997	13.826	1.00	57.43	L	C
ATOM	3739	OD1	ASP	L	94	42.696	40.310	12.814	1.00	57.14	L	O
ATOM	3740	OD2	ASP	L	94	41.463	39.008	13.648	1.00	61.04	L	O
ATOM	3741	C	ASP	L	94	43.190	42.589	16.555	1.00	51.99	L	C
ATOM	3742	O	ASP	L	94	43.648	42.180	17.663	1.00	54.05	L	O
ATOM	3743	N	PRO	L	95	42.672	43.777	16.387	1.00	48.83	L	N
ATOM	3744	CD	PRO	L	95	42.461	44.714	17.489	1.00	47.99	L	C
ATOM	3745	CA	PRO	L	95	42.312	44.348	15.087	1.00	48.09	L	C
ATOM	3746	CB	PRO	L	95	41.376	45.510	15.436	1.00	49.09	L	C
ATOM	3747	CG	PRO	L	95	42.063	46.117	16.791	1.00	47.71	L	C
ATOM	3748	C	PRO	L	95	43.396	44.759	14.188	1.00	46.87	L	C
ATOM	3749	O	PRO	L	95	44.300	45.389	14.643	1.00	47.73	L	O
ATOM	3750	N	TRP	L	96	43.354	44.392	12.867	1.00	45.97	L	N
ATOM	3751	CA	TRP	L	96	44.289	45.074	11.947	1.00	45.52	L	C
ATOM	3752	CB	TRP	L	96	44.003	44.780	10.478	1.00	45.68	L	C
ATOM	3753	CG	TRP	L	96	44.181	43.372	10.097	1.00	45.86	L	C
ATOM	3754	CD2	TRP	L	96	44.084	42.815	8.827	1.00	46.64	L	C
ATOM	3755	CE2	TRP	L	96	44.231	41.361	8.976	1.00	46.98	L	C
ATOM	3756	CE3	TRP	L	96	43.831	43.331	7.577	1.00	47.58	L	C
ATOM	3757	CD1	TRP	L	96	44.369	42.327	10.941	1.00	44.89	L	C
ATOM	3758	NE1	TRP	L	96	44.446	41.119	10.306	1.00	45.59	L	N
ATOM	3759	CZ2	TRP	L	96	44.327	40.521	7.939	1.00	46.28	L	C
ATOM	3760	CZ3	TRP	L	96	43.875	42.467	6.467	1.00	48.84	L	C
ATOM	3761	CH2	TRP	L	96	44.030	41.022	6.640	1.00	47.17	L	C
ATOM	3762	C	TRP	L	96	44.304	46.639	12.165	1.00	43.70	L	C
ATOM	3763	O	TRP	L	96	43.282	47.212	12.334	1.00	42.66	L	O
ATOM	3764	N	THR	L	97	45.480	47.279	12.172	1.00	42.35	L	N
ATOM	3765	CA	THR	L	97	45.610	48.692	12.325	1.00	42.63	L	C
ATOM	3766	CB	THR	L	97	46.179	49.032	13.645	1.00	41.06	L	C
ATOM	3767	OG1	THR	L	97	47.337	48.270	13.806	1.00	42.43	L	O
ATOM	3768	CG2	THR	L	97	45.190	48.602	14.784	1.00	42.15	L	C
ATOM	3769	C	THR	L	97	46.561	49.331	11.315	1.00	42.11	L	C
ATOM	3770	O	THR	L	97	47.465	48.653	10.852	1.00	40.72	L	O
ATOM	3771	N	PHE	L	98	46.371	50.620	11.204	1.00	42.79	L	N
ATOM	3772	CA	PHE	L	98	47.158	51.355	10.243	1.00	44.72	L	C
ATOM	3773	CB	PHE	L	98	46.257	52.157	9.301	1.00	44.19	L	C
ATOM	3774	CG	PHE	L	98	45.492	51.275	8.233	1.00	45.94	L	C
ATOM	3775	CD1	PHE	L	98	44.260	50.690	8.549	1.00	44.38	L	C
ATOM	3776	CD2	PHE	L	98	45.845	51.317	6.909	1.00	43.71	L	C
ATOM	3777	CE1	PHE	L	98	43.579	49.891	7.630	1.00	44.14	L	C
ATOM	3778	CE2	PHE	L	98	45.142	50.544	5.952	1.00	44.40	L	C
ATOM	3779	CZ	PHE	L	98	43.990	49.844	6.323	1.00	43.77	L	C
ATOM	3780	C	PHE	L	98	48.021	52.424	11.032	1.00	45.39	L	C
ATOM	3781	O	PHE	L	98	47.539	53.020	11.932	1.00	46.17	L	O
ATOM	3782	N	GLY	L	99	49.155	52.858	10.467	1.00	45.81	L	N
ATOM	3783	CA	GLY	L	99	49.809	54.075	10.921	1.00	45.06	L	C
ATOM	3784	C	GLY	L	99	49.051	55.337	10.565	1.00	46.31	L	C
ATOM	3785	O	GLY	L	99	48.143	55.392	9.509	1.00	45.42	L	O
ATOM	3786	N	GLY	L	100	49.531	56.441	11.247	1.00	45.88	L	N
ATOM	3787	CA	GLY	L	100	49.024	57.752	11.058	1.00	45.30	L	C
ATOM	3788	C	GLY	L	100	49.199	58.373	9.657	1.00	45.43	L	C
ATOM	3789	O	GLY	L	100	48.790	59.443	9.313	1.00	45.57	L	O
ATOM	3790	N	GLY	L	101	50.013	57.757	8.844	1.00	45.62	L	N
ATOM	3791	CA	GLY	L	101	50.426	58.406	7.650	1.00	45.85	L	C
ATOM	3792	C	GLY	L	101	51.663	59.279	7.620	1.00	46.19	L	C

ATOM	3793	O	GLY	L	101	51.934	59.904	8.587	1.00	44.61	L	O
ATOM	3794	N	THR	L	102	52.291	59.442	6.433	1.00	45.36	L	N
ATOM	3795	CA	THR	L	102	53.411	60.313	6.255	1.00	45.28	L	C
ATOM	3796	CB	THR	L	102	54.626	59.534	5.965	1.00	44.83	L	C
ATOM	3797	OG1	THR	L	102	55.236	59.086	7.115	1.00	44.03	L	O
ATOM	3798	CG2	THR	L	102	55.665	60.329	5.172	1.00	44.01	L	C
ATOM	3799	C	THR	L	102	53.154	60.976	4.830	1.00	46.66	L	C
ATOM	3800	O	THR	L	102	52.867	60.240	3.841	1.00	45.35	L	O
ATOM	3801	N	LYS	L	103	53.058	62.320	4.809	1.00	47.18	L	N
ATOM	3802	CA	LYS	L	103	52.816	63.201	3.673	1.00	48.50	L	C
ATOM	3803	CB	LYS	L	103	52.191	64.445	4.212	1.00	50.90	L	C
ATOM	3804	CG	LYS	L	103	51.609	65.477	3.221	1.00	56.57	L	C
ATOM	3805	CD	LYS	L	103	50.967	64.749	1.911	1.00	60.51	L	C
ATOM	3806	CE	LYS	L	103	50.587	65.501	0.527	1.00	60.75	L	C
ATOM	3807	NZ	LYS	L	103	49.218	64.661	0.158	1.00	64.51	L	N
ATOM	3808	C	LYS	L	103	54.089	63.528	2.937	1.00	49.12	L	C
ATOM	3809	O	LYS	L	103	55.070	63.987	3.529	1.00	46.89	L	O
ATOM	3810	N	LEU	L	104	54.136	63.203	1.640	1.00	49.88	L	N
ATOM	3811	CA	LEU	L	104	55.237	63.493	0.821	1.00	50.17	L	C
ATOM	3812	CB	LEU	L	104	55.450	62.279	-0.094	1.00	50.10	L	C
ATOM	3813	CG	LEU	L	104	56.504	62.487	-1.172	1.00	51.61	L	C
ATOM	3814	CD1	LEU	L	104	57.736	62.665	-0.408	1.00	50.91	L	C
ATOM	3815	CD2	LEU	L	104	56.680	61.293	-2.010	1.00	51.28	L	C
ATOM	3816	C	LEU	L	104	54.886	64.669	-0.160	1.00	50.51	L	C
ATOM	3817	O	LEU	L	104	54.013	64.595	-0.991	1.00	50.36	L	O
ATOM	3818	N	GLU	L	105	55.750	65.621	-0.180	1.00	52.49	L	N
ATOM	3819	CA	GLU	L	105	55.759	66.681	-1.104	1.00	54.11	L	C
ATOM	3820	CB	GLU	L	105	55.539	67.921	-0.352	1.00	55.10	L	C
ATOM	3821	CG	GLU	L	105	54.018	67.996	-0.086	1.00	61.17	L	C
ATOM	3822	CD	GLU	L	105	53.637	68.790	1.207	1.00	64.63	L	C
ATOM	3823	OE1	GLU	L	105	54.425	68.420	2.179	1.00	67.64	L	O
ATOM	3824	OE2	GLU	L	105	52.652	69.661	1.163	1.00	65.16	L	O
ATOM	3825	C	GLU	L	105	56.954	66.708	-2.082	1.00	54.00	L	C
ATOM	3826	O	GLU	L	105	58.116	66.333	-1.762	1.00	53.00	L	O
ATOM	3827	N	ILE	L	106	56.644	67.285	-3.223	1.00	54.75	L	N
ATOM	3828	CA	ILE	L	106	57.745	67.670	-4.139	1.00	56.70	L	C
ATOM	3829	CB	ILE	L	106	57.349	67.406	-5.589	1.00	56.28	L	C
ATOM	3830	CG2	ILE	L	106	58.592	67.703	-6.534	1.00	56.73	L	C
ATOM	3831	CG1	ILE	L	106	56.777	65.999	-5.661	1.00	57.37	L	C
ATOM	3832	CD1	ILE	L	106	57.702	65.016	-5.232	1.00	56.71	L	C
ATOM	3833	C	ILE	L	106	58.348	69.019	-3.972	1.00	57.21	L	C
ATOM	3834	O	ILE	L	106	57.604	69.928	-3.826	1.00	57.93	L	O
ATOM	3835	N	LYS	L	107	59.714	69.124	-3.982	1.00	57.73	L	N
ATOM	3836	CA	LYS	L	107	60.478	70.430	-4.003	1.00	58.73	L	C
ATOM	3837	CB	LYS	L	107	61.787	70.552	-3.283	1.00	58.92	L	C
ATOM	3838	CG	LYS	L	107	61.726	70.325	-1.955	1.00	61.50	L	C
ATOM	3839	CD	LYS	L	107	63.145	70.594	-1.364	1.00	63.56	L	C
ATOM	3840	CE	LYS	L	107	63.002	71.212	0.071	1.00	65.27	L	C
ATOM	3841	NZ	LYS	L	107	64.255	71.130	0.893	1.00	67.17	L	N
ATOM	3842	C	LYS	L	107	60.785	70.780	-5.419	1.00	58.54	L	C
ATOM	3843	O	LYS	L	107	61.079	69.888	-6.256	1.00	59.83	L	O
ATOM	3844	N	ARG	L	108	60.489	72.052	-5.691	1.00	57.71	L	N
ATOM	3845	CA	ARG	L	108	60.602	72.586	-6.940	1.00	56.79	L	C
ATOM	3846	CB	ARG	L	108	59.370	72.336	-7.752	1.00	56.25	L	C
ATOM	3847	CG	ARG	L	108	58.122	72.926	-7.302	1.00	57.11	L	C
ATOM	3848	CD	ARG	L	108	57.194	73.347	-8.373	1.00	58.22	L	C
ATOM	3849	NE	ARG	L	108	57.728	74.544	-9.051	1.00	59.58	L	N
ATOM	3850	CZ	ARG	L	108	57.277	75.002	-10.208	1.00	60.73	L	C
ATOM	3851	NH1	ARG	L	108	56.286	74.384	-10.896	1.00	60.18	L	N
ATOM	3852	NH2	ARG	L	108	57.817	76.093	-10.739	1.00	60.38	L	N
ATOM	3853	C	ARG	L	108	61.109	73.981	-6.858	1.00	57.20	L	C
ATOM	3854	O	ARG	L	108	61.247	74.526	-5.783	1.00	57.37	L	O
ATOM	3855	N	ALA	L	109	61.418	74.553	-8.058	1.00	56.62	L	N
ATOM	3856	CA	ALA	L	109	61.799	76.015	-8.199	1.00	56.09	L	C
ATOM	3857	CB	ALA	L	109	62.040	76.296	-9.655	1.00	53.79	L	C
ATOM	3858	C	ALA	L	109	60.615	76.950	-7.667	1.00	56.43	L	C
ATOM	3859	O	ALA	L	109	59.410	76.628	-7.921	1.00	56.16	L	O
ATOM	3860	N	ASP	L	110	60.920	78.053	-6.998	1.00	56.18	L	N
ATOM	3861	CA	ASP	L	110	59.892	78.966	-6.545	1.00	56.86	L	C

ATOM	3862	CB	ASP	L	110	60.511	80.157	-5.837	1.00	56.81	L C
ATOM	3863	CG	ASP	L	110	61.128	79.797	-4.443	1.00	58.54	L C
ATOM	3864	OD1	ASP	L	110	60.928	78.730	-3.852	1.00	59.52	L O
ATOM	3865	OD2	ASP	L	110	61.870	80.621	-3.807	1.00	59.92	L O
ATOM	3866	C	ASP	L	110	59.125	79.430	-7.775	1.00	57.69	L C
ATOM	3867	O	ASP	L	110	59.672	79.417	-8.905	1.00	59.35	L O
ATOM	3868	N	ALA	L	111	57.838	79.723	-7.595	1.00	56.11	L N
ATOM	3869	CA	ALA	L	111	56.869	80.171	-8.619	1.00	55.19	L C
ATOM	3870	CB	ALA	L	111	56.070	79.034	-9.159	1.00	52.10	L C
ATOM	3871	C	ALA	L	111	55.941	81.179	-7.991	1.00	55.80	L C
ATOM	3872	O	ALA	L	111	55.376	80.892	-6.956	1.00	55.37	L O
ATOM	3873	N	ALA	L	112	55.807	82.368	-8.618	1.00	56.05	L N
ATOM	3874	CA	ALA	L	112	54.850	83.310	-8.173	1.00	56.07	L C
ATOM	3875	CB	ALA	L	112	55.222	84.806	-8.826	1.00	55.31	L C
ATOM	3876	C	ALA	L	112	53.370	82.893	-8.402	1.00	56.07	L C
ATOM	3877	O	ALA	L	112	52.988	82.406	-9.455	1.00	56.89	L O
ATOM	3878	N	PRO	L	113	52.474	83.234	-7.505	1.00	55.80	L N
ATOM	3879	CD	PRO	L	113	52.643	84.043	-6.244	1.00	54.68	L C
ATOM	3880	CA	PRO	L	113	51.074	83.015	-7.777	1.00	54.69	L C
ATOM	3881	CB	PRO	L	113	50.384	83.513	-6.451	1.00	54.68	L C
ATOM	3882	CG	PRO	L	113	51.271	84.529	-5.848	1.00	53.65	L C
ATOM	3883	C	PRO	L	113	50.516	83.920	-8.805	1.00	54.74	L C
ATOM	3884	O	PRO	L	113	50.922	85.031	-8.877	1.00	55.39	L O
ATOM	3885	N	THR	L	114	49.392	83.530	-9.334	1.00	54.38	L N
ATOM	3886	CA	THR	L	114	48.631	84.218	-10.276	1.00	54.72	L C
ATOM	3887	CB	THR	L	114	48.300	83.289	-11.360	1.00	55.08	L C
ATOM	3888	OG1	THR	L	114	49.517	82.942	-11.940	1.00	56.71	L O
ATOM	3889	CG2	THR	L	114	47.352	84.010	-12.458	1.00	54.02	L C
ATOM	3890	C	THR	L	114	47.315	84.529	-9.570	1.00	55.93	L C
ATOM	3891	O	THR	L	114	46.529	83.548	-9.242	1.00	55.95	L O
ATOM	3892	N	VAL	L	115	47.093	85.831	-9.299	1.00	55.11	L N
ATOM	3893	CA	VAL	L	115	46.026	86.296	-8.435	1.00	55.65	L C
ATOM	3894	CB	VAL	L	115	46.526	87.339	-7.568	1.00	55.29	L C
ATOM	3895	CG1	VAL	L	115	45.498	87.847	-6.585	1.00	54.37	L C
ATOM	3896	CG2	VAL	L	115	47.733	86.748	-6.861	1.00	55.51	L C
ATOM	3897	C	VAL	L	115	44.896	86.832	-9.187	1.00	56.77	L C
ATOM	3898	O	VAL	L	115	45.067	87.612	-10.165	1.00	57.49	L O
ATOM	3899	N	SER	L	116	43.697	86.493	-8.747	1.00	57.44	L N
ATOM	3900	CA	SER	L	116	42.536	87.040	-9.514	1.00	59.96	L C
ATOM	3901	CB	SER	L	116	41.993	86.004	-10.433	1.00	59.44	L C
ATOM	3902	OG	SER	L	116	43.127	85.809	-11.254	1.00	63.37	L O
ATOM	3903	C	SER	L	116	41.517	87.421	-8.528	1.00	61.30	L C
ATOM	3904	O	SER	L	116	41.396	86.709	-7.486	1.00	62.38	L O
ATOM	3905	N	ILE	L	117	40.807	88.529	-8.785	1.00	62.29	L N
ATOM	3906	CA	ILE	L	117	39.705	88.949	-7.955	1.00	63.59	L C
ATOM	3907	CB	ILE	L	117	40.034	90.318	-7.214	1.00	64.24	L C
ATOM	3908	CG2	ILE	L	117	39.911	91.545	-8.193	1.00	63.93	L C
ATOM	3909	CG1	ILE	L	117	39.176	90.561	-5.851	1.00	63.82	L C
ATOM	3910	CD1	ILE	L	117	39.509	91.728	-5.135	1.00	63.17	L C
ATOM	3911	C	ILE	L	117	38.324	88.847	-8.605	1.00	64.65	L C
ATOM	3912	O	ILE	L	117	38.135	88.842	-9.868	1.00	66.10	L O
ATOM	3913	N	PHE	L	118	37.301	88.667	-7.783	1.00	65.70	L N
ATOM	3914	CA	PHE	L	118	36.011	88.514	-8.316	1.00	67.48	L C
ATOM	3915	CB	PHE	L	118	35.650	87.070	-8.575	1.00	68.00	L C
ATOM	3916	CG	PHE	L	118	36.650	86.307	-9.398	1.00	68.57	L C
ATOM	3917	CD1	PHE	L	118	37.740	85.735	-8.812	1.00	69.91	L C
ATOM	3918	CD2	PHE	L	118	36.448	86.087	-10.734	1.00	67.93	L C
ATOM	3919	CE1	PHE	L	118	38.640	85.062	-9.583	1.00	69.94	L C
ATOM	3920	CE2	PHE	L	118	37.333	85.356	-11.483	1.00	68.43	L C
ATOM	3921	CZ	PHE	L	118	38.378	84.846	-10.967	1.00	68.56	L C
ATOM	3922	C	PHE	L	118	34.952	89.192	-7.470	1.00	68.64	L C
ATOM	3923	O	PHE	L	118	34.821	88.899	-6.264	1.00	69.49	L O
ATOM	3924	N	PRO	L	119	34.151	90.103	-8.061	1.00	69.22	L N
ATOM	3925	CD	PRO	L	119	34.183	90.603	-9.460	1.00	68.87	L C
ATOM	3926	CA	PRO	L	119	33.094	90.771	-7.290	1.00	69.16	L C
ATOM	3927	CB	PRO	L	119	32.689	91.929	-8.220	1.00	68.71	L C
ATOM	3928	CG	PRO	L	119	33.934	92.087	-9.087	1.00	69.40	L C
ATOM	3929	C	PRO	L	119	31.941	89.878	-7.085	1.00	69.48	L C
ATOM	3930	O	PRO	L	119	31.819	88.991	-7.820	1.00	69.66	L O

ATOM	3931	N	PRO	L	120	31.018	90.158	-6.195	1.00	70.27	L N
ATOM	3932	CD	PRO	L	120	30.919	91.398	-5.392	1.00	70.15	L C
ATOM	3933	CA	PRO	L	120	29.871	89.237	-5.969	1.00	71.14	L C
ATOM	3934	CB	PRO	L	120	29.149	89.866	-4.837	1.00	70.76	L C
ATOM	3935	CG	PRO	L	120	30.185	90.868	-4.253	1.00	70.81	L C
ATOM	3936	C	PRO	L	120	28.917	89.154	-7.152	1.00	71.90	L C
ATOM	3937	O	PRO	L	120	28.743	90.113	-7.840	1.00	72.28	L O
ATOM	3938	N	SER	L	121	28.311	88.008	-7.406	1.00	73.49	L N
ATOM	3939	CA	SER	L	121	27.432	87.865	-8.562	1.00	75.09	L C
ATOM	3940	CB	SER	L	121	27.094	86.412	-8.743	1.00	75.12	L C
ATOM	3941	OG	SER	L	121	26.586	85.860	-7.505	1.00	75.74	L O
ATOM	3942	C	SER	L	121	26.132	88.602	-8.241	1.00	76.41	L C
ATOM	3943	O	SER	L	121	25.753	88.759	-7.076	1.00	76.22	L O
ATOM	3944	N	SER	L	122	25.406	89.005	-9.291	1.00	77.92	L N
ATOM	3945	CA	SER	L	122	24.027	89.566	-9.093	1.00	79.32	L C
ATOM	3946	CB	SER	L	122	23.326	89.892	-10.400	1.00	79.46	L C
ATOM	3947	OG	SER	L	122	24.061	89.395	-11.455	1.00	81.39	L O
ATOM	3948	C	SER	L	122	23.128	88.620	-8.362	1.00	79.71	L C
ATOM	3949	O	SER	L	122	22.367	89.032	-7.482	1.00	79.61	L O
ATOM	3950	N	GLU	L	123	23.245	87.351	-8.720	1.00	79.84	L N
ATOM	3951	CA	GLU	L	123	22.352	86.391	-8.170	1.00	80.62	L C
ATOM	3952	CB	GLU	L	123	22.642	85.086	-8.917	1.00	82.32	L C
ATOM	3953	CG	GLU	L	123	21.476	84.057	-9.091	1.00	84.76	L C
ATOM	3954	CD	GLU	L	123	21.980	82.620	-9.416	1.00	86.63	L C
ATOM	3955	OE1	GLU	L	123	21.543	81.649	-8.701	1.00	88.17	L O
ATOM	3956	OE2	GLU	L	123	22.830	82.491	-10.349	1.00	87.03	L O
ATOM	3957	C	GLU	L	123	22.341	86.308	-6.609	1.00	79.85	L C
ATOM	3958	O	GLU	L	123	21.293	86.136	-5.979	1.00	79.94	L O
ATOM	3959	N	GLN	L	124	23.486	86.506	-5.988	1.00	79.17	L N
ATOM	3960	CA	GLN	L	124	23.628	86.412	-4.536	1.00	78.84	L C
ATOM	3961	CB	GLN	L	124	25.119	86.103	-4.212	1.00	77.47	L C
ATOM	3962	CG	GLN	L	124	25.590	86.085	-2.803	1.00	75.52	L C
ATOM	3963	CD	GLN	L	124	27.166	86.208	-2.726	1.00	75.37	L C
ATOM	3964	OE1	GLN	L	124	27.734	86.138	-1.666	1.00	75.06	L O
ATOM	3965	NE2	GLN	L	124	27.811	86.385	-3.834	1.00	74.95	L N
ATOM	3966	C	GLN	L	124	23.222	87.747	-3.926	1.00	79.38	L C
ATOM	3967	O	GLN	L	124	22.714	87.841	-2.784	1.00	78.57	L O
ATOM	3968	N	LEU	L	125	23.531	88.797	-4.708	1.00	80.14	L N
ATOM	3969	CA	LEU	L	125	23.192	90.185	-4.268	1.00	80.82	L C
ATOM	3970	CB	LEU	L	125	23.623	91.162	-5.306	1.00	79.74	L C
ATOM	3971	CG	LEU	L	125	24.770	92.122	-5.094	1.00	78.76	L C
ATOM	3972	CD1	LEU	L	125	25.497	91.659	-3.878	1.00	78.25	L C
ATOM	3973	CD2	LEU	L	125	25.712	92.319	-6.364	1.00	78.11	L C
ATOM	3974	C	LEU	L	125	21.678	90.292	-4.087	1.00	81.71	L C
ATOM	3975	O	LEU	L	125	21.222	90.372	-2.956	1.00	82.15	L O
ATOM	3976	N	THR	L	126	20.893	90.207	-5.150	1.00	81.94	L N
ATOM	3977	CA	THR	L	126	19.476	90.116	-4.932	1.00	82.43	L C
ATOM	3978	CB	THR	L	126	18.740	89.577	-6.127	1.00	82.87	L C
ATOM	3979	OG1	THR	L	126	19.106	88.209	-6.272	1.00	84.01	L O
ATOM	3980	CG2	THR	L	126	19.112	90.313	-7.442	1.00	83.71	L C
ATOM	3981	C	THR	L	126	19.188	89.148	-3.809	1.00	82.03	L C
ATOM	3982	O	THR	L	126	18.218	89.262	-3.161	1.00	83.16	L O
ATOM	3983	N	SER	L	127	19.972	88.128	-3.608	1.00	81.29	L N
ATOM	3984	CA	SER	L	127	19.769	87.307	-2.421	1.00	80.30	L C
ATOM	3985	CB	SER	L	127	20.700	86.060	-2.431	1.00	81.26	L C
ATOM	3986	OG	SER	L	127	20.075	84.893	-1.916	1.00	82.17	L O
ATOM	3987	C	SER	L	127	19.959	87.974	-1.042	1.00	78.92	L C
ATOM	3988	O	SER	L	127	19.477	87.367	-0.088	1.00	79.15	L O
ATOM	3989	N	GLY	L	128	20.661	89.130	-0.915	1.00	77.27	L N
ATOM	3990	CA	GLY	L	128	21.107	89.689	0.384	1.00	76.66	L C
ATOM	3991	C	GLY	L	128	22.578	89.517	0.913	1.00	76.00	L C
ATOM	3992	O	GLY	L	128	22.943	89.960	2.002	1.00	75.56	L O
ATOM	3993	N	GLY	L	129	23.398	88.774	0.171	1.00	75.16	L N
ATOM	3994	CA	GLY	L	129	24.795	88.519	0.509	1.00	73.79	L C
ATOM	3995	C	GLY	L	129	25.750	89.161	-0.515	1.00	72.59	L C
ATOM	3996	O	GLY	L	129	25.391	89.350	-1.659	1.00	71.66	L O
ATOM	3997	N	ALA	L	130	26.977	89.495	-0.095	1.00	71.12	L N
ATOM	3998	CA	ALA	L	130	27.996	89.860	-1.089	1.00	69.78	L C
ATOM	3999	CB	ALA	L	130	28.269	91.282	-0.981	1.00	69.16	L C

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ATOM   4000  C   ALA L 130      29.248  88.975  -0.726  1.00 69.14      L    C
ATOM   4001  O   ALA L 130      29.693  89.059   0.402  1.00 69.40      L    O
ATOM   4002  N   SER L 131      29.685  88.053  -1.568  1.00 67.83      L    N
ATOM   4003  CA  SER L 131      30.954  87.324  -1.317  1.00 66.38      L    C
ATOM   4004  CB  SER L 131      30.761  85.779  -1.366  1.00 66.45      L    C
ATOM   4005  OG  SER L 131      29.911  85.269  -0.267  1.00 65.95      L    O
ATOM   4006  C   SER L 131      31.977  87.774  -2.347  1.00 65.46      L    C
ATOM   4007  O   SER L 131      31.640  87.847  -3.602  1.00 65.33      L    O
ATOM   4008  N   VAL L 132      33.141  88.177  -1.850  1.00 64.00      L    N
ATOM   4009  CA  VAL L 132      34.236  88.632  -2.718  1.00 63.13      L    C
ATOM   4010  CB  VAL L 132      34.819  89.972  -2.286  1.00 63.18      L    C
ATOM   4011  CG1 VAL L 132      35.786  90.546  -3.235  1.00 62.10      L    C
ATOM   4012  CG2 VAL L 132      33.797  90.979  -2.012  1.00 63.46      L    C
ATOM   4013  C   VAL L 132      35.287  87.545  -2.681  1.00 62.52      L    C
ATOM   4014  O   VAL L 132      35.689  87.053  -1.599  1.00 61.71      L    O
ATOM   4015  N   VAL L 133      35.674  87.092  -3.864  1.00 62.28      L    N
ATOM   4016  CA  VAL L 133      36.508  85.922  -4.004  1.00 61.13      L    C
ATOM   4017  CB  VAL L 133      35.845  84.812  -4.879  1.00 60.79      L    C
ATOM   4018  CG1 VAL L 133      36.666  83.560  -4.734  1.00 61.21      L    C
ATOM   4019  CG2 VAL L 133      34.490  84.536  -4.496  1.00 60.87      L    C
ATOM   4020  C   VAL L 133      37.779  86.296  -4.687  1.00 60.84      L    C
ATOM   4021  O   VAL L 133      37.838  87.026  -5.766  1.00 59.39      L    O
ATOM   4022  N   CYS L 134      38.808  85.738  -4.151  1.00 60.55      L    N
ATOM   4023  CA  CYS L 134      40.170  85.866  -4.711  1.00 60.80      L    C
ATOM   4024  C   CYS L 134      40.910  84.507  -4.875  1.00 58.83      L    C
ATOM   4025  O   CYS L 134      41.022  83.716  -3.947  1.00 58.54      L    O
ATOM   4026  CB  CYS L 134      40.963  86.783  -3.760  1.00 62.49      L    C
ATOM   4027  SG  CYS L 134      42.525  87.373  -4.465  1.00 66.69      L    S
ATOM   4028  N   PHE L 135      41.465  84.202  -6.034  1.00 58.10      L    N
ATOM   4029  CA  PHE L 135      42.320  83.024  -6.337  1.00 58.00      L    C
ATOM   4030  CB  PHE L 135      41.916  82.231  -7.608  1.00 57.99      L    C
ATOM   4031  CG  PHE L 135      40.563  81.667  -7.504  1.00 59.98      L    C
ATOM   4032  CD1 PHE L 135      40.199  80.894  -6.353  1.00 60.26      L    C
ATOM   4033  CD2 PHE L 135      39.570  81.927  -8.426  1.00 60.52      L    C
ATOM   4034  CE1 PHE L 135      38.918  80.414  -6.220  1.00 60.79      L    C
ATOM   4035  CE2 PHE L 135      38.274  81.405  -8.208  1.00 60.24      L    C
ATOM   4036  CZ  PHE L 135      37.979  80.723  -7.131  1.00 60.17      L    C
ATOM   4037  C   PHE L 135      43.695  83.390  -6.360  1.00 57.37      L    C
ATOM   4038  O   PHE L 135      44.065  84.430  -6.793  1.00 59.08      L    O
ATOM   4039  N   LEU L 136      44.475  82.615  -5.732  1.00 56.20      L    N
ATOM   4040  CA  LEU L 136      45.902  82.636  -5.797  1.00 56.01      L    C
ATOM   4041  CB  LEU L 136      46.466  82.926  -4.349  1.00 55.00      L    C
ATOM   4042  CG  LEU L 136      46.197  84.380  -3.849  1.00 53.48      L    C
ATOM   4043  CD1 LEU L 136      44.809  84.348  -3.487  1.00 52.57      L    C
ATOM   4044  CD2 LEU L 136      47.206  84.588  -2.663  1.00 53.68      L    C
ATOM   4045  C   LEU L 136      46.461  81.270  -6.220  1.00 55.46      L    C
ATOM   4046  O   LEU L 136      46.648  80.361  -5.363  1.00 55.72      L    O
ATOM   4047  N   ASN L 137      46.696  81.125  -7.504  1.00 54.71      L    N
ATOM   4048  CA  ASN L 137      46.908  79.853  -8.217  1.00 54.02      L    C
ATOM   4049  CB  ASN L 137      45.912  79.848  -9.315  1.00 53.13      L    C
ATOM   4050  CG  ASN L 137      44.576  79.532  -8.824  1.00 54.07      L    C
ATOM   4051  OD1 ASN L 137      43.611  79.418  -9.556  1.00 54.87      L    O
ATOM   4052  ND2 ASN L 137      44.486  79.396  -7.490  1.00 53.36      L    N
ATOM   4053  C   ASN L 137      48.280  79.488  -8.641  1.00 53.42      L    C
ATOM   4054  O   ASN L 137      49.023  80.363  -9.044  1.00 52.73      L    O
ATOM   4055  N   ASN L 138      48.717  78.234  -8.388  1.00 53.56      L    N
ATOM   4056  CA  ASN L 138      50.019  77.761  -8.934  1.00 52.82      L    C
ATOM   4057  CB  ASN L 138      49.948  77.670 -10.515  1.00 53.07      L    C
ATOM   4058  CG  ASN L 138      48.845  76.761 -10.939  1.00 53.90      L    C
ATOM   4059  OD1 ASN L 138      47.738  77.168 -11.022  1.00 54.05      L    O
ATOM   4060  ND2 ASN L 138      49.164  75.451 -11.148  1.00 56.15      L    N
ATOM   4061  C   ASN L 138      51.282  78.409  -8.462  1.00 52.73      L    C
ATOM   4062  O   ASN L 138      52.085  78.958  -9.222  1.00 52.99      L    O
ATOM   4063  N   PHE L 139      51.493  78.369  -7.146  1.00 51.91      L    N
ATOM   4064  CA  PHE L 139      52.686  78.991  -6.586  1.00 50.60      L    C
ATOM   4065  CB  PHE L 139      52.243  80.105  -5.715  1.00 50.74      L    C
ATOM   4066  CG  PHE L 139      51.351  79.679  -4.491  1.00 48.25      L    C
ATOM   4067  CD1 PHE L 139      51.889  79.231  -3.410  1.00 46.22      L    C
ATOM   4068  CD2 PHE L 139      50.020  79.854  -4.515  1.00 47.57      L    C
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ATOM	4069	CE1	PHE	L	139	51.033	78.832	-2.264	1.00	44.38	L C
ATOM	4070	CE2	PHE	L	139	49.153	79.655	-3.432	1.00	46.99	L C
ATOM	4071	CZ	PHE	L	139	49.685	79.145	-2.293	1.00	46.10	L C
ATOM	4072	C	PHE	L	139	53.479	78.035	-5.987	1.00	50.74	L C
ATOM	4073	O	PHE	L	139	52.967	76.992	-5.659	1.00	51.42	L O
ATOM	4074	N	TYR	L	140	54.743	78.307	-5.712	1.00	50.69	L N
ATOM	4075	CA	TYR	L	140	55.491	77.532	-4.737	1.00	51.02	L C
ATOM	4076	CB	TYR	L	140	56.222	76.384	-5.565	1.00	50.21	L C
ATOM	4077	CG	TYR	L	140	57.032	75.429	-4.718	1.00	50.51	L C
ATOM	4078	CD1	TYR	L	140	58.310	75.776	-4.260	1.00	50.90	L C
ATOM	4079	CE1	TYR	L	140	59.070	74.860	-3.430	1.00	51.73	L C
ATOM	4080	CD2	TYR	L	140	56.489	74.231	-4.313	1.00	50.29	L C
ATOM	4081	CE2	TYR	L	140	57.189	73.398	-3.442	1.00	49.97	L C
ATOM	4082	CZ	TYR	L	140	58.482	73.731	-3.033	1.00	50.71	L C
ATOM	4083	OH	TYR	L	140	59.122	72.903	-2.208	1.00	51.28	L O
ATOM	4084	C	TYR	L	140	56.515	78.436	-4.108	1.00	52.40	L C
ATOM	4085	O	TYR	L	140	57.132	79.318	-4.849	1.00	53.02	L O
ATOM	4086	N	PRO	L	141	56.914	78.189	-2.837	1.00	53.24	L N
ATOM	4087	CD	PRO	L	141	58.097	78.906	-2.277	1.00	53.94	L C
ATOM	4088	CA	PRO	L	141	56.381	77.114	-1.909	1.00	53.82	L C
ATOM	4089	CB	PRO	L	141	57.436	77.042	-0.809	1.00	54.17	L C
ATOM	4090	CG	PRO	L	141	58.112	78.417	-0.784	1.00	54.65	L C
ATOM	4091	C	PRO	L	141	55.060	77.398	-1.338	1.00	55.01	L C
ATOM	4092	O	PRO	L	141	54.450	78.370	-1.550	1.00	54.05	L O
ATOM	4093	N	LYS	L	142	54.522	76.460	-0.588	1.00	56.78	L N
ATOM	4094	CA	LYS	L	142	53.103	76.616	-0.029	1.00	58.31	L C
ATOM	4095	CB	LYS	L	142	52.811	75.335	0.800	1.00	59.20	L C
ATOM	4096	CG	LYS	L	142	53.687	75.266	2.059	1.00	62.44	L C
ATOM	4097	CD	LYS	L	142	53.100	74.381	3.213	1.00	66.39	L C
ATOM	4098	CE	LYS	L	142	53.392	72.900	2.888	1.00	68.80	L C
ATOM	4099	NZ	LYS	L	142	52.247	72.069	3.031	1.00	71.04	L N
ATOM	4100	C	LYS	L	142	52.742	77.846	0.910	1.00	57.77	L C
ATOM	4101	O	LYS	L	142	51.589	78.219	1.053	1.00	56.47	L O
ATOM	4102	N	ASP	L	143	53.695	78.301	1.647	1.00	58.64	L N
ATOM	4103	CA	ASP	L	143	53.509	79.452	2.544	1.00	60.59	L C
ATOM	4104	CB	ASP	L	143	54.787	79.662	3.435	1.00	63.72	L C
ATOM	4105	CG	ASP	L	143	55.369	78.208	3.881	1.00	68.11	L C
ATOM	4106	OD1	ASP	L	143	54.603	77.551	4.678	1.00	71.23	L O
ATOM	4107	OD2	ASP	L	143	56.381	77.589	3.350	1.00	68.52	L O
ATOM	4108	C	ASP	L	143	53.144	80.707	1.777	1.00	59.86	L C
ATOM	4109	O	ASP	L	143	53.781	81.100	0.832	1.00	59.91	L O
ATOM	4110	N	ILE	L	144	51.992	81.227	2.139	1.00	59.20	L N
ATOM	4111	CA	ILE	L	144	51.460	82.460	1.579	1.00	57.84	L C
ATOM	4112	CB	ILE	L	144	50.848	82.198	0.240	1.00	57.69	L C
ATOM	4113	CG2	ILE	L	144	49.495	81.527	0.333	1.00	57.29	L C
ATOM	4114	CG1	ILE	L	144	50.459	83.396	-0.447	1.00	56.97	L C
ATOM	4115	CD1	ILE	L	144	50.218	82.952	-1.999	1.00	58.74	L C
ATOM	4116	C	ILE	L	144	50.517	83.183	2.516	1.00	57.84	L C
ATOM	4117	O	ILE	L	144	50.025	82.633	3.447	1.00	57.82	L O
ATOM	4118	N	ASN	L	145	50.398	84.459	2.352	1.00	58.32	L N
ATOM	4119	CA	ASN	L	145	49.474	85.216	3.173	1.00	58.90	L C
ATOM	4120	CB	ASN	L	145	50.180	85.973	4.384	1.00	61.33	L C
ATOM	4121	CG	ASN	L	145	50.711	84.960	5.438	1.00	65.53	L C
ATOM	4122	OD1	ASN	L	145	50.064	84.629	6.562	1.00	67.50	L O
ATOM	4123	ND2	ASN	L	145	51.803	84.324	5.035	1.00	67.78	L N
ATOM	4124	C	ASN	L	145	48.750	86.163	2.315	1.00	58.33	L C
ATOM	4125	O	ASN	L	145	49.351	86.782	1.573	1.00	57.41	L O
ATOM	4126	N	VAL	L	146	47.438	86.226	2.478	1.00	57.86	L N
ATOM	4127	CA	VAL	L	146	46.555	87.234	1.924	1.00	58.06	L C
ATOM	4128	CB	VAL	L	146	45.303	86.517	1.079	1.00	57.95	L C
ATOM	4129	CG1	VAL	L	146	44.307	86.211	1.872	1.00	57.78	L C
ATOM	4130	CG2	VAL	L	146	44.674	87.508	0.160	1.00	58.46	L C
ATOM	4131	C	VAL	L	146	45.900	88.252	2.910	1.00	57.64	L C
ATOM	4132	O	VAL	L	146	45.598	87.920	4.076	1.00	58.21	L O
ATOM	4133	N	ALA	L	147	45.671	89.436	2.420	1.00	57.33	L N
ATOM	4134	CA	ALA	L	147	45.064	90.601	3.176	1.00	57.71	L C
ATOM	4135	CB	ALA	L	147	46.137	91.686	3.585	1.00	55.87	L C
ATOM	4136	C	ALA	L	147	44.014	91.255	2.324	1.00	57.31	L C
ATOM	4137	O	ALA	L	147	44.223	91.499	1.101	1.00	58.04	L O

ATOM	4138	N	TRP	L	148	42.851	91.453	2.894	1.00	57.87	L	N
ATOM	4139	CA	TRP	L	148	41.821	92.218	2.236	1.00	58.89	L	C
ATOM	4140	CB	TRP	L	148	40.462	91.584	2.565	1.00	57.33	L	C
ATOM	4141	CG	TRP	L	148	40.288	90.291	1.853	1.00	57.66	L	C
ATOM	4142	CD2	TRP	L	148	39.694	90.085	0.541	1.00	57.55	L	C
ATOM	4143	CE2	TRP	L	148	39.622	88.685	0.329	1.00	57.15	L	C
ATOM	4144	CE3	TRP	L	148	39.241	90.945	-0.454	1.00	56.56	L	C
ATOM	4145	CD1	TRP	L	148	40.542	89.005	2.371	1.00	58.03	L	C
ATOM	4146	NE1	TRP	L	148	40.157	88.010	1.528	1.00	57.48	L	N
ATOM	4147	CZ2	TRP	L	148	39.105	88.187	-0.854	1.00	56.94	L	C
ATOM	4148	CZ3	TRP	L	148	38.719	90.449	-1.634	1.00	57.22	L	C
ATOM	4149	CH2	TRP	L	148	38.652	89.052	-1.835	1.00	57.66	L	C
ATOM	4150	C	TRP	L	148	41.859	93.669	2.705	1.00	59.68	L	C
ATOM	4151	O	TRP	L	148	42.073	93.972	3.876	1.00	58.38	L	O
ATOM	4152	N	LYS	L	149	41.705	94.576	1.727	1.00	60.92	L	N
ATOM	4153	CA	LYS	L	149	41.490	95.970	2.071	1.00	62.70	L	C
ATOM	4154	CB	LYS	L	149	42.705	96.770	1.601	1.00	62.73	L	C
ATOM	4155	CG	LYS	L	149	44.017	96.275	2.216	1.00	65.79	L	C
ATOM	4156	CD	LYS	L	149	45.191	97.199	1.883	1.00	67.30	L	C
ATOM	4157	CE	LYS	L	149	46.310	97.132	2.928	1.00	68.06	L	C
ATOM	4158	NZ	LYS	L	149	47.554	97.631	2.346	1.00	69.75	L	N
ATOM	4159	C	LYS	L	149	40.236	96.513	1.393	1.00	64.55	L	C
ATOM	4160	O	LYS	L	149	40.083	96.480	0.179	1.00	65.43	L	O
ATOM	4161	N	ILE	L	150	39.297	96.975	2.238	1.00	66.29	L	N
ATOM	4162	CA	ILE	L	150	38.118	97.649	1.709	1.00	68.24	L	C
ATOM	4163	CB	ILE	L	150	36.893	97.082	2.420	1.00	67.61	L	C
ATOM	4164	CG2	ILE	L	150	35.672	97.148	1.483	1.00	66.74	L	C
ATOM	4165	CG1	ILE	L	150	37.115	95.617	2.807	1.00	68.87	L	C
ATOM	4166	CD1	ILE	L	150	35.801	94.846	2.900	1.00	68.94	L	C
ATOM	4167	C	ILE	L	150	38.190	99.155	1.961	1.00	69.93	L	C
ATOM	4168	O	ILE	L	150	37.920	99.651	3.048	1.00	70.68	L	O
ATOM	4169	N	ASP	L	151	38.614	99.893	0.919	1.00	72.15	L	N
ATOM	4170	CA	ASP	L	151	38.698	101.335	1.080	1.00	75.11	L	C
ATOM	4171	CB	ASP	L	151	37.330	101.823	1.563	1.00	76.60	L	C
ATOM	4172	CG	ASP	L	151	36.515	102.376	0.400	1.00	78.00	L	C
ATOM	4173	OD1	ASP	L	151	36.903	102.148	-0.744	1.00	80.12	L	O
ATOM	4174	OD2	ASP	L	151	35.490	103.004	0.660	1.00	78.82	L	O
ATOM	4175	C	ASP	L	151	39.771	101.714	2.116	1.00	76.27	L	C
ATOM	4176	O	ASP	L	151	39.501	102.350	3.129	1.00	77.76	L	O
ATOM	4177	N	GLY	L	152	41.005	101.233	1.858	1.00	76.18	L	N
ATOM	4178	CA	GLY	L	152	42.135	101.650	2.684	1.00	77.99	L	C
ATOM	4179	C	GLY	L	152	42.400	100.699	3.858	1.00	79.58	L	C
ATOM	4180	O	GLY	L	152	43.497	100.184	4.043	1.00	80.56	L	O
ATOM	4181	N	SER	L	153	41.354	100.501	4.688	1.00	79.95	L	N
ATOM	4182	CA	SER	L	153	41.528	99.673	5.878	1.00	80.24	L	C
ATOM	4183	CB	SER	L	153	40.488	100.083	6.931	1.00	79.86	L	C
ATOM	4184	OG	SER	L	153	39.493	100.915	6.336	1.00	80.56	L	O
ATOM	4185	C	SER	L	153	41.397	98.186	5.554	1.00	80.28	L	C
ATOM	4186	O	SER	L	153	40.625	97.774	4.697	1.00	79.92	L	O
ATOM	4187	N	GLU	L	154	42.238	97.415	6.271	1.00	80.81	L	N
ATOM	4188	CA	GLU	L	154	42.199	95.956	6.217	1.00	82.01	L	C
ATOM	4189	CB	GLU	L	154	43.431	95.490	7.000	1.00	82.58	L	C
ATOM	4190	CG	GLU	L	154	43.693	93.986	6.909	1.00	83.88	L	C
ATOM	4191	CD	GLU	L	154	44.934	93.662	7.710	1.00	85.00	L	C
ATOM	4192	OE1	GLU	L	154	45.688	94.573	8.011	1.00	86.24	L	O
ATOM	4193	OE2	GLU	L	154	45.155	92.486	7.989	1.00	85.17	L	O
ATOM	4194	C	GLU	L	154	40.924	95.410	6.889	1.00	82.30	L	C
ATOM	4195	O	GLU	L	154	40.455	95.942	7.884	1.00	81.97	L	O
ATOM	4196	N	ARG	L	155	40.480	94.338	6.220	1.00	82.65	L	N
ATOM	4197	CA	ARG	L	155	39.515	93.441	6.761	1.00	83.03	L	C
ATOM	4198	CB	ARG	L	155	38.397	93.264	5.785	1.00	83.37	L	C
ATOM	4199	CG	ARG	L	155	37.151	93.965	6.190	1.00	84.92	L	C
ATOM	4200	CD	ARG	L	155	36.200	93.337	7.238	1.00	86.77	L	C
ATOM	4201	NE	ARG	L	155	34.877	94.025	7.153	1.00	88.25	L	N
ATOM	4202	CZ	ARG	L	155	33.646	93.437	7.146	1.00	88.42	L	C
ATOM	4203	NH1	ARG	L	155	33.464	92.126	7.274	1.00	87.36	L	N
ATOM	4204	NH2	ARG	L	155	32.564	94.209	6.998	1.00	89.76	L	N
ATOM	4205	C	ARG	L	155	40.140	92.075	7.077	1.00	82.99	L	C
ATOM	4206	O	ARG	L	155	41.035	91.596	6.322	1.00	83.97	L	O

ATOM	4207	N	GLN	L	156	39.666	91.490	8.196	1.00	81.99	L	N
ATOM	4208	CA	GLN	L	156	39.811	90.083	8.655	1.00	80.76	L	C
ATOM	4209	CB	GLN	L	156	40.770	90.099	9.830	1.00	80.72	L	C
ATOM	4210	CG	GLN	L	156	42.232	90.228	9.421	1.00	80.80	L	C
ATOM	4211	CD	GLN	L	156	43.078	90.931	10.427	1.00	82.05	L	C
ATOM	4212	OE1	GLN	L	156	42.765	92.026	10.846	1.00	82.80	L	O
ATOM	4213	NE2	GLN	L	156	44.169	90.282	10.857	1.00	82.66	L	N
ATOM	4214	C	GLN	L	156	38.459	89.288	8.952	1.00	80.18	L	C
ATOM	4215	O	GLN	L	156	38.334	88.061	8.733	1.00	80.18	L	O
ATOM	4216	N	ASN	L	157	37.435	90.015	9.341	1.00	78.71	L	N
ATOM	4217	CA	ASN	L	157	36.109	89.487	9.547	1.00	77.03	L	C
ATOM	4218	CB	ASN	L	157	35.300	90.700	10.075	1.00	78.97	L	C
ATOM	4219	CG	ASN	L	157	33.882	90.323	10.592	1.00	80.56	L	C
ATOM	4220	OD1	ASN	L	157	33.573	89.132	10.652	1.00	82.32	L	O
ATOM	4221	ND2	ASN	L	157	33.032	91.339	10.954	1.00	81.05	L	N
ATOM	4222	C	ASN	L	157	35.380	88.982	8.298	1.00	74.78	L	C
ATOM	4223	O	ASN	L	157	34.967	89.810	7.408	1.00	75.06	L	O
ATOM	4224	N	GLY	L	158	35.103	87.642	8.222	1.00	71.80	L	N
ATOM	4225	CA	GLY	L	158	34.183	87.163	7.173	1.00	67.26	L	C
ATOM	4226	C	GLY	L	158	35.024	86.671	6.129	1.00	65.35	L	C
ATOM	4227	O	GLY	L	158	34.664	86.616	4.978	1.00	65.64	L	O
ATOM	4228	N	VAL	L	159	36.203	86.316	6.524	1.00	62.86	L	N
ATOM	4229	CA	VAL	L	159	37.256	85.881	5.623	1.00	60.58	L	C
ATOM	4230	CB	VAL	L	159	38.648	86.582	5.757	1.00	60.31	L	C
ATOM	4231	CG1	VAL	L	159	39.725	85.978	4.872	1.00	57.65	L	C
ATOM	4232	CG2	VAL	L	159	38.678	88.045	5.438	1.00	59.05	L	C
ATOM	4233	C	VAL	L	159	37.506	84.421	5.903	1.00	59.71	L	C
ATOM	4234	O	VAL	L	159	37.844	83.995	7.023	1.00	60.16	L	O
ATOM	4235	N	LEU	L	160	37.374	83.625	4.863	1.00	57.40	L	N
ATOM	4236	CA	LEU	L	160	37.557	82.157	4.890	1.00	55.89	L	C
ATOM	4237	CB	LEU	L	160	36.153	81.523	4.887	1.00	55.19	L	C
ATOM	4238	CG	LEU	L	160	35.473	81.481	6.386	1.00	55.02	L	C
ATOM	4239	CD1	LEU	L	160	34.081	80.756	6.541	1.00	52.85	L	C
ATOM	4240	CD2	LEU	L	160	36.367	80.947	7.670	1.00	51.54	L	C
ATOM	4241	C	LEU	L	160	38.467	81.698	3.747	1.00	54.28	L	C
ATOM	4242	O	LEU	L	160	38.156	81.965	2.593	1.00	54.43	L	O
ATOM	4243	N	ASN	L	161	39.609	81.137	4.096	1.00	53.43	L	N
ATOM	4244	CA	ASN	L	161	40.587	80.590	3.258	1.00	53.45	L	C
ATOM	4245	CB	ASN	L	161	41.879	81.051	3.771	1.00	54.82	L	C
ATOM	4246	CG	ASN	L	161	42.029	82.496	3.642	1.00	56.80	L	C
ATOM	4247	OD1	ASN	L	161	41.519	83.084	2.665	1.00	56.52	L	O
ATOM	4248	ND2	ASN	L	161	42.657	83.091	4.610	1.00	55.21	L	N
ATOM	4249	C	ASN	L	161	40.734	79.081	3.176	1.00	53.57	L	C
ATOM	4250	O	ASN	L	161	40.319	78.384	4.043	1.00	53.48	L	O
ATOM	4251	N	SER	L	162	41.253	78.571	2.016	1.00	53.97	L	N
ATOM	4252	CA	SER	L	162	41.350	77.148	1.750	1.00	53.68	L	C
ATOM	4253	CB	SER	L	162	39.961	76.646	1.339	1.00	52.18	L	C
ATOM	4254	OG	SER	L	162	40.034	75.376	0.681	1.00	55.01	L	O
ATOM	4255	C	SER	L	162	42.407	76.915	0.696	1.00	54.09	L	C
ATOM	4256	O	SER	L	162	42.432	77.585	-0.222	1.00	55.23	L	O
ATOM	4257	N	TRP	L	163	43.198	75.906	0.853	1.00	53.72	L	N
ATOM	4258	CA	TRP	L	163	44.378	75.589	0.150	1.00	54.51	L	C
ATOM	4259	CB	TRP	L	163	45.659	75.480	1.064	1.00	57.00	L	C
ATOM	4260	CG	TRP	L	163	46.120	76.734	1.597	1.00	59.37	L	C
ATOM	4261	CD2	TRP	L	163	45.511	77.432	2.684	1.00	59.95	L	C
ATOM	4262	CE2	TRP	L	163	46.278	78.524	2.950	1.00	61.25	L	C
ATOM	4263	CE3	TRP	L	163	44.475	77.121	3.538	1.00	60.81	L	C
ATOM	4264	CD1	TRP	L	163	47.228	77.427	1.237	1.00	60.45	L	C
ATOM	4265	NE1	TRP	L	163	47.313	78.570	2.022	1.00	62.43	L	N
ATOM	4266	CZ2	TRP	L	163	46.021	79.336	3.953	1.00	61.48	L	C
ATOM	4267	CZ3	TRP	L	163	44.208	77.956	4.536	1.00	60.93	L	C
ATOM	4268	CH2	TRP	L	163	44.941	79.117	4.659	1.00	60.59	L	C
ATOM	4269	C	TRP	L	163	44.152	74.125	-0.338	1.00	53.80	L	C
ATOM	4270	O	TRP	L	163	43.755	73.221	0.367	1.00	53.91	L	O
ATOM	4271	N	THR	L	164	44.639	73.884	-1.511	1.00	52.58	L	N
ATOM	4272	CA	THR	L	164	44.610	72.603	-2.117	1.00	51.82	L	C
ATOM	4273	CB	THR	L	164	44.605	72.750	-3.624	1.00	51.25	L	C
ATOM	4274	OG1	THR	L	164	45.805	73.483	-4.091	1.00	51.26	L	O
ATOM	4275	CG2	THR	L	164	43.400	73.462	-4.131	1.00	50.51	L	C

ATOM	4276	C	THR	L	164	45.845	71.880	-1.815	1.00	51.96	L	C
ATOM	4277	O	THR	L	164	46.712	72.419	-1.359	1.00	52.00	L	O
ATOM	4278	N	ASP	L	165	45.971	70.649	-2.208	1.00	53.05	L	N
ATOM	4279	CA	ASP	L	165	47.165	69.837	-1.993	1.00	53.45	L	C
ATOM	4280	CB	ASP	L	165	46.799	68.360	-1.999	1.00	55.52	L	C
ATOM	4281	CG	ASP	L	165	46.252	67.855	-0.542	1.00	60.07	L	C
ATOM	4282	OD1	ASP	L	165	45.044	67.725	-0.411	1.00	61.03	L	O
ATOM	4283	OD2	ASP	L	165	46.984	67.497	0.454	1.00	63.38	L	O
ATOM	4284	C	ASP	L	165	48.009	70.135	-3.161	1.00	52.57	L	C
ATOM	4285	O	ASP	L	165	47.508	70.595	-4.165	1.00	52.07	L	O
ATOM	4286	N	GLN	L	166	49.223	69.688	-3.087	1.00	50.87	L	N
ATOM	4287	CA	GLN	L	166	50.207	69.825	-4.145	1.00	50.45	L	C
ATOM	4288	CB	GLN	L	166	51.473	69.184	-3.640	1.00	49.06	L	C
ATOM	4289	CG	GLN	L	166	52.576	69.588	-4.484	1.00	50.09	L	C
ATOM	4290	CD	GLN	L	166	53.909	69.326	-4.010	1.00	50.81	L	C
ATOM	4291	OE1	GLN	L	166	54.122	68.377	-3.327	1.00	50.74	L	O
ATOM	4292	NE2	GLN	L	166	54.822	70.264	-4.311	1.00	50.10	L	N
ATOM	4293	C	GLN	L	166	49.653	69.162	-5.444	1.00	51.47	L	C
ATOM	4294	O	GLN	L	166	49.199	68.063	-5.439	1.00	50.46	L	O
ATOM	4295	N	ASP	L	167	49.577	69.901	-6.493	1.00	52.11	L	N
ATOM	4296	CA	ASP	L	167	49.257	69.421	-7.799	1.00	54.31	L	C
ATOM	4297	CB	ASP	L	167	49.503	70.542	-8.785	1.00	56.80	L	C
ATOM	4298	CG	ASP	L	167	48.910	70.248	-10.071	1.00	59.47	L	C
ATOM	4299	OD1	ASP	L	167	47.643	70.442	-10.035	1.00	60.73	L	O
ATOM	4300	OD2	ASP	L	167	49.615	69.742	-11.037	1.00	60.31	L	O
ATOM	4301	C	ASP	L	167	50.249	68.275	-8.167	1.00	55.01	L	C
ATOM	4302	O	ASP	L	167	51.401	68.414	-8.028	1.00	55.28	L	O
ATOM	4303	N	SER	L	168	49.733	67.109	-8.488	1.00	55.89	L	N
ATOM	4304	CA	SER	L	168	50.473	65.926	-9.062	1.00	56.86	L	C
ATOM	4305	CB	SER	L	168	49.570	64.627	-9.158	1.00	56.64	L	C
ATOM	4306	OG	SER	L	168	48.456	65.012	-9.870	1.00	60.89	L	O
ATOM	4307	C	SER	L	168	51.220	66.080	-10.403	1.00	56.36	L	C
ATOM	4308	O	SER	L	168	52.027	65.231	-10.659	1.00	57.56	L	O
ATOM	4309	N	LYS	L	169	51.052	67.158	-11.101	1.00	56.30	L	N
ATOM	4310	CA	LYS	L	169	51.800	67.448	-12.364	1.00	57.59	L	C
ATOM	4311	CB	LYS	L	169	50.798	67.867	-13.469	1.00	59.32	L	C
ATOM	4312	CG	LYS	L	169	49.678	66.849	-13.648	1.00	62.12	L	C
ATOM	4313	CD	LYS	L	169	48.998	66.638	-15.020	1.00	62.52	L	C
ATOM	4314	CE	LYS	L	169	48.225	65.181	-14.949	1.00	64.22	L	C
ATOM	4315	NZ	LYS	L	169	47.154	65.015	-16.011	1.00	63.95	L	N
ATOM	4316	C	LYS	L	169	52.812	68.527	-12.332	1.00	57.97	L	C
ATOM	4317	O	LYS	L	169	53.946	68.201	-12.490	1.00	57.97	L	O
ATOM	4318	N	ASP	L	170	52.446	69.786	-11.987	1.00	57.59	L	N
ATOM	4319	CA	ASP	L	170	53.438	70.868	-11.910	1.00	57.49	L	C
ATOM	4320	CB	ASP	L	170	52.788	72.129	-12.489	1.00	60.30	L	C
ATOM	4321	CG	ASP	L	170	51.710	72.750	-11.564	1.00	62.68	L	C
ATOM	4322	OD1	ASP	L	170	51.622	72.398	-10.321	1.00	65.22	L	O
ATOM	4323	OD2	ASP	L	170	50.896	73.581	-12.024	1.00	62.99	L	O
ATOM	4324	C	ASP	L	170	53.901	71.148	-10.435	1.00	55.90	L	C
ATOM	4325	O	ASP	L	170	54.694	72.062	-10.191	1.00	54.92	L	O
ATOM	4326	N	SER	L	171	53.446	70.339	-9.478	1.00	54.19	L	N
ATOM	4327	CA	SER	L	171	54.038	70.455	-8.108	1.00	53.65	L	C
ATOM	4328	CB	SER	L	171	55.440	70.037	-8.123	1.00	53.17	L	C
ATOM	4329	OG	SER	L	171	55.708	68.799	-8.882	1.00	54.70	L	O
ATOM	4330	C	SER	L	171	53.876	71.866	-7.423	1.00	52.81	L	C
ATOM	4331	O	SER	L	171	54.596	72.185	-6.436	1.00	51.59	L	O
ATOM	4332	N	THR	L	172	52.826	72.583	-7.840	1.00	51.64	L	N
ATOM	4333	CA	THR	L	172	52.507	73.877	-7.362	1.00	51.66	L	C
ATOM	4334	CB	THR	L	172	52.052	74.809	-8.372	1.00	51.61	L	C
ATOM	4335	OG1	THR	L	172	50.823	74.383	-8.882	1.00	50.22	L	O
ATOM	4336	CG2	THR	L	172	52.978	75.076	-9.669	1.00	50.29	L	C
ATOM	4337	C	THR	L	172	51.329	73.740	-6.295	1.00	51.43	L	C
ATOM	4338	O	THR	L	172	50.672	72.688	-6.205	1.00	51.34	L	O
ATOM	4339	N	TYR	L	173	51.051	74.805	-5.587	1.00	51.80	L	N
ATOM	4340	CA	TYR	L	173	49.878	74.930	-4.669	1.00	52.73	L	C
ATOM	4341	CB	TYR	L	173	50.334	75.305	-3.199	1.00	52.74	L	C
ATOM	4342	CG	TYR	L	173	51.209	74.185	-2.606	1.00	52.92	L	C
ATOM	4343	CD1	TYR	L	173	52.517	74.155	-2.818	1.00	53.07	L	C
ATOM	4344	CE1	TYR	L	173	53.329	73.243	-2.256	1.00	54.80	L	C

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ATOM   4345  CD2 TYR L 173      50.703  73.175  -1.858  1.00 53.06           L    C
ATOM   4346  CE2 TYR L 173      51.564  72.130  -1.375  1.00 54.56           L    C
ATOM   4347  CZ  TYR L 173      52.827  72.163  -1.586  1.00 55.24           L    C
ATOM   4348  OH  TYR L 173      53.703  71.126  -1.149  1.00 56.41           L    O
ATOM   4349  C   TYR L 173      48.987  75.983  -5.133  1.00 52.98           L    C
ATOM   4350  O   TYR L 173      49.387  76.949  -5.773  1.00 52.51           L    O
ATOM   4351  N   SER L 174      47.778  75.895  -4.636  1.00 54.50           L    N
ATOM   4352  CA  SER L 174      46.789  76.955  -4.809  1.00 56.59           L    C
ATOM   4353  CB  SER L 174      45.898  76.574  -6.002  1.00 56.89           L    C
ATOM   4354  OG  SER L 174      46.709  76.567  -7.154  1.00 58.41           L    O
ATOM   4355  C   SER L 174      45.984  77.303  -3.506  1.00 57.56           L    C
ATOM   4356  O   SER L 174      45.807  76.544  -2.616  1.00 56.52           L    O
ATOM   4357  N   MET L 175      45.349  78.466  -3.501  1.00 59.39           L    N
ATOM   4358  CA  MET L 175      44.637  78.939  -2.408  1.00 60.02           L    C
ATOM   4359  CB  MET L 175      45.564  79.641  -1.563  1.00 61.65           L    C
ATOM   4360  CG  MET L 175      45.288  81.039  -1.286  1.00 66.41           L    C
ATOM   4361  SD  MET L 175      45.001  81.374   0.591  1.00 70.49           L    S
ATOM   4362  CE  MET L 175      46.271  81.681   0.823  1.00 66.50           L    C
ATOM   4363  C   MET L 175      43.567  79.795  -2.863  1.00 59.29           L    C
ATOM   4364  O   MET L 175      43.680  80.541  -3.860  1.00 59.37           L    O
ATOM   4365  N   SER L 176      42.433  79.630  -2.237  1.00 58.81           L    N
ATOM   4366  CA  SER L 176      41.309  80.502  -2.491  1.00 59.10           L    C
ATOM   4367  CB  SER L 176      40.178  79.712  -2.851  1.00 57.88           L    C
ATOM   4368  OG  SER L 176      39.208  80.594  -2.947  1.00 60.69           L    O
ATOM   4369  C   SER L 176      40.964  81.310  -1.208  1.00 58.48           L    C
ATOM   4370  O   SER L 176      41.063  80.739  -0.089  1.00 57.99           L    O
ATOM   4371  N   SER L 177      40.659  82.616  -1.358  1.00 57.20           L    N
ATOM   4372  CA  SER L 177      40.193  83.440  -0.268  1.00 57.96           L    C
ATOM   4373  CB  SER L 177      41.143  84.497  -0.005  1.00 56.59           L    C
ATOM   4374  OG  SER L 177      40.940  85.208   1.304  1.00 55.06           L    O
ATOM   4375  C   SER L 177      38.889  84.056  -0.493  1.00 59.67           L    C
ATOM   4376  O   SER L 177      38.619  84.635  -1.584  1.00 60.67           L    O
ATOM   4377  N   THR L 178      37.970  83.906   0.453  1.00 60.93           L    N
ATOM   4378  CA  THR L 178      36.562  84.391   0.311  1.00 61.57           L    C
ATOM   4379  CB  THR L 178      35.594  83.260   0.267  1.00 60.58           L    C
ATOM   4380  OG1 THR L 178      35.763  82.541  -0.937  1.00 62.49           L    O
ATOM   4381  CG2 THR L 178      34.146  83.762  -0.046  1.00 61.14           L    C
ATOM   4382  C   THR L 178      36.127  85.364   1.530  1.00 62.36           L    C
ATOM   4383  O   THR L 178      36.172  85.057   2.681  1.00 61.84           L    O
ATOM   4384  N   LEU L 179      35.820  86.606   1.189  1.00 64.02           L    N
ATOM   4385  CA  LEU L 179      35.321  87.641   2.073  1.00 65.76           L    C
ATOM   4386  CB  LEU L 179      36.067  88.942   1.769  1.00 66.01           L    C
ATOM   4387  CG  LEU L 179      35.527  90.141   2.547  1.00 66.63           L    C
ATOM   4388  CD1 LEU L 179      35.694  89.990   4.059  1.00 65.10           L    C
ATOM   4389  CD2 LEU L 179      36.187  91.462   2.151  1.00 66.81           L    C
ATOM   4390  C   LEU L 179      33.808  87.792   1.872  1.00 66.30           L    C
ATOM   4391  O   LEU L 179      33.328  88.194   0.820  1.00 66.88           L    O
ATOM   4392  N   THR L 180      33.078  87.369   2.912  1.00 67.93           L    N
ATOM   4393  CA  THR L 180      31.622  87.393   2.887  1.00 70.66           L    C
ATOM   4394  CB  THR L 180      31.126  86.066   3.460  1.00 70.36           L    C
ATOM   4395  OG1 THR L 180      31.691  84.981   2.712  1.00 71.93           L    O
ATOM   4396  CG2 THR L 180      29.605  85.996   3.378  1.00 71.29           L    C
ATOM   4397  C   THR L 180      31.088  88.536   3.748  1.00 71.78           L    C
ATOM   4398  O   THR L 180      31.298  88.594   4.951  1.00 71.49           L    O
ATOM   4399  N   LEU L 181      30.412  89.505   3.103  1.00 74.20           L    N
ATOM   4400  CA  LEU L 181      29.918  90.676   3.846  1.00 76.89           L    C
ATOM   4401  CB  LEU L 181      30.347  91.926   3.052  1.00 75.96           L    C
ATOM   4402  CG  LEU L 181      31.845  91.902   2.685  1.00 76.56           L    C
ATOM   4403  CD1 LEU L 181      32.154  92.713   1.419  1.00 76.50           L    C
ATOM   4404  CD2 LEU L 181      32.736  92.478   3.791  1.00 75.74           L    C
ATOM   4405  C   LEU L 181      28.381  90.605   4.016  1.00 78.78           L    C
ATOM   4406  O   LEU L 181      27.828  89.535   4.105  1.00 80.37           L    O
ATOM   4407  N   THR L 182      27.735  91.786   4.145  1.00 80.95           L    N
ATOM   4408  CA  THR L 182      26.289  91.915   3.858  1.00 82.33           L    C
ATOM   4409  CB  THR L 182      25.662  92.615   5.077  1.00 82.13           L    C
ATOM   4410  OG1 THR L 182      26.674  93.433   5.728  1.00 81.85           L    O
ATOM   4411  CG2 THR L 182      25.240  91.514   6.082  1.00 82.04           L    C
ATOM   4412  C   THR L 182      26.237  92.856   2.668  1.00 83.70           L    C
ATOM   4413  O   THR L 182      27.002  93.774   2.622  1.00 84.91           L    O
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ATOM	4414	N	LYS	L	183	25.406	92.658	1.644	1.00	84.68	L	N
ATOM	4415	CA	LYS	L	183	25.737	93.594	0.562	1.00	86.00	L	C
ATOM	4416	CB	LYS	L	183	25.019	93.197	-0.749	1.00	86.72	L	C
ATOM	4417	CG	LYS	L	183	23.499	93.322	-0.752	1.00	86.54	L	C
ATOM	4418	CD	LYS	L	183	23.065	93.995	-2.073	1.00	87.47	L	C
ATOM	4419	CE	LYS	L	183	21.657	93.785	-2.691	1.00	88.10	L	C
ATOM	4420	NZ	LYS	L	183	21.485	94.811	-3.743	1.00	89.02	L	N
ATOM	4421	C	LYS	L	183	25.602	95.056	1.041	1.00	86.08	L	C
ATOM	4422	O	LYS	L	183	26.173	96.024	0.508	1.00	86.38	L	O
ATOM	4423	N	ASP	L	184	24.871	95.158	2.167	1.00	85.81	L	N
ATOM	4424	CA	ASP	L	184	24.500	96.437	2.721	1.00	85.79	L	C
ATOM	4425	CB	ASP	L	184	23.536	96.160	3.897	1.00	87.59	L	C
ATOM	4426	CG	ASP	L	184	23.420	97.349	4.851	1.00	89.93	L	C
ATOM	4427	OD1	ASP	L	184	23.081	98.440	4.386	1.00	90.99	L	O
ATOM	4428	OD2	ASP	L	184	23.484	97.125	6.059	1.00	91.11	L	O
ATOM	4429	C	ASP	L	184	25.756	97.177	3.133	1.00	84.86	L	C
ATOM	4430	O	ASP	L	184	25.888	98.391	2.998	1.00	85.11	L	O
ATOM	4431	N	GLU	L	185	26.696	96.403	3.685	1.00	83.36	L	N
ATOM	4432	CA	GLU	L	185	28.035	96.852	4.008	1.00	82.20	L	C
ATOM	4433	CB	GLU	L	185	28.562	95.839	5.023	1.00	82.08	L	C
ATOM	4434	CG	GLU	L	185	29.993	95.387	4.788	1.00	82.98	L	C
ATOM	4435	CD	GLU	L	185	30.855	96.050	5.830	1.00	83.92	L	C
ATOM	4436	OE1	GLU	L	185	31.322	95.363	6.730	1.00	85.45	L	O
ATOM	4437	OE2	GLU	L	185	30.886	97.277	5.847	1.00	83.51	L	O
ATOM	4438	C	GLU	L	185	28.942	96.888	2.760	1.00	80.93	L	C
ATOM	4439	O	GLU	L	185	29.750	97.781	2.573	1.00	79.31	L	O
ATOM	4440	N	TYR	L	186	28.794	95.847	1.906	1.00	80.68	L	N
ATOM	4441	CA	TYR	L	186	29.502	95.888	0.600	1.00	81.19	L	C
ATOM	4442	CB	TYR	L	186	28.925	94.799	-0.320	1.00	79.74	L	C
ATOM	4443	CG	TYR	L	186	29.431	94.924	-1.735	1.00	79.67	L	C
ATOM	4444	CD1	TYR	L	186	30.784	95.127	-1.986	1.00	79.51	L	C
ATOM	4445	CE1	TYR	L	186	31.300	94.990	-3.274	1.00	78.75	L	C
ATOM	4446	CD2	TYR	L	186	28.587	94.606	-2.809	1.00	79.13	L	C
ATOM	4447	CE2	TYR	L	186	29.094	94.472	-4.091	1.00	78.31	L	C
ATOM	4448	CZ	TYR	L	186	30.439	94.669	-4.334	1.00	77.87	L	C
ATOM	4449	OH	TYR	L	186	30.923	94.670	-5.639	1.00	77.89	L	O
ATOM	4450	C	TYR	L	186	29.290	97.258	-0.011	1.00	81.44	L	C
ATOM	4451	O	TYR	L	186	30.217	98.023	-0.236	1.00	82.62	L	O
ATOM	4452	N	GLU	L	187	28.004	97.580	-0.242	1.00	81.21	L	N
ATOM	4453	CA	GLU	L	187	27.596	98.768	-0.987	1.00	81.63	L	C
ATOM	4454	CB	GLU	L	187	26.082	98.747	-1.066	1.00	82.22	L	C
ATOM	4455	CG	GLU	L	187	25.567	97.889	-2.208	1.00	83.98	L	C
ATOM	4456	CD	GLU	L	187	24.105	98.198	-2.392	1.00	85.00	L	C
ATOM	4457	OE1	GLU	L	187	23.363	97.305	-2.767	1.00	84.70	L	O
ATOM	4458	OE2	GLU	L	187	23.706	99.319	-2.073	1.00	86.06	L	O
ATOM	4459	C	GLU	L	187	27.993	100.113	-0.356	1.00	80.66	L	C
ATOM	4460	O	GLU	L	187	27.543	101.169	-0.784	1.00	80.69	L	O
ATOM	4461	N	ARG	L	188	28.800	100.085	0.715	1.00	79.90	L	N
ATOM	4462	CA	ARG	L	188	29.105	101.364	1.347	1.00	79.44	L	C
ATOM	4463	CB	ARG	L	188	28.945	101.227	2.864	1.00	80.37	L	C
ATOM	4464	CG	ARG	L	188	27.471	101.291	3.281	1.00	82.71	L	C
ATOM	4465	CD	ARG	L	188	27.286	101.669	4.756	1.00	85.06	L	C
ATOM	4466	NE	ARG	L	188	27.408	100.484	5.612	1.00	85.93	L	N
ATOM	4467	CZ	ARG	L	188	26.281	99.818	5.932	1.00	86.70	L	C
ATOM	4468	NH1	ARG	L	188	25.109	100.226	5.477	1.00	86.66	L	N
ATOM	4469	NH2	ARG	L	188	26.357	98.738	6.716	1.00	86.37	L	N
ATOM	4470	C	ARG	L	188	30.493	101.898	0.973	1.00	78.28	L	C
ATOM	4471	O	ARG	L	188	30.834	103.050	1.208	1.00	79.42	L	O
ATOM	4472	N	HIS	L	189	31.159	100.835	0.491	1.00	76.81	L	N
ATOM	4473	CA	HIS	L	189	32.505	101.005	-0.024	1.00	75.77	L	C
ATOM	4474	CB	HIS	L	189	33.450	100.127	0.793	1.00	76.18	L	C
ATOM	4475	CG	HIS	L	189	33.202	100.344	2.259	1.00	75.83	L	C
ATOM	4476	CD2	HIS	L	189	32.184	99.803	3.049	1.00	75.79	L	C
ATOM	4477	ND1	HIS	L	189	34.056	101.028	3.062	1.00	76.33	L	N
ATOM	4478	CE1	HIS	L	189	33.568	100.890	4.306	1.00	76.23	L	C
ATOM	4479	NE2	HIS	L	189	32.447	100.160	4.329	1.00	76.30	L	N
ATOM	4480	C	HIS	L	189	32.567	100.595	-1.488	1.00	74.26	L	C
ATOM	4481	O	HIS	L	189	31.866	99.713	-1.942	1.00	73.32	L	O
ATOM	4482	N	ASN	L	190	33.495	101.241	-2.203	1.00	73.22	L	N

ATOM	4483	CA	ASN	L	190	33.511	101.062	-3.644	1.00	72.28	L	C
ATOM	4484	CB	ASN	L	190	33.497	102.448	-4.284	1.00	72.27	L	C
ATOM	4485	CG	ASN	L	190	33.359	102.314	-5.777	1.00	72.22	L	C
ATOM	4486	OD1	ASN	L	190	32.582	101.514	-6.291	1.00	72.45	L	O
ATOM	4487	ND2	ASN	L	190	34.149	103.133	-6.492	1.00	72.27	L	N
ATOM	4488	C	ASN	L	190	34.749	100.292	-4.083	1.00	71.86	L	C
ATOM	4489	O	ASN	L	190	34.733	99.519	-5.032	1.00	71.82	L	O
ATOM	4490	N	SER	L	191	35.886	100.556	-3.430	1.00	70.48	L	N
ATOM	4491	CA	SER	L	191	37.231	99.902	-3.668	1.00	69.30	L	C
ATOM	4492	CB	SER	L	191	38.292	100.968	-3.415	1.00	68.08	L	C
ATOM	4493	OG	SER	L	191	39.567	100.442	-3.635	1.00	70.37	L	O
ATOM	4494	C	SER	L	191	37.561	98.593	-2.756	1.00	68.67	L	C
ATOM	4495	O	SER	L	191	37.611	98.630	-1.534	1.00	68.74	L	O
ATOM	4496	N	TYR	L	192	37.721	97.469	-3.426	1.00	67.14	L	N
ATOM	4497	CA	TYR	L	192	37.945	96.133	-2.841	1.00	66.18	L	C
ATOM	4498	CB	TYR	L	192	36.809	95.191	-3.337	1.00	64.98	L	C
ATOM	4499	CG	TYR	L	192	35.577	95.517	-2.560	1.00	65.06	L	C
ATOM	4500	CD1	TYR	L	192	34.690	96.498	-3.018	1.00	65.76	L	C
ATOM	4501	CE1	TYR	L	192	33.532	96.850	-2.250	1.00	65.52	L	C
ATOM	4502	CD2	TYR	L	192	35.350	95.015	-1.281	1.00	64.44	L	C
ATOM	4503	CE2	TYR	L	192	34.192	95.424	-0.452	1.00	64.83	L	C
ATOM	4504	CZ	TYR	L	192	33.299	96.346	-0.960	1.00	65.25	L	C
ATOM	4505	OH	TYR	L	192	32.176	96.797	-0.300	1.00	65.93	L	O
ATOM	4506	C	TYR	L	192	39.239	95.609	-3.407	1.00	65.75	L	C
ATOM	4507	O	TYR	L	192	39.405	95.510	-4.664	1.00	65.70	L	O
ATOM	4508	N	THR	L	193	40.182	95.367	-2.565	1.00	64.25	L	N
ATOM	4509	CA	THR	L	193	41.444	94.833	-2.979	1.00	63.31	L	C
ATOM	4510	CB	THR	L	193	42.465	95.898	-2.780	1.00	63.11	L	C
ATOM	4511	OG1	THR	L	193	42.317	96.829	-3.840	1.00	63.06	L	O
ATOM	4512	CG2	THR	L	193	43.903	95.300	-2.971	1.00	62.69	L	C
ATOM	4513	C	THR	L	193	41.943	93.531	-2.280	1.00	63.36	L	C
ATOM	4514	O	THR	L	193	41.741	93.343	-1.075	1.00	61.67	L	O
ATOM	4515	N	CYS	L	194	42.588	92.686	-3.059	1.00	63.76	L	N
ATOM	4516	CA	CYS	L	194	43.220	91.404	-2.686	1.00	64.62	L	C
ATOM	4517	C	CYS	L	194	44.750	91.501	-2.683	1.00	64.56	L	C
ATOM	4518	O	CYS	L	194	45.367	91.725	-3.717	1.00	64.27	L	O
ATOM	4519	CB	CYS	L	194	42.754	90.303	-3.656	1.00	65.84	L	C
ATOM	4520	SG	CYS	L	194	43.253	88.662	-3.082	1.00	69.27	L	S
ATOM	4521	N	GLU	L	195	45.475	91.101	-1.654	1.00	65.49	L	N
ATOM	4522	CA	GLU	L	195	46.940	91.294	-1.514	1.00	66.37	L	C
ATOM	4523	CB	GLU	L	195	47.313	92.457	-0.485	1.00	67.92	L	C
ATOM	4524	CG	GLU	L	195	47.266	93.904	-1.015	1.00	70.14	L	C
ATOM	4525	CD	GLU	L	195	48.021	94.916	-0.147	1.00	72.46	L	C
ATOM	4526	OE1	GLU	L	195	48.876	94.560	0.691	1.00	74.03	L	O
ATOM	4527	OE2	GLU	L	195	47.713	96.098	-0.294	1.00	74.44	L	O
ATOM	4528	C	GLU	L	195	47.676	90.065	-1.028	1.00	66.00	L	C
ATOM	4529	O	GLU	L	195	47.530	89.604	0.172	1.00	66.57	L	O
ATOM	4530	N	ALA	L	196	48.631	89.611	-1.891	1.00	65.28	L	N
ATOM	4531	CA	ALA	L	196	49.251	88.309	-1.699	1.00	64.12	L	C
ATOM	4532	CB	ALA	L	196	49.146	87.584	-2.984	1.00	63.44	L	C
ATOM	4533	C	ALA	L	196	50.644	88.502	-1.252	1.00	64.13	L	C
ATOM	4534	O	ALA	L	196	51.394	89.096	-1.899	1.00	63.42	L	O
ATOM	4535	N	THR	L	197	51.008	88.031	-0.064	1.00	64.82	L	N
ATOM	4536	CA	THR	L	197	52.389	88.024	0.252	1.00	64.09	L	C
ATOM	4537	CB	THR	L	197	52.652	88.665	1.576	1.00	63.72	L	C
ATOM	4538	OG1	THR	L	197	52.336	90.047	1.434	1.00	64.06	L	O
ATOM	4539	CG2	THR	L	197	54.091	88.660	1.879	1.00	63.15	L	C
ATOM	4540	C	THR	L	197	53.024	86.702	0.070	1.00	64.02	L	C
ATOM	4541	O	THR	L	197	52.745	85.779	0.788	1.00	64.77	L	O
ATOM	4542	N	HIS	L	198	53.912	86.657	-0.910	1.00	62.84	L	N
ATOM	4543	CA	HIS	L	198	54.764	85.477	-1.189	1.00	61.69	L	C
ATOM	4544	CB	HIS	L	198	54.209	84.821	-2.512	1.00	59.77	L	C
ATOM	4545	CG	HIS	L	198	54.600	83.394	-2.645	1.00	59.10	L	C
ATOM	4546	CD2	HIS	L	198	54.012	82.226	-2.233	1.00	58.46	L	C
ATOM	4547	ND1	HIS	L	198	55.734	83.035	-3.297	1.00	59.08	L	N
ATOM	4548	CE1	HIS	L	198	55.823	81.697	-3.331	1.00	57.61	L	C
ATOM	4549	NE2	HIS	L	198	54.821	81.190	-2.634	1.00	57.62	L	N
ATOM	4550	C	HIS	L	198	56.291	85.717	-1.302	1.00	61.03	L	C
ATOM	4551	O	HIS	L	198	56.747	86.720	-1.785	1.00	60.88	L	O

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ATOM   4552  N   LYS L 199      57.048  84.693  -1.083  1.00 60.86           N
ATOM   4553  CA  LYS L 199      58.586  84.708  -1.161  1.00 61.48           C
ATOM   4554  CB  LYS L 199      59.152  83.326  -0.608  1.00 62.55           C
ATOM   4555  CG  LYS L 199      60.165  82.579  -1.411  1.00 65.31           C
ATOM   4556  CD  LYS L 199      60.614  81.343  -0.633  1.00 67.98           C
ATOM   4557  CE  LYS L 199      62.157  81.071  -0.720  1.00 68.98           C
ATOM   4558  NZ  LYS L 199      62.459  79.587  -1.216  1.00 72.58           N
ATOM   4559  C   LYS L 199      59.215  85.037  -2.499  1.00 60.71           C
ATOM   4560  O   LYS L 199      60.316  85.439  -2.483  1.00 59.15           O
ATOM   4561  N   THR L 200      58.534  84.770  -3.606  1.00 61.34           N
ATOM   4562  CA  THR L 200      58.889  85.151  -4.867  1.00 62.41           C
ATOM   4563  CB  THR L 200      57.823  84.599  -5.955  1.00 61.98           C
ATOM   4564  OG1 THR L 200      56.492  84.775  -5.459  1.00 61.48           O
ATOM   4565  CG2 THR L 200      57.965  83.103  -6.030  1.00 61.96           C
ATOM   4566  C   THR L 200      58.937  86.656  -5.003  1.00 63.55           C
ATOM   4567  O   THR L 200      59.287  87.166  -6.033  1.00 63.63           O
ATOM   4568  N   SER L 201      58.552  87.427  -4.027  1.00 65.08           N
ATOM   4569  CA  SER L 201      58.503  88.878  -4.257  1.00 66.77           C
ATOM   4570  CB  SER L 201      57.270  89.284  -5.062  1.00 66.67           C
ATOM   4571  OG  SER L 201      57.317  90.617  -5.277  1.00 69.81           O
ATOM   4572  C   SER L 201      58.532  89.678  -2.932  1.00 67.89           C
ATOM   4573  O   SER L 201      57.824  89.379  -2.026  1.00 67.63           O
ATOM   4574  N   THR L 202      59.389  90.679  -2.903  1.00 68.99           N
ATOM   4575  CA  THR L 202      59.579  91.609  -1.731  1.00 70.40           C
ATOM   4576  CB  THR L 202      60.789  92.514  -1.942  1.00 70.21           C
ATOM   4577  OG1 THR L 202      61.001  92.700  -3.363  1.00 71.61           O
ATOM   4578  CG2 THR L 202      62.051  91.770  -1.502  1.00 69.32           C
ATOM   4579  C   THR L 202      58.384  92.492  -1.483  1.00 71.81           C
ATOM   4580  O   THR L 202      58.249  93.078  -0.433  1.00 73.06           O
ATOM   4581  N   SER L 203      57.509  92.620  -2.445  1.00 72.08           N
ATOM   4582  CA  SER L 203      56.351  93.397  -2.139  1.00 72.51           C
ATOM   4583  CB  SER L 203      56.536  94.788  -2.770  1.00 72.61           C
ATOM   4584  OG  SER L 203      56.840  94.698  -4.173  1.00 73.89           O
ATOM   4585  C   SER L 203      55.109  92.574  -2.642  1.00 73.15           C
ATOM   4586  O   SER L 203      55.060  91.850  -3.730  1.00 73.17           O
ATOM   4587  N   PRO L 204      54.020  92.809  -1.971  1.00 73.52           N
ATOM   4588  CD  PRO L 204      53.822  93.786  -0.890  1.00 73.68           C
ATOM   4589  CA  PRO L 204      52.764  92.157  -2.391  1.00 73.37           C
ATOM   4590  CB  PRO L 204      51.760  92.891  -1.538  1.00 72.83           C
ATOM   4591  CG  PRO L 204      52.466  94.171  -1.377  1.00 73.10           C
ATOM   4592  C   PRO L 204      52.319  92.276  -3.827  1.00 73.82           C
ATOM   4593  O   PRO L 204      52.550  93.254  -4.516  1.00 73.65           O
ATOM   4594  N   ILE L 205      51.530  91.345  -4.270  1.00 74.15           N
ATOM   4595  CA  ILE L 205      50.947  91.530  -5.602  1.00 75.21           C
ATOM   4596  CB  ILE L 205      51.131  90.297  -6.391  1.00 75.73           C
ATOM   4597  CG2 ILE L 205      50.847  89.201  -5.470  1.00 77.35           C
ATOM   4598  CG1 ILE L 205      50.088  90.139  -7.496  1.00 75.81           C
ATOM   4599  CD1 ILE L 205      50.328  88.977  -8.411  1.00 76.36           C
ATOM   4600  C   ILE L 205      49.492  91.850  -5.266  1.00 75.53           C
ATOM   4601  O   ILE L 205      49.112  91.672  -4.177  1.00 76.26           O
ATOM   4602  N   VAL L 206      48.715  92.491  -6.123  1.00 75.08           N
ATOM   4603  CA  VAL L 206      47.513  93.122  -5.663  1.00 74.71           C
ATOM   4604  CB  VAL L 206      47.697  94.634  -5.144  1.00 74.40           C
ATOM   4605  CG1 VAL L 206      48.952  94.812  -4.282  1.00 73.30           C
ATOM   4606  CG2 VAL L 206      47.699  95.650  -6.301  1.00 74.38           C
ATOM   4607  C   VAL L 206      46.644  93.211  -6.846  1.00 74.88           C
ATOM   4608  O   VAL L 206      47.071  93.738  -7.786  1.00 75.87           O
ATOM   4609  N   LYS L 207      45.442  92.674  -6.741  1.00 74.58           N
ATOM   4610  CA  LYS L 207      44.292  92.812  -7.622  1.00 74.35           C
ATOM   4611  CB  LYS L 207      43.878  91.401  -8.024  1.00 74.50           C
ATOM   4612  CG  LYS L 207      44.996  90.736  -8.978  1.00 75.19           C
ATOM   4613  CD  LYS L 207      45.030  91.289 -10.379  1.00 76.53           C
ATOM   4614  CE  LYS L 207      46.336  90.847 -11.268  1.00 77.77           C
ATOM   4615  NZ  LYS L 207      45.764  90.117 -12.435  1.00 79.30           N
ATOM   4616  C   LYS L 207      43.096  93.543  -6.906  1.00 74.45           C
ATOM   4617  O   LYS L 207      42.827  93.341  -5.709  1.00 73.76           O
ATOM   4618  N   SER L 208      42.406  94.355  -7.676  1.00 74.34           N
ATOM   4619  CA  SER L 208      41.413  95.213  -7.140  1.00 74.67           C
ATOM   4620  CB  SER L 208      41.922  96.636  -6.816  1.00 74.26           C
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ATOM   4621  OG  SER L 208      43.125  96.638  -6.088  1.00 75.04      L    O
ATOM   4622  C   SER L 208      40.278  95.350  -8.117  1.00 75.12      L    C
ATOM   4623  O   SER L 208      40.328  94.990  -9.309  1.00 75.07      L    O
ATOM   4624  N   PHE L 209      39.225  95.930  -7.600  1.00 75.89      L    N
ATOM   4625  CA  PHE L 209      38.202  96.369  -8.515  1.00 76.68      L    C
ATOM   4626  CB  PHE L 209      37.392  95.232  -8.946  1.00 75.71      L    C
ATOM   4627  CG  PHE L 209      36.442  94.760  -7.934  1.00 76.21      L    C
ATOM   4628  CD1 PHE L 209      35.288  95.396  -7.710  1.00 76.27      L    C
ATOM   4629  CD2 PHE L 209      36.650  93.568  -7.240  1.00 76.95      L    C
ATOM   4630  CE1 PHE L 209      34.321  94.896  -6.848  1.00 76.62      L    C
ATOM   4631  CE2 PHE L 209      35.650  93.051  -6.385  1.00 76.70      L    C
ATOM   4632  CZ  PHE L 209      34.499  93.760  -6.215  1.00 77.30      L    C
ATOM   4633  C   PHE L 209      37.343  97.346  -7.803  1.00 77.21      L    C
ATOM   4634  O   PHE L 209      37.380  97.403  -6.577  1.00 76.60      L    O
ATOM   4635  N   ASN L 210      36.554  98.038  -8.608  1.00 78.77      L    N
ATOM   4636  CA  ASN L 210      35.666  99.132  -8.158  1.00 81.02      L    C
ATOM   4637  CB  ASN L 210      36.053 100.417  -8.857  1.00 80.71      L    C
ATOM   4638  CG  ASN L 210      37.168 101.090  -8.158  1.00 81.36      L    C
ATOM   4639  OD1 ASN L 210      37.285 100.936  -6.984  1.00 81.95      L    O
ATOM   4640  ND2 ASN L 210      38.007 101.840  -8.855  1.00 82.01      L    N
ATOM   4641  C   ASN L 210      34.272  98.732  -8.427  1.00 82.34      L    C
ATOM   4642  O   ASN L 210      33.977  98.373  -9.515  1.00 82.13      L    O
ATOM   4643  N   ARG L 211      33.422  98.708  -7.429  1.00 84.67      L    N
ATOM   4644  CA  ARG L 211      32.091  98.267  -7.731  1.00 87.93      L    C
ATOM   4645  CB  ARG L 211      31.303  97.737  -6.518  1.00 88.21      L    C
ATOM   4646  CG  ARG L 211      31.279  98.473  -5.284  1.00 88.74      L    C
ATOM   4647  CD  ARG L 211      29.975  98.235  -4.336  1.00 89.20      L    C
ATOM   4648  NE  ARG L 211      29.663  99.546  -3.767  1.00 89.87      L    N
ATOM   4649  CZ  ARG L 211      28.653 100.289  -4.194  1.00 89.88      L    C
ATOM   4650  NH1 ARG L 211      27.680  99.841  -4.984  1.00 90.54      L    N
ATOM   4651  NH2 ARG L 211      28.576 101.484  -3.765  1.00 90.60      L    N
ATOM   4652  C   ARG L 211      31.240  99.210  -8.590  1.00 90.23      L    C
ATOM   4653  O   ARG L 211      30.298  98.696  -9.159  1.00 90.59      L    O
ATOM   4654  N   ASN L 212      31.609 100.529  -8.707  1.00 92.92      L    N
ATOM   4655  CA  ASN L 212      31.022 101.615  -9.578  1.00 95.30      L    C
ATOM   4656  CB  ASN L 212      31.287 103.060  -8.990  1.00 95.62      L    C
ATOM   4657  CG  ASN L 212      32.727 103.685  -9.302  1.00 95.98      L    C
ATOM   4658  OD1 ASN L 212      33.706 102.985  -9.365  1.00 96.57      L    O
ATOM   4659  ND2 ASN L 212      32.810 105.038  -9.430  1.00 95.86      L    N
ATOM   4660  C   ASN L 212      31.451 101.449 -11.064  1.00 97.04      L    C
ATOM   4661  O   ASN L 212      30.838 102.032 -11.978  1.00 97.84      L    O
ATOM   4662  N   GLU L 213      32.523 100.647 -11.235  1.00 98.65      L    N
ATOM   4663  CA  GLU L 213      32.879  99.815 -12.407  1.00100.44      L    C
ATOM   4664  CB  GLU L 213      31.669  99.384 -13.335  1.00101.37      L    C
ATOM   4665  CG  GLU L 213      30.708  98.317 -12.739  1.00103.86      L    C
ATOM   4666  CD  GLU L 213      29.293  98.287 -13.389  1.00105.73      L    C
ATOM   4667  OE1 GLU L 213      29.148  98.663 -14.613  1.00106.92      L    O
ATOM   4668  OE2 GLU L 213      28.311  97.881 -12.696  1.00106.19      L    O
ATOM   4669  C   GLU L 213      34.052 100.491 -13.158  1.00101.34      L    C
ATOM   4670  O   GLU L 213      35.005 101.056 -12.555  1.00101.24      L    O
ATOM   4671  OXT GLU L 213      34.010 100.451 -14.407  1.00102.50      L    O
ATOM   4672  CB  ALA H   1      39.945  47.058 -15.210  1.00 57.59      H    C
ATOM   4673  C   ALA H   1      39.240  45.311 -13.489  1.00 56.41      H    C
ATOM   4674  O   ALA H   1      38.014  45.283 -13.595  1.00 56.03      H    O
ATOM   4675  N   ALA H   1      39.647  44.577 -15.546  1.00 58.24      H    N
ATOM   4676  CA  ALA H   1      40.167  45.578 -14.643  1.00 57.67      H    C
ATOM   4677  N   VAL H   2      39.812  45.198 -12.287  1.00 55.97      H    N
ATOM   4678  CA  VAL H   2      38.982  45.072 -11.168  1.00 55.80      H    C
ATOM   4679  CB  VAL H   2      39.847  44.750  -9.932  1.00 55.16      H    C
ATOM   4680  CG1 VAL H   2      38.900  44.730  -8.646  1.00 53.68      H    C
ATOM   4681  CG2 VAL H   2      40.562  43.232 -10.087  1.00 54.67      H    C
ATOM   4682  C   VAL H   2      38.208  46.290 -10.890  1.00 55.96      H    C
ATOM   4683  O   VAL H   2      38.753  47.332 -10.978  1.00 56.13      H    O
ATOM   4684  N   LYS H   3      36.979  46.190 -10.426  1.00 55.21      H    N
ATOM   4685  CA  LYS H   3      36.214  47.342 -10.003  1.00 54.60      H    C
ATOM   4686  CB  LYS H   3      35.313  47.862 -11.046  1.00 56.93      H    C
ATOM   4687  CG  LYS H   3      35.974  48.256 -12.313  1.00 61.09      H    C
ATOM   4688  CD  LYS H   3      34.988  48.698 -13.499  1.00 64.16      H    C
ATOM   4689  CE  LYS H   3      35.878  48.939 -14.898  1.00 66.47      H    C
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ATOM   4690  NZ  LYS H   3      35.296  48.156 -16.087  1.00 69.30      H    N
ATOM   4691  C   LYS H   3      35.355  47.206  -8.701  1.00 52.89      H    C
ATOM   4692  O   LYS H   3      34.716  46.223  -8.522  1.00 53.61      H    O
ATOM   4693  N   LEU H   4      35.271  48.273  -7.924  1.00 50.65      H    N
ATOM   4694  CA  LEU H   4      34.437  48.255  -6.746  1.00 49.52      H    C
ATOM   4695  CB  LEU H   4      35.301  48.009  -5.477  1.00 46.67      H    C
ATOM   4696  CG  LEU H   4      36.237  46.878  -5.386  1.00 47.93      H    C
ATOM   4697  CD1 LEU H   4      37.068  46.748  -3.950  1.00 44.50      H    C
ATOM   4698  CD2 LEU H   4      35.265  45.686  -5.471  1.00 45.14      H    C
ATOM   4699  C   LEU H   4      33.768  49.504  -6.651  1.00 49.57      H    C
ATOM   4700  O   LEU H   4      34.443  50.510  -6.706  1.00 49.93      H    O
ATOM   4701  N   VAL H   5      32.466  49.494  -6.457  1.00 48.58      H    N
ATOM   4702  CA  VAL H   5      31.680  50.754  -6.411  1.00 48.51      H    C
ATOM   4703  CB  VAL H   5      30.892  50.955  -7.693  1.00 48.35      H    C
ATOM   4704  CG1 VAL H   5      30.080  52.257  -7.619  1.00 47.31      H    C
ATOM   4705  CG2 VAL H   5      31.859  50.919  -8.930  1.00 46.39      H    C
ATOM   4706  C   VAL H   5      30.742  50.824  -5.191  1.00 48.91      H    C
ATOM   4707  O   VAL H   5      29.722  50.175  -5.154  1.00 49.48      H    O
ATOM   4708  N   GLU H   6      31.058  51.695  -4.269  1.00 49.77      H    N
ATOM   4709  CA  GLU H   6      30.241  51.844  -3.056  1.00 50.87      H    C
ATOM   4710  CB  GLU H   6      31.120  52.542  -2.043  1.00 50.52      H    C
ATOM   4711  CG  GLU H   6      32.410  51.720  -1.614  1.00 52.97      H    C
ATOM   4712  CD  GLU H   6      33.634  52.070  -2.427  1.00 54.93      H    C
ATOM   4713  OE1 GLU H   6      33.454  52.594  -3.591  1.00 56.24      H    O
ATOM   4714  OE2 GLU H   6      34.778  51.772  -1.950  1.00 53.24      H    O
ATOM   4715  C   GLU H   6      29.005  52.674  -3.334  1.00 51.92      H    C
ATOM   4716  O   GLU H   6      29.006  53.587  -4.190  1.00 53.20      H    O
ATOM   4717  N   SER H   7      27.949  52.409  -2.617  1.00 52.28      H    N
ATOM   4718  CA  SER H   7      26.784  53.228  -2.628  1.00 52.15      H    C
ATOM   4719  CB  SER H   7      25.870  52.850  -3.832  1.00 51.14      H    C
ATOM   4720  OG  SER H   7      25.351  51.648  -3.702  1.00 52.31      H    O
ATOM   4721  C   SER H   7      26.041  53.138  -1.335  1.00 52.74      H    C
ATOM   4722  O   SER H   7      26.407  52.356  -0.512  1.00 52.35      H    O
ATOM   4723  N   GLY H   8      24.926  53.908  -1.176  1.00 53.91      H    N
ATOM   4724  CA  GLY H   8      24.156  53.922   0.064  1.00 53.35      H    C
ATOM   4725  C   GLY H   8      24.571  54.962   1.106  1.00 54.52      H    C
ATOM   4726  O   GLY H   8      23.988  55.136   2.312  1.00 54.64      H    O
ATOM   4727  N   GLY H   9      25.549  55.685   0.755  1.00 54.06      H    N
ATOM   4728  CA  GLY H   9      26.023  56.605   1.797  1.00 55.85      H    C
ATOM   4729  C   GLY H   9      25.094  57.863   1.926  1.00 56.97      H    C
ATOM   4730  O   GLY H   9      24.395  58.190   0.985  1.00 58.21      H    O
ATOM   4731  N   GLY H  10      25.096  58.589   3.054  1.00 56.93      H    N
ATOM   4732  CA  GLY H  10      24.492  59.891   3.099  1.00 56.30      H    C
ATOM   4733  C   GLY H  10      24.458  60.322   4.539  1.00 57.22      H    C
ATOM   4734  O   GLY H  10      25.269  59.948   5.401  1.00 56.37      H    O
ATOM   4735  N   LEU H  11      23.491  61.158   4.829  1.00 57.88      H    N
ATOM   4736  CA  LEU H  11      23.324  61.737   6.172  1.00 58.33      H    C
ATOM   4737  CB  LEU H  11      22.670  63.095   5.971  1.00 57.28      H    C
ATOM   4738  CG  LEU H  11      22.217  63.874   7.215  1.00 57.41      H    C
ATOM   4739  CD1 LEU H  11      23.399  64.040   8.105  1.00 56.59      H    C
ATOM   4740  CD2 LEU H  11      21.634  65.218   6.674  1.00 55.33      H    C
ATOM   4741  C   LEU H  11      22.422  60.912   7.021  1.00 58.53      H    C
ATOM   4742  O   LEU H  11      21.366  60.532   6.603  1.00 59.22      H    O
ATOM   4743  N   VAL H  12      22.718  60.668   8.244  1.00 58.84      H    N
ATOM   4744  CA  VAL H  12      21.708  59.921   8.963  1.00 59.95      H    C
ATOM   4745  CB  VAL H  12      22.077  58.487   8.929  1.00 60.75      H    C
ATOM   4746  CG1 VAL H  12      23.568  58.246   9.447  1.00 60.56      H    C
ATOM   4747  CG2 VAL H  12      21.161  57.695   9.903  1.00 60.62      H    C
ATOM   4748  C   VAL H  12      21.774  60.473  10.353  1.00 60.49      H    C
ATOM   4749  O   VAL H  12      22.697  61.158  10.649  1.00 60.65      H    O
ATOM   4750  N   LYS H  13      20.834  60.195  11.250  1.00 60.42      H    N
ATOM   4751  CA  LYS H  13      20.867  60.756  12.646  1.00 59.46      H    C
ATOM   4752  CB  LYS H  13      19.419  61.034  13.130  1.00 60.98      H    C
ATOM   4753  CG  LYS H  13      18.779  62.229  12.311  1.00 63.17      H    C
ATOM   4754  CD  LYS H  13      17.763  63.064  13.154  1.00 65.62      H    C
ATOM   4755  CE  LYS H  13      17.036  64.154  12.229  1.00 68.26      H    C
ATOM   4756  NZ  LYS H  13      16.291  63.244  11.290  1.00 71.07      H    N
ATOM   4757  C   LYS H  13      21.481  59.888  13.673  1.00 58.33      H    C
ATOM   4758  O   LYS H  13      21.441  58.724  13.546  1.00 58.31      H    O
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ATOM   4759  N   PRO H  14      22.042  60.411  14.752  1.00 57.07      H    N
ATOM   4760  CD  PRO H  14      22.318  61.869  14.891  1.00 55.75      H    C
ATOM   4761  CA  PRO H  14      22.626  59.548  15.802  1.00 56.28      H    C
ATOM   4762  CB  PRO H  14      22.995  60.555  16.947  1.00 56.53      H    C
ATOM   4763  CG  PRO H  14      23.122  61.877  16.191  1.00 56.41      H    C
ATOM   4764  C   PRO H  14      21.666  58.517  16.305  1.00 55.92      H    C
ATOM   4765  O   PRO H  14      20.570  58.933  16.728  1.00 56.88      H    O
ATOM   4766  N   GLY H  15      21.993  57.257  16.354  1.00 55.44      H    N
ATOM   4767  CA  GLY H  15      20.994  56.241  16.724  1.00 54.88      H    C
ATOM   4768  C   GLY H  15      20.484  55.495  15.465  1.00 54.20      H    C
ATOM   4769  O   GLY H  15      19.892  54.476  15.544  1.00 54.74      H    O
ATOM   4770  N   GLY H  16      20.699  56.038  14.263  1.00 53.14      H    N
ATOM   4771  CA  GLY H  16      19.951  55.543  13.101  1.00 51.86      H    C
ATOM   4772  C   GLY H  16      20.773  54.494  12.482  1.00 52.00      H    C
ATOM   4773  O   GLY H  16      21.729  53.970  13.145  1.00 51.59      H    O
ATOM   4774  N   SER H  17      20.297  54.042  11.307  1.00 53.11      H    N
ATOM   4775  CA  SER H  17      20.774  52.845  10.687  1.00 54.45      H    C
ATOM   4776  CB  SER H  17      19.762  51.729  10.752  1.00 54.70      H    C
ATOM   4777  OG  SER H  17      20.092  51.111  12.020  1.00 59.63      H    O
ATOM   4778  C   SER H  17      20.920  53.091   9.213  1.00 54.40      H    C
ATOM   4779  O   SER H  17      20.163  53.853   8.685  1.00 53.44      H    O
ATOM   4780  N   LEU H  18      21.938  52.505   8.621  1.00 54.00      H    N
ATOM   4781  CA  LEU H  18      22.072  52.699   7.169  1.00 54.73      H    C
ATOM   4782  CB  LEU H  18      22.948  53.926   6.955  1.00 54.70      H    C
ATOM   4783  CG  LEU H  18      23.142  54.458   5.572  1.00 56.43      H    C
ATOM   4784  CD1 LEU H  18      21.896  55.216   5.078  1.00 56.27      H    C
ATOM   4785  CD2 LEU H  18      24.212  55.423   5.601  1.00 56.44      H    C
ATOM   4786  C   LEU H  18      22.774  51.412   6.623  1.00 55.38      H    C
ATOM   4787  O   LEU H  18      23.624  50.717   7.374  1.00 56.00      H    O
ATOM   4788  N   LYS H  19      22.509  51.140   5.353  1.00 53.52      H    N
ATOM   4789  CA  LYS H  19      23.140  50.022   4.821  1.00 53.55      H    C
ATOM   4790  CB  LYS H  19      22.060  48.990   4.581  1.00 56.27      H    C
ATOM   4791  CG  LYS H  19      22.453  47.670   3.743  1.00 58.99      H    C
ATOM   4792  CD  LYS H  19      21.232  46.615   3.828  1.00 61.93      H    C
ATOM   4793  CE  LYS H  19      21.663  45.114   4.237  1.00 63.64      H    C
ATOM   4794  NZ  LYS H  19      20.771  44.171   5.226  1.00 65.48      H    N
ATOM   4795  C   LYS H  19      23.871  50.392   3.511  1.00 52.35      H    C
ATOM   4796  O   LYS H  19      23.232  50.883   2.474  1.00 50.72      H    O
ATOM   4797  N   LEU H  20      25.196  50.059   3.504  1.00 50.39      H    N
ATOM   4798  CA  LEU H  20      25.957  50.334   2.258  1.00 49.11      H    C
ATOM   4799  CB  LEU H  20      27.361  50.733   2.749  1.00 47.89      H    C
ATOM   4800  CG  LEU H  20      27.439  51.809   3.840  1.00 47.60      H    C
ATOM   4801  CD1 LEU H  20      28.979  52.103   4.114  1.00 43.14      H    C
ATOM   4802  CD2 LEU H  20      26.682  53.096   3.407  1.00 43.08      H    C
ATOM   4803  C   LEU H  20      26.058  49.092   1.342  1.00 48.76      H    C
ATOM   4804  O   LEU H  20      25.999  47.926   1.817  1.00 48.50      H    O
ATOM   4805  N   SER H  21      26.446  49.281   0.097  1.00 47.53      H    N
ATOM   4806  CA  SER H  21      26.578  48.199  -0.700  1.00 49.80      H    C
ATOM   4807  CB  SER H  21      25.230  47.952  -1.286  1.00 49.00      H    C
ATOM   4808  OG  SER H  21      24.931  48.983  -2.110  1.00 53.28      H    O
ATOM   4809  C   SER H  21      27.727  48.498  -1.651  1.00 50.26      H    C
ATOM   4810  O   SER H  21      28.307  49.642  -1.707  1.00 51.26      H    O
ATOM   4811  N   CYS H  22      28.244  47.418  -2.228  1.00 50.61      H    N
ATOM   4812  CA  CYS H  22      29.412  47.531  -3.065  1.00 50.77      H    C
ATOM   4813  C   CYS H  22      29.346  46.503  -4.180  1.00 50.55      H    C
ATOM   4814  O   CYS H  22      29.357  45.322  -3.900  1.00 50.98      H    O
ATOM   4815  CB  CYS H  22      30.761  47.352  -2.238  1.00 51.71      H    C
ATOM   4816  SG  CYS H  22      32.242  47.175  -3.280  1.00 54.13      H    S
ATOM   4817  N   ALA H  23      29.415  46.993  -5.373  1.00 49.89      H    N
ATOM   4818  CA  ALA H  23      29.302  46.234  -6.577  1.00 49.03      H    C
ATOM   4819  CB  ALA H  23      28.614  47.108  -7.567  1.00 47.99      H    C
ATOM   4820  C   ALA H  23      30.604  45.935  -7.103  1.00 49.69      H    C
ATOM   4821  O   ALA H  23      31.277  46.787  -7.604  1.00 51.43      H    O
ATOM   4822  N   ALA H  24      30.911  44.676  -7.200  1.00 49.14      H    N
ATOM   4823  CA  ALA H  24      32.207  44.285  -7.697  1.00 48.47      H    C
ATOM   4824  CB  ALA H  24      32.731  43.140  -6.924  1.00 47.00      H    C
ATOM   4825  C   ALA H  24      32.143  43.718  -9.135  1.00 48.34      H    C
ATOM   4826  O   ALA H  24      31.351  42.919  -9.301  1.00 49.22      H    O
ATOM   4827  N   SER H  25      33.302  43.766  -9.816  1.00 46.94      H    N
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ATOM	4828	CA	SER	H	25	33.438	43.147	-11.075	1.00	45.88	H	C
ATOM	4829	CB	SER	H	25	32.645	44.055	-12.109	1.00	45.88	H	C
ATOM	4830	OG	SER	H	25	33.287	45.345	-12.458	1.00	45.34	H	O
ATOM	4831	C	SER	H	25	34.889	43.038	-11.463	1.00	45.41	H	C
ATOM	4832	O	SER	H	25	35.874	43.637	-10.835	1.00	43.95	H	O
ATOM	4833	N	GLY	H	26	35.133	42.204	-12.453	1.00	45.42	H	N
ATOM	4834	CA	GLY	H	26	36.533	42.085	-12.885	1.00	44.78	H	C
ATOM	4835	C	GLY	H	26	37.332	41.020	-12.147	1.00	45.64	H	C
ATOM	4836	O	GLY	H	26	38.405	40.867	-12.358	1.00	47.57	H	O
ATOM	4837	N	PHE	H	27	36.715	40.205	-11.356	1.00	45.58	H	N
ATOM	4838	CA	PHE	H	27	37.357	39.136	-10.671	1.00	46.08	H	C
ATOM	4839	CB	PHE	H	27	38.317	39.699	-9.644	1.00	43.87	H	C
ATOM	4840	CG	PHE	H	27	37.579	40.292	-8.414	1.00	43.88	H	C
ATOM	4841	CD1	PHE	H	27	37.326	39.512	-7.245	1.00	40.50	H	C
ATOM	4842	CD2	PHE	H	27	37.119	41.532	-8.474	1.00	42.67	H	C
ATOM	4843	CE1	PHE	H	27	36.667	40.059	-6.196	1.00	42.28	H	C
ATOM	4844	CE2	PHE	H	27	36.366	42.142	-7.299	1.00	44.46	H	C
ATOM	4845	CZ	PHE	H	27	36.134	41.425	-6.272	1.00	42.65	H	C
ATOM	4846	C	PHE	H	27	36.336	38.072	-10.076	1.00	47.08	H	C
ATOM	4847	O	PHE	H	27	35.185	38.307	-9.844	1.00	49.16	H	O
ATOM	4848	N	THR	H	28	36.748	36.820	-9.877	1.00	48.35	H	N
ATOM	4849	CA	THR	H	28	35.813	35.893	-9.410	1.00	50.12	H	C
ATOM	4850	CB	THR	H	28	36.202	34.434	-9.933	1.00	52.14	H	C
ATOM	4851	OG1	THR	H	28	35.403	33.362	-9.243	1.00	56.55	H	O
ATOM	4852	CG2	THR	H	28	37.402	34.188	-9.641	1.00	53.83	H	C
ATOM	4853	C	THR	H	28	35.514	36.102	-7.818	1.00	49.21	H	C
ATOM	4854	O	THR	H	28	36.115	35.568	-6.977	1.00	49.79	H	O
ATOM	4855	N	PHE	H	29	34.524	36.874	-7.593	1.00	47.72	H	N
ATOM	4856	CA	PHE	H	29	34.149	37.342	-6.286	1.00	47.97	H	C
ATOM	4857	CB	PHE	H	29	32.787	38.132	-6.445	1.00	47.14	H	C
ATOM	4858	CG	PHE	H	29	32.172	38.691	-5.220	1.00	49.20	H	C
ATOM	4859	CD1	PHE	H	29	32.709	39.718	-4.625	1.00	48.92	H	C
ATOM	4860	CD2	PHE	H	29	31.027	38.144	-4.646	1.00	50.32	H	C
ATOM	4861	CE1	PHE	H	29	32.193	40.292	-3.574	1.00	49.53	H	C
ATOM	4862	CE2	PHE	H	29	30.519	38.683	-3.472	1.00	51.60	H	C
ATOM	4863	CZ	PHE	H	29	31.069	39.875	-3.036	1.00	50.36	H	C
ATOM	4864	C	PHE	H	29	34.066	36.255	-5.324	1.00	48.25	H	C
ATOM	4865	O	PHE	H	29	34.650	36.405	-4.308	1.00	47.87	H	O
ATOM	4866	N	ILE	H	30	33.416	35.161	-5.640	1.00	48.05	H	N
ATOM	4867	CA	ILE	H	30	33.240	34.134	-4.657	1.00	48.95	H	C
ATOM	4868	CB	ILE	H	30	32.439	32.942	-5.181	1.00	51.25	H	C
ATOM	4869	CG2	ILE	H	30	31.085	33.450	-5.918	1.00	51.50	H	C
ATOM	4870	CG1	ILE	H	30	33.251	32.358	-6.337	1.00	53.67	H	C
ATOM	4871	CD1	ILE	H	30	32.533	31.000	-6.629	1.00	56.77	H	C
ATOM	4872	C	ILE	H	30	34.510	33.607	-4.067	1.00	47.10	H	C
ATOM	4873	O	ILE	H	30	34.426	33.078	-2.972	1.00	46.72	H	O
ATOM	4874	N	SER	H	31	35.639	33.649	-4.781	1.00	45.74	H	N
ATOM	4875	CA	SER	H	31	36.879	33.125	-4.259	1.00	46.34	H	C
ATOM	4876	CB	SER	H	31	37.827	32.857	-5.438	1.00	45.27	H	C
ATOM	4877	OG	SER	H	31	37.519	31.569	-6.102	1.00	47.34	H	O
ATOM	4878	C	SER	H	31	37.608	34.041	-3.249	1.00	47.42	H	C
ATOM	4879	O	SER	H	31	38.528	33.582	-2.645	1.00	48.51	H	O
ATOM	4880	N	TYR	H	32	37.258	35.349	-3.166	1.00	46.52	H	N
ATOM	4881	CA	TYR	H	32	37.975	36.322	-2.352	1.00	45.49	H	C
ATOM	4882	CB	TYR	H	32	38.213	37.568	-3.172	1.00	45.29	H	C
ATOM	4883	CG	TYR	H	32	39.251	37.376	-4.152	1.00	47.58	H	C
ATOM	4884	CD1	TYR	H	32	38.922	36.939	-5.514	1.00	46.72	H	C
ATOM	4885	CE1	TYR	H	32	39.847	36.713	-6.359	1.00	47.22	H	C
ATOM	4886	CD2	TYR	H	32	40.590	37.593	-3.856	1.00	47.39	H	C
ATOM	4887	CE2	TYR	H	32	41.530	37.455	-4.906	1.00	49.71	H	C
ATOM	4888	CZ	TYR	H	32	41.051	36.937	-6.187	1.00	49.39	H	C
ATOM	4889	OH	TYR	H	32	41.962	36.800	-7.206	1.00	50.64	H	O
ATOM	4890	C	TYR	H	32	37.216	36.750	-1.113	1.00	44.53	H	C
ATOM	4891	O	TYR	H	32	35.949	36.960	-1.073	1.00	43.26	H	O
ATOM	4892	N	ALA	H	33	37.935	36.900	-0.101	1.00	42.87	H	N
ATOM	4893	CA	ALA	H	33	37.400	37.574	1.210	1.00	42.63	H	C
ATOM	4894	CB	ALA	H	33	38.336	37.424	2.247	1.00	40.21	H	C
ATOM	4895	C	ALA	H	33	37.328	39.121	0.848	1.00	41.98	H	C
ATOM	4896	O	ALA	H	33	38.029	39.563	-0.026	1.00	41.34	H	O

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ATOM   4897  N   MET H  34      36.474  39.866   1.481  1.00 41.20      H    N
ATOM   4898  CA  MET H  34      36.186  41.225   1.222  1.00 40.63      H    C
ATOM   4899  CB  MET H  34      34.869  41.292   0.611  1.00 39.10      H    C
ATOM   4900  CG  MET H  34      34.696  40.629  -0.882  1.00 39.77      H    C
ATOM   4901  SD  MET H  34      35.784  41.463  -1.994  1.00 45.71      H    S
ATOM   4902  CE  MET H  34      34.886  42.982  -1.964  1.00 37.92      H    C
ATOM   4903  C   MET H  34      36.064  41.971   2.628  1.00 41.20      H    C
ATOM   4904  O   MET H  34      35.792  41.357   3.624  1.00 41.85      H    O
ATOM   4905  N   SER H  35      36.215  43.285   2.610  1.00 41.11      H    N
ATOM   4906  CA  SER H  35      36.200  44.080   3.829  1.00 42.00      H    C
ATOM   4907  CB  SER H  35      37.670  44.280   4.124  1.00 43.05      H    C
ATOM   4908  OG  SER H  35      38.364  43.036   4.454  1.00 47.79      H    O
ATOM   4909  C   SER H  35      35.695  45.455   3.673  1.00 41.71      H    C
ATOM   4910  O   SER H  35      35.720  46.062   2.568  1.00 41.47      H    O
ATOM   4911  N   TRP H  36      35.278  46.065   4.802  1.00 42.04      H    N
ATOM   4912  CA  TRP H  36      35.092  47.569   4.846  1.00 40.91      H    C
ATOM   4913  CB  TRP H  36      33.732  47.837   5.384  1.00 40.20      H    C
ATOM   4914  CG  TRP H  36      32.757  47.463   4.576  1.00 43.62      H    C
ATOM   4915  CD2 TRP H  36      32.191  48.141   3.476  1.00 43.80      H    C
ATOM   4916  CE2 TRP H  36      31.210  47.285   2.887  1.00 45.57      H    C
ATOM   4917  CE3 TRP H  36      32.313  49.388   2.967  1.00 44.89      H    C
ATOM   4918  CD1 TRP H  36      32.184  46.211   4.564  1.00 44.58      H    C
ATOM   4919  NE1 TRP H  36      31.199  46.152   3.621  1.00 44.93      H    N
ATOM   4920  CZ2 TRP H  36      30.343  47.669   1.841  1.00 46.06      H    C
ATOM   4921  CZ3 TRP H  36      31.538  49.746   1.866  1.00 47.87      H    C
ATOM   4922  CH2 TRP H  36      30.542  48.889   1.300  1.00 47.68      H    C
ATOM   4923  C   TRP H  36      36.263  48.226   5.552  1.00 41.16      H    C
ATOM   4924  O   TRP H  36      36.743  47.750   6.656  1.00 41.65      H    O
ATOM   4925  N   VAL H  37      36.709  49.362   5.049  1.00 41.54      H    N
ATOM   4926  CA  VAL H  37      37.677  50.161   5.817  1.00 41.72      H    C
ATOM   4927  CB  VAL H  37      39.036  50.109   5.144  1.00 42.37      H    C
ATOM   4928  CG1 VAL H  37      40.071  51.091   5.876  1.00 39.85      H    C
ATOM   4929  CG2 VAL H  37      39.663  48.676   5.106  1.00 38.47      H    C
ATOM   4930  C   VAL H  37      37.199  51.595   5.722  1.00 43.01      H    C
ATOM   4931  O   VAL H  37      36.995  52.089   4.630  1.00 42.66      H    O
ATOM   4932  N   ARG H  38      37.228  52.304   6.833  1.00 44.32      H    N
ATOM   4933  CA  ARG H  38      36.769  53.755   6.812  1.00 44.72      H    C
ATOM   4934  CB  ARG H  38      35.669  53.856   7.939  1.00 45.50      H    C
ATOM   4935  CG  ARG H  38      36.084  53.725   9.186  1.00 45.79      H    C
ATOM   4936  CD  ARG H  38      34.803  53.785  10.025  1.00 45.99      H    C
ATOM   4937  NE  ARG H  38      35.170  53.623  11.372  1.00 45.09      H    N
ATOM   4938  CZ  ARG H  38      34.231  53.606  12.437  1.00 47.24      H    C
ATOM   4939  NH1 ARG H  38      32.926  53.654  12.247  1.00 45.96      H    N
ATOM   4940  NH2 ARG H  38      34.638  53.487  13.675  1.00 45.71      H    N
ATOM   4941  C   ARG H  38      37.859  54.745   7.186  1.00 45.98      H    C
ATOM   4942  O   ARG H  38      38.903  54.408   7.622  1.00 45.24      H    O
ATOM   4943  N   GLN H  39      37.661  55.979   6.830  1.00 47.04      H    N
ATOM   4944  CA  GLN H  39      38.673  56.948   6.926  1.00 47.06      H    C
ATOM   4945  CB  GLN H  39      39.308  57.430   5.570  1.00 46.43      H    C
ATOM   4946  CG  GLN H  39      40.465  58.409   5.662  1.00 47.08      H    C
ATOM   4947  CD  GLN H  39      41.330  58.532   4.518  1.00 47.35      H    C
ATOM   4948  OE1 GLN H  39      40.835  58.575   3.341  1.00 45.83      H    O
ATOM   4949  NE2 GLN H  39      42.761  58.615   4.792  1.00 45.77      H    N
ATOM   4950  C   GLN H  39      37.956  58.115   7.601  1.00 47.56      H    C
ATOM   4951  O   GLN H  39      37.114  58.739   6.919  1.00 47.30      H    O
ATOM   4952  N   THR H  40      38.514  58.593   8.660  1.00 48.24      H    N
ATOM   4953  CA  THR H  40      37.841  59.686   9.468  1.00 50.73      H    C
ATOM   4954  CB  THR H  40      38.301  59.722  10.851  1.00 50.76      H    C
ATOM   4955  OG1 THR H  40      39.707  60.030  10.772  1.00 52.70      H    O
ATOM   4956  CG2 THR H  40      38.318  58.470  11.429  1.00 51.20      H    C
ATOM   4957  C   THR H  40      38.246  60.985   8.902  1.00 51.36      H    C
ATOM   4958  O   THR H  40      39.059  61.013   8.038  1.00 51.10      H    O
ATOM   4959  N   PRO H  41      37.564  62.061   9.296  1.00 52.21      H    N
ATOM   4960  CD  PRO H  41      36.295  62.115  10.073  1.00 52.24      H    C
ATOM   4961  CA  PRO H  41      37.890  63.382   8.700  1.00 51.01      H    C
ATOM   4962  CB  PRO H  41      36.823  64.321   9.370  1.00 51.14      H    C
ATOM   4963  CG  PRO H  41      35.639  63.438   9.554  1.00 50.96      H    C
ATOM   4964  C   PRO H  41      39.303  63.781   9.025  1.00 51.27      H    C
ATOM   4965  O   PRO H  41      39.846  64.518   8.265  1.00 51.34      H    O
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ATOM   4966  N   GLU H  42      39.838  63.399  10.184  1.00 50.91      H    N
ATOM   4967  CA  GLU H  42      41.210  63.665  10.527  1.00 52.30      H    C
ATOM   4968  CB  GLU H  42      41.532  63.339  12.031  1.00 55.58      H    C
ATOM   4969  CG  GLU H  42      40.596  64.039  13.179  1.00 59.66      H    C
ATOM   4970  CD  GLU H  42      39.079  63.416  13.163  1.00 62.60      H    C
ATOM   4971  OE1 GLU H  42      38.707  62.251  13.758  1.00 63.38      H    O
ATOM   4972  OE2 GLU H  42      38.252  63.979  12.323  1.00 64.12      H    O
ATOM   4973  C   GLU H  42      42.073  62.709   9.628  1.00 51.81      H    C
ATOM   4974  O   GLU H  42      43.240  62.735   9.742  1.00 52.65      H    O
ATOM   4975  N   ALA H  43      41.527  61.853   8.757  1.00 49.44      H    N
ATOM   4976  CA  ALA H  43      42.347  61.082   7.706  1.00 48.63      H    C
ATOM   4977  CB  ALA H  43      43.348  61.928   6.815  1.00 47.37      H    C
ATOM   4978  C   ALA H  43      43.018  59.830   8.352  1.00 48.33      H    C
ATOM   4979  O   ALA H  43      43.689  59.136   7.699  1.00 48.60      H    O
ATOM   4980  N   ARG H  44      42.570  59.389   9.572  1.00 47.49      H    N
ATOM   4981  CA  ARG H  44      42.889  58.032   9.839  1.00 48.90      H    C
ATOM   4982  CB  ARG H  44      42.938  57.885  11.296  1.00 52.09      H    C
ATOM   4983  CG  ARG H  44      44.321  58.813  11.780  1.00 59.28      H    C
ATOM   4984  CD  ARG H  44      44.773  58.725  13.290  1.00 62.11      H    C
ATOM   4985  NE  ARG H  44      45.692  57.571  13.544  1.00 64.30      H    N
ATOM   4986  CZ  ARG H  44      46.987  57.605  13.921  1.00 63.28      H    C
ATOM   4987  NH1 ARG H  44      47.689  58.789  14.061  1.00 63.13      H    N
ATOM   4988  NH2 ARG H  44      47.593  56.430  14.154  1.00 63.84      H    N
ATOM   4989  C   ARG H  44      42.073  56.938   9.226  1.00 47.27      H    C
ATOM   4990  O   ARG H  44      40.898  56.964   9.436  1.00 47.74      H    O
ATOM   4991  N   LEU H  45      42.750  55.849   8.788  1.00 44.62      H    N
ATOM   4992  CA  LEU H  45      42.201  54.621   8.474  1.00 43.21      H    C
ATOM   4993  CB  LEU H  45      42.979  53.927   7.427  1.00 41.37      H    C
ATOM   4994  CG  LEU H  45      43.190  54.958   6.126  1.00 41.08      H    C
ATOM   4995  CD1 LEU H  45      44.344  54.453   5.241  1.00 39.01      H    C
ATOM   4996  CD2 LEU H  45      42.020  54.769   5.365  1.00 41.28      H    C
ATOM   4997  C   LEU H  45      41.890  53.725   9.680  1.00 44.41      H    C
ATOM   4998  O   LEU H  45      42.784  53.297  10.506  1.00 42.31      H    O
ATOM   4999  N   GLU H  46      40.653  53.243   9.616  1.00 44.35      H    N
ATOM   5000  CA  GLU H  46      40.405  52.104  10.572  1.00 46.78      H    C
ATOM   5001  CB  GLU H  46      39.654  52.733  11.793  1.00 48.43      H    C
ATOM   5002  CG  GLU H  46      38.953  51.754  12.667  1.00 52.62      H    C
ATOM   5003  CD  GLU H  46      37.945  52.324  13.608  1.00 56.08      H    C
ATOM   5004  OE1 GLU H  46      37.478  53.515  13.325  1.00 57.26      H    O
ATOM   5005  OE2 GLU H  46      37.788  51.555  14.649  1.00 55.19      H    O
ATOM   5006  C   GLU H  46      39.651  50.915   9.850  1.00 46.71      H    C
ATOM   5007  O   GLU H  46      38.667  51.058   9.176  1.00 46.44      H    O
ATOM   5008  N   TRP H  47      40.175  49.729   9.965  1.00 46.18      H    N
ATOM   5009  CA  TRP H  47      39.466  48.450   9.572  1.00 46.26      H    C
ATOM   5010  CB  TRP H  47      40.340  47.263   9.895  1.00 45.60      H    C
ATOM   5011  CG  TRP H  47      39.694  45.993   9.682  1.00 49.04      H    C
ATOM   5012  CD2 TRP H  47      39.356  45.041  10.644  1.00 49.15      H    C
ATOM   5013  CE2 TRP H  47      38.668  44.028   9.983  1.00 48.82      H    C
ATOM   5014  CE3 TRP H  47      39.556  44.952  12.113  1.00 49.50      H    C
ATOM   5015  CD1 TRP H  47      39.199  45.536   8.452  1.00 47.78      H    C
ATOM   5016  NE1 TRP H  47      38.624  44.341   8.636  1.00 48.17      H    N
ATOM   5017  CZ2 TRP H  47      38.166  42.946  10.626  1.00 49.29      H    C
ATOM   5018  CZ3 TRP H  47      39.025  43.894  12.766  1.00 50.46      H    C
ATOM   5019  CH2 TRP H  47      38.534  42.753  11.972  1.00 49.96      H    C
ATOM   5020  C   TRP H  47      38.178  48.290  10.228  1.00 45.51      H    C
ATOM   5021  O   TRP H  47      38.089  48.496  11.428  1.00 46.18      H    O
ATOM   5022  N   VAL H  48      37.138  48.043   9.468  1.00 45.21      H    N
ATOM   5023  CA  VAL H  48      35.778  48.054   9.961  1.00 46.94      H    C
ATOM   5024  CB  VAL H  48      34.909  49.056   9.097  1.00 46.39      H    C
ATOM   5025  CG1 VAL H  48      33.524  48.931   9.243  1.00 46.00      H    C
ATOM   5026  CG2 VAL H  48      35.317  50.434   9.519  1.00 46.55      H    C
ATOM   5027  C   VAL H  48      35.150  46.594   9.919  1.00 47.74      H    C
ATOM   5028  O   VAL H  48      34.364  46.264  10.742  1.00 48.01      H    O
ATOM   5029  N   ALA H  49      35.430  45.788   8.912  1.00 47.88      H    N
ATOM   5030  CA  ALA H  49      34.934  44.439   9.013  1.00 47.12      H    C
ATOM   5031  CB  ALA H  49      33.393  44.443   9.047  1.00 47.13      H    C
ATOM   5032  C   ALA H  49      35.447  43.653   7.835  1.00 46.52      H    C
ATOM   5033  O   ALA H  49      35.923  44.124   6.750  1.00 46.49      H    O
ATOM   5034  N   SER H  50      35.416  42.374   8.072  1.00 45.97      H    N
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ATOM	5035	CA	SER	H	50	35.824	41.422	6.964	1.00	45.97	H	C
ATOM	5036	CB	SER	H	50	37.267	40.907	7.351	1.00	45.68	H	C
ATOM	5037	OG	SER	H	50	38.110	41.991	7.172	1.00	46.90	H	O
ATOM	5038	C	SER	H	50	34.842	40.237	6.905	1.00	45.95	H	C
ATOM	5039	O	SER	H	50	34.224	39.839	7.964	1.00	46.23	H	O
ATOM	5040	N	ILE	H	51	34.740	39.574	5.746	1.00	44.35	H	N
ATOM	5041	CA	ILE	H	51	34.061	38.321	5.575	1.00	43.41	H	C
ATOM	5042	CB	ILE	H	51	32.647	38.545	4.897	1.00	42.37	H	C
ATOM	5043	CG2	ILE	H	51	32.703	39.310	3.471	1.00	40.16	H	C
ATOM	5044	CG1	ILE	H	51	31.811	37.239	4.824	1.00	41.84	H	C
ATOM	5045	CD1	ILE	H	51	30.240	37.456	4.666	1.00	41.59	H	C
ATOM	5046	C	ILE	H	51	34.881	37.441	4.640	1.00	44.63	H	C
ATOM	5047	O	ILE	H	51	35.403	38.002	3.596	1.00	44.42	H	O
ATOM	5048	N	SER	H	52	35.147	36.126	5.074	1.00	44.47	H	N
ATOM	5049	CA	SER	H	52	35.938	35.254	4.277	1.00	47.09	H	C
ATOM	5050	CB	SER	H	52	36.368	34.010	5.034	1.00	46.84	H	C
ATOM	5051	OG	SER	H	52	35.231	33.304	5.485	1.00	47.85	H	O
ATOM	5052	C	SER	H	52	35.147	34.674	3.019	1.00	47.49	H	C
ATOM	5053	O	SER	H	52	33.926	34.918	2.875	1.00	45.99	H	O
ATOM	5054	N	SER	H	53	35.865	33.884	2.201	1.00	49.05	H	N
ATOM	5055	CA	SER	H	53	35.209	33.375	0.894	1.00	49.67	H	C
ATOM	5056	CB	SER	H	53	36.168	32.723	-0.041	1.00	49.00	H	C
ATOM	5057	OG	SER	H	53	36.770	31.610	0.686	1.00	50.01	H	O
ATOM	5058	C	SER	H	53	34.185	32.332	1.448	1.00	50.73	H	C
ATOM	5059	O	SER	H	53	33.092	32.140	0.880	1.00	51.07	H	O
ATOM	5060	N	GLY	H	54	34.403	31.912	2.647	1.00	51.03	H	N
ATOM	5061	CA	GLY	H	54	33.540	30.925	3.220	1.00	52.23	H	C
ATOM	5062	C	GLY	H	54	32.454	31.432	4.040	1.00	53.84	H	C
ATOM	5063	O	GLY	H	54	31.664	30.683	4.614	1.00	54.98	H	O
ATOM	5064	N	GLY	H	55	32.326	32.712	4.172	1.00	53.92	H	N
ATOM	5065	CA	GLY	H	55	31.281	33.279	5.125	1.00	55.93	H	C
ATOM	5066	C	GLY	H	55	31.653	33.592	6.603	1.00	56.90	H	C
ATOM	5067	O	GLY	H	55	30.829	34.053	7.401	1.00	59.08	H	O
ATOM	5068	N	ASN	H	56	32.901	33.390	7.042	1.00	56.97	H	N
ATOM	5069	CA	ASN	H	56	33.241	33.813	8.376	1.00	56.87	H	C
ATOM	5070	CB	ASN	H	56	34.641	33.311	8.686	1.00	58.57	H	C
ATOM	5071	CG	ASN	H	56	34.848	31.707	8.674	1.00	60.80	H	C
ATOM	5072	OD1	ASN	H	56	35.948	31.265	8.259	1.00	62.91	H	O
ATOM	5073	ND2	ASN	H	56	33.932	30.944	9.202	1.00	58.88	H	N
ATOM	5074	C	ASN	H	56	33.328	35.349	8.488	1.00	56.17	H	C
ATOM	5075	O	ASN	H	56	33.756	35.993	7.536	1.00	56.06	H	O
ATOM	5076	N	THR	H	57	32.945	35.940	9.651	1.00	55.51	H	N
ATOM	5077	CA	THR	H	57	32.817	37.327	9.817	1.00	53.59	H	C
ATOM	5078	CB	THR	H	57	31.419	37.838	10.158	1.00	53.48	H	C
ATOM	5079	OG1	THR	H	57	30.924	37.625	11.595	1.00	52.48	H	O
ATOM	5080	CG2	THR	H	57	30.394	37.337	9.249	1.00	51.25	H	C
ATOM	5081	C	THR	H	57	33.855	37.740	10.893	1.00	53.43	H	C
ATOM	5082	O	THR	H	57	34.062	37.063	11.883	1.00	52.41	H	O
ATOM	5083	N	TYR	H	58	34.453	38.887	10.713	1.00	52.67	H	N
ATOM	5084	CA	TYR	H	58	35.398	39.398	11.668	1.00	52.76	H	C
ATOM	5085	CB	TYR	H	58	36.725	39.194	11.145	1.00	52.49	H	C
ATOM	5086	CG	TYR	H	58	37.059	37.850	10.726	1.00	53.52	H	C
ATOM	5087	CD1	TYR	H	58	36.701	37.420	9.504	1.00	53.54	H	C
ATOM	5088	CE1	TYR	H	58	37.013	36.257	9.099	1.00	53.11	H	C
ATOM	5089	CD2	TYR	H	58	37.868	37.014	11.533	1.00	53.39	H	C
ATOM	5090	CE2	TYR	H	58	38.229	35.741	11.070	1.00	54.38	H	C
ATOM	5091	CZ	TYR	H	58	37.748	35.425	9.790	1.00	54.35	H	C
ATOM	5092	OH	TYR	H	58	38.058	34.221	9.344	1.00	54.85	H	O
ATOM	5093	C	TYR	H	58	35.244	40.926	11.935	1.00	53.04	H	C
ATOM	5094	O	TYR	H	58	35.056	41.671	10.975	1.00	53.44	H	O
ATOM	5095	N	TYR	H	59	35.267	41.325	13.182	1.00	52.51	H	N
ATOM	5096	CA	TYR	H	59	34.990	42.745	13.523	1.00	52.95	H	C
ATOM	5097	CB	TYR	H	59	33.538	43.018	14.083	1.00	52.90	H	C
ATOM	5098	CG	TYR	H	59	32.418	42.555	13.081	1.00	55.00	H	C
ATOM	5099	CD1	TYR	H	59	31.791	41.335	13.231	1.00	54.89	H	C
ATOM	5100	CE1	TYR	H	59	30.867	40.833	12.405	1.00	54.80	H	C
ATOM	5101	CD2	TYR	H	59	31.997	43.323	12.072	1.00	54.68	H	C
ATOM	5102	CE2	TYR	H	59	31.049	42.822	11.166	1.00	55.81	H	C
ATOM	5103	CZ	TYR	H	59	30.494	41.541	11.353	1.00	55.91	H	C

ATOM	5104	OH	TYR	H	59	29.437	41.021	10.587	1.00	56.18	H	O
ATOM	5105	C	TYR	H	59	35.873	43.285	14.582	1.00	52.14	H	C
ATOM	5106	O	TYR	H	59	36.170	42.528	15.501	1.00	52.61	H	O
ATOM	5107	N	PRO	H	60	36.301	44.578	14.540	1.00	51.10	H	N
ATOM	5108	CD	PRO	H	60	35.948	45.627	13.547	1.00	50.32	H	C
ATOM	5109	CA	PRO	H	60	36.979	45.185	15.733	1.00	51.29	H	C
ATOM	5110	CB	PRO	H	60	37.619	46.481	15.123	1.00	50.61	H	C
ATOM	5111	CG	PRO	H	60	36.550	46.883	14.122	1.00	49.50	H	C
ATOM	5112	C	PRO	H	60	35.908	45.651	16.792	1.00	52.20	H	C
ATOM	5113	O	PRO	H	60	34.753	45.912	16.527	1.00	51.38	H	O
ATOM	5114	N	ASP	H	61	36.342	45.820	18.000	1.00	53.47	H	N
ATOM	5115	CA	ASP	H	61	35.405	46.214	19.161	1.00	54.77	H	C
ATOM	5116	CB	ASP	H	61	36.206	46.275	20.452	1.00	55.46	H	C
ATOM	5117	CG	ASP	H	61	36.538	44.902	20.885	1.00	57.77	H	C
ATOM	5118	OD1	ASP	H	61	37.403	44.611	21.711	1.00	58.30	H	O
ATOM	5119	OD2	ASP	H	61	35.804	44.026	20.420	1.00	58.83	H	O
ATOM	5120	C	ASP	H	61	34.655	47.507	19.054	1.00	54.65	H	C
ATOM	5121	O	ASP	H	61	33.545	47.569	19.547	1.00	54.74	H	O
ATOM	5122	N	SER	H	62	35.102	48.381	18.162	1.00	54.82	H	N
ATOM	5123	CA	SER	H	62	34.543	49.676	17.993	1.00	56.32	H	C
ATOM	5124	CB	SER	H	62	35.638	50.516	17.192	1.00	57.39	H	C
ATOM	5125	OG	SER	H	62	35.889	50.046	15.798	1.00	59.78	H	O
ATOM	5126	C	SER	H	62	33.163	49.619	17.362	1.00	56.10	H	C
ATOM	5127	O	SER	H	62	32.468	50.520	17.414	1.00	55.34	H	O
ATOM	5128	N	VAL	H	63	32.900	48.597	16.552	1.00	56.41	H	N
ATOM	5129	CA	VAL	H	63	31.699	48.386	15.847	1.00	56.65	H	C
ATOM	5130	CB	VAL	H	63	31.890	48.550	14.285	1.00	55.76	H	C
ATOM	5131	CG1	VAL	H	63	32.652	49.663	14.056	1.00	54.30	H	C
ATOM	5132	CG2	VAL	H	63	32.541	47.342	13.662	1.00	53.71	H	C
ATOM	5133	C	VAL	H	63	31.043	46.946	16.075	1.00	57.66	H	C
ATOM	5134	O	VAL	H	63	29.946	46.678	15.567	1.00	57.57	H	O
ATOM	5135	N	LYS	H	64	31.674	46.040	16.780	1.00	58.60	H	N
ATOM	5136	CA	LYS	H	64	31.037	44.767	17.007	1.00	60.19	H	C
ATOM	5137	CB	LYS	H	64	31.873	43.826	17.908	1.00	61.48	H	C
ATOM	5138	CG	LYS	H	64	31.453	42.283	17.741	1.00	62.93	H	C
ATOM	5139	CD	LYS	H	64	32.299	41.554	18.817	1.00	64.36	H	C
ATOM	5140	CE	LYS	H	64	31.942	40.092	19.153	1.00	65.73	H	C
ATOM	5141	NZ	LYS	H	64	32.876	39.344	20.203	1.00	65.45	H	N
ATOM	5142	C	LYS	H	64	29.648	44.855	17.722	1.00	60.59	H	C
ATOM	5143	O	LYS	H	64	29.431	45.586	18.780	1.00	62.28	H	O
ATOM	5144	N	GLY	H	65	28.729	44.105	17.128	1.00	59.72	H	N
ATOM	5145	CA	GLY	H	65	27.365	44.166	17.600	1.00	58.63	H	C
ATOM	5146	C	GLY	H	65	26.533	45.288	17.147	1.00	58.62	H	C
ATOM	5147	O	GLY	H	65	25.347	45.340	17.462	1.00	59.10	H	O
ATOM	5148	N	ARG	H	66	27.108	46.269	16.463	1.00	57.07	H	N
ATOM	5149	CA	ARG	H	66	26.280	47.247	15.780	1.00	55.77	H	C
ATOM	5150	CB	ARG	H	66	26.729	48.647	16.112	1.00	55.31	H	C
ATOM	5151	CG	ARG	H	66	26.990	48.903	17.660	1.00	53.21	H	C
ATOM	5152	CD	ARG	H	66	27.229	50.369	17.891	1.00	51.58	H	C
ATOM	5153	NE	ARG	H	66	28.570	50.742	17.594	1.00	49.37	H	N
ATOM	5154	CZ	ARG	H	66	28.931	51.813	16.823	1.00	50.26	H	C
ATOM	5155	NH1	ARG	H	66	28.037	52.565	16.279	1.00	48.61	H	N
ATOM	5156	NH2	ARG	H	66	30.200	52.124	16.519	1.00	49.64	H	N
ATOM	5157	C	ARG	H	66	26.389	47.081	14.297	1.00	55.54	H	C
ATOM	5158	O	ARG	H	66	25.503	47.441	13.635	1.00	55.80	H	O
ATOM	5159	N	PHE	H	67	27.482	46.545	13.757	1.00	54.92	H	N
ATOM	5160	CA	PHE	H	67	27.672	46.501	12.322	1.00	54.62	H	C
ATOM	5161	CB	PHE	H	67	29.029	47.046	11.863	1.00	55.55	H	C
ATOM	5162	CG	PHE	H	67	29.137	48.569	11.794	1.00	56.18	H	C
ATOM	5163	CD1	PHE	H	67	28.315	49.397	12.535	1.00	54.88	H	C
ATOM	5164	CD2	PHE	H	67	30.137	49.156	11.059	1.00	55.35	H	C
ATOM	5165	CE1	PHE	H	67	28.498	50.731	12.493	1.00	56.55	H	C
ATOM	5166	CE2	PHE	H	67	30.283	50.503	11.012	1.00	55.27	H	C
ATOM	5167	CZ	PHE	H	67	29.510	51.315	11.687	1.00	55.25	H	C
ATOM	5168	C	PHE	H	67	27.636	45.083	11.915	1.00	54.09	H	C
ATOM	5169	O	PHE	H	67	27.967	44.187	12.703	1.00	53.47	H	O
ATOM	5170	N	THR	H	68	27.185	44.863	10.716	1.00	53.47	H	N
ATOM	5171	CA	THR	H	68	27.043	43.466	10.208	1.00	54.52	H	C
ATOM	5172	CB	THR	H	68	25.623	42.863	10.372	1.00	55.50	H	C

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ATOM   5173  OG1 THR H  68      25.227  42.726  11.744  1.00 56.18      H    O
ATOM   5174  CG2 THR H  68      25.626  41.324   9.847  1.00 54.74      H    C
ATOM   5175  C   THR H  68      27.369  43.493   8.681  1.00 54.03      H    C
ATOM   5176  O   THR H  68      26.825  44.268   8.008  1.00 54.00      H    O
ATOM   5177  N   ILE H  69      28.418  42.758   8.312  1.00 52.81      H    N
ATOM   5178  CA  ILE H  69      28.871  42.515   6.903  1.00 51.48      H    C
ATOM   5179  CB  ILE H  69      30.530  42.476   6.854  1.00 51.28      H    C
ATOM   5180  CG2 ILE H  69      31.062  41.283   7.479  1.00 50.24      H    C
ATOM   5181  CG1 ILE H  69      31.035  42.606   5.358  1.00 49.67      H    C
ATOM   5182  CD1 ILE H  69      32.613  42.801   5.195  1.00 49.96      H    C
ATOM   5183  C   ILE H  69      28.280  41.291   6.305  1.00 51.26      H    C
ATOM   5184  O   ILE H  69      28.204  40.323   7.025  1.00 52.09      H    O
ATOM   5185  N   SER H  70      27.863  41.288   5.093  1.00 50.56      H    N
ATOM   5186  CA  SER H  70      27.401  40.072   4.393  1.00 51.41      H    C
ATOM   5187  CB  SER H  70      25.909  40.011   4.459  1.00 50.53      H    C
ATOM   5188  OG  SER H  70      25.366  41.376   4.072  1.00 51.90      H    O
ATOM   5189  C   SER H  70      27.707  40.193   2.895  1.00 51.69      H    C
ATOM   5190  O   SER H  70      28.045  41.274   2.444  1.00 51.39      H    O
ATOM   5191  N   ARG H  71      27.528  39.135   2.133  1.00 51.78      H    N
ATOM   5192  CA  ARG H  71      27.821  39.220   0.685  1.00 51.92      H    C
ATOM   5193  CB  ARG H  71      29.163  38.500   0.369  1.00 50.83      H    C
ATOM   5194  CG  ARG H  71      29.280  37.000   0.946  1.00 48.57      H    C
ATOM   5195  CD  ARG H  71      30.574  36.465   0.945  1.00 47.03      H    C
ATOM   5196  NE  ARG H  71      31.331  36.661  -0.344  1.00 43.91      H    N
ATOM   5197  CZ  ARG H  71      32.635  36.759  -0.514  1.00 44.40      H    C
ATOM   5198  NH1 ARG H  71      33.443  36.645   0.485  1.00 44.25      H    N
ATOM   5199  NH2 ARG H  71      33.137  36.861  -1.721  1.00 42.99      H    N
ATOM   5200  C   ARG H  71      26.794  38.435   0.008  1.00 52.40      H    C
ATOM   5201  O   ARG H  71      26.269  37.442   0.575  1.00 52.00      H    O
ATOM   5202  N   ASP H  72      26.636  38.752  -1.253  1.00 53.22      H    N
ATOM   5203  CA  ASP H  72      25.750  38.087  -2.065  1.00 54.30      H    C
ATOM   5204  CB  ASP H  72      24.706  39.144  -2.484  1.00 57.72      H    C
ATOM   5205  CG  ASP H  72      23.581  38.605  -3.544  1.00 61.26      H    C
ATOM   5206  OD1 ASP H  72      23.881  37.685  -4.373  1.00 61.12      H    O
ATOM   5207  OD2 ASP H  72      22.466  39.184  -3.613  1.00 63.54      H    O
ATOM   5208  C   ASP H  72      26.491  37.583  -3.244  1.00 53.96      H    C
ATOM   5209  O   ASP H  72      26.756  38.360  -4.270  1.00 54.68      H    O
ATOM   5210  N   ASN H  73      26.711  36.267  -3.230  1.00 53.35      H    N
ATOM   5211  CA  ASN H  73      27.576  35.773  -4.308  1.00 53.42      H    C
ATOM   5212  CB  ASN H  73      28.264  34.501  -3.899  1.00 52.96      H    C
ATOM   5213  CG  ASN H  73      29.163  34.664  -2.695  1.00 54.63      H    C
ATOM   5214  OD1 ASN H  73      29.674  35.743  -2.461  1.00 56.11      H    O
ATOM   5215  ND2 ASN H  73      29.245  33.639  -1.842  1.00 53.97      H    N
ATOM   5216  C   ASN H  73      27.010  35.722  -5.731  1.00 52.70      H    C
ATOM   5217  O   ASN H  73      27.701  35.344  -6.643  1.00 52.43      H    O
ATOM   5218  N   ALA H  74      25.709  35.801  -5.830  1.00 53.07      H    N
ATOM   5219  CA  ALA H  74      24.963  35.601  -7.134  1.00 53.76      H    C
ATOM   5220  CB  ALA H  74      23.449  35.164  -6.989  1.00 52.82      H    C
ATOM   5221  C   ALA H  74      25.048  36.940  -7.773  1.00 53.98      H    C
ATOM   5222  O   ALA H  74      25.137  37.023  -8.944  1.00 54.91      H    O
ATOM   5223  N   ARG H  75      24.946  37.960  -6.946  1.00 53.48      H    N
ATOM   5224  CA  ARG H  75      25.028  39.266  -7.416  1.00 53.84      H    C
ATOM   5225  CB  ARG H  75      23.861  40.024  -6.712  1.00 56.70      H    C
ATOM   5226  CG  ARG H  75      22.486  39.956  -7.445  1.00 57.90      H    C
ATOM   5227  CD  ARG H  75      21.361  40.798  -6.811  1.00 60.38      H    C
ATOM   5228  NE  ARG H  75      20.699  39.885  -5.884  1.00 64.88      H    N
ATOM   5229  CZ  ARG H  75      19.499  39.426  -5.935  1.00 65.98      H    C
ATOM   5230  NH1 ARG H  75      18.646  39.712  -6.877  1.00 67.53      H    N
ATOM   5231  NH2 ARG H  75      19.147  38.611  -5.004  1.00 68.48      H    N
ATOM   5232  C   ARG H  75      26.355  40.070  -7.320  1.00 53.01      H    C
ATOM   5233  O   ARG H  75      26.491  41.234  -7.849  1.00 51.34      H    O
ATOM   5234  N   ASN H  76      27.361  39.476  -6.669  1.00 51.72      H    N
ATOM   5235  CA  ASN H  76      28.632  40.121  -6.510  1.00 50.79      H    C
ATOM   5236  CB  ASN H  76      29.315  40.254  -7.918  1.00 50.88      H    C
ATOM   5237  CG  ASN H  76      29.731  38.958  -8.434  1.00 51.70      H    C
ATOM   5238  OD1 ASN H  76      30.392  38.820  -9.470  1.00 50.64      H    O
ATOM   5239  ND2 ASN H  76      29.563  37.982  -7.603  1.00 52.12      H    N
ATOM   5240  C   ASN H  76      28.444  41.544  -5.865  1.00 49.22      H    C
ATOM   5241  O   ASN H  76      29.086  42.494  -6.227  1.00 47.56      H    O
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ATOM	5242	N	ILE	H	77	27.729	41.553	-4.754	1.00	47.69	H N
ATOM	5243	CA	ILE	H	77	27.579	42.653	-3.929	1.00	47.93	H C
ATOM	5244	CB	ILE	H	77	26.126	43.102	-3.973	1.00	47.80	H C
ATOM	5245	CG2	ILE	H	77	26.040	44.411	-3.140	1.00	48.14	H C
ATOM	5246	CG1	ILE	H	77	25.721	43.638	-5.331	1.00	46.37	H C
ATOM	5247	CD1	ILE	H	77	24.173	43.842	-5.549	1.00	45.88	H C
ATOM	5248	C	ILE	H	77	27.998	42.386	-2.487	1.00	48.54	H C
ATOM	5249	O	ILE	H	77	27.825	41.270	-1.957	1.00	48.81	H O
ATOM	5250	N	LEU	H	78	28.610	43.389	-1.863	1.00	47.84	H N
ATOM	5251	CA	LEU	H	78	29.059	43.294	-0.509	1.00	48.57	H C
ATOM	5252	CB	LEU	H	78	30.563	43.649	-0.495	1.00	48.73	H C
ATOM	5253	CG	LEU	H	78	31.088	43.596	0.929	1.00	47.67	H C
ATOM	5254	CD1	LEU	H	78	31.187	42.158	1.519	1.00	47.04	H C
ATOM	5255	CD2	LEU	H	78	32.365	44.371	1.207	1.00	47.57	H C
ATOM	5256	C	LEU	H	78	28.299	44.319	0.352	1.00	49.21	H C
ATOM	5257	O	LEU	H	78	27.826	45.315	-0.052	1.00	50.45	H O
ATOM	5258	N	TYR	H	79	28.035	44.033	1.553	1.00	50.75	H N
ATOM	5259	CA	TYR	H	79	27.177	44.855	2.317	1.00	52.06	H C
ATOM	5260	CB	TYR	H	79	25.742	44.140	2.498	1.00	53.35	H C
ATOM	5261	CG	TYR	H	79	24.871	43.972	1.172	1.00	55.87	H C
ATOM	5262	CD1	TYR	H	79	24.578	42.710	0.663	1.00	56.51	H C
ATOM	5263	CE1	TYR	H	79	23.735	42.556	-0.481	1.00	57.98	H C
ATOM	5264	CD2	TYR	H	79	24.374	45.043	0.491	1.00	55.72	H C
ATOM	5265	CE2	TYR	H	79	23.572	44.882	-0.639	1.00	56.31	H C
ATOM	5266	CZ	TYR	H	79	23.247	43.650	-1.054	1.00	58.45	H C
ATOM	5267	OH	TYR	H	79	22.609	43.533	-2.252	1.00	60.12	H O
ATOM	5268	C	TYR	H	79	27.702	45.191	3.633	1.00	52.15	H C
ATOM	5269	O	TYR	H	79	28.365	44.358	4.266	1.00	51.25	H O
ATOM	5270	N	LEU	H	80	27.289	46.360	4.152	1.00	52.18	H N
ATOM	5271	CA	LEU	H	80	27.608	46.718	5.521	1.00	52.72	H C
ATOM	5272	CB	LEU	H	80	28.802	47.563	5.493	1.00	51.05	H C
ATOM	5273	CG	LEU	H	80	29.222	48.078	6.905	1.00	52.44	H C
ATOM	5274	CD1	LEU	H	80	29.699	46.925	7.713	1.00	53.20	H C
ATOM	5275	CD2	LEU	H	80	30.226	49.254	7.078	1.00	51.80	H C
ATOM	5276	C	LEU	H	80	26.405	47.402	6.180	1.00	53.63	H C
ATOM	5277	O	LEU	H	80	25.923	48.431	5.665	1.00	53.00	H O
ATOM	5278	N	GLN	H	81	25.772	46.703	7.112	1.00	54.52	H N
ATOM	5279	CA	GLN	H	81	24.604	47.215	7.836	1.00	55.69	H C
ATOM	5280	CB	GLN	H	81	23.568	46.125	8.221	1.00	56.62	H C
ATOM	5281	CG	GLN	H	81	22.383	46.533	9.127	1.00	58.33	H C
ATOM	5282	CD	GLN	H	81	21.423	47.264	8.251	1.00	60.67	H C
ATOM	5283	OE1	GLN	H	81	20.972	46.664	7.278	1.00	62.49	H O
ATOM	5284	NE2	GLN	H	81	21.387	48.608	8.375	1.00	60.55	H N
ATOM	5285	C	GLN	H	81	25.055	47.763	9.110	1.00	56.82	H C
ATOM	5286	O	GLN	H	81	25.683	46.975	9.959	1.00	57.61	H O
ATOM	5287	N	MET	H	82A	24.641	48.995	9.331	1.00	58.28	H N
ATOM	5288	CA	MET	H	82A	25.021	49.784	10.484	1.00	60.26	H C
ATOM	5289	CB	MET	H	82A	25.707	51.079	10.003	1.00	61.16	H C
ATOM	5290	CG	MET	H	82A	26.924	50.877	9.024	1.00	62.89	H C
ATOM	5291	SD	MET	H	82A	27.898	52.390	8.755	1.00	64.38	H S
ATOM	5292	CE	MET	H	82A	27.091	52.775	7.376	1.00	62.45	H C
ATOM	5293	C	MET	H	82A	23.826	50.254	11.264	1.00	60.42	H C
ATOM	5294	O	MET	H	82A	22.829	50.795	10.702	1.00	60.13	H O
ATOM	5295	N	SER	H	82B	24.011	50.199	12.556	1.00	60.07	H N
ATOM	5296	CA	SER	H	82B	22.880	50.393	13.477	1.00	60.49	H C
ATOM	5297	CB	SER	H	82B	22.140	49.048	13.727	1.00	59.10	H C
ATOM	5298	OG	SER	H	82B	22.902	48.287	14.714	1.00	61.61	H O
ATOM	5299	C	SER	H	82B	23.449	51.108	14.761	1.00	60.67	H C
ATOM	5300	O	SER	H	82B	24.669	51.138	14.980	1.00	61.39	H O
ATOM	5301	N	SER	H	82C	22.635	51.846	15.459	1.00	60.07	H N
ATOM	5302	CA	SER	H	82C	23.174	52.808	16.498	1.00	61.07	H C
ATOM	5303	CB	SER	H	82C	23.475	52.032	17.784	1.00	61.29	H C
ATOM	5304	OG	SER	H	82C	22.619	50.931	17.720	1.00	60.87	H O
ATOM	5305	C	SER	H	82C	24.377	53.608	16.154	1.00	61.65	H C
ATOM	5306	O	SER	H	82C	25.334	53.623	16.938	1.00	61.63	H O
ATOM	5307	N	LEU	H	82D	24.353	54.235	14.971	1.00	61.41	H N
ATOM	5308	CA	LEU	H	82D	25.433	55.102	14.508	1.00	61.72	H C
ATOM	5309	CB	LEU	H	82D	24.979	55.739	13.156	1.00	60.37	H C
ATOM	5310	CG	LEU	H	82D	24.975	54.687	12.069	1.00	59.24	H C

ATOM	5311	CD1	LEU	H	82D	24.386	55.079	10.897	1.00	57.43	H	C
ATOM	5312	CD2	LEU	H	82D	26.461	54.225	11.718	1.00	58.39	H	C
ATOM	5313	C	LEU	H	82D	25.685	56.273	15.489	1.00	62.71	H	C
ATOM	5314	O	LEU	H	82D	24.718	56.901	15.988	1.00	64.10	H	O
ATOM	5315	N	ARG	H	83	26.928	56.521	15.850	1.00	63.66	H	N
ATOM	5316	CA	ARG	H	83	27.286	57.669	16.671	1.00	64.35	H	C
ATOM	5317	CB	ARG	H	83	28.035	57.275	17.953	1.00	64.30	H	C
ATOM	5318	CG	ARG	H	83	28.089	55.693	18.182	1.00	67.33	H	C
ATOM	5319	CD	ARG	H	83	28.592	55.263	19.516	1.00	69.20	H	C
ATOM	5320	NE	ARG	H	83	28.362	53.883	19.942	1.00	72.23	H	N
ATOM	5321	CZ	ARG	H	83	29.251	52.934	19.924	1.00	73.34	H	C
ATOM	5322	NH1	ARG	H	83	30.408	53.145	19.356	1.00	73.99	H	N
ATOM	5323	NH2	ARG	H	83	28.944	51.726	20.407	1.00	74.45	H	N
ATOM	5324	C	ARG	H	83	28.077	58.597	15.795	1.00	64.00	H	C
ATOM	5325	O	ARG	H	83	28.564	58.169	14.720	1.00	63.76	H	O
ATOM	5326	N	SER	H	84	28.296	59.837	16.310	1.00	63.40	H	N
ATOM	5327	CA	SER	H	84	29.007	60.906	15.511	1.00	62.90	H	C
ATOM	5328	CB	SER	H	84	29.129	62.220	16.249	1.00	62.76	H	C
ATOM	5329	OG	SER	H	84	29.598	61.963	17.500	1.00	64.95	H	O
ATOM	5330	C	SER	H	84	30.367	60.434	15.059	1.00	62.17	H	C
ATOM	5331	O	SER	H	84	30.796	60.790	13.908	1.00	62.05	H	O
ATOM	5332	N	GLU	H	85	31.008	59.642	15.944	1.00	60.48	H	N
ATOM	5333	CA	GLU	H	85	32.356	59.037	15.635	1.00	59.67	H	C
ATOM	5334	CB	GLU	H	85	32.818	58.098	16.798	1.00	59.83	H	C
ATOM	5335	CG	GLU	H	85	32.602	58.833	17.959	1.00	63.33	H	C
ATOM	5336	CD	GLU	H	85	31.403	58.378	18.752	1.00	64.36	H	C
ATOM	5337	OE1	GLU	H	85	31.387	57.224	19.125	1.00	65.15	H	O
ATOM	5338	OE2	GLU	H	85	30.602	59.226	19.061	1.00	66.28	H	O
ATOM	5339	C	GLU	H	85	32.385	58.092	14.494	1.00	58.39	H	C
ATOM	5340	O	GLU	H	85	33.412	57.539	14.307	1.00	59.02	H	O
ATOM	5341	N	ASP	H	86	31.253	57.774	13.908	1.00	56.08	H	N
ATOM	5342	CA	ASP	H	86	31.158	56.814	12.864	1.00	54.11	H	C
ATOM	5343	CB	ASP	H	86	29.880	55.991	13.036	1.00	55.33	H	C
ATOM	5344	CG	ASP	H	86	30.017	54.951	14.084	1.00	57.05	H	C
ATOM	5345	OD1	ASP	H	86	29.030	54.963	14.834	1.00	58.36	H	O
ATOM	5346	OD2	ASP	H	86	31.050	54.210	14.375	1.00	55.58	H	O
ATOM	5347	C	ASP	H	86	31.243	57.475	11.489	1.00	52.34	H	C
ATOM	5348	O	ASP	H	86	31.339	56.836	10.413	1.00	50.01	H	O
ATOM	5349	N	THR	H	87	31.286	58.783	11.579	1.00	49.59	H	N
ATOM	5350	CA	THR	H	87	31.325	59.669	10.417	1.00	48.63	H	C
ATOM	5351	CB	THR	H	87	31.069	61.194	10.922	1.00	48.91	H	C
ATOM	5352	OG1	THR	H	87	29.737	61.382	11.522	1.00	50.30	H	O
ATOM	5353	CG2	THR	H	87	31.250	62.306	9.903	1.00	48.84	H	C
ATOM	5354	C	THR	H	87	32.614	59.471	9.751	1.00	47.71	H	C
ATOM	5355	O	THR	H	87	33.651	59.598	10.363	1.00	45.93	H	O
ATOM	5356	N	ALA	H	88	32.525	59.243	8.444	1.00	45.98	H	N
ATOM	5357	CA	ALA	H	88	33.696	58.816	7.656	1.00	44.66	H	C
ATOM	5358	CB	ALA	H	88	34.219	57.705	8.177	1.00	43.85	H	C
ATOM	5359	C	ALA	H	88	33.423	58.565	6.266	1.00	44.68	H	C
ATOM	5360	O	ALA	H	88	32.260	58.442	5.872	1.00	45.79	H	O
ATOM	5361	N	MET	H	89	34.498	58.433	5.474	1.00	44.08	H	N
ATOM	5362	CA	MET	H	89	34.488	57.827	4.173	1.00	43.11	H	C
ATOM	5363	CB	MET	H	89	35.704	58.347	3.419	1.00	43.90	H	C
ATOM	5364	CG	MET	H	89	35.662	57.806	1.922	1.00	45.35	H	C
ATOM	5365	SD	MET	H	89	34.197	58.351	0.916	1.00	50.54	H	S
ATOM	5366	CE	MET	H	89	34.716	59.894	0.371	1.00	45.97	H	C
ATOM	5367	C	MET	H	89	34.666	56.305	4.331	1.00	44.27	H	C
ATOM	5368	O	MET	H	89	35.591	55.858	4.896	1.00	44.18	H	O
ATOM	5369	N	TYR	H	90	33.626	55.528	4.007	1.00	43.97	H	N
ATOM	5370	CA	TYR	H	90	33.576	54.059	4.051	1.00	43.93	H	C
ATOM	5371	CB	TYR	H	90	32.153	53.648	4.374	1.00	42.74	H	C
ATOM	5372	CG	TYR	H	90	31.822	53.774	5.899	1.00	42.49	H	C
ATOM	5373	CD1	TYR	H	90	32.069	52.770	6.771	1.00	42.71	H	C
ATOM	5374	CE1	TYR	H	90	31.778	52.890	8.105	1.00	41.99	H	C
ATOM	5375	CD2	TYR	H	90	31.543	54.970	6.446	1.00	41.28	H	C
ATOM	5376	CE2	TYR	H	90	31.376	55.175	7.823	1.00	41.04	H	C
ATOM	5377	CZ	TYR	H	90	31.502	54.125	8.653	1.00	41.54	H	C
ATOM	5378	OH	TYR	H	90	31.430	54.157	10.018	1.00	41.11	H	O
ATOM	5379	C	TYR	H	90	34.061	53.435	2.663	1.00	44.56	H	C

ATOM	5380	O	TYR H	90	33.501	53.708	1.596	1.00	44.77	H	O
ATOM	5381	N	TYR H	91	35.160	52.733	2.666	1.00	42.96	H	N
ATOM	5382	CA	TYR H	91	35.638	52.127	1.436	1.00	43.91	H	C
ATOM	5383	CB	TYR H	91	37.214	52.315	1.356	1.00	42.41	H	C
ATOM	5384	CG	TYR H	91	37.761	53.729	1.202	1.00	43.94	H	C
ATOM	5385	CD1	TYR H	91	38.374	54.490	2.259	1.00	41.91	H	C
ATOM	5386	CE1	TYR H	91	38.708	55.820	2.057	1.00	44.39	H	C
ATOM	5387	CD2	TYR H	91	37.789	54.267	-0.090	1.00	42.91	H	C
ATOM	5388	CE2	TYR H	91	38.185	55.415	-0.312	1.00	45.60	H	C
ATOM	5389	CZ	TYR H	91	38.807	56.203	0.666	1.00	46.11	H	C
ATOM	5390	OH	TYR H	91	39.168	57.455	0.214	1.00	50.45	H	O
ATOM	5391	C	TYR H	91	35.356	50.634	1.438	1.00	44.70	H	C
ATOM	5392	O	TYR H	91	35.516	49.860	2.407	1.00	43.09	H	O
ATOM	5393	N	CYS H	92	35.128	50.127	0.237	1.00	45.69	H	N
ATOM	5394	CA	CYS H	92	35.005	48.670	0.074	1.00	46.10	H	C
ATOM	5395	C	CYS H	92	36.380	48.319	-0.337	1.00	44.52	H	C
ATOM	5396	O	CYS H	92	36.965	48.974	-1.220	1.00	43.72	H	O
ATOM	5397	CB	CYS H	92	34.031	48.498	-1.175	1.00	47.38	H	C
ATOM	5398	SG	CYS H	92	33.784	46.885	-1.690	1.00	56.06	H	S
ATOM	5399	N	ALA H	93	36.773	47.126	-0.042	1.00	43.35	H	N
ATOM	5400	CA	ALA H	93	38.079	46.581	-0.608	1.00	43.49	H	C
ATOM	5401	CB	ALA H	93	39.256	46.935	0.540	1.00	41.94	H	C
ATOM	5402	C	ALA H	93	38.022	45.117	-0.627	1.00	43.78	H	C
ATOM	5403	O	ALA H	93	37.485	44.409	0.487	1.00	45.34	H	O
ATOM	5404	N	ARG H	94	38.862	44.628	-1.461	1.00	43.45	H	N
ATOM	5405	CA	ARG H	94	39.053	43.214	-1.645	1.00	44.26	H	C
ATOM	5406	CB	ARG H	94	39.576	42.862	-3.109	1.00	45.24	H	C
ATOM	5407	CG	ARG H	94	39.501	41.398	-3.350	1.00	46.44	H	C
ATOM	5408	CD	ARG H	94	39.929	40.954	-4.994	1.00	47.28	H	C
ATOM	5409	NE	ARG H	94	41.337	40.997	-5.159	1.00	49.70	H	N
ATOM	5410	CZ	ARG H	94	41.991	40.672	-6.278	1.00	50.40	H	C
ATOM	5411	NH1	ARG H	94	41.357	40.531	-7.402	1.00	50.46	H	N
ATOM	5412	NH2	ARG H	94	43.276	40.565	-6.311	1.00	46.10	H	N
ATOM	5413	C	ARG H	94	40.201	42.746	-0.761	1.00	44.81	H	C
ATOM	5414	O	ARG H	94	41.240	43.215	-0.817	1.00	45.02	H	O
ATOM	5415	N	LEU H	95	39.932	41.776	0.081	1.00	44.55	H	N
ATOM	5416	CA	LEU H	95	40.997	41.445	1.189	1.00	43.74	H	C
ATOM	5417	CB	LEU H	95	40.289	41.191	2.470	1.00	41.49	H	C
ATOM	5418	CG	LEU H	95	41.121	40.420	3.541	1.00	42.09	H	C
ATOM	5419	CD1	LEU H	95	42.374	41.237	3.739	1.00	43.97	H	C
ATOM	5420	CD2	LEU H	95	40.120	40.347	4.728	1.00	43.57	H	C
ATOM	5421	C	LEU H	95	41.584	40.263	0.804	1.00	44.13	H	C
ATOM	5422	O	LEU H	95	40.903	39.281	0.740	1.00	46.03	H	O
ATOM	5423	N	ASP H	96	42.765	40.367	0.208	1.00	44.89	H	N
ATOM	5424	CA	ASP H	96	43.557	39.273	-0.364	1.00	45.30	H	C
ATOM	5425	CB	ASP H	96	44.541	39.676	-1.408	1.00	44.92	H	C
ATOM	5426	CG	ASP H	96	43.888	40.051	-2.741	1.00	48.16	H	C
ATOM	5427	OD1	ASP H	96	42.729	40.535	-2.757	1.00	48.56	H	O
ATOM	5428	OD2	ASP H	96	44.526	40.125	-3.840	1.00	49.25	H	O
ATOM	5429	C	ASP H	96	44.212	38.427	0.600	1.00	46.33	H	C
ATOM	5430	O	ASP H	96	44.551	37.315	0.197	1.00	48.00	H	O
ATOM	5431	N	GLY H	97	44.145	38.748	1.933	1.00	46.28	H	N
ATOM	5432	CA	GLY H	97	44.662	37.905	2.935	1.00	45.80	H	C
ATOM	5433	C	GLY H	97	45.751	38.577	3.889	1.00	46.63	H	C
ATOM	5434	O	GLY H	97	46.433	39.510	3.487	1.00	45.58	H	O
ATOM	5435	N	TYR H	98	45.867	38.104	5.140	1.00	45.50	H	N
ATOM	5436	CA	TYR H	98	46.921	38.596	5.940	1.00	45.67	H	C
ATOM	5437	CB	TYR H	98	46.875	38.006	7.336	1.00	44.72	H	C
ATOM	5438	CG	TYR H	98	47.032	36.530	7.385	1.00	45.01	H	C
ATOM	5439	CD1	TYR H	98	48.216	35.953	7.805	1.00	45.57	H	C
ATOM	5440	CE1	TYR H	98	48.418	34.646	7.739	1.00	46.45	H	C
ATOM	5441	CD2	TYR H	98	46.007	35.760	7.288	1.00	43.79	H	C
ATOM	5442	CE2	TYR H	98	46.089	34.336	7.473	1.00	45.14	H	C
ATOM	5443	CZ	TYR H	98	47.319	33.809	7.701	1.00	45.97	H	C
ATOM	5444	OH	TYR H	98	47.439	32.515	7.945	1.00	47.02	H	O
ATOM	5445	C	TYR H	98	48.298	38.576	5.350	1.00	45.31	H	C
ATOM	5446	O	TYR H	98	49.096	39.334	5.817	1.00	46.71	H	O
ATOM	5447	N	TYR H	99	48.587	37.714	4.324	1.00	44.78	H	N
ATOM	5448	CA	TYR H	99	49.812	37.624	3.630	1.00	43.31	H	C

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ATOM   5449  CB  TYR H  99      50.227  36.082   3.153  1.00 45.33      H    C
ATOM   5450  CG  TYR H  99      50.752  35.176   4.285  1.00 47.93      H    C
ATOM   5451  CD1 TYR H  99      51.868  35.548   5.007  1.00 49.06      H    C
ATOM   5452  CE1 TYR H  99      52.254  34.855   6.073  1.00 50.83      H    C
ATOM   5453  CD2 TYR H  99      49.982  34.050   4.801  1.00 48.72      H    C
ATOM   5454  CE2 TYR H  99      50.422  33.286   5.787  1.00 50.56      H    C
ATOM   5455  CZ  TYR H  99      51.532  33.716   6.501  1.00 51.08      H    C
ATOM   5456  OH  TYR H  99      51.955  32.910   7.410  1.00 50.59      H    O
ATOM   5457  C   TYR H  99      49.829  38.483   2.360  1.00 41.57      H    C
ATOM   5458  O   TYR H  99      50.880  38.715   1.772  1.00 42.24      H    O
ATOM   5459  N   PHE H 100A     48.735  38.962   1.875  1.00 41.19      H    N
ATOM   5460  CA  PHE H 100A     48.715  39.844   0.745  1.00 41.39      H    C
ATOM   5461  CB  PHE H 100A     47.950  39.136  -0.406  1.00 41.14      H    C
ATOM   5462  CG  PHE H 100A     48.520  37.790  -0.721  1.00 40.31      H    C
ATOM   5463  CD1 PHE H 100A     48.087  36.764  -0.162  1.00 39.72      H    C
ATOM   5464  CD2 PHE H 100A     49.650  37.668  -1.444  1.00 39.59      H    C
ATOM   5465  CE1 PHE H 100A     48.687  35.463  -0.394  1.00 40.58      H    C
ATOM   5466  CE2 PHE H 100A     50.144  36.420  -1.925  1.00 41.22      H    C
ATOM   5467  CZ  PHE H 100A     49.756  35.288  -1.187  1.00 41.75      H    C
ATOM   5468  C   PHE H 100A     48.163  41.269   0.851  1.00 41.09      H    C
ATOM   5469  O   PHE H 100A     48.322  42.037  -0.071  1.00 40.97      H    O
ATOM   5470  N   GLY H 100B     47.429  41.627   1.883  1.00 41.60      H    N
ATOM   5471  CA  GLY H 100B     46.918  43.013   2.046  1.00 40.67      H    C
ATOM   5472  C   GLY H 100B     45.530  43.259   1.366  1.00 41.06      H    C
ATOM   5473  O   GLY H 100B     44.855  42.360   0.912  1.00 40.75      H    O
ATOM   5474  N   PHE H 100C     45.087  44.491   1.365  1.00 39.30      H    N
ATOM   5475  CA  PHE H 100C     43.876  44.969   0.745  1.00 39.10      H    C
ATOM   5476  CB  PHE H 100C     43.437  46.207   1.455  1.00 36.63      H    C
ATOM   5477  CG  PHE H 100C     42.852  46.003   2.697  1.00 37.34      H    C
ATOM   5478  CD1 PHE H 100C     43.534  46.461   3.977  1.00 37.49      H    C
ATOM   5479  CD2 PHE H 100C     41.806  45.153   2.862  1.00 37.27      H    C
ATOM   5480  CE1 PHE H 100C     42.988  46.286   5.054  1.00 37.43      H    C
ATOM   5481  CE2 PHE H 100C     41.256  44.860   4.462  1.00 37.98      H    C
ATOM   5482  CZ  PHE H 100C     41.775  45.401   5.277  1.00 38.05      H    C
ATOM   5483  C   PHE H 100C     44.310  45.386  -0.689  1.00 38.92      H    C
ATOM   5484  O   PHE H 100C     44.856  46.558  -0.957  1.00 37.99      H    O
ATOM   5485  N   ALA H 101      44.112  44.508  -1.626  1.00 38.37      H    N
ATOM   5486  CA  ALA H 101      44.715  44.704  -2.982  1.00 38.04      H    C
ATOM   5487  CB  ALA H 101      44.741  43.310  -3.802  1.00 37.26      H    C
ATOM   5488  C   ALA H 101      43.888  45.617  -3.860  1.00 38.70      H    C
ATOM   5489  O   ALA H 101      44.459  46.125  -4.821  1.00 39.22      H    O
ATOM   5490  N   TYR H 102      42.624  45.849  -3.587  1.00 37.88      H    N
ATOM   5491  CA  TYR H 102      41.823  46.756  -4.421  1.00 40.73      H    C
ATOM   5492  CB  TYR H 102      40.881  45.940  -5.415  1.00 43.71      H    C
ATOM   5493  CG  TYR H 102      41.770  45.485  -6.594  1.00 46.39      H    C
ATOM   5494  CD1 TYR H 102      42.487  44.255  -6.486  1.00 46.61      H    C
ATOM   5495  CE1 TYR H 102      43.463  43.807  -7.469  1.00 47.40      H    C
ATOM   5496  CD2 TYR H 102      42.176  46.399  -7.510  1.00 46.31      H    C
ATOM   5497  CE2 TYR H 102      43.139  45.953  -8.505  1.00 48.95      H    C
ATOM   5498  CZ  TYR H 102      43.697  44.635  -8.507  1.00 50.42      H    C
ATOM   5499  OH  TYR H 102      44.665  44.236  -9.426  1.00 50.89      H    O
ATOM   5500  C   TYR H 102      40.807  47.551  -3.509  1.00 41.67      H    C
ATOM   5501  O   TYR H 102      40.259  46.925  -2.531  1.00 41.21      H    O
ATOM   5502  N   TRP H 103      40.625  48.838  -3.783  1.00 41.77      H    N
ATOM   5503  CA  TRP H 103      39.717  49.645  -3.097  1.00 44.39      H    C
ATOM   5504  CB  TRP H 103      40.386  50.618  -2.117  1.00 42.16      H    C
ATOM   5505  CG  TRP H 103      41.471  50.174  -1.249  1.00 42.59      H    C
ATOM   5506  CD2 TRP H 103      41.595  50.503   0.174  1.00 41.43      H    C
ATOM   5507  CE2 TRP H 103      42.752  49.885   0.661  1.00 40.61      H    C
ATOM   5508  CE3 TRP H 103      40.791  51.203   1.095  1.00 38.63      H    C
ATOM   5509  CD1 TRP H 103      42.667  49.439  -1.605  1.00 41.54      H    C
ATOM   5510  NE1 TRP H 103      43.385  49.247  -0.423  1.00 41.94      H    N
ATOM   5511  CZ2 TRP H 103      43.179  50.049   2.000  1.00 37.96      H    C
ATOM   5512  CZ3 TRP H 103      41.257  51.321   2.447  1.00 37.69      H    C
ATOM   5513  CH2 TRP H 103      42.429  50.777   2.818  1.00 37.36      H    C
ATOM   5514  C   TRP H 103      38.805  50.440  -3.949  1.00 45.62      H    C
ATOM   5515  O   TRP H 103      39.068  50.687  -5.092  1.00 45.76      H    O
ATOM   5516  N   GLY H 104      37.603  50.646  -3.465  1.00 46.03      H    N
ATOM   5517  CA  GLY H 104      36.649  51.494  -4.232  1.00 49.34      H    C
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ATOM	5518	C	GLY	H	104	36.862	52.969	-3.990	1.00	50.39	H	C
ATOM	5519	O	GLY	H	104	37.839	53.342	-3.435	1.00	50.04	H	O
ATOM	5520	N	GLN	H	105	35.899	53.812	-4.380	1.00	51.47	H	N
ATOM	5521	CA	GLN	H	105	36.001	55.263	-4.372	1.00	53.77	H	C
ATOM	5522	CB	GLN	H	105	35.215	55.927	-5.448	1.00	58.08	H	C
ATOM	5523	CG	GLN	H	105	36.012	55.514	-6.818	1.00	63.91	H	C
ATOM	5524	CD	GLN	H	105	37.577	56.078	-7.031	1.00	67.40	H	C
ATOM	5525	OE1	GLN	H	105	37.891	57.324	-6.794	1.00	70.51	H	O
ATOM	5526	NE2	GLN	H	105	38.506	55.151	-7.495	1.00	68.61	H	N
ATOM	5527	C	GLN	H	105	35.541	55.826	-3.186	1.00	53.77	H	C
ATOM	5528	O	GLN	H	105	35.881	56.980	-2.926	1.00	52.00	H	O
ATOM	5529	N	GLY	H	106	34.827	55.047	-2.408	1.00	53.76	H	N
ATOM	5530	CA	GLY	H	106	34.526	55.500	-1.099	1.00	53.09	H	C
ATOM	5531	C	GLY	H	106	33.100	56.020	-1.125	1.00	53.25	H	C
ATOM	5532	O	GLY	H	106	32.662	56.529	-2.182	1.00	53.58	H	O
ATOM	5533	N	THR	H	107	32.320	55.878	-0.055	1.00	51.37	H	N
ATOM	5534	CA	THR	H	107	31.068	56.570	0.001	1.00	49.58	H	C
ATOM	5535	CB	THR	H	107	29.822	55.625	-0.204	1.00	49.86	H	C
ATOM	5536	OG1	THR	H	107	28.563	56.384	-0.242	1.00	52.01	H	O
ATOM	5537	CG2	THR	H	107	29.563	54.703	0.994	1.00	48.32	H	C
ATOM	5538	C	THR	H	107	31.010	57.202	1.297	1.00	49.76	H	C
ATOM	5539	O	THR	H	107	31.356	56.588	2.303	1.00	49.74	H	O
ATOM	5540	N	LEU	H	108	30.618	58.471	1.346	1.00	50.53	H	N
ATOM	5541	CA	LEU	H	108	30.546	59.237	2.619	1.00	51.52	H	C
ATOM	5542	CB	LEU	H	108	30.711	60.734	2.383	1.00	52.39	H	C
ATOM	5543	CG	LEU	H	108	32.064	61.420	2.162	1.00	56.70	H	C
ATOM	5544	CD1	LEU	H	108	32.029	62.939	1.777	1.00	54.62	H	C
ATOM	5545	CD2	LEU	H	108	33.009	61.326	3.414	1.00	56.22	H	C
ATOM	5546	C	LEU	H	108	29.329	59.030	3.483	1.00	50.37	H	C
ATOM	5547	O	LEU	H	108	28.272	59.085	2.998	1.00	48.78	H	O
ATOM	5548	N	VAL	H	109	29.532	58.955	4.786	1.00	49.42	H	N
ATOM	5549	CA	VAL	H	109	28.471	58.808	5.695	1.00	50.40	H	C
ATOM	5550	CB	VAL	H	109	28.528	57.421	6.360	1.00	50.35	H	C
ATOM	5551	CG1	VAL	H	109	27.558	57.361	7.473	1.00	49.64	H	C
ATOM	5552	CG2	VAL	H	109	28.360	56.213	5.360	1.00	49.09	H	C
ATOM	5553	C	VAL	H	109	28.586	59.882	6.856	1.00	51.56	H	C
ATOM	5554	O	VAL	H	109	29.611	59.948	7.554	1.00	51.16	H	O
ATOM	5555	N	ALA	H	110	27.582	60.770	7.019	1.00	51.38	H	N
ATOM	5556	CA	ALA	H	110	27.547	61.701	8.120	1.00	52.80	H	C
ATOM	5557	CB	ALA	H	110	27.449	63.102	7.626	1.00	52.41	H	C
ATOM	5558	C	ALA	H	110	26.460	61.441	9.110	1.00	52.98	H	C
ATOM	5559	O	ALA	H	110	25.368	61.185	8.712	1.00	52.47	H	O
ATOM	5560	N	VAL	H	111	26.893	61.338	10.336	1.00	54.00	H	N
ATOM	5561	CA	VAL	H	111	26.075	61.036	11.455	1.00	55.55	H	C
ATOM	5562	CB	VAL	H	111	26.756	60.138	12.381	1.00	55.09	H	C
ATOM	5563	CG1	VAL	H	111	25.748	59.634	13.565	1.00	55.18	H	C
ATOM	5564	CG2	VAL	H	111	27.155	58.795	11.646	1.00	53.86	H	C
ATOM	5565	C	VAL	H	111	25.946	62.358	12.138	1.00	57.61	H	C
ATOM	5566	O	VAL	H	111	26.838	62.797	12.773	1.00	57.50	H	O
ATOM	5567	N	SER	H	112	24.800	63.012	11.987	1.00	59.58	H	N
ATOM	5568	CA	SER	H	112	24.564	64.420	12.424	1.00	62.06	H	C
ATOM	5569	CB	SER	H	112	25.076	65.409	11.269	1.00	62.27	H	C
ATOM	5570	OG	SER	H	112	24.805	66.847	11.473	1.00	63.44	H	O
ATOM	5571	C	SER	H	112	23.061	64.596	12.675	1.00	64.01	H	C
ATOM	5572	O	SER	H	112	22.269	64.096	11.871	1.00	64.87	H	O
ATOM	5573	N	ALA	H	113	22.634	65.326	13.724	1.00	65.89	H	N
ATOM	5574	CA	ALA	H	113	21.219	65.766	13.787	1.00	67.77	H	C
ATOM	5575	CB	ALA	H	113	20.753	65.882	15.179	1.00	67.00	H	C
ATOM	5576	C	ALA	H	113	20.861	67.043	12.965	1.00	69.23	H	C
ATOM	5577	O	ALA	H	113	19.729	67.369	12.728	1.00	69.65	H	O
ATOM	5578	N	ALA	H	114	21.836	67.674	12.368	1.00	69.99	H	N
ATOM	5579	CA	ALA	H	114	21.556	68.745	11.383	1.00	71.20	H	C
ATOM	5580	CB	ALA	H	114	22.832	69.472	11.042	1.00	70.37	H	C
ATOM	5581	C	ALA	H	114	20.864	68.283	10.131	1.00	72.68	H	C
ATOM	5582	O	ALA	H	114	20.698	67.061	9.867	1.00	72.43	H	O
ATOM	5583	N	LYS	H	115	20.523	69.293	9.307	1.00	73.47	H	N
ATOM	5584	CA	LYS	H	115	19.588	69.075	8.225	1.00	74.97	H	C
ATOM	5585	CB	LYS	H	115	18.332	69.996	8.398	1.00	76.29	H	C
ATOM	5586	CG	LYS	H	115	17.029	69.220	8.865	1.00	78.90	H	C

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ATOM   5587  CD  LYS H 115      15.722  70.076   8.445  1.00 80.84      H    C
ATOM   5588  CE  LYS H 115      14.479  69.941   9.414  1.00 82.54      H    C
ATOM   5589  NZ  LYS H 115      13.417  70.968   9.050  1.00 84.38      H    N
ATOM   5590  C   LYS H 115      20.237  69.344   6.901  1.00 74.57      H    C
ATOM   5591  O   LYS H 115      20.973  70.400   6.712  1.00 74.15      H    O
ATOM   5592  N   THR H 116      19.761  68.565   5.925  1.00 74.05      H    N
ATOM   5593  CA  THR H 116      20.330  68.731   4.659  1.00 74.84      H    C
ATOM   5594  CB  THR H 116      20.188  67.575   3.700  1.00 75.81      H    C
ATOM   5595  OG1 THR H 116      19.398  67.962   2.580  1.00 78.72      H    O
ATOM   5596  CG2 THR H 116      19.520  66.458   4.332  1.00 77.18      H    C
ATOM   5597  C   THR H 116      20.045  70.095   4.138  1.00 74.35      H    C
ATOM   5598  O   THR H 116      19.015  70.595   4.371  1.00 74.89      H    O
ATOM   5599  N   THR H 117      21.028  70.736   3.524  1.00 73.19      H    N
ATOM   5600  CA  THR H 117      20.737  72.009   2.879  1.00 72.52      H    C
ATOM   5601  CB  THR H 117      21.321  73.135   3.718  1.00 72.50      H    C
ATOM   5602  OG1 THR H 117      21.009  72.949   5.153  1.00 72.65      H    O
ATOM   5603  CG2 THR H 117      20.677  74.469   3.161  1.00 71.32      H    C
ATOM   5604  C   THR H 117      21.307  72.133   1.516  1.00 71.62      H    C
ATOM   5605  O   THR H 117      22.446  71.904   1.379  1.00 72.24      H    O
ATOM   5606  N   PRO H 118      20.558  72.464   0.497  1.00 70.54      H    N
ATOM   5607  CD  PRO H 118      19.109  72.729   0.435  1.00 70.30      H    C
ATOM   5608  CA  PRO H 118      21.172  72.613  -0.815  1.00 69.81      H    C
ATOM   5609  CB  PRO H 118      19.973  72.676  -1.794  1.00 70.03      H    C
ATOM   5610  CG  PRO H 118      18.907  73.314  -1.007  1.00 69.36      H    C
ATOM   5611  C   PRO H 118      22.089  73.820  -0.850  1.00 69.30      H    C
ATOM   5612  O   PRO H 118      22.100  74.702  -0.001  1.00 68.93      H    O
ATOM   5613  N   PRO H 119      23.020  73.759  -1.772  1.00 69.63      H    N
ATOM   5614  CD  PRO H 119      23.318  72.607  -2.675  1.00 69.24      H    C
ATOM   5615  CA  PRO H 119      23.982  74.865  -1.927  1.00 69.43      H    C
ATOM   5616  CB  PRO H 119      25.140  74.229  -2.653  1.00 69.59      H    C
ATOM   5617  CG  PRO H 119      24.419  73.207  -3.526  1.00 69.96      H    C
ATOM   5618  C   PRO H 119      23.379  75.894  -2.789  1.00 69.54      H    C
ATOM   5619  O   PRO H 119      22.564  75.533  -3.519  1.00 69.35      H    O
ATOM   5620  N   SER H 120      23.735  77.137  -2.578  1.00 69.05      H    N
ATOM   5621  CA  SER H 120      23.541  78.148  -3.511  1.00 69.34      H    C
ATOM   5622  CB  SER H 120      23.388  79.438  -2.776  1.00 69.06      H    C
ATOM   5623  OG  SER H 120      22.280  79.351  -1.990  1.00 69.83      H    O
ATOM   5624  C   SER H 120      24.790  78.222  -4.362  1.00 69.65      H    C
ATOM   5625  O   SER H 120      25.825  78.200  -3.817  1.00 70.99      H    O
ATOM   5626  N   VAL H 121      24.683  78.406  -5.682  1.00 69.07      H    N
ATOM   5627  CA  VAL H 121      25.782  78.429  -6.568  1.00 68.49      H    C
ATOM   5628  CB  VAL H 121      25.581  77.269  -7.538  1.00 67.99      H    C
ATOM   5629  CG1 VAL H 121      26.660  77.227  -8.681  1.00 66.50      H    C
ATOM   5630  CG2 VAL H 121      25.504  75.933  -6.683  1.00 67.19      H    C
ATOM   5631  C   VAL H 121      25.903  79.759  -7.337  1.00 68.59      H    C
ATOM   5632  O   VAL H 121      25.006  80.213  -7.833  1.00 69.44      H    O
ATOM   5633  N   TYR H 122      27.035  80.351  -7.514  1.00 68.04      H    N
ATOM   5634  CA  TYR H 122      27.097  81.683  -8.072  1.00 68.49      H    C
ATOM   5635  CB  TYR H 122      27.326  82.741  -7.030  1.00 66.91      H    C
ATOM   5636  CG  TYR H 122      26.318  82.787  -5.901  1.00 65.94      H    C
ATOM   5637  CD1 TYR H 122      25.018  82.941  -6.191  1.00 65.72      H    C
ATOM   5638  CE1 TYR H 122      24.036  82.968  -5.212  1.00 64.55      H    C
ATOM   5639  CD2 TYR H 122      26.659  82.585  -4.584  1.00 64.79      H    C
ATOM   5640  CE2 TYR H 122      25.691  82.631  -3.591  1.00 64.05      H    C
ATOM   5641  CZ  TYR H 122      24.358  82.849  -3.962  1.00 63.93      H    C
ATOM   5642  OH  TYR H 122      23.289  82.929  -3.129  1.00 63.03      H    O
ATOM   5643  C   TYR H 122      28.278  81.724  -9.056  1.00 69.84      H    C
ATOM   5644  O   TYR H 122      29.303  81.211  -8.764  1.00 69.11      H    O
ATOM   5645  N   PRO H 123      28.142  82.401 -10.181  1.00 71.60      H    N
ATOM   5646  CD  PRO H 123      26.999  83.253 -10.618  1.00 71.61      H    C
ATOM   5647  CA  PRO H 123      29.225  82.373 -11.168  1.00 73.00      H    C
ATOM   5648  CB  PRO H 123      28.495  82.618 -12.519  1.00 72.20      H    C
ATOM   5649  CG  PRO H 123      27.297  83.644 -12.077  1.00 71.53      H    C
ATOM   5650  C   PRO H 123      30.228  83.455 -10.829  1.00 74.28      H    C
ATOM   5651  O   PRO H 123      29.839  84.542 -10.394  1.00 75.03      H    O
ATOM   5652  N   LEU H 124      31.500  83.209 -11.057  1.00 75.57      H    N
ATOM   5653  CA  LEU H 124      32.464  84.215 -10.808  1.00 77.18      H    C
ATOM   5654  CB  LEU H 124      33.515  83.686  -9.820  1.00 76.33      H    C
ATOM   5655  CG  LEU H 124      33.045  83.173  -8.499  1.00 75.63      H    C
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ATOM   5656  CD1 LEU H 124      34.230  82.372  -7.902  1.00 75.48      H    C
ATOM   5657  CD2 LEU H 124      32.585  84.320  -7.676  1.00 75.22      H    C
ATOM   5658  C   LEU H 124      33.147  84.641 -12.061  1.00 78.64      H    C
ATOM   5659  O   LEU H 124      33.894  83.897 -12.645  1.00 78.81      H    O
ATOM   5660  N   ALA H 125      33.005  85.915 -12.348  1.00 80.89      H    N
ATOM   5661  CA  ALA H 125      33.442  86.473 -13.631  1.00 82.49      H    C
ATOM   5662  CB  ALA H 125      32.252  86.765 -14.462  1.00 81.49      H    C
ATOM   5663  C   ALA H 125      34.258  87.705 -13.366  1.00 83.38      H    C
ATOM   5664  O   ALA H 125      33.977  88.375 -12.373  1.00 83.49      H    O
ATOM   5665  N   PRO H 126      35.298  87.967 -14.181  1.00 84.62      H    N
ATOM   5666  CD  PRO H 126      35.713  87.225 -15.370  1.00 84.56      H    C
ATOM   5667  CA  PRO H 126      36.216  89.095 -13.959  1.00 85.66      H    C
ATOM   5668  CB  PRO H 126      37.083  89.030 -15.205  1.00 85.31      H    C
ATOM   5669  CG  PRO H 126      36.296  88.308 -16.113  1.00 84.85      H    C
ATOM   5670  C   PRO H 126      35.534  90.465 -13.871  1.00 86.61      H    C
ATOM   5671  O   PRO H 126      34.537  90.903 -14.349  1.00 86.89      H    O
ATOM   5672  N   ALA H 133      45.015  88.620 -19.518  1.00 87.90      H    N
ATOM   5673  CA  ALA H 133      46.014  88.473 -20.570  1.00 88.86      H    C
ATOM   5674  CB  ALA H 133      47.399  88.539 -19.927  1.00 88.44      H    C
ATOM   5675  C   ALA H 133      45.850  87.150 -21.322  1.00 89.28      H    C
ATOM   5676  O   ALA H 133      44.766  86.594 -21.442  1.00 89.70      H    O
ATOM   5677  N   ALA H 134      46.979  86.669 -21.875  1.00 89.69      H    N
ATOM   5678  CA  ALA H 134      46.941  85.423 -22.633  1.00 90.00      H    C
ATOM   5679  CB  ALA H 134      48.337  84.801 -22.599  1.00 90.26      H    C
ATOM   5680  C   ALA H 134      45.920  84.439 -22.055  1.00 90.19      H    C
ATOM   5681  O   ALA H 134      45.215  83.736 -22.766  1.00 90.05      H    O
ATOM   5682  N   MET H 135      45.887  84.376 -20.712  1.00 89.65      H    N
ATOM   5683  CA  MET H 135      44.974  83.444 -20.061  1.00 88.40      H    C
ATOM   5684  CB  MET H 135      45.807  82.459 -19.241  1.00 89.05      H    C
ATOM   5685  CG  MET H 135      46.718  81.595 -20.115  1.00 89.97      H    C
ATOM   5686  SD  MET H 135      45.790  80.601 -21.291  1.00 92.18      H    S
ATOM   5687  CE  MET H 135      44.934  79.553 -20.106  1.00 90.49      H    C
ATOM   5688  C   MET H 135      43.977  84.167 -19.152  1.00 87.02      H    C
ATOM   5689  O   MET H 135      44.172  85.301 -18.736  1.00 87.12      H    O
ATOM   5690  N   VAL H 136      42.854  83.477 -18.881  1.00 85.50      H    N
ATOM   5691  CA  VAL H 136      41.838  84.065 -18.018  1.00 83.76      H    C
ATOM   5692  CB  VAL H 136      40.793  84.742 -18.905  1.00 83.98      H    C
ATOM   5693  CG1 VAL H 136      39.802  83.703 -19.426  1.00 83.33      H    C
ATOM   5694  CG2 VAL H 136      40.041  85.793 -18.110  1.00 83.66      H    C
ATOM   5695  C   VAL H 136      41.164  83.009 -17.140  1.00 82.18      H    C
ATOM   5696  O   VAL H 136      40.857  81.903 -17.565  1.00 82.47      H    O
ATOM   5697  N   THR H 137      40.974  83.371 -15.858  1.00 80.41      H    N
ATOM   5698  CA  THR H 137      40.306  82.454 -14.943  1.00 79.76      H    C
ATOM   5699  CB  THR H 137      41.222  82.227 -13.740  1.00 79.32      H    C
ATOM   5700  OG1 THR H 137      40.560  82.675 -12.555  1.00 79.45      H    O
ATOM   5701  CG2 THR H 137      42.519  83.023 -13.911  1.00 78.61      H    C
ATOM   5702  C   THR H 137      38.957  83.011 -14.480  1.00 78.49      H    C
ATOM   5703  O   THR H 137      38.773  84.211 -14.320  1.00 78.29      H    O
ATOM   5704  N   LEU H 138      38.056  82.025 -14.373  1.00 77.73      H    N
ATOM   5705  CA  LEU H 138      36.717  82.196 -13.866  1.00 77.47      H    C
ATOM   5706  CB  LEU H 138      35.784  81.768 -14.997  1.00 78.10      H    C
ATOM   5707  CG  LEU H 138      36.149  82.431 -16.321  1.00 79.50      H    C
ATOM   5708  CD1 LEU H 138      35.422  81.810 -17.526  1.00 79.35      H    C
ATOM   5709  CD2 LEU H 138      35.787  83.917 -16.316  1.00 78.82      H    C
ATOM   5710  C   LEU H 138      36.566  81.217 -12.706  1.00 76.73      H    C
ATOM   5711  O   LEU H 138      37.440  80.402 -12.420  1.00 76.08      H    O
ATOM   5712  N   GLY H 139      35.428  81.318 -11.999  1.00 76.19      H    N
ATOM   5713  CA  GLY H 139      35.185  80.385 -10.926  1.00 76.09      H    C
ATOM   5714  C   GLY H 139      33.699  80.196 -10.655  1.00 75.94      H    C
ATOM   5715  O   GLY H 139      32.807  80.740 -11.324  1.00 75.89      H    O
ATOM   5716  N   CYS H 140      33.460  79.323  -9.639  1.00 76.35      H    N
ATOM   5717  CA  CYS H 140      32.115  79.018  -9.174  1.00 76.80      H    C
ATOM   5718  C   CYS H 140      32.118  78.990  -7.664  1.00 75.34      H    C
ATOM   5719  O   CYS H 140      32.979  78.400  -7.062  1.00 75.52      H    O
ATOM   5720  CB  CYS H 140      31.768  77.608  -9.693  1.00 78.19      H    C
ATOM   5721  SG  CYS H 140      30.531  77.716 -10.993  1.00 83.30      H    S
ATOM   5722  N   LEU H 141      31.166  79.675  -7.033  1.00 73.47      H    N
ATOM   5723  CA  LEU H 141      31.133  79.580  -5.599  1.00 70.98      H    C
ATOM   5724  CB  LEU H 141      31.071  81.022  -5.092  1.00 70.21      H    C
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ATOM   5725  CG  LEU H 141      30.910  81.245  -3.583  1.00 69.27      H    C
ATOM   5726  CD1 LEU H 141      32.100  80.826  -2.720  1.00 68.13      H    C
ATOM   5727  CD2 LEU H 141      30.766  82.729  -3.303  1.00 68.78      H    C
ATOM   5728  C   LEU H 141      29.938  78.722  -5.186  1.00 69.23      H    C
ATOM   5729  O   LEU H 141      28.813  78.816  -5.720  1.00 69.90      H    O
ATOM   5730  N   VAL H 142      30.252  77.766  -4.287  1.00 66.68      H    N
ATOM   5731  CA  VAL H 142      29.214  76.863  -3.806  1.00 64.25      H    C
ATOM   5732  CB  VAL H 142      29.617  75.452  -4.218  1.00 64.24      H    C
ATOM   5733  CG1 VAL H 142      28.544  74.440  -3.846  1.00 61.94      H    C
ATOM   5734  CG2 VAL H 142      29.797  75.400  -5.719  1.00 61.98      H    C
ATOM   5735  C   VAL H 142      29.063  77.012  -2.312  1.00 63.46      H    C
ATOM   5736  O   VAL H 142      29.931  76.683  -1.511  1.00 62.73      H    O
ATOM   5737  N   LYS H 143      27.895  77.604  -1.972  1.00 62.44      H    N
ATOM   5738  CA  LYS H 143      27.728  78.239  -0.671  1.00 61.55      H    C
ATOM   5739  CB  LYS H 143      27.568  79.740  -0.912  1.00 61.63      H    C
ATOM   5740  CG  LYS H 143      27.800  80.536   0.368  1.00 64.18      H    C
ATOM   5741  CD  LYS H 143      27.452  82.004   0.237  1.00 66.95      H    C
ATOM   5742  CE  LYS H 143      27.476  82.690   1.597  1.00 67.20      H    C
ATOM   5743  NZ  LYS H 143      28.805  82.543   2.222  1.00 69.98      H    N
ATOM   5744  C   LYS H 143      26.502  77.737   0.069  1.00 60.08      H    C
ATOM   5745  O   LYS H 143      25.390  77.671  -0.439  1.00 59.81      H    O
ATOM   5746  N   GLY H 144      26.809  77.297   1.302  1.00 58.65      H    N
ATOM   5747  CA  GLY H 144      25.785  77.102   2.318  1.00 58.01      H    C
ATOM   5748  C   GLY H 144      25.114  75.718   2.273  1.00 57.98      H    C
ATOM   5749  O   GLY H 144      23.925  75.575   2.485  1.00 57.35      H    O
ATOM   5750  N   TYR H 145      25.914  74.670   1.969  1.00 57.90      H    N
ATOM   5751  CA  TYR H 145      25.310  73.332   1.814  1.00 57.33      H    C
ATOM   5752  CB  TYR H 145      25.754  72.732   0.470  1.00 57.61      H    C
ATOM   5753  CG  TYR H 145      27.211  72.419   0.469  1.00 59.84      H    C
ATOM   5754  CD1 TYR H 145      27.702  71.225   0.973  1.00 59.62      H    C
ATOM   5755  CE1 TYR H 145      29.021  70.862   0.786  1.00 61.69      H    C
ATOM   5756  CD2 TYR H 145      28.071  73.235  -0.241  1.00 60.20      H    C
ATOM   5757  CE2 TYR H 145      29.408  72.879  -0.428  1.00 60.85      H    C
ATOM   5758  CZ  TYR H 145      29.887  71.699   0.108  1.00 61.51      H    C
ATOM   5759  OH  TYR H 145      31.233  71.371  -0.008  1.00 63.36      H    O
ATOM   5760  C   TYR H 145      25.707  72.391   2.974  1.00 57.16      H    C
ATOM   5761  O   TYR H 145      26.691  72.595   3.662  1.00 56.86      H    O
ATOM   5762  N   PHE H 146      24.907  71.338   3.216  1.00 57.23      H    N
ATOM   5763  CA  PHE H 146      25.269  70.307   4.209  1.00 57.03      H    C
ATOM   5764  CB  PHE H 146      24.977  70.863   5.618  1.00 57.40      H    C
ATOM   5765  CG  PHE H 146      25.239  69.831   6.686  1.00 57.38      H    C
ATOM   5766  CD1 PHE H 146      26.497  69.744   7.267  1.00 56.79      H    C
ATOM   5767  CD2 PHE H 146      24.228  68.953   7.079  1.00 57.31      H    C
ATOM   5768  CE1 PHE H 146      26.753  68.781   8.233  1.00 56.84      H    C
ATOM   5769  CE2 PHE H 146      24.492  67.991   8.047  1.00 57.73      H    C
ATOM   5770  CZ  PHE H 146      25.753  67.889   8.614  1.00 56.94      H    C
ATOM   5771  C   PHE H 146      24.395  69.079   3.936  1.00 57.78      H    C
ATOM   5772  O   PHE H 146      23.225  69.177   3.600  1.00 58.27      H    O
ATOM   5773  N   PRO H 147      24.948  67.837   4.033  1.00 57.91      H    N
ATOM   5774  CD  PRO H 147      24.299  66.563   3.760  1.00 57.22      H    C
ATOM   5775  CA  PRO H 147      26.347  67.580   4.399  1.00 56.51      H    C
ATOM   5776  CB  PRO H 147      26.337  66.155   4.958  1.00 57.13      H    C
ATOM   5777  CG  PRO H 147      25.316  65.398   4.154  1.00 57.27      H    C
ATOM   5778  C   PRO H 147      27.195  67.564   3.130  1.00 56.56      H    C
ATOM   5779  O   PRO H 147      26.749  67.891   2.031  1.00 55.45      H    O
ATOM   5780  N   GLU H 148      28.481  67.179   3.330  1.00 55.99      H    N
ATOM   5781  CA  GLU H 148      29.360  66.829   2.227  1.00 55.91      H    C
ATOM   5782  CB  GLU H 148      30.818  66.673   2.755  1.00 55.82      H    C
ATOM   5783  CG  GLU H 148      31.483  67.963   3.268  1.00 57.49      H    C
ATOM   5784  CD  GLU H 148      32.922  68.092   2.735  1.00 60.41      H    C
ATOM   5785  OE1 GLU H 148      33.838  67.843   3.478  1.00 62.59      H    O
ATOM   5786  OE2 GLU H 148      33.117  68.614   1.641  1.00 60.21      H    O
ATOM   5787  C   GLU H 148      28.866  65.468   1.672  1.00 54.77      H    C
ATOM   5788  O   GLU H 148      28.271  64.686   2.384  1.00 55.39      H    O
ATOM   5789  N   PRO H 149      29.156  65.241   0.375  1.00 54.06      H    N
ATOM   5790  CD  PRO H 149      28.965  63.973  -0.326  1.00 52.97      H    C
ATOM   5791  CA  PRO H 149      29.912  66.118  -0.486  1.00 54.94      H    C
ATOM   5792  CB  PRO H 149      30.909  65.167  -1.114  1.00 54.57      H    C
ATOM   5793  CG  PRO H 149      30.057  63.944  -1.504  1.00 54.42      H    C
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ATOM   5794  C   PRO H 149      29.121  66.781  -1.643  1.00 56.29      H    C
ATOM   5795  O   PRO H 149      27.930  66.563  -1.847  1.00 57.63      H    O
ATOM   5796  N   VAL H 150      29.844  67.654  -2.427  1.00 57.08      H    N
ATOM   5797  CA  VAL H 150      29.324  68.079  -3.723  1.00 56.72      H    C
ATOM   5798  CB  VAL H 150      29.146  69.608  -3.809  1.00 56.11      H    C
ATOM   5799  CG1 VAL H 150      28.016  70.105  -2.912  1.00 55.69      H    C
ATOM   5800  CG2 VAL H 150      30.449  70.326  -3.507  1.00 56.14      H    C
ATOM   5801  C   VAL H 150      30.290  67.734  -4.807  1.00 57.76      H    C
ATOM   5802  O   VAL H 150      31.430  67.338  -4.587  1.00 57.89      H    O
ATOM   5803  N   THR H 151      29.837  67.938  -6.018  1.00 59.16      H    N
ATOM   5804  CA  THR H 151      30.715  67.629  -7.095  1.00 60.28      H    C
ATOM   5805  CB  THR H 151      30.353  66.211  -7.573  1.00 61.13      H    C
ATOM   5806  OG1 THR H 151      31.476  65.613  -8.226  1.00 62.65      H    O
ATOM   5807  CG2 THR H 151      29.132  66.233  -8.489  1.00 61.40      H    C
ATOM   5808  C   THR H 151      30.628  68.695  -8.174  1.00 60.42      H    C
ATOM   5809  O   THR H 151      29.556  69.171  -8.551  1.00 61.43      H    O
ATOM   5810  N   VAL H 152      31.823  69.130  -8.609  1.00 60.63      H    N
ATOM   5811  CA  VAL H 152      31.903  70.227  -9.539  1.00 60.80      H    C
ATOM   5812  CB  VAL H 152      32.737  71.304  -8.867  1.00 61.18      H    C
ATOM   5813  CG1 VAL H 152      33.050  72.431  -9.854  1.00 59.55      H    C
ATOM   5814  CG2 VAL H 152      32.020  71.839  -7.646  1.00 60.63      H    C
ATOM   5815  C   VAL H 152      32.626  69.789 -10.789  1.00 61.85      H    C
ATOM   5816  O   VAL H 152      33.667  69.158 -10.717  1.00 61.61      H    O
ATOM   5817  N   THR H 153      32.010  70.069 -11.955  1.00 63.13      H    N
ATOM   5818  CA  THR H 153      32.739  69.927 -13.195  1.00 64.55      H    C
ATOM   5819  CB  THR H 153      32.109  68.787 -14.003  1.00 64.46      H    C
ATOM   5820  OG1 THR H 153      30.720  69.050 -14.214  1.00 66.15      H    O
ATOM   5821  CG2 THR H 153      32.260  67.448 -13.266  1.00 63.21      H    C
ATOM   5822  C   THR H 153      32.639  71.211 -13.991  1.00 65.35      H    C
ATOM   5823  O   THR H 153      31.845  72.107 -13.682  1.00 65.82      H    O
ATOM   5824  N   TRP H 154      33.506  71.320 -15.015  1.00 67.73      H    N
ATOM   5825  CA  TRP H 154      33.347  72.395 -15.980  1.00 70.47      H    C
ATOM   5826  CB  TRP H 154      34.619  73.250 -15.939  1.00 71.18      H    C
ATOM   5827  CG  TRP H 154      34.748  73.980 -14.636  1.00 71.96      H    C
ATOM   5828  CD2 TRP H 154      34.191  75.299 -14.369  1.00 72.27      H    C
ATOM   5829  CE2 TRP H 154      34.618  75.650 -13.034  1.00 72.93      H    C
ATOM   5830  CE3 TRP H 154      33.425  76.182 -15.096  1.00 72.34      H    C
ATOM   5831  CD1 TRP H 154      35.493  73.616 -13.492  1.00 72.81      H    C
ATOM   5832  NE1 TRP H 154      35.447  74.556 -12.501  1.00 72.55      H    N
ATOM   5833  CZ2 TRP H 154      34.233  76.887 -12.518  1.00 73.00      H    C
ATOM   5834  CZ3 TRP H 154      33.055  77.407 -14.581  1.00 73.01      H    C
ATOM   5835  CH2 TRP H 154      33.453  77.757 -13.283  1.00 73.60      H    C
ATOM   5836  C   TRP H 154      33.107  71.799 -17.383  1.00 71.96      H    C
ATOM   5837  O   TRP H 154      33.638  70.750 -17.717  1.00 72.49      H    O
ATOM   5838  N   ASN H 155      32.260  72.524 -18.176  1.00 73.41      H    N
ATOM   5839  CA  ASN H 155      31.585  72.007 -19.404  1.00 74.78      H    C
ATOM   5840  CB  ASN H 155      32.344  72.405 -20.678  1.00 73.67      H    C
ATOM   5841  CG  ASN H 155      32.371  73.903 -20.835  1.00 72.85      H    C
ATOM   5842  OD1 ASN H 155      31.399  74.614 -20.572  1.00 72.15      H    O
ATOM   5843  ND2 ASN H 155      33.584  74.393 -21.194  1.00 73.17      H    N
ATOM   5844  C   ASN H 155      31.216  70.502 -19.442  1.00 76.03      H    C
ATOM   5845  O   ASN H 155      31.406  69.818 -20.459  1.00 76.90      H    O
ATOM   5846  N   SER H 156      30.667  70.010 -18.306  1.00 77.24      H    N
ATOM   5847  CA  SER H 156      30.036  68.674 -18.239  1.00 78.92      H    C
ATOM   5848  CB  SER H 156      28.857  68.600 -19.221  1.00 79.62      H    C
ATOM   5849  OG  SER H 156      27.897  69.586 -18.822  1.00 80.28      H    O
ATOM   5850  C   SER H 156      31.016  67.491 -18.355  1.00 79.81      H    C
ATOM   5851  O   SER H 156      30.668  66.343 -18.630  1.00 80.45      H    O
ATOM   5852  N   GLY H 157      32.288  67.828 -18.097  1.00 80.22      H    N
ATOM   5853  CA  GLY H 157      33.354  66.848 -18.140  1.00 80.31      H    C
ATOM   5854  C   GLY H 157      34.487  67.349 -19.033  1.00 80.50      H    C
ATOM   5855  O   GLY H 157      35.642  66.951 -18.923  1.00 80.73      H    O
ATOM   5856  N   ALA H 158      34.098  68.246 -19.969  1.00 80.66      H    N
ATOM   5857  CA  ALA H 158      35.030  68.606 -21.029  1.00 81.02      H    C
ATOM   5858  CB  ALA H 158      34.297  69.433 -22.089  1.00 81.05      H    C
ATOM   5859  C   ALA H 158      36.306  69.292 -20.525  1.00 81.09      H    C
ATOM   5860  O   ALA H 158      37.407  68.848 -20.789  1.00 80.82      H    O
ATOM   5861  N   LEU H 159      36.120  70.402 -19.776  1.00 81.48      H    N
ATOM   5862  CA  LEU H 159      37.255  71.134 -19.228  1.00 81.12      H    C
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ATOM	5863	CB	LEU	H	159	36.718	72.524	-18.926	1.00	81.49	H	C
ATOM	5864	CG	LEU	H	159	37.224	73.540	-19.951	1.00	80.68	H	C
ATOM	5865	CD1	LEU	H	159	36.514	74.885	-19.863	1.00	80.53	H	C
ATOM	5866	CD2	LEU	H	159	38.716	73.822	-19.816	1.00	81.02	H	C
ATOM	5867	C	LEU	H	159	37.786	70.536	-17.917	1.00	81.10	H	C
ATOM	5868	O	LEU	H	159	37.150	70.570	-16.885	1.00	80.67	H	O
ATOM	5869	N	SER	H	160	39.002	69.969	-17.978	1.00	81.36	H	N
ATOM	5870	CA	SER	H	160	39.491	69.283	-16.784	1.00	81.20	H	C
ATOM	5871	CB	SER	H	160	39.458	67.783	-17.075	1.00	81.88	H	C
ATOM	5872	OG	SER	H	160	39.477	67.580	-18.489	1.00	82.71	H	O
ATOM	5873	C	SER	H	160	40.911	69.699	-16.408	1.00	80.76	H	C
ATOM	5874	O	SER	H	160	41.486	69.249	-15.415	1.00	81.69	H	O
ATOM	5875	N	SER	H	161	41.515	70.530	-17.297	1.00	79.36	H	N
ATOM	5876	CA	SER	H	161	42.797	71.127	-16.948	1.00	78.19	H	C
ATOM	5877	CB	SER	H	161	43.864	70.721	-17.960	1.00	78.47	H	C
ATOM	5878	OG	SER	H	161	44.212	69.356	-17.737	1.00	80.44	H	O
ATOM	5879	C	SER	H	161	42.743	72.653	-16.771	1.00	76.76	H	C
ATOM	5880	O	SER	H	161	41.890	73.369	-17.292	1.00	76.36	H	O
ATOM	5881	N	GLY	H	162	43.720	73.112	-15.955	1.00	75.51	H	N
ATOM	5882	CA	GLY	H	162	43.708	74.467	-15.436	1.00	73.39	H	C
ATOM	5883	C	GLY	H	162	42.535	74.685	-14.455	1.00	71.72	H	C
ATOM	5884	O	GLY	H	162	42.098	75.803	-14.213	1.00	72.43	H	O
ATOM	5885	N	VAL	H	163	42.005	73.511	-13.941	1.00	68.97	H	N
ATOM	5886	CA	VAL	H	163	40.926	73.470	-12.941	1.00	66.41	H	C
ATOM	5887	CB	VAL	H	163	39.906	72.375	-13.308	1.00	66.17	H	C
ATOM	5888	CG1	VAL	H	163	39.101	71.962	-12.064	1.00	64.64	H	C
ATOM	5889	CG2	VAL	H	163	38.945	72.866	-14.357	1.00	65.38	H	C
ATOM	5890	C	VAL	H	163	41.427	73.170	-11.526	1.00	65.54	H	C
ATOM	5891	O	VAL	H	163	42.045	72.151	-11.247	1.00	65.66	H	O
ATOM	5892	N	HIS	H	164	41.138	74.143	-10.634	1.00	64.28	H	N
ATOM	5893	CA	HIS	H	164	41.380	73.986	-9.217	1.00	62.68	H	C
ATOM	5894	CB	HIS	H	164	42.289	75.168	-8.825	1.00	62.70	H	C
ATOM	5895	CG	HIS	H	164	43.713	75.002	-9.366	1.00	61.67	H	C
ATOM	5896	CD2	HIS	H	164	44.444	75.900	-10.192	1.00	61.61	H	C
ATOM	5897	ND1	HIS	H	164	44.548	73.994	-8.998	1.00	61.59	H	N
ATOM	5898	CE1	HIS	H	164	45.733	74.259	-9.619	1.00	61.79	H	C
ATOM	5899	NE2	HIS	H	164	45.701	75.392	-10.339	1.00	61.73	H	N
ATOM	5900	C	HIS	H	164	40.045	74.070	-8.445	1.00	62.25	H	C
ATOM	5901	O	HIS	H	164	39.417	75.114	-8.357	1.00	62.65	H	O
ATOM	5902	N	THR	H	165	39.571	72.900	-7.924	1.00	60.50	H	N
ATOM	5903	CA	THR	H	165	38.430	72.875	-6.986	1.00	58.57	H	C
ATOM	5904	CB	THR	H	165	37.531	71.679	-7.383	1.00	58.57	H	C
ATOM	5905	OG1	THR	H	165	36.954	71.953	-8.661	1.00	57.87	H	O
ATOM	5906	CG2	THR	H	165	36.394	71.435	-6.374	1.00	56.88	H	C
ATOM	5907	C	THR	H	165	38.921	72.728	-5.529	1.00	57.25	H	C
ATOM	5908	O	THR	H	165	39.631	71.797	-5.164	1.00	57.26	H	O
ATOM	5909	N	PHE	H	166	38.577	73.747	-4.680	1.00	55.32	H	N
ATOM	5910	CA	PHE	H	166	39.188	73.844	-3.346	1.00	53.48	H	C
ATOM	5911	CB	PHE	H	166	39.250	75.330	-2.943	1.00	51.93	H	C
ATOM	5912	CG	PHE	H	166	40.124	76.136	-3.886	1.00	50.87	H	C
ATOM	5913	CD1	PHE	H	166	39.593	76.613	-5.092	1.00	49.87	H	C
ATOM	5914	CD2	PHE	H	166	41.457	76.408	-3.551	1.00	50.53	H	C
ATOM	5915	CE1	PHE	H	166	40.413	77.311	-5.980	1.00	48.36	H	C
ATOM	5916	CE2	PHE	H	166	42.274	77.110	-4.445	1.00	50.79	H	C
ATOM	5917	CZ	PHE	H	166	41.752	77.556	-5.660	1.00	48.16	H	C
ATOM	5918	C	PHE	H	166	38.401	73.043	-2.279	1.00	52.89	H	C
ATOM	5919	O	PHE	H	166	37.210	72.826	-2.376	1.00	53.51	H	O
ATOM	5920	N	PRO	H	167	39.133	72.552	-1.254	1.00	52.26	H	N
ATOM	5921	CD	PRO	H	167	40.559	72.601	-0.985	1.00	50.59	H	C
ATOM	5922	CA	PRO	H	167	38.463	71.788	-0.180	1.00	52.23	H	C
ATOM	5923	CB	PRO	H	167	39.563	71.373	0.812	1.00	51.28	H	C
ATOM	5924	CG	PRO	H	167	40.874	71.440	0.054	1.00	51.12	H	C
ATOM	5925	C	PRO	H	167	37.407	72.654	0.511	1.00	53.22	H	C
ATOM	5926	O	PRO	H	167	37.593	73.839	0.731	1.00	53.17	H	O
ATOM	5927	N	ALA	H	168	36.247	72.018	0.850	1.00	54.77	H	N
ATOM	5928	CA	ALA	H	168	35.223	72.783	1.570	1.00	56.82	H	C
ATOM	5929	CB	ALA	H	168	33.997	71.886	1.770	1.00	56.59	H	C
ATOM	5930	C	ALA	H	168	35.724	73.229	2.939	1.00	58.43	H	C
ATOM	5931	O	ALA	H	168	36.554	72.589	3.576	1.00	58.60	H	O

ATOM	5932	N	VAL	H	169	35.216	74.412	3.348	1.00	61.29	H	N
ATOM	5933	CA	VAL	H	169	35.314	74.880	4.720	1.00	64.98	H	C
ATOM	5934	CB	VAL	H	169	35.947	76.274	4.720	1.00	65.10	H	C
ATOM	5935	CG1	VAL	H	169	37.462	76.143	4.565	1.00	64.84	H	C
ATOM	5936	CG2	VAL	H	169	35.394	77.109	3.577	1.00	66.13	H	C
ATOM	5937	C	VAL	H	169	33.945	74.907	5.403	1.00	66.34	H	C
ATOM	5938	O	VAL	H	169	32.897	75.043	4.780	1.00	66.63	H	O
ATOM	5939	N	LEU	H	170	33.975	74.725	6.734	1.00	68.77	H	N
ATOM	5940	CA	LEU	H	170	32.726	74.631	7.475	1.00	71.62	H	C
ATOM	5941	CB	LEU	H	170	32.786	73.367	8.340	1.00	70.81	H	C
ATOM	5942	CG	LEU	H	170	31.534	73.158	9.194	1.00	70.04	H	C
ATOM	5943	CD1	LEU	H	170	30.284	72.878	8.356	1.00	68.73	H	C
ATOM	5944	CD2	LEU	H	170	31.668	71.975	10.159	1.00	69.05	H	C
ATOM	5945	C	LEU	H	170	32.497	75.861	8.359	1.00	74.42	H	C
ATOM	5946	O	LEU	H	170	33.216	76.124	9.315	1.00	74.98	H	O
ATOM	5947	N	GLU	H	171	31.473	76.650	7.985	1.00	77.39	H	N
ATOM	5948	CA	GLU	H	171	31.147	77.829	8.780	1.00	80.47	H	C
ATOM	5949	CB	GLU	H	171	31.193	79.054	7.864	1.00	82.66	H	C
ATOM	5950	CG	GLU	H	171	30.366	80.220	8.406	1.00	85.40	H	C
ATOM	5951	CD	GLU	H	171	31.231	81.076	9.304	1.00	86.56	H	C
ATOM	5952	OE1	GLU	H	171	30.703	81.973	9.945	1.00	87.03	H	O
ATOM	5953	OE2	GLU	H	171	32.436	80.836	9.353	1.00	86.28	H	O
ATOM	5954	C	GLU	H	171	29.769	77.704	9.430	1.00	81.61	H	C
ATOM	5955	O	GLU	H	171	28.732	77.775	8.784	1.00	82.55	H	O
ATOM	5956	N	SER	H	172	29.786	77.466	10.755	1.00	82.44	H	N
ATOM	5957	CA	SER	H	172	28.538	77.280	11.487	1.00	83.43	H	C
ATOM	5958	CB	SER	H	172	27.828	78.630	11.604	1.00	84.82	H	C
ATOM	5959	OG	SER	H	172	27.626	78.930	12.985	1.00	86.80	H	O
ATOM	5960	C	SER	H	172	27.621	76.250	10.819	1.00	83.32	H	C
ATOM	5961	O	SER	H	172	26.564	76.556	10.283	1.00	83.57	H	O
ATOM	5962	N	ASP	H	173	28.097	74.987	10.837	1.00	82.66	H	N
ATOM	5963	CA	ASP	H	173	27.315	73.880	10.280	1.00	80.87	H	C
ATOM	5964	CB	ASP	H	173	27.842	72.491	10.629	1.00	84.20	H	C
ATOM	5965	CG	ASP	H	173	28.158	72.411	12.114	1.00	87.15	H	C
ATOM	5966	OD1	ASP	H	173	28.796	73.336	12.616	1.00	88.19	H	O
ATOM	5967	OD2	ASP	H	173	27.799	71.414	12.738	1.00	88.10	H	O
ATOM	5968	C	ASP	H	173	26.810	74.056	8.846	1.00	78.06	H	C
ATOM	5969	O	ASP	H	173	25.705	73.667	8.487	1.00	78.01	H	O
ATOM	5970	N	LEU	H	174	27.656	74.697	8.017	1.00	73.95	H	N
ATOM	5971	CA	LEU	H	174	27.402	74.696	6.579	1.00	70.41	H	C
ATOM	5972	CB	LEU	H	174	26.488	75.875	6.219	1.00	70.08	H	C
ATOM	5973	CG	LEU	H	174	25.025	75.612	6.594	1.00	70.43	H	C
ATOM	5974	CD1	LEU	H	174	24.084	76.749	6.170	1.00	70.06	H	C
ATOM	5975	CD2	LEU	H	174	24.469	74.336	5.958	1.00	69.67	H	C
ATOM	5976	C	LEU	H	174	28.717	74.777	5.806	1.00	67.79	H	C
ATOM	5977	O	LEU	H	174	29.660	75.460	6.187	1.00	66.62	H	O
ATOM	5978	N	TYR	H	175	28.785	74.006	4.704	1.00	64.82	H	N
ATOM	5979	CA	TYR	H	175	30.001	74.020	3.906	1.00	62.23	H	C
ATOM	5980	CB	TYR	H	175	30.165	72.646	3.264	1.00	62.23	H	C
ATOM	5981	CG	TYR	H	175	30.532	71.653	4.307	1.00	62.65	H	C
ATOM	5982	CD1	TYR	H	175	31.855	71.542	4.721	1.00	63.65	H	C
ATOM	5983	CE1	TYR	H	175	32.217	70.597	5.663	1.00	63.25	H	C
ATOM	5984	CD2	TYR	H	175	29.569	70.808	4.851	1.00	62.78	H	C
ATOM	5985	CE2	TYR	H	175	29.935	69.851	5.790	1.00	63.05	H	C
ATOM	5986	CZ	TYR	H	175	31.254	69.741	6.188	1.00	63.80	H	C
ATOM	5987	OH	TYR	H	175	31.620	68.822	7.153	1.00	65.22	H	O
ATOM	5988	C	TYR	H	175	29.947	75.102	2.834	1.00	60.55	H	C
ATOM	5989	O	TYR	H	175	28.904	75.420	2.278	1.00	60.47	H	O
ATOM	5990	N	THR	H	176	31.145	75.617	2.509	1.00	58.14	H	N
ATOM	5991	CA	THR	H	176	31.271	76.400	1.320	1.00	56.65	H	C
ATOM	5992	CB	THR	H	176	31.337	77.854	1.722	1.00	56.64	H	C
ATOM	5993	OG1	THR	H	176	30.080	78.266	2.254	1.00	57.48	H	O
ATOM	5994	CG2	THR	H	176	31.662	78.674	0.474	1.00	55.36	H	C
ATOM	5995	C	THR	H	176	32.535	76.046	0.581	1.00	55.63	H	C
ATOM	5996	O	THR	H	176	33.607	75.880	1.154	1.00	54.15	H	O
ATOM	5997	N	LEU	H	177	32.406	75.891	-0.743	1.00	54.99	H	N
ATOM	5998	CA	LEU	H	177	33.644	75.711	-1.454	1.00	54.81	H	C
ATOM	5999	CB	LEU	H	177	33.997	74.226	-1.576	1.00	53.58	H	C
ATOM	6000	CG	LEU	H	177	33.205	73.434	-2.616	1.00	53.24	H	C

ATOM	6001	CD1	LEU	H	177	33.308	74.013	-4.022	1.00	51.50	H C
ATOM	6002	CD2	LEU	H	177	33.717	71.984	-2.732	1.00	51.97	H C
ATOM	6003	C	LEU	H	177	33.662	76.506	-2.744	1.00	55.13	H C
ATOM	6004	O	LEU	H	177	32.702	77.156	-3.143	1.00	54.75	H O
ATOM	6005	N	SER	H	178	34.839	76.548	-3.353	1.00	55.14	H N
ATOM	6006	CA	SER	H	178	34.915	77.210	-4.621	1.00	56.14	H C
ATOM	6007	CB	SER	H	178	35.455	78.635	-4.459	1.00	56.78	H C
ATOM	6008	OG	SER	H	178	36.837	78.573	-4.103	1.00	59.10	H O
ATOM	6009	C	SER	H	178	35.787	76.403	-5.564	1.00	56.78	H C
ATOM	6010	O	SER	H	178	36.603	75.556	-5.159	1.00	57.21	H O
ATOM	6011	N	SER	H	179	35.540	76.664	-6.871	1.00	57.71	H N
ATOM	6012	CA	SER	H	179	36.339	76.082	-7.932	1.00	58.62	H C
ATOM	6013	CB	SER	H	179	35.518	74.977	-8.584	1.00	58.75	H C
ATOM	6014	OG	SER	H	179	36.313	74.361	-9.613	1.00	59.52	H O
ATOM	6015	C	SER	H	179	36.675	77.129	-8.983	1.00	60.22	H C
ATOM	6016	O	SER	H	179	35.889	78.005	-9.295	1.00	59.16	H O
ATOM	6017	N	SER	H	180	37.916	77.008	-9.523	1.00	62.74	H N
ATOM	6018	CA	SER	H	180	38.398	77.958	-10.511	1.00	65.02	H C
ATOM	6019	CB	SER	H	180	39.555	78.780	-9.906	1.00	64.91	H C
ATOM	6020	OG	SER	H	180	40.781	78.041	-9.914	1.00	65.15	H O
ATOM	6021	C	SER	H	180	38.840	77.235	-11.782	1.00	66.68	H C
ATOM	6022	O	SER	H	180	39.221	76.062	-11.807	1.00	66.57	H O
ATOM	6023	N	VAL	H	181	38.720	77.943	-12.900	1.00	69.07	H N
ATOM	6024	CA	VAL	H	181	39.191	77.339	-14.121	1.00	71.88	H C
ATOM	6025	CB	VAL	H	181	37.992	76.656	-14.815	1.00	72.40	H C
ATOM	6026	CG1	VAL	H	181	37.011	77.703	-15.337	1.00	71.91	H C
ATOM	6027	CG2	VAL	H	181	38.489	75.812	-15.979	1.00	72.80	H C
ATOM	6028	C	VAL	H	181	39.883	78.374	-15.003	1.00	74.04	H C
ATOM	6029	O	VAL	H	181	39.424	79.508	-15.152	1.00	74.01	H O
ATOM	6030	N	THR	H	182	41.088	77.980	-15.536	1.00	76.61	H N
ATOM	6031	CA	THR	H	182	41.826	78.902	-16.431	1.00	79.82	H C
ATOM	6032	CB	THR	H	182	43.277	79.125	-15.950	1.00	79.87	H C
ATOM	6033	OG1	THR	H	182	43.322	79.384	-14.540	1.00	80.82	H O
ATOM	6034	CG2	THR	H	182	43.896	80.294	-16.730	1.00	80.09	H C
ATOM	6035	C	THR	H	182	41.812	78.403	-17.877	1.00	81.48	H C
ATOM	6036	O	THR	H	182	41.963	77.221	-18.160	1.00	81.90	H O
ATOM	6037	N	VAL	H	183	41.543	79.374	-18.794	1.00	83.41	H N
ATOM	6038	CA	VAL	H	183	41.506	79.122	-20.231	1.00	85.28	H C
ATOM	6039	CB	VAL	H	183	40.056	78.845	-20.658	1.00	84.90	H C
ATOM	6040	CG1	VAL	H	183	39.492	77.605	-19.968	1.00	84.54	H C
ATOM	6041	CG2	VAL	H	183	39.201	80.053	-20.320	1.00	84.50	H C
ATOM	6042	C	VAL	H	183	41.963	80.374	-20.976	1.00	86.87	H C
ATOM	6043	O	VAL	H	183	41.665	81.494	-20.600	1.00	86.42	H O
ATOM	6044	N	PRO	H	184	42.719	80.179	-22.083	1.00	88.54	H N
ATOM	6045	CD	PRO	H	184	43.143	78.934	-22.681	1.00	88.29	H C
ATOM	6046	CA	PRO	H	184	43.109	81.278	-22.974	1.00	89.59	H C
ATOM	6047	CB	PRO	H	184	43.425	80.640	-24.339	1.00	89.09	H C
ATOM	6048	CG	PRO	H	184	43.020	79.171	-24.249	1.00	88.32	H C
ATOM	6049	C	PRO	H	184	41.942	82.267	-23.160	1.00	90.99	H C
ATOM	6050	O	PRO	H	184	40.788	81.907	-23.284	1.00	91.39	H O
ATOM	6051	N	SER	H	185	42.265	83.573	-23.196	1.00	92.37	H N
ATOM	6052	CA	SER	H	185	41.175	84.539	-23.307	1.00	93.92	H C
ATOM	6053	CB	SER	H	185	41.796	85.917	-23.523	1.00	93.71	H C
ATOM	6054	OG	SER	H	185	43.100	85.935	-22.948	1.00	93.45	H O
ATOM	6055	C	SER	H	185	40.258	84.197	-24.482	1.00	95.37	H C
ATOM	6056	O	SER	H	185	39.053	84.030	-24.357	1.00	95.82	H O
ATOM	6057	N	SER	H	186	40.875	84.129	-25.669	1.00	96.71	H N
ATOM	6058	CA	SER	H	186	40.143	83.774	-26.880	1.00	97.45	H C
ATOM	6059	CB	SER	H	186	41.070	82.951	-27.779	1.00	97.22	H C
ATOM	6060	OG	SER	H	186	42.409	83.051	-27.294	1.00	96.73	H O
ATOM	6061	C	SER	H	186	38.872	82.975	-26.564	1.00	98.18	H C
ATOM	6062	O	SER	H	186	37.752	83.440	-26.720	1.00	98.23	H O
ATOM	6063	N	PRO	H	187	39.083	81.714	-26.142	1.00	98.67	H N
ATOM	6064	CD	PRO	H	187	40.347	81.049	-25.882	1.00	99.12	H C
ATOM	6065	CA	PRO	H	187	37.970	80.795	-25.903	1.00	98.81	H C
ATOM	6066	CB	PRO	H	187	38.558	79.487	-25.379	1.00	98.64	H C
ATOM	6067	CG	PRO	H	187	40.050	79.487	-25.685	1.00	99.00	H C
ATOM	6068	C	PRO	H	187	36.928	81.342	-24.911	1.00	99.06	H C
ATOM	6069	O	PRO	H	187	36.101	80.625	-24.368	1.00	99.21	H O

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ATOM   6070  N   ARG H 188      37.001  82.663 -24.664  1.00 99.35           H    N
ATOM   6071  CA  ARG H 188      36.126  83.344 -23.714  1.00 99.40           H    C
ATOM   6072  CB  ARG H 188      36.567  82.959 -22.300  1.00 99.67           H    C
ATOM   6073  CG  ARG H 188      35.443  82.305 -21.498  1.00 99.53           H    C
ATOM   6074  CD  ARG H 188      34.248  83.247 -21.305  1.00100.06           H    C
ATOM   6075  NE  ARG H 188      34.581  84.322 -20.364  1.00 99.98           H    N
ATOM   6076  CZ  ARG H 188      33.612  84.726 -19.521  1.00100.11           H    C
ATOM   6077  NH1 ARG H 188      32.423  84.150 -19.552  1.00100.16           H    N
ATOM   6078  NH2 ARG H 188      33.856  85.717 -18.659  1.00 99.90           H    N
ATOM   6079  C   ARG H 188      36.183  84.865 -23.879  1.00 99.18           H    C
ATOM   6080  O   ARG H 188      37.230  85.463 -24.085  1.00 99.88           H    O
ATOM   6081  N   PRO H 189      34.992  85.489 -23.825  1.00 98.61           H    N
ATOM   6082  CD  PRO H 189      34.695  86.909 -23.868  1.00 98.41           H    C
ATOM   6083  CA  PRO H 189      33.737  84.759 -23.700  1.00 98.37           H    C
ATOM   6084  CB  PRO H 189      32.648  85.752 -23.292  1.00 98.25           H    C
ATOM   6085  CG  PRO H 189      33.290  87.128 -23.140  1.00 97.82           H    C
ATOM   6086  C   PRO H 189      33.354  84.074 -25.015  1.00 98.61           H    C
ATOM   6087  O   PRO H 189      32.206  83.732 -25.264  1.00 98.49           H    O
ATOM   6088  N   SER H 190      34.360  83.922 -25.894  1.00 98.76           H    N
ATOM   6089  CA  SER H 190      34.104  83.255 -27.163  1.00 98.88           H    C
ATOM   6090  CB  SER H 190      35.433  82.711 -27.684  1.00 99.51           H    C
ATOM   6091  OG  SER H 190      35.181  81.696 -28.655  1.00100.20           H    O
ATOM   6092  C   SER H 190      33.098  82.114 -26.993  1.00 98.50           H    C
ATOM   6093  O   SER H 190      31.933  82.211 -27.357  1.00 98.43           H    O
ATOM   6094  N   GLU H 191      33.602  80.989 -26.451  1.00 98.18           H    N
ATOM   6095  CA  GLU H 191      32.708  79.880 -26.132  1.00 97.34           H    C
ATOM   6096  CB  GLU H 191      33.438  78.565 -26.415  1.00 98.15           H    C
ATOM   6097  CG  GLU H 191      34.403  78.669 -27.596  1.00 99.39           H    C
ATOM   6098  CD  GLU H 191      35.565  77.727 -27.379  1.00100.16           H    C
ATOM   6099  OE1 GLU H 191      36.435  78.045 -26.581  1.00100.89           H    O
ATOM   6100  OE2 GLU H 191      35.586  76.673 -28.012  1.00100.38           H    O
ATOM   6101  C   GLU H 191      32.264  79.934 -24.669  1.00 96.18           H    C
ATOM   6102  O   GLU H 191      32.723  80.747 -23.876  1.00 95.98           H    O
ATOM   6103  N   THR H 192      31.308  79.047 -24.329  1.00 94.96           H    N
ATOM   6104  CA  THR H 192      30.724  79.091 -22.994  1.00 93.78           H    C
ATOM   6105  CB  THR H 192      29.277  78.623 -23.105  1.00 94.05           H    C
ATOM   6106  OG1 THR H 192      29.253  77.410 -23.863  1.00 94.26           H    O
ATOM   6107  CG2 THR H 192      28.440  79.678 -23.840  1.00 93.66           H    C
ATOM   6108  C   THR H 192      31.487  78.205 -22.002  1.00 92.58           H    C
ATOM   6109  O   THR H 192      31.918  77.102 -22.313  1.00 92.18           H    O
ATOM   6110  N   VAL H 193      31.659  78.811 -20.824  1.00 90.80           H    N
ATOM   6111  CA  VAL H 193      32.106  78.053 -19.668  1.00 88.60           H    C
ATOM   6112  CB  VAL H 193      33.319  78.761 -19.062  1.00 88.07           H    C
ATOM   6113  CG1 VAL H 193      33.150  80.273 -19.171  1.00 88.69           H    C
ATOM   6114  CG2 VAL H 193      33.506  78.369 -17.610  1.00 87.63           H    C
ATOM   6115  C   VAL H 193      30.967  77.958 -18.664  1.00 87.38           H    C
ATOM   6116  O   VAL H 193      30.403  78.947 -18.214  1.00 87.20           H    O
ATOM   6117  N   THR H 194      30.587  76.709 -18.396  1.00 85.54           H    N
ATOM   6118  CA  THR H 194      29.492  76.478 -17.489  1.00 83.65           H    C
ATOM   6119  CB  THR H 194      28.370  75.813 -18.285  1.00 83.86           H    C
ATOM   6120  OG1 THR H 194      27.816  76.773 -19.185  1.00 84.35           H    O
ATOM   6121  CG2 THR H 194      27.260  75.339 -17.346  1.00 82.99           H    C
ATOM   6122  C   THR H 194      29.955  75.585 -16.355  1.00 82.17           H    C
ATOM   6123  O   THR H 194      30.672  74.613 -16.553  1.00 82.55           H    O
ATOM   6124  N   CYS H 195      29.544  75.716 -15.093  1.00 80.08           H    N
ATOM   6125  CA  CYS H 195      30.051  74.784 -14.145  1.00 78.12           H    C
ATOM   6126  C   CYS H 195      28.846  74.043 -13.572  1.00 76.08           H    C
ATOM   6127  O   CYS H 195      27.748  74.587 -13.422  1.00 74.81           H    O
ATOM   6128  CB  CYS H 195      30.825  75.600 -13.095  1.00 79.63           H    C
ATOM   6129  SG  CYS H 195      29.974  75.843 -11.518  1.00 82.89           H    S
ATOM   6130  N   ASN H 196      29.066  72.780 -13.183  1.00 74.40           H    N
ATOM   6131  CA  ASN H 196      27.980  71.872 -12.865  1.00 72.95           H    C
ATOM   6132  CB  ASN H 196      27.915  70.606 -13.774  1.00 72.15           H    C
ATOM   6133  CG  ASN H 196      28.406  70.875 -15.164  1.00 71.83           H    C
ATOM   6134  OD1 ASN H 196      29.525  71.162 -15.381  1.00 68.99           H    O
ATOM   6135  ND2 ASN H 196      27.501  70.826 -16.106  1.00 73.50           H    N
ATOM   6136  C   ASN H 196      28.281  71.399 -11.561  1.00 72.47           H    C
ATOM   6137  O   ASN H 196      29.217  70.696 -11.342  1.00 72.10           H    O
ATOM   6138  N   VAL H 197      27.318  71.586 -10.735  1.00 71.69           H    N
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ATOM   6139  CA  VAL H 197      27.429  71.327  -9.318  1.00 70.22      H    C
ATOM   6140  CB  VAL H 197      27.179  72.629  -8.554  1.00 69.36      H    C
ATOM   6141  CG1 VAL H 197      27.229  72.357  -7.046  1.00 67.95      H    C
ATOM   6142  CG2 VAL H 197      28.253  73.643  -9.009  1.00 68.71      H    C
ATOM   6143  C   VAL H 197      26.381  70.345  -8.905  1.00 69.75      H    C
ATOM   6144  O   VAL H 197      25.213  70.530  -9.240  1.00 70.35      H    O
ATOM   6145  N   ALA H 198      26.747  69.318  -8.145  1.00 68.57      H    N
ATOM   6146  CA  ALA H 198      25.749  68.437  -7.608  1.00 67.67      H    C
ATOM   6147  CB  ALA H 198      25.841  67.205  -8.296  1.00 67.30      H    C
ATOM   6148  C   ALA H 198      25.921  68.201  -6.135  1.00 67.32      H    C
ATOM   6149  O   ALA H 198      27.024  68.151  -5.641  1.00 66.23      H    O
ATOM   6150  N   HIS H 199      24.826  67.953  -5.469  1.00 67.38      H    N
ATOM   6151  CA  HIS H 199      24.776  67.804  -4.064  1.00 68.47      H    C
ATOM   6152  CB  HIS H 199      24.255  69.073  -3.271  1.00 67.96      H    C
ATOM   6153  CG  HIS H 199      24.329  68.894  -1.791  1.00 67.23      H    C
ATOM   6154  CD2 HIS H 199      25.311  68.371  -1.013  1.00 66.87      H    C
ATOM   6155  ND1 HIS H 199      23.282  69.150  -0.952  1.00 66.44      H    N
ATOM   6156  CE1 HIS H 199      23.669  68.911   0.302  1.00 67.18      H    C
ATOM   6157  NE2 HIS H 199      24.894  68.391   0.287  1.00 66.30      H    N
ATOM   6158  C   HIS H 199      23.780  66.705  -3.971  1.00 69.13      H    C
ATOM   6159  O   HIS H 199      22.637  67.026  -3.897  1.00 69.67      H    O
ATOM   6160  N   PRO H 200      24.226  65.441  -4.035  1.00 69.98      H    N
ATOM   6161  CD  PRO H 200      25.632  65.150  -4.215  1.00 69.33      H    C
ATOM   6162  CA  PRO H 200      23.392  64.222  -3.910  1.00 70.75      H    C
ATOM   6163  CB  PRO H 200      24.401  63.064  -3.673  1.00 70.87      H    C
ATOM   6164  CG  PRO H 200      25.708  63.634  -4.023  1.00 71.25      H    C
ATOM   6165  C   PRO H 200      22.503  64.261  -2.707  1.00 72.04      H    C
ATOM   6166  O   PRO H 200      21.333  64.016  -2.771  1.00 72.64      H    O
ATOM   6167  N   ALA H 201      23.032  64.644  -1.571  1.00 72.86      H    N
ATOM   6168  CA  ALA H 201      22.184  64.607  -0.379  1.00 72.98      H    C
ATOM   6169  CB  ALA H 201      22.890  65.109   0.764  1.00 72.38      H    C
ATOM   6170  C   ALA H 201      20.826  65.318  -0.529  1.00 73.61      H    C
ATOM   6171  O   ALA H 201      19.920  64.865   0.034  1.00 73.80      H    O
ATOM   6172  N   SER H 202      20.716  66.390  -1.286  1.00 74.32      H    N
ATOM   6173  CA  SER H 202      19.446  67.136  -1.396  1.00 75.64      H    C
ATOM   6174  CB  SER H 202      19.660  68.595  -0.939  1.00 76.16      H    C
ATOM   6175  OG  SER H 202      20.291  69.315  -2.024  1.00 76.25      H    O
ATOM   6176  C   SER H 202      18.957  67.126  -2.831  1.00 76.11      H    C
ATOM   6177  O   SER H 202      18.189  67.973  -3.318  1.00 76.18      H    O
ATOM   6178  N   SER H 203      19.464  66.185  -3.560  1.00 76.76      H    N
ATOM   6179  CA  SER H 203      18.892  65.969  -4.827  1.00 77.54      H    C
ATOM   6180  CB  SER H 203      17.413  65.525  -4.606  1.00 77.35      H    C
ATOM   6181  OG  SER H 203      17.284  64.168  -4.052  1.00 77.60      H    O
ATOM   6182  C   SER H 203      19.000  67.249  -5.719  1.00 77.79      H    C
ATOM   6183  O   SER H 203      18.065  67.645  -6.453  1.00 78.13      H    O
ATOM   6184  N   THR H 204      20.149  67.858  -5.688  1.00 77.85      H    N
ATOM   6185  CA  THR H 204      20.306  69.116  -6.344  1.00 78.95      H    C
ATOM   6186  CB  THR H 204      20.920  70.101  -5.307  1.00 79.06      H    C
ATOM   6187  OG1 THR H 204      20.042  70.161  -4.206  1.00 80.45      H    O
ATOM   6188  CG2 THR H 204      20.960  71.527  -5.762  1.00 79.18      H    C
ATOM   6189  C   THR H 204      21.192  68.896  -7.564  1.00 79.50      H    C
ATOM   6190  O   THR H 204      22.173  68.187  -7.512  1.00 79.85      H    O
ATOM   6191  N   LYS H 205      20.870  69.539  -8.645  1.00 80.18      H    N
ATOM   6192  CA  LYS H 205      21.768  69.545  -9.766  1.00 81.64      H    C
ATOM   6193  CB  LYS H 205      21.729  68.172 -10.481  1.00 81.77      H    C
ATOM   6194  CG  LYS H 205      22.428  68.031 -11.878  1.00 83.94      H    C
ATOM   6195  CD  LYS H 205      23.761  68.927 -12.188  1.00 85.65      H    C
ATOM   6196  CE  LYS H 205      24.377  68.628 -13.676  1.00 86.61      H    C
ATOM   6197  NZ  LYS H 205      25.873  68.732 -13.750  1.00 87.15      H    N
ATOM   6198  C   LYS H 205      21.510  70.851 -10.601  1.00 82.29      H    C
ATOM   6199  O   LYS H 205      20.392  71.121 -11.148  1.00 82.64      H    O
ATOM   6200  N   VAL H 206      22.546  71.701 -10.571  1.00 82.71      H    N
ATOM   6201  CA  VAL H 206      22.509  73.046 -11.125  1.00 83.11      H    C
ATOM   6202  CB  VAL H 206      22.556  74.056 -10.024  1.00 83.19      H    C
ATOM   6203  CG1 VAL H 206      22.550  75.540 -10.675  1.00 83.85      H    C
ATOM   6204  CG2 VAL H 206      21.380  73.847  -9.119  1.00 82.83      H    C
ATOM   6205  C   VAL H 206      23.694  73.338 -12.032  1.00 83.70      H    C
ATOM   6206  O   VAL H 206      24.827  72.842 -11.783  1.00 83.58      H    O
ATOM   6207  N   ASP H 207      23.422  74.134 -13.075  1.00 84.95      H    N
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ATOM   6208  CA  ASP H 207      24.462  74.532 -14.042  1.00 86.38      H     C
ATOM   6209  CB  ASP H 207      24.270  73.858 -15.435  1.00 86.99      H     C
ATOM   6210  CG  ASP H 207      24.342  72.302 -15.384  1.00 88.63      H     C
ATOM   6211  OD1 ASP H 207      25.436  71.773 -15.662  1.00 88.98      H     O
ATOM   6212  OD2 ASP H 207      23.380  71.538 -15.103  1.00 89.52      H     O
ATOM   6213  C   ASP H 207      24.456  76.044 -14.123  1.00 87.07      H     C
ATOM   6214  O   ASP H 207      23.501  76.601 -14.580  1.00 86.95      H     O
ATOM   6215  N   ALA H 208      25.484  76.710 -13.580  1.00 87.90      H     N
ATOM   6216  CA  ALA H 208      25.563  78.160 -13.722  1.00 88.66      H     C
ATOM   6217  CB  ALA H 208      25.811  78.899 -12.475  1.00 87.84      H     C
ATOM   6218  C   ALA H 208      26.572  78.528 -14.793  1.00 89.66      H     C
ATOM   6219  O   ALA H 208      27.793  78.193 -14.774  1.00 89.70      H     O
ATOM   6220  N   LYS H 209      25.997  79.265 -15.730  1.00 90.60      H     N
ATOM   6221  CA  LYS H 209      26.707  79.881 -16.848  1.00 91.34      H     C
ATOM   6222  CB  LYS H 209      25.694  80.141 -17.964  1.00 91.16      H     C
ATOM   6223  CG  LYS H 209      26.283  80.980 -19.098  1.00 91.01      H     C
ATOM   6224  CD  LYS H 209      25.227  81.362 -20.136  1.00 90.83      H     C
ATOM   6225  CE  LYS H 209      25.837  81.992 -21.392  1.00 90.53      H     C
ATOM   6226  NZ  LYS H 209      24.796  82.699 -22.135  1.00 89.44      H     N
ATOM   6227  C   LYS H 209      27.401  81.189 -16.447  1.00 91.78      H     C
ATOM   6228  O   LYS H 209      26.832  82.071 -15.816  1.00 91.55      H     O
ATOM   6229  N   ILE H 210      28.695  81.276 -16.805  1.00 92.64      H     N
ATOM   6230  CA  ILE H 210      29.438  82.494 -16.508  1.00 93.49      H     C
ATOM   6231  CB  ILE H 210      30.918  82.136 -16.427  1.00 92.09      H     C
ATOM   6232  CG2 ILE H 210      31.654  83.154 -15.536  1.00 91.71      H     C
ATOM   6233  CG1 ILE H 210      31.088  80.751 -15.794  1.00 91.25      H     C
ATOM   6234  CD1 ILE H 210      30.409  80.649 -14.424  1.00 90.25      H     C
ATOM   6235  C   ILE H 210      29.192  83.572 -17.570  1.00 95.01      H     C
ATOM   6236  O   ILE H 210      29.623  83.485 -18.713  1.00 95.16      H     O
ATOM   6237  N   ALA H 211      28.423  84.594 -17.155  1.00 96.52      H     N
ATOM   6238  CA  ALA H 211      27.957  85.595 -18.107  1.00 97.96      H     C
ATOM   6239  CB  ALA H 211      26.989  86.529 -17.376  1.00 97.85      H     C
ATOM   6240  C   ALA H 211      29.105  86.409 -18.708  1.00 99.08      H     C
ATOM   6241  O   ALA H 211      29.787  85.997 -19.636  1.00 99.14      H     O
ATOM   6242  N   ALA H 212      29.276  87.629 -18.171  1.00100.17      H     N
ATOM   6243  CA  ALA H 212      30.290  88.518 -18.725  1.00101.26      H     C
ATOM   6244  CB  ALA H 212      29.844  88.922 -20.131  1.00101.45      H     C
ATOM   6245  C   ALA H 212      30.480  89.764 -17.861  1.00101.96      H     C
ATOM   6246  O   ALA H 212      31.345  89.835 -16.998  1.00102.21      H     O
ATOM   6247  N   ALA H 213      29.660  90.793 -18.151  1.00103.01      H     N
ATOM   6248  CA  ALA H 213      29.750  92.013 -17.360  1.00104.14      H     C
ATOM   6249  CB  ALA H 213      29.407  91.661 -15.911  1.00104.00      H     C
ATOM   6250  C   ALA H 213      31.154  92.615 -17.425  1.00105.06      H     C
ATOM   6251  O   ALA H 213      31.731  93.023 -16.428  1.00105.39      H     O
ATOM   6252  OXT ALA H 213      31.766  92.717 -18.478  1.00105.71      H     O
ATOM   6253  O   HOH W   1      48.040  27.606  -7.533  1.00 43.49      W     O
ATOM   6254  O   HOH W   2      56.255  30.910  -4.462  1.00 55.47      W     O
ATOM   6255  O   HOH W   3      53.943  67.195  -8.118  1.00 54.98      W     O
ATOM   6256  O   HOH W   4      26.430  18.335 -11.581  1.00 44.42      W     O
ATOM   6257  O   HOH W   5      35.131  45.610 -13.929  1.00 49.40      W     O
ATOM   6258  O   HOH W   6      32.116  35.087  -8.534  1.00 56.83      W     O
ATOM   6259  O   HOH W   7      51.776  59.864  11.192  1.00 42.02      W     O
ATOM   6260  O   HOH W   8      44.767  37.321  -4.124  1.00 42.78      W     O
ATOM   6261  O   HOH W   9      39.735  52.975  -5.906  1.00 61.02      W     O
ATOM   6262  O   HOH W  10      51.943  57.484  12.566  1.00 39.47      W     O
ATOM   6263  O   HOH W  11      38.747  31.228  -1.651  1.00 43.69      W     O
ATOM   6264  O   HOH W  12      46.181  62.163   0.296  1.00 56.40      W     O
ATOM   6265  O   HOH W  13      58.428  47.238   4.389  1.00 48.79      W     O
ATOM   6266  O   HOH W  14      43.554  36.444  -2.054  1.00 45.57      W     O
ATOM   6267  O   HOH W  15      57.415  61.701  12.627  1.00 41.49      W     O
ATOM   6268  O   HOH W  16      61.270  51.287  12.253  1.00 67.52      W     O
ATOM   6269  O   HOH W  18      48.459  41.310  -2.576  1.00 48.81      W     O
ATOM   6270  O   HOH W  19      53.916  29.663   7.818  1.00 48.60      W     O
ATOM   6271  O   HOH W  20      56.558  71.377  -0.532  1.00 48.14      W     O
ATOM   6272  O   HOH W  21      32.808  27.123  -0.609  1.00 44.93      W     O
ATOM   6273  O   HOH W  22      47.847  62.036 -10.526  1.00 63.97      W     O
ATOM   6274  O   HOH W  23      36.925  77.944  -1.838  1.00 50.62      W     O
ATOM   6275  O   HOH W  24      26.214  42.194  14.054  1.00 63.38      W     O
ATOM   6276  O   HOH W  25      45.644  56.046   9.966  1.00 42.51      W     O
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ATOM	6277	O	HOH	W	26	44.856	70.990	1.971	1.00	72.82	W	O
ATOM	6278	O	HOH	W	27	41.934	61.986	-0.999	1.00	78.26	W	O
ATOM	6279	O	HOH	W	28	25.281	34.502	-1.348	1.00	61.27	W	O
ATOM	6280	O	HOH	W	29	49.892	62.411	-6.980	1.00	59.50	W	O
ATOM	6281	O	HOH	W	30	29.792	66.376	5.878	1.00	52.90	W	O
ATOM	6282	O	HOH	W	31	38.272	58.084	-4.321	1.00	65.01	W	O
ATOM	6283	O	HOH	W	32	27.858	55.054	-6.230	1.00	56.02	W	O
ATOM	6284	O	HOH	W	33	57.799	63.672	-12.243	1.00	59.48	W	O
ATOM	6285	O	HOH	W	34	31.795	68.789	0.185	1.00	63.03	W	O
ATOM	6286	O	HOH	W	35	38.425	31.427	-8.589	1.00	60.62	W	O
ATOM	6287	O	HOH	W	36	46.860	66.957	-9.197	1.00	54.26	W	O
ATOM	6288	O	HOH	W	37	36.028	69.393	-9.044	1.00	62.22	W	O
ATOM	6289	O	HOH	W	38	41.452	74.029	2.581	1.00	57.03	W	O
ATOM	6290	O	HOH	W	39	61.277	8.820	8.379	1.00	45.17	W	O
ATOM	6291	O	HOH	W	40	58.226	38.911	5.165	1.00	58.24	W	O
ATOM	6292	O	HOH	W	41	45.000	61.694	3.280	1.00	67.77	W	O
ATOM	6293	O	HOH	W	42	32.220	33.159	-1.482	1.00	54.51	W	O
ATOM	6294	O	HOH	W	43	24.268	56.225	-2.604	1.00	75.87	W	O
ATOM	6295	O	HOH	W	44	43.870	51.811	12.171	1.00	43.94	W	O
ATOM	6296	O	HOH	W	45	45.208	48.980	-4.712	1.00	41.05	W	O
ATOM	6297	O	HOH	W	46	51.086	54.354	-7.830	1.00	52.34	W	O
ATOM	6298	O	HOH	W	47	45.735	54.909	12.584	1.00	47.53	W	O
ATOM	6299	O	HOH	W	48	40.670	36.691	-0.514	1.00	40.03	W	O
ATOM	6300	O	HOH	W	49	47.855	48.291	-6.195	1.00	47.98	W	O
ATOM	6301	O	HOH	W	50	27.975	20.736	-9.226	1.00	61.39	W	O
ATOM	6302	O	HOH	W	51	26.649	37.011	3.912	1.00	54.89	W	O
ATOM	6303	O	HOH	W	52	40.332	12.184	-6.970	1.00	60.26	W	O
ATOM	6304	O	HOH	W	53	26.889	4.626	-22.012	1.00	50.29	W	O
ATOM	6305	O	HOH	W	54	46.332	35.286	4.217	1.00	42.35	W	O
ATOM	6306	O	HOH	W	55	38.286	11.976	-5.012	1.00	47.62	W	O
ATOM	6307	O	HOH	W	56	52.678	29.083	-13.037	1.00	74.09	W	O
ATOM	6308	O	HOH	W	57	42.010	49.514	12.090	1.00	48.80	W	O
ATOM	6309	O	HOH	W	58	34.530	60.323	12.849	1.00	51.87	W	O
ATOM	6310	O	HOH	W	59	35.892	62.030	6.806	1.00	67.89	W	O
ATOM	6311	O	HOH	W	60	32.190	8.378	-14.298	1.00	57.42	W	O
ATOM	6312	O	HOH	W	61	45.527	38.449	11.020	1.00	42.83	W	O
ATOM	6313	O	HOH	W	62	45.913	56.892	-4.556	1.00	49.15	W	O
ATOM	6314	O	HOH	W	63	38.310	29.708	-4.579	1.00	59.27	W	O
ATOM	6315	O	HOH	W	64	54.611	60.457	12.380	1.00	48.38	W	O
ATOM	6316	O	HOH	W	65	39.898	13.402	4.429	1.00	56.14	W	O
ATOM	6317	O	HOH	W	66	44.938	65.750	1.699	1.00	77.41	W	O
ATOM	6318	O	HOH	W	67	22.644	47.300	-3.327	1.00	78.49	W	O
ATOM	6319	O	HOH	W	68	40.739	60.462	13.589	1.00	57.60	W	O
ATOM	6320	O	HOH	W	69	58.604	38.401	16.276	1.00	63.25	W	O
ATOM	6321	O	HOH	W	70	23.021	50.256	-0.331	1.00	64.43	W	O
ATOM	6322	O	HOH	W	72	36.562	76.332	0.228	1.00	59.77	W	O
ATOM	6323	O	HOH	W	73	36.156	30.941	5.240	1.00	54.66	W	O
ATOM	6324	O	HOH	W	74	46.575	45.898	-6.213	1.00	51.03	W	O
ATOM	6325	O	HOH	W	75	63.106	60.743	5.288	1.00	65.63	W	O
ATOM	6326	O	HOH	W	76	27.283	11.656	-26.940	1.00	64.69	W	O
ATOM	6327	O	HOH	W	77	42.119	12.906	-15.812	1.00	69.75	W	O
ATOM	6328	O	HOH	W	78	56.213	74.271	0.210	1.00	49.07	W	O
ATOM	6329	O	HOH	W	79	49.593	17.074	4.731	1.00	51.22	W	O
ATOM	6330	O	HOH	W	80	19.205	50.436	6.981	1.00	65.58	W	O
ATOM	6331	O	HOH	W	81	62.469	45.075	15.496	1.00	57.05	W	O
ATOM	6332	O	HOH	W	82	63.942	60.529	2.662	1.00	65.56	W	O
ATOM	6333	O	HOH	W	83	51.559	22.884	-12.355	1.00	53.77	W	O
ATOM	6334	O	HOH	W	84	56.702	18.717	-5.348	1.00	60.77	W	O
ATOM	6335	O	HOH	W	85	56.703	13.170	-0.339	1.00	53.66	W	O
ATOM	6336	O	HOH	W	86	38.703	45.090	18.422	1.00	49.89	W	O
ATOM	6337	O	HOH	W	87	55.180	62.436	-12.094	1.00	62.42	W	O
ATOM	6338	O	HOH	W	88	53.098	34.493	-1.712	1.00	40.29	W	O
ATOM	6339	O	HOH	W	89	42.579	52.369	-5.068	1.00	63.35	W	O
ATOM	6340	O	HOH	W	90	57.341	68.463	4.885	1.00	63.09	W	O
ATOM	6341	O	HOH	W	91	61.045	40.263	-1.253	1.00	61.58	W	O
ATOM	6342	O	HOH	W	92	35.567	69.261	-15.191	1.00	63.58	W	O
ATOM	6343	O	HOH	W	93	56.069	24.458	4.847	1.00	55.61	W	O
ATOM	6344	O	HOH	W	94	42.082	14.769	-10.703	1.00	76.08	W	O
ATOM	6345	O	HOH	W	95	30.011	60.161	-0.586	1.00	56.59	W	O

ATOM	6346	O	HOH W 96	38.436	48.430	17.977	1.00	68.46	W	O
ATOM	6347	O	HOH W 98	50.322	24.776	-13.192	1.00	58.28	W	O
ATOM	6348	O	HOH W 99	58.464	55.474	13.643	1.00	51.66	W	O
ATOM	6349	O	HOH W 100	44.700	36.694	-6.969	1.00	70.56	W	O
ATOM	6350	O	HOH W 102	23.656	17.781	-5.182	1.00	68.07	W	O
ATOM	6351	O	HOH W 103	37.411	50.148	-8.219	1.00	52.24	W	O
ATOM	6352	O	HOH W 104	39.637	14.794	-13.739	1.00	66.82	W	O
ATOM	6353	O	HOH W 106	28.717	35.027	-8.770	1.00	79.00	W	O
ATOM	6354	O	HOH W 107	44.180	52.426	14.928	1.00	53.12	W	O
ATOM	6355	O	HOH W 108	45.966	31.344	10.771	1.00	64.16	W	O
ATOM	6356	O	HOH W 110	50.431	24.443	9.057	1.00	57.10	W	O
ATOM	6357	O	HOH W 111	60.167	46.654	-5.172	1.00	82.35	W	O
ATOM	6358	O	HOH W 112	53.600	25.361	9.729	1.00	80.85	W	O
ATOM	6359	O	HOH W 113	24.145	20.686	-4.121	1.00	82.35	W	O
ATOM	6360	O	HOH W 114	24.876	23.040	-17.596	1.00	66.24	W	O
ATOM	6361	O	HOH W 115	51.643	3.467	3.813	1.00	69.60	W	O
ATOM	6362	O	HOH W 116	37.627	61.517	4.930	1.00	61.35	W	O
ATOM	6363	O	HOH W 117	54.093	37.319	-7.747	1.00	63.69	W	O
ATOM	6364	O	HOH W 118	27.162	50.144	-5.258	1.00	63.24	W	O
ATOM	6365	O	HOH W 119	51.286	63.607	8.442	1.00	55.40	W	O
ATOM	6366	O	HOH W 120	49.202	62.361	7.879	1.00	56.22	W	O
ATOM	6367	O	HOH W 121	28.413	38.641	11.608	1.00	58.68	W	O
ATOM	6368	O	HOH W 122	54.149	22.502	-12.184	1.00	58.04	W	O
ATOM	6369	O	HOH W 123	42.924	49.950	-5.329	1.00	55.71	W	O
ATOM	6370	O	HOH W 124	55.168	8.794	0.302	1.00	56.19	W	O
ATOM	6371	O	HOH W 125	30.285	12.190	-25.537	1.00	55.20	W	O
ATOM	6372	O	HOH W 126	28.498	1.566	-1.711	1.00	65.33	W	O
ATOM	6373	O	HOH W 127	29.591	65.606	8.390	1.00	77.20	W	O
ATOM	6374	O	HOH W 128	36.172	56.763	14.794	1.00	66.67	W	O
ATOM	6375	O	HOH W 129	42.258	8.230	-13.604	1.00	65.20	W	O
ATOM	6376	O	HOH W 130	46.138	51.846	16.640	1.00	54.65	W	O
ATOM	6377	O	HOH W 131	27.630	60.434	19.677	1.00	59.03	W	O
ATOM	6378	O	HOH W 132	45.177	68.255	-15.282	1.00	83.69	W	O
ATOM	6379	O	HOH W 133	20.606	52.417	4.041	1.00	68.39	W	O
ATOM	6380	O	HOH W 134	29.093	9.721	-4.723	1.00	97.13	W	O
ATOM	6381	O	HOH W 136	51.100	80.703	-12.102	1.00	69.57	W	O
ATOM	6382	O	HOH W 137	21.223	52.941	19.573	1.00	89.91	W	O
ATOM	6383	O	HOH W 138	39.908	48.609	13.428	1.00	54.77	W	O
ATOM	6384	O	HOH W 139	22.630	41.252	3.257	1.00	75.57	W	O
ATOM	6385	O	HOH W 140	55.368	43.479	-8.878	1.00	50.93	W	O
ATOM	6386	O	HOH W 142	25.657	65.193	-1.065	1.00	56.79	W	O
ATOM	6387	O	HOH W 143	21.041	43.339	2.736	1.00	79.16	W	O
ATOM	6388	O	HOH W 144	51.583	5.155	-0.072	1.00	68.07	W	O
ATOM	6389	O	HOH W 145	32.286	-14.727	-19.514	1.00	82.03	W	O
ATOM	6390	O	HOH W 146	41.985	68.503	1.865	1.00	84.68	W	O
ATOM	6391	O	HOH W 147	34.846	77.589	-31.096	1.00	87.07	W	O
ATOM	6392	O	HOH W 148	48.125	34.528	-8.668	1.00	64.10	W	O
ATOM	6393	O	HOH W 149	59.944	18.444	-11.075	1.00	80.97	W	O
ATOM	6394	O	HOH W 150	61.671	43.988	18.926	1.00	73.57	W	O
ATOM	6395	O	HOH W 151	53.973	39.898	-6.529	1.00	63.01	W	O
ATOM	6396	O	HOH W 152	33.054	13.127	-22.134	1.00	46.54	W	O
ATOM	6397	O	HOH W 153	40.317	33.419	9.150	1.00	64.69	W	O
ATOM	6398	O	HOH W 154	49.628	68.076	-0.443	1.00	66.41	W	O
ATOM	6399	O	HOH W 155	40.949	12.531	1.841	1.00	57.31	W	O
ATOM	6400	O	HOH W 156	39.019	24.898	8.414	1.00	67.94	W	O
ATOM	6401	O	HOH W 157	42.102	51.146	16.080	1.00	68.46	W	O
ATOM	6402	O	HOH W 158	48.299	4.489	-2.634	1.00	56.56	W	O
ATOM	6403	O	HOH W 159	49.392	30.418	-9.479	1.00	58.57	W	O
ATOM	6404	O	HOH W 160	45.974	71.344	-7.813	1.00	68.35	W	O
ATOM	6405	O	HOH W 161	62.463	57.842	8.393	1.00	68.93	W	O
ATOM	6406	O	HOH W 162	62.314	3.853	-8.007	1.00	72.85	W	O
ATOM	6407	O	HOH W 163	48.708	28.590	-11.402	1.00	70.46	W	O
ATOM	6408	O	HOH W 164	26.594	22.894	-11.356	1.00	72.66	W	O
ATOM	6409	O	HOH W 165	27.650	57.278	-2.348	1.00	75.27	W	O
ATOM	6410	O	HOH W 166	27.594	60.020	0.150	1.00	62.76	W	O
ATOM	6411	O	HOH W 167	43.450	54.030	-6.900	1.00	85.08	W	O
ATOM	6412	O	HOH W 168	38.122	59.238	-1.849	1.00	56.87	W	O
ATOM	6413	O	HOH W 169	27.129	39.301	13.729	1.00	68.09	W	O
ATOM	6414	O	HOH W 170	62.114	9.622	5.962	1.00	50.86	W	O

ATOM	6415	O	HOH	W	171	46.578	59.161	-10.262	1.00	77.64	W	O
ATOM	6416	O	HOH	W	172	48.228	52.442	14.549	1.00	51.18	W	O
ATOM	6417	O	HOH	W	173	70.197	2.753	-7.042	1.00	87.49	W	O
ATOM	6418	O	HOH	W	174	64.004	2.450	-6.765	1.00	69.28	W	O
ATOM	6419	O	HOH	W	175	42.696	-4.990	-18.564	1.00	72.72	W	O
ATOM	6420	O	HOH	W	177	18.059	23.624	-13.442	1.00	101.30	W	O
ATOM	6421	O	HOH	W	180	15.355	21.664	-29.333	1.00	68.26	W	O
ATOM	6422	O	HOH	W	181	35.274	18.207	-15.496	1.00	81.17	W	O
ATOM	6423	O	HOH	W	182	37.734	20.058	-17.674	1.00	76.65	W	O
ATOM	6424	O	HOH	W	183	4.398	9.996	-27.101	1.00	73.23	W	O
ATOM	6425	O	HOH	W	184	25.726	62.296	18.755	1.00	68.08	W	O
ATOM	6426	O	HOH	W	185	55.967	5.969	6.509	1.00	63.28	W	O
ATOM	6427	O	HOH	W	186	52.635	32.458	16.778	1.00	64.30	W	O
ATOM	6428	O	HOH	W	187	42.187	61.267	1.486	1.00	63.63	W	O
ATOM	6429	O	HOH	W	188	54.080	67.804	9.345	1.00	73.07	W	O
ATOM	6430	O	HOH	W	191	39.373	49.817	15.778	1.00	73.96	W	O
ATOM	6431	O	HOH	W	192	30.145	48.697	18.491	1.00	67.43	W	O
ATOM	6432	O	HOH	W	193	58.517	28.333	-10.692	1.00	64.51	W	O
ATOM	6433	O	HOH	W	194	66.066	47.014	5.586	1.00	70.05	W	O
ATOM	6434	O	HOH	W	195	60.708	45.623	-2.248	1.00	54.73	W	O
ATOM	6435	O	HOH	W	197	40.532	56.318	-5.957	1.00	61.38	W	O
ATOM	6436	O	HOH	W	198	59.085	42.157	-5.617	1.00	63.62	W	O
ATOM	6437	O	HOH	W	199	58.018	28.117	9.569	1.00	59.02	W	O
ATOM	6438	O	HOH	W	200	62.084	19.823	-10.491	1.00	91.05	W	O
ATOM	6439	O	HOH	W	201	71.317	-2.871	5.295	1.00	80.75	W	O
ATOM	6440	O	HOH	W	202	25.844	56.209	-4.399	1.00	67.04	W	O
ATOM	6441	O	HOH	W	203	50.532	31.124	13.305	1.00	78.61	W	O
ATOM	6442	O	HOH	W	204	25.247	43.277	5.774	1.00	53.65	W	O
ATOM	6443	O	HOH	W	205	53.767	36.272	-4.050	1.00	82.87	W	O
ATOM	6444	O	HOH	W	206	53.294	78.768	-11.698	1.00	56.03	W	O
ATOM	6445	O	HOH	W	207	47.425	27.397	11.529	1.00	75.72	W	O
ATOM	6446	O	HOH	W	208	51.605	34.818	15.792	1.00	75.55	W	O
ATOM	6447	O	HOH	W	209	43.903	15.886	-13.465	1.00	74.13	W	O
ATOM	6448	O	HOH	W	210	46.556	14.040	-14.514	1.00	91.12	W	O
ATOM	6449	O	HOH	W	211	40.263	22.624	-18.077	1.00	89.07	W	O
ATOM	6450	O	HOH	W	213	55.658	6.616	-2.956	1.00	84.65	W	O
ATOM	6451	O	HOH	W	214	58.186	32.450	2.029	1.00	61.74	W	O
ATOM	6452	O	HOH	W	215	58.141	37.758	1.259	1.00	61.98	W	O
ATOM	6453	O	HOH	W	216	56.966	35.250	2.674	1.00	57.55	W	O
ATOM	6454	O	HOH	W	217	55.211	32.727	-4.777	1.00	53.03	W	O
ATOM	6455	O	HOH	W	218	52.367	31.257	-12.864	1.00	74.72	W	O
ATOM	6456	O	HOH	W	220	56.462	36.886	-6.283	1.00	63.55	W	O
ATOM	6457	O	HOH	W	224	29.998	24.261	-5.658	1.00	60.64	W	O
ATOM	6458	O	HOH	W	225	24.007	3.807	-7.206	1.00	62.70	W	O
ATOM	6459	O	HOH	W	226	45.167	21.855	11.818	1.00	88.68	W	O
ATOM	6460	O	HOH	W	227	53.676	66.697	12.072	1.00	56.13	W	O
ATOM	6461	O	HOH	W	229	51.011	64.329	11.868	1.00	95.18	W	O
ATOM	6462	O	HOH	W	230	39.248	30.285	10.392	1.00	80.36	W	O
ATOM	6463	O	HOH	W	231	44.473	38.407	17.076	1.00	62.67	W	O
ATOM	6464	O	HOH	W	235	25.679	2.154	-15.868	1.00	53.86	W	O
ATOM	6465	O	HOH	W	236	32.236	5.660	-21.135	1.00	68.77	W	O
ATOM	6466	O	HOH	W	237	34.413	28.315	6.252	1.00	71.91	W	O
ATOM	6467	O	HOH	W	238	27.724	33.801	2.425	1.00	70.02	W	O
ATOM	6468	O	HOH	W	239	56.205	67.777	2.833	1.00	75.06	W	O
ATOM	6469	O	HOH	W	240	66.188	51.600	-3.826	1.00	72.09	W	O
ATOM	6470	O	HOH	W	242	63.285	59.362	7.053	1.00	69.81	W	O
ATOM	6471	O	HOH	W	243	60.113	26.378	-1.506	1.00	76.04	W	O
ATOM	6472	O	HOH	W	244	57.113	41.670	20.487	1.00	55.69	W	O
ATOM	6473	O	HOH	W	245	46.457	68.175	-11.707	1.00	85.84	W	O
ATOM	6474	O	HOH	W	246	42.305	5.455	-2.908	1.00	75.40	W	O
ATOM	6475	O	HOH	W	247	32.141	54.995	-5.609	1.00	64.97	W	O
ATOM	6476	O	HOH	W	248	58.909	60.333	14.761	1.00	63.95	W	O
ATOM	6477	O	HOH	W	249	38.763	42.049	16.135	1.00	67.39	W	O
ATOM	6478	O	HOH	W	250	39.214	62.955	17.104	1.00	75.29	W	O
ATOM	6479	O	HOH	W	252	60.671	39.189	7.433	1.00	55.23	W	O
ATOM	6480	O	HOH	W	253	38.380	64.692	15.501	1.00	74.82	W	O
ATOM	6481	O	HOH	W	254	44.133	17.210	-18.228	1.00	87.18	W	O
ATOM	6482	O	HOH	W	255	32.114	36.860	-9.882	1.00	84.19	W	O
ATOM	6483	O	HOH	W	256	46.385	47.101	-10.075	1.00	80.35	W	O

ATOM	6484	O	HOH W 257	48.734	74.644	-7.834	1.00	65.87	W	O
ATOM	6485	O	HOH W 258	40.889	36.343	13.840	1.00	58.72	W	O
ATOM	6486	O	HOH W 259	26.565	62.889	1.610	1.00	67.80	W	O
ATOM	6487	O	HOH W 260	48.882	1.237	-9.586	1.00	88.07	W	O
ATOM	6488	O	HOH W 261	17.126	54.786	10.638	1.00	79.86	W	O
ATOM	6489	O	HOH W 263	36.298	73.093	7.560	1.00	65.44	W	O
ATOM	6490	O	HOH W 264	39.791	69.041	4.490	1.00	78.57	W	O
ATOM	6491	O	HOH W 266	58.200	30.543	-12.662	1.00	86.34	W	O
ATOM	6492	O	HOH W 267	54.753	45.537	-11.451	1.00	73.79	W	O
ATOM	6493	O	HOH W 268	40.914	69.799	-20.286	1.00	77.77	W	O
ATOM	6494	O	HOH W 269	22.521	42.813	6.948	1.00	80.04	W	O
ATOM	6495	O	HOH W 270	31.954	46.535	-10.594	1.00	58.81	W	O
ATOM	6496	O	HOH W 271	33.809	27.047	-12.285	1.00	72.26	W	O
ATOM	6497	O	HOH W 272	67.372	52.181	-0.866	1.00	83.95	W	O
ATOM	6498	O	HOH W 273	49.002	32.971	-10.475	1.00	73.13	W	O
ATOM	6499	O	HOH W 274	36.608	60.824	14.598	1.00	81.86	W	O
ATOM	6500	O	HOH W 275	19.219	1.308	-19.062	1.00	55.79	W	O

[a]Amino acids residues of the light (L) and heavy (H) chains are numbered according to the Chothia numbering system as shown in Tables 6 and 7, respectively (Al-Lazikani *et al., Jour. Mol. Biol.* 273:927-948, 1997). Amino acid residues of IL-13 (I) are numbered as shown in SEQ ID NO:4 (FIG. 2B). Amino acid residues of IL-13Rα1 are numbered as shown in SEQ ID NO:12 (FIG. 14).

[b]Columns are labeled according to Protein Data Bank Format, Version 2.2

Other embodiments are in the claims

WHAT IS CLAIMED IS:

1. A crystalline antibody, wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

2. The crystalline antibody of claim 1, wherein the crystalline antibody has space group $P2_12_12_1$.

3. The crystalline antibody according to any one of claims 1 or 2, wherein the crystalline antibody has unit cell dimensions a=54.4, b=98.0, c=108.5, and $\alpha=\beta=\gamma=90^{\circ}$.

4. The crystalline antibody according to any one of claims 1-3, wherein the antibody is from a mammal.

5. The crystalline antibody according to any one of claims 1-4, wherein the antibody is from a mouse, rat, rabbit, or goat.

6. The crystalline antibody according to any one of claims 1-5, further comprising an IL-13 polypeptide bound to the antibody.

7. The crystalline antibody of claim 6, further comprising an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

8. The crystalline antibody according to any one of claims 1-7, wherein the antibody comprises a polypeptide including the amino acid sequence of SEQ ID NO:1.

9. The crystalline antibody according to any one of claims 1-8, wherein the antibody comprises a polypeptide including the amino acid sequence of SEQ ID NO:2.

10. The crystalline antibody according to any one of claims 1-9, wherein the antibody is a monoclonal antibody.

11. The crystalline antibody according to any one of claims 1-10, wherein the antibody is mAb13.2.

12. The crystalline antibody according to any one of claims 1-11, wherein the antibody is an mAb13.2 Fab fragment.

13. The crystalline antibody according to any one of claims 1-12, wherein the antibody is capable of binding to a region of IL-13 that binds to an IL-4R polypeptide *in vivo*.

14. The crystalline antibody according to any one of claims 1-13, wherein the crystalline antibody can diffract X-rays to a resolution of at least about 3.5 Å.

15. The crystalline antibody according to any one of claims 1-14, wherein the crystalline antibody comprises the structural coordinates of Table 10, +/- a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

16. The crystalline antibody according to any one of claims 1-15, wherein:

the light chain of the antibody comprises the amino acid sequence of SEQ ID NO:1;

the heavy chain of the antibody comprises the amino acid sequence of SEQ ID NO:2; and

the crystalline antibody diffracts X-rays to a resolution of at least about 3.5 Å.

17. A crystalline composition that comprises an antibody, wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

18. The crystalline composition of claim 17, further comprising at least one water molecule.

19. The crystalline composition according to any one of claims 17 or 18, further comprising a salt or zinc.

20. The crystalline composition according to any one of claims 17-19, further comprising an IL-13 polypeptide bound to the anti-IL-13 antibody or Fab fragment.

21. The crystalline composition of claim 20, further comprising an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

22. A crystalline complex, comprising:

an IL-13 polypeptide; and

an antibody,

wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

23. The crystalline complex of claim 22, wherein the crystalline complex has space group $P2_13$.

24. The crystalline complex according to any one of claims 22 or 23, wherein the crystalline complex has unit cell dimensions $a = b = c = 125.3$ Å and $\alpha = \beta = \gamma = 90°$.

25. The crystalline complex according to any one of claims 22-24, wherein the antibody is from a mammal.

26. The crystalline complex according to any one of claims 22-25, wherein the antibody is from a mouse.

27. The crystalline complex according to any one of claims 22-26, wherein the IL-13 polypeptide is from a mammal.

28. The crystalline complex according to any one of claims 22-27, wherein the IL-13 polypeptide is from a human.

29. The crystalline complex according to any one of claims 22-28, wherein the antibody comprises a polypeptide including the amino acid sequence of SEQ ID NO:1.

30. The crystalline complex according to any one of claims 22-29, wherein the antibody comprises a polypeptide including the amino acid sequence of SEQ ID NO:2.

31. The crystalline complex according to any one of claims 22-30, wherein the antibody is a monoclonal antibody.

32. The crystalline complex according to any one of claims 22-31, wherein the antibody is mAb13.2.

33. The crystalline complex according to any one of claims 22-32, wherein the antibody is an mAb13.2 Fab fragment.

34. The crystalline complex according to any one of claims 22-33, wherein the antibody is bound to a region of the IL-13 polypeptide that binds to an IL-4R polypeptide *in vivo*.

35. The crystalline complex according to any one of claims 22-34, wherein the IL-13 polypeptide comprises a region that binds to an IL-4R polypeptide.

36. The crystalline complex according to any one of claims 22-35, wherein the IL-13 polypeptide comprises the amino acid sequence of SEQ ID NO:4.

37. The crystalline complex according to any one of claims 22-36, wherein the antibody interacts with one or more of residues Ser7, Thr8, Ala9, Glu12, Leu48, Glu49, Ile52, Asn53, Arg65, Ser68, Gly69, Phe70, Cys71, Pro72, His73, Lys74, and Arg86 as defined by the amino acid sequence of SEQ ID NO:4.

38. The crystalline complex according to any one of claims 22-37, wherein the IL-13 polypeptide interacts with one or more of residues Asn31, Tyr32, Lys34, Arg54, Asn96, Asp98, and Trp100 as defined by the amino acid sequence of SEQ ID NO:1 and Ile30, Ser31, Ala33, Trp47, Ser50, Ser52, Ser53, Tyr58, Leu98, Asp99, Gly100, Tyr101, Tyr102, and Phe103 as defined by the amino acid sequence of SEQ ID NO:2.

39. The crystalline complex according to any one of claims 22-38, wherein the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

40. The crystalline complex according to any one of claims 22-39, wherein the crystalline complex comprises the structural coordinates of Table 11, +/- a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

41. The crystalline complex according to any one of claims 22-40, further comprising an IL-13Rα1 polypeptide.

42. A crystalline complex, comprising:
an IL-13Rα1 polypeptide; and
an IL-13 polypeptide.

43. The crystalline complex of claim 42, wherein the crystalline complex has space group I4.

44. The crystalline complex according to any one of claims 42 or 43, wherein the crystalline complex has unit cell dimensions a = b = 164.9 Å, c = 74.8 Å and $\alpha = \beta = \gamma = 90^{\circ}$.

45. The crystalline complex according to any one of claims 42, 43, or 44, further comprising an antibody,

wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

46. The crystalline complex of claim 45, wherein the antibody is from a mammal.

47. The crystalline complex according to any one of claims 45 or 46, wherein the antibody is from a mouse.

48. The crystalline complex according to any one of claims 42-47, wherein the IL-13 polypeptide is from a mammal.

49. The crystalline complex according to any one of claims 42-48, wherein the IL-13 polypeptide is from a human.

50. The crystalline complex according to any one of claims 45 or 46, wherein the antibody is a monoclonal antibody.

51. The crystalline complex according to any one of claims 45 or 46, wherein the antibody is mAb13.2.

52. The crystalline complex according to any one of claims 45 or 46, wherein the antibody is an mAb13.2 Fab fragment.

53. The crystalline complex according to any one of claims 45 or 46, wherein the antibody is bound to a region of the IL-13 polypeptide that binds to an IL-4R polypeptide *in vivo*.

54. The crystalline complex according to any one of claims 42-53, wherein the IL-13 polypeptide comprises a region that binds to an IL-4R polypeptide.

55. The crystalline complex according to any one of claims 42-54, wherein the IL-13Rα1 polypeptide is from a mammal.

56. The crystalline complex according to any one of claims 42-55, wherein the IL-13Rα1 polypeptide is from a human

57. The crystalline complex according to any one of claims 42-56, wherein the IL-13 polypeptide comprises the amino acid sequence of SEQ ID NO:4.

58. The crystalline complex according to any one of claims 42-57, wherein the IL-13Rα1 polypeptide comprises the amino acid sequence of SEQ ID NO:12.

59. The crystalline complex according to any one of claims 44 or 46, wherein the antibody interacts with one or more of residues Ser7, Thr8, Ala9, Glu12, Leu48, Glu49, Ile52, Asn53, Arg65, Ser68, Gly69, Phe70, Cys71, Pro72, His73, Lys74, and Arg86 as defined by the amino acid sequence of SEQ ID NO:4.

60. The crystalline complex according to any one of claims 45 or 46, wherein the IL-13 polypeptide interacts with one or more of residues Asn31, Tyr32, Lys34, Arg54, Asn96, Asp98, and Trp100 as defined by the amino acid sequence of SEQ ID NO:1 and Ile30, Ser31, Ala33, Trp47, Ser50, Ser52, Ser53, Tyr58, Leu98, Asp99, Gly100, Tyr101, Tyr102, and Phe103 as defined by the amino acid sequence of SEQ ID NO:2.

61. The crystalline complex according to any one of claims 42-60, wherein the IL-13 polypeptide interacts with one or more of residues Ile254, Ser255, Arg256, Lys318, Cys320, Tyr321, Lys76, Lys77, Ile78, and Ala79 as defined by the amino acid sequence of SEQ ID NO:12.

62. The crystalline complex according to any one of claims 42-59, wherein the IL-13Rα1 polypeptide interacts with one or more of residues Arg11, Glu12, Leu13, Ile14, Glu15, Thr88, Lys89, Ile90, Glu91, Lys104, Lys105, Leu106, Phe107, and Arg108, as defined by the amino acid sequence of SEQ ID NO:4.

63. The crystalline complex according to any one of claims 42-62, wherein the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

64. The crystalline complex according to any one of claims 42-63, wherein the crystalline complex comprises the structural coordinates of Table 12, +/- a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

65. A method comprising:

using a three-dimensional model of an antibody to design an agent that interacts with an IL-13 polypeptide,

wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

66. The method of claim 65, wherein the three-dimensional model comprises a CDR of the antibody.

67. The method according to any one of claims 65 or 66, wherein the antibody is a Fab fragment of an anti-IL-13 antibody.

68. The method according to any one of claims 65-67, wherein the antibody comprises a light chain polypeptide including the amino acid sequence of SEQ ID NO:1, and a heavy chain polypeptide including the amino acid sequence of SEQ ID NO:2.

69. The method according to any one of claims 65-68, wherein the antibody is mAb13.2.

70. The method according to any one of claims 65-69, wherein the antibody is an mAb13.2 Fab fragment.

71. The method according to any one of claims 65-70, wherein the three-dimensional model comprises structural coordinates of atoms of the antibody.

72. The method of claim 71, wherein the structural coordinates are experimentally determined coordinates.

73. The method according to any one of claims 65-72, wherein the three-dimensional model comprises structural coordinates of an atom selected from the group consisting of atoms of amino acids Asn31, Tyr32, Lys34, Arg54, Asn96, Asp98, and Trp100 as defined by the amino acid sequence of SEQ ID NO:1, and Ile30, Ser31, Ala33, Trp47, Ser50, Ser52, Ser53, Tyr58, Leu98, Asp99, Gly100, Tyr101, Tyr102, and Phe103 as defined by the amino acid sequence of SEQ ID NO:2.

74. The method according to any one of claims 65-73, wherein the agent binds a region of the IL-13 polypeptide that binds an IL-4R polypeptide *in vivo*.

75. The method of claim 74, wherein the IL-4R polypeptide is an IL-4Rα polypeptide.

76. The method according to any one of claims 65-75, wherein the three-dimensional model comprises an IL-13 polypeptide bound to the antibody.

77. The method of claim 76, wherein the three-dimensional model further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

78. A method comprising:

using a three-dimensional model of an IL-13 polypeptide to design an agent that interacts with the IL-13 polypeptide.

79. The method of claim 78, wherein the three-dimensional model further comprises an antibody bound to the IL-13 polypeptide, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

80. The method of claim 79, wherein the three-dimensional model comprises structural coordinates of atoms of the antibody.

81. The method according to any one of claims 78-807, wherein the three-dimensional model comprises a region of the IL-13 polypeptide that binds to an IL-4R polypeptide *in vivo*.

82. The method according to any one of claims 78-81, wherein the agent inhibits binding of the IL-13 polypeptide to an IL-4R polypeptide.

83. The method according to any one of claims 75-79, wherein the three-dimensional model comprises structural coordinates of atoms of the IL-13 polypeptide.

84. The method of claim 83, wherein the structural coordinates are experimentally determined coordinates.

85. The method according to any one of claims 83 or 84, wherein the structural coordinates are according to Table 11 +/- a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

86. The method according to any one of claims 78-85, wherein the three-dimensional model comprises structural coordinates of an atom selected from the group consisting of atoms of amino acids Glu49, Asn53, Ser68, Gly69, Phe70, Cys71, Pro72, His73, Lys74, and Arg86 of the IL-13 polypeptide as defined by the amino acid sequence of SEQ ID NO:4.

87. The method according to any one of claims 78-86, wherein the three-dimensional model further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

88. The method of claim 87, wherein the three-dimensional model comprises structural coordinates of atoms of the IL-13Rα1 polypeptide.

89. A method comprising:

using a three-dimensional model of an IL-13 polypeptide bound to an IL-13Rα1 polypeptide to design an agent that interacts with the IL-13 polypeptide.

90. The method of claim 89, wherein the three-dimensional model further comprises an antibody bound to the IL-13 polypeptide, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

91. The method according to any one of claims 89 or 90, wherein the agent inhibits binding of the IL-13 polypeptide to an IL-4R polypeptide.

92. The method according to any one of claims 89-91, wherein the three-dimensional model comprises structural coordinates of atoms of the IL-13 polypeptide and the IL-13Rα1 polypeptide.

93. The method of claim 92, wherein the structural coordinates are experimentally determined coordinates.

94. The method according to any one of claims 92 or 93, wherein the structural coordinates are according to Table 12 +/- a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

95. A method, comprising:

selecting an agent by performing rational drug design with a three-dimensional structure of a crystalline complex that comprises an IL-13 polypeptide;

contacting the agent with an IL-13 polypeptide; and

detecting the ability of the agent to bind the IL-13 polypeptide.

96. The method of claim 95, wherein the crystalline complex of the three-dimensional structure further comprises an antibody bound to the IL-13 polypeptide, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

97. The method of claim 96, wherein the anti-IL-13 antibody or Fab fragment of an anti-IL-13 antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

98. The method according to any one of claims 95-97, wherein the agent is selected via computer modeling.

99. The method according to any one of claims 95-98, wherein the three-dimensional structure comprises structural coordinates of Table 11, ± a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

100. The method according to any one of claims 95-99, wherein the crystalline complex of the three-dimensional structure further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

101. The method according to any one of claims 95-100, wherein the three-dimensional structure comprises structural coordinates of Table 12, ± a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

102. The method according to any one of claims 95-101, further comprising obtaining the agent.

103. The method according to any one of claims 95-102, further comprising:

obtaining a supplemental crystalline complex comprising the IL-13 polypeptide and the agent;

determining the three-dimensional structure of the supplemental crystalline complex;

selecting a second agent by performing rational drug design with the three-dimensional structure of the supplemental crystalline complex;

contacting the second agent with the IL-13 polypeptide; and

detecting the ability of the second agent to bind the IL-13 polypeptide.

104. The method of claim 103, wherein the second agent is selected via computer modeling.

105. The method according to any one of claims 103 or 104, further comprising detecting an ability of the second agent to inhibit IL-13 activity.

106. A method, comprising:

contacting an IL-13 polypeptide with an antibody to form a composition; and

crystallizing the composition to form a crystalline complex in which the antibody is bound to the IL-13 polypeptide,

wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

107. The method of claim 106, wherein the method includes using vapor diffusion.

108. The method according to any one of claims 106 or 107, wherein the antibody is mAb13.2.

109. The method according to any one of claims 106-108, wherein the antibody is a mAb13.2 Fab fragment.

110. A method, comprising:

contacting an IL-13 polypeptide with an antibody and an IL-13Rα1 polypeptide to form a composition; and

crystallizing the composition to form a crystalline complex in which the antibody and the IL-13Rα1 polypeptide are each bound to the IL-13 polypeptide,

wherein the antibody comprises an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

111.The method of claim 110, wherein the method includes using vapor diffusion.

112. The method according to any one of claims 110-111, wherein the antibody is mAb13.2.

113. The method according to any one of claims 110-112, wherein the antibody is an mAb13.2 Fab fragment.

114. A software system, comprising instructions for causing a computer system to:

accept information relating to a structure of an IL-13 polypeptide bound to an antibody, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody;

accept information relating to a candidate agent; and

determine binding characteristics of the candidate agent to the IL-13 polypeptide,

wherein the determination is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

115. The software system of claim 114, wherein the structure of the IL-13 polypeptide bound to the antibody is a crystal structure.

116. The software system of claim 115, wherein the crystal structure comprises the structural coordinates of Table 11, ± a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

117. The software system according to any one of claims 106-108, wherein the structure of the IL-13 polypeptide bound to the antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

118. The software system of claim 117, wherein the structure of the IL-13 polypeptide bound to the antibody and the IL-13Rα1 polypeptide bound to the IL-13 polypeptide is a crystal structure.

119. The software system of claim 118, wherein the crystal structure comprises the structural coordinates of Table 12, ± a root mean square deviation for alpha carbon atoms of not more than 1.5 Å.

120. The software system according to any one of claims 114-119, further comprising instructions for causing the computer system to:

apply information from a database, the information relating to candidate agents; and

identify a candidate agent in the database that can bind the IL-13 polypeptide, wherein the identification is based on the information relating to the structure of the IL-13 polypeptide and information relating to the candidate agent.

121. The software system according to any one of claims 114-120, further comprising instructions for causing the computer system to model the binding characteristics of the candidate agent with the IL-13 polypeptide.

122. A computer program residing on a computer readable medium having a plurality of instructions stored thereon, which, when executed by one or more processors, cause the one or more processors to:

accept information relating to a structure of an IL-13 polypeptide bound to an antibody, the antibody comprising an anti-IL-13 polypeptide or a Fab fragment of an anti-IL-13 antibody;

accept information relating to a candidate agent; and

determine binding characteristics of the candidate agent to the IL-13 polypeptide,

wherein the determination is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

123. The computer program of claim 122, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

124. A method, comprising:

accepting information relating to the structure of an IL-13 polypeptide bound to an antibody, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody; and

modeling the binding characteristics of the IL-13 polypeptide with a candidate agent,

wherein the method is implemented by a software system.

125. The method of claim 124, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

126. The method according to any one of claims 124 or 125, further comprising applying information from a database of candidate agents to identify a candidate agent that can bind the IL-13 polypeptide,

wherein the identification is based on the information relating to the structure of the IL-13 polypeptide and information relating to the candidate agent.

127. A computer program residing on a computer readable medium having a plurality of instructions stored thereon, which, when executed by one or more processors, cause the one or more processors to:

accept information relating to the structure of an IL-13 polypeptide bound to an antibody, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody; and

model the binding characteristics of the IL-13 polypeptide with a candidate agent.

128. The computer program of claim 127, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

129. The computer program according to any one of claims 127 or 128, further comprising instructions which cause the one or more processors to:

apply information from a database, the information relating to candidate agents; and

identify a candidate agent in the database that can bind the IL-13 polypeptide,

wherein the identification is based on the information relating to the structure of the IL-13 polypeptide.

130. The computer program according to any one of claims 127-129, further comprising instructions which cause the one or more processors to model the binding characteristics of the candidate agent with the IL-13 polypeptide.

131. A software system, comprising instructions for causing a computer system to:

accept information relating to the structure of an IL-13 polypeptide bound to an antibody, the antibody comprising an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody; and

model the binding characteristics of the IL-13 polypeptide with a candidate agent.

132. The method of claim 131, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

133. A crystalline antibody, wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

134. A crystalline composition that comprises an antibody, wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

135. A crystalline complex, comprising:

an IL-13 polypeptide; and

an antibody,

wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

136. A crystalline complex, comprising:

an IL-13 polypeptide;

an IL-13Rα1 polypeptide; and

an antibody,

wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

137. A method, comprising:

using a three-dimensional model of an antibody to design an agent that interacts with an IL-13 polypeptide,

wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

138. The method of claim 137, wherein the three-dimensional model comprises structural coordinates of atoms of the antibody.

139. A method, comprising:

contacting an IL-13 polypeptide with an antibody to form a composition; and

crystallizing the composition to form a crystalline complex in which the antibody is bound to the IL-13 polypeptide,

wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

140. A method, comprising:

contacting an IL-13 polypeptide with an antibody and an IL-13Rα1 polypeptide to form a composition; and

crystallizing the composition to form a crystalline complex in which the antibody and the IL-13Rα1 polypeptide are each bound to the IL-13 polypeptide,

wherein the antibody is capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*, and the crystalline complex can diffract X-rays to a resolution of at least about 3.5 Å.

141. A software system, comprising instructions for causing a computer system to:

accept information relating to a structure of an IL-13 polypeptide bound to an antibody, the antibody being capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*;

accept information relating to a candidate agent; and

determine binding characteristics of the candidate agent to the IL-13 polypeptide,

wherein the determination is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

142. The software system of claim 141, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

143. A computer program residing on a computer readable medium having a plurality of instructions stored thereon, which, when executed by one or more processors, cause the one or more processors to:

accept information relating to a structure of an IL-13 polypeptide bound to an antibody, the antibody being capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*;

accept information relating to a candidate agent; and

determine binding characteristics of the candidate agent to the IL-13 polypeptide,

wherein the determination is based on the information relating to the structure of the IL-13 polypeptide and the information relating to the candidate agent.

144. The computer program of claim 143, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

145. A method, comprising:

accepting information relating to the structure of an IL-13 polypeptide bound to a an antibody, the antibody being capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*; and

modeling the binding characteristics of the IL-13 polypeptide with a candidate agent,

wherein the method is implemented by a software system.

146. The method of claim 145, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

147. A computer program residing on a computer readable medium having a plurality of instructions stored thereon, which, when executed by one or more processors, cause the one or more processors to:

accept information relating to the structure of an IL-13 polypeptide bound to an antibody, the antibody being capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*; and

model the binding characteristics of the IL-13 polypeptide with a candidate agent.

148. The computer program of claim 147, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

149. A software system, comprising instructions for causing a computer system to:

accept information relating to the structure of an IL-13 polypeptide bound to an antibody, the antibody being capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*; and

model the binding characteristics of the IL-13 polypeptide with a candidate agent.

150. The software system of claim 149, wherein the structure of the IL-13 polypeptide bound to an antibody further comprises an IL-13Rα1 polypeptide bound to the IL-13 polypeptide.

151. A method of modulating IL-13 activity in a subject, comprising:

using rational drug design to select an agent that is capable of modulating IL-13 activity; and

administering a therapeutically effective amount of the agent to the subject.

152. The method of claim 151, wherein the rational drug design includes using a three-dimensional structure of a crystalline complex that comprises an IL-13 polypeptide.

153. The method of claim 152, wherein the crystalline complex further comprises an antibody, the antibody being an anti-IL-13 antibody or a Fab fragment of an anti-IL-13 antibody.

154. The method according to any one of claims 152 or 153, wherein the crystalline complex further comprises an antibody, the antibody being capable of binding a site of an IL-13 polypeptide to which an IL-4R polypeptide binds *in vivo*.

155. The method according to any one of claims 152-154, wherein the crystalline complex further comprises an IL-13Rα1 polypeptide.

156. A method of treating a subject having a condition associated with IL-13 activity, comprising:

using rational drug design to select an agent that is capable of effecting IL-13 activity; and

administering a therapeutically effective amount of the agent to a subject in need thereof.

157. The method of claim 156, wherein the condition is asthma.

158. The method according to any one of claims 156 or 157, wherein the condition is allergic asthma or nonallergic asthma.

159. The method of claim 156, wherein the condition comprises at least one condition selected from the group consisting of cancer, airway inflammation, eosinophilia, fibrosis, excess mucus production, an inflammatory condition of the skin,

gastrointestinal organs, blood vessels or connective tissue, and an autoimmune condition of the skin, gastrointestinal organs, blood vessels, or connective tissue.

160. The method of claim 156, wherein the condition comprises at least one condition selected from the group consisting of chronic obstructive pulmonary disorder, cystic fibrosis, pulmonary fibrosis, allergic rhinitis, atopic dermatitis, inflammatory bowel disease, Crohn's disease, cirrhosis, scleroderma, or Hodgkin's lymphoma.

161. A method of prophylactically treating a subject susceptible to a condition associated with IL-13 activity, comprising:

determining that the subject is susceptible to the condition associated with IL-13 activity;

using rational drug design to select an agent that is capable of effecting IL-13 activity; and

administering a therapeutically effective amount of the agent to the subject.

162. The method of claim 161, wherein the condition is asthma.

163. The method according to any one of claims 161 or 162, wherein the condition is allergic asthma or nonallergic asthma.

164. The method of claim 161, wherein the condition comprises at least one condition selected from the group consisting of cancer, airway inflammation, eosinophilia, fibrosis, excess mucus production, an inflammatory condition of the skin, gastrointestinal organs, blood vessels or connective tissue, and an autoimmune condition of the skin, gastrointestinal organs, blood vessels, or connective tissue.

165. The method of claim 161, wherein the condition comprises at least one condition selected from the group consisting of chronic obstructive pulmonary disorder, cystic fibrosis, pulmonary fibrosis, allergic rhinitis, atopic dermatitis, inflammatory bowel disease, Crohn's disease, cirrhosis, scleroderma, or Hodgkin's lymphoma.

166. The method according to any one of claims 161-165, wherein the agent binds to the IL-13 polypeptide by interacting to within about 2.0Å with one or more of amino acids Glu49, Asn53, Gly69, Pro72, His73, Lys74, and Arg86, as defined by the amino acid sequence of SEQ ID NO:4.

167. Use of an agent designed or selected according to any one of claims 64-97 or 129 or 130 in the manufacture of a medicament for the prophylaxis or treatment of a condition associated with IL-13 activity.

168. The use according to claim 167, wherein the agent is capable of inhibiting IL-13 activity.

169. The use according to any one of claims 167 or 168, wherein the agent is capable of inhibiting IL-13 activity *in vivo*.

170. The use according to any one of claims 167, 168, or 169, wherein the condition is asthma.

171. The use according to any one of claims 167-170, wherein the condition is allergic asthma or non-allergic asthma.

172. The use according to any one of claims 167-170, wherein the condition comprises at least one condition selected from the group consisting of cancer, airway inflammation, eosinophilia, fibrosis, excess mucus production, an inflammatory condition of the skin, gastrointestinal organs, blood vessels or connective tissue, and an autoimmune condition of the skin, gastrointestinal organs, blood vessels, or connective tissue.

173. The use according to any one of claims 167-170, wherein the condition comprises at least one condition selected from the group consisting of chronic obstructive

pulmonary disorder, cystic fibrosis, pulmonary fibrosis, allergic rhinitis, atopic dermatitis, inflammatory bowel disease, Crohn's disease, cirrhosis, scleroderma, or Hodgkin's lymphoma.

174. The use according to any one of claims 167-173, wherein the agent binds to the IL-13 polypeptide by interacting to within about 2.0Å with one or more of amino acids Glu49, Asn53, Gly69, Pro72, His73, Lys74, and Arg86, as defined by the amino acid sequence of SEQ ID NO:4.

175. An agent designed or selected according to any one of claims 65-105 or 129 or 130 for use in the prophylaxis or treatment of a condition associated with IL-13 activity.

176. The agent of claim 175, wherein the agent is capable of inhibiting IL-13 activity.

177. The agent according to any one of claims 175 or 176, wherein the agent is capable of inhibiting IL-13 activity in vivo.

178. The agent according to any one of claims 175, 176, or 177, wherein the condition is asthma.

179. The agent according to any one of claims 175-178, wherein the condition is allergic asthma or nonallergic asthma.

180. The agent according to any one of claims 175-177, wherein the condition comprises at least one condition selected from the group consisting of cancer, airway inflammation, eosinophilia, fibrosis, excess mucus production, an inflammatory condition of the skin, gastrointestinal organs, blood vessels or connective tissue, and an autoimmune condition of the skin, gastrointestinal organs, blood vessels, or connective tissue.

181. The agent according to any one of claims 175-177, wherein the condition comprises at least one condition selected from the group consisting of chronic obstructive pulmonary disorder, cystic fibrosis, pulmonary fibrosis, allergic rhinitis, atopic dermatitis, inflammatory bowel disease, Crohn's disease, cirrhosis, scleroderma, or Hodgkin's lymphoma.

182. The agent according to any one of claims 175-181, wherein the agent binds to the IL-13 polypeptide by interacting to within about 2.0Å with one or more of amino acids Glu49, Asn53, Gly69, Pro72, His73, Lys74, and Arg86, as defined by the amino acid sequence of SEQ ID NO:4.