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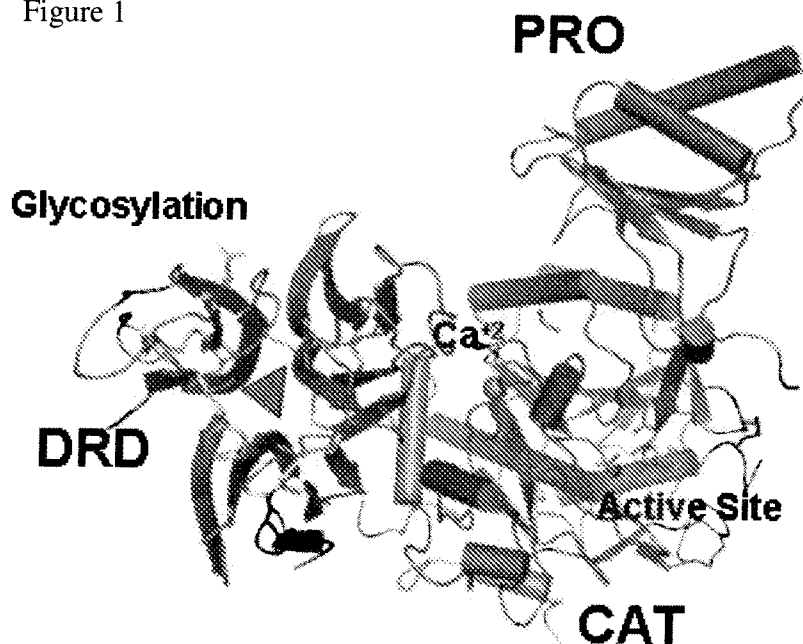
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(54) Title: CRYSTAL STRUCTURE OF PROTEIN CONVERTASE 9 (PCSK9) AND USES THEREOF

Figure 1



(57) Abstract: The invention provides a crystallized PCSK9 molecule. The three-dimensional coordinates of the crystal structure of PCSK9 are obtained by X-ray diffraction. The coordinates can be used for studying the PCSK9 structure and designing, screening and developing compounds that modulate PCSK9 activity.

CRYSTAL STRUCTURE OF PROPROTEIN CONVERTASE 9 (PCSK9) AND USES THEREOF

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of priority to U.S. Provisional Patent Application Number 60/893,828, filed 08 March 2007. The full disclosure of this application is incorporated herein by reference in its entirety and for all purposes.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The invention provides a crystallized PCSK9 molecule. The three-dimensional coordinates of the crystal structure of PCSK9 are obtained by X-ray diffraction. The coordinates can be used for studying the PCSK9 structure and designing, screening and developing compounds that modulate PCSK9 activity.

Background

[0003] Proprotein convertase subtilisin kexin like 9 (PCSK9) is a 692 residue extra cellular protein expressed primarily in the kidneys, liver and intestines and represents the 9th member of the secretory subtilase family. The full length sequence consists of three domains; the first two domains correspond to an inhibitory pro-domain (amino acids 1-152) and a serine protease domain (amino acids 153-452) of the proteinase K subfamily member of the secretory subtilisin-like serine proteases, respectively. The third domain is 210 residues in length (amino acids 453-692), rich in cysteine residues and was thought to play an analogous role to the P-(processing) domains of other Furin/Kexin/Subtilisin-like serine proteases which appears to be essential for folding and regulation of the activated protease. Mutations in PCSK9 are strongly associated with levels of low density lipoprotein cholesterol (LDL-c) in the blood plasma and thereby occurrence or resistance to atherosclerosis and coronary heart disease.

[0004] The PCSK9 three dimensional coordinates of the invention can be used to design, screen and develop compounds that associate with and modulate the activity of PCSK9.

Summary of the Invention

[0005] The present invention provides the three-dimensional structure of PCSK9 thereby enabling identification and design of ligands, biopharmaceuticals or low molecular weight molecules that specifically bind to and modulate the activity of PCSK9.

[0006] The present invention relates to:

[0007] (i) a crystal of the PCSK9 polypeptide comprising the catalytic site with or without a ligand or low molecular weight compound;

[0008] (ii) a method of crystallizing the PCSK9 polypeptide; and

[0009] (iii) methods of using the three dimensional coordinates derived from said PCSK9 polypeptide crystal to identify/design small molecules/biotherapeutics capable of modulating PCSK9 activity.

BRIEF DESCRIPTION OF FIGURES

[0010] FIG. 1: A ribbon diagram of PCSK9 detailing the overall fold of the molecule, the pro (auto-inhibitory domain) is colored red, the catalytic domain blue and the disulfide rich C-terminal domain green. Disulfide bonds within the molecule are represented as yellow sticks.

[0011] FIG. 2: A representation of the electrostatic surface of the PCSK9 substrate binding site. Surface is colored red, blue and white to indicate electronegative, electropositive and charge neutral areas, respectively.

DETAILED DESCRIPTION OF THE INVENTION**Definitions**

[0012] The term “binding partner” according to the invention refers to a ligand or low molecular weight molecule that associates with PCSK9 and either enhances the ability of PCSK9 to crystallize or modulates the activity of PCSK9.

[0013] The term “PCSK9” means “proprotein convertase subtilisin kexin like 9” and is also known as neural apoptosis-regulated convertase, NARC-1.

[0014] The term “space group” according to the invention refers to the arrangement of symmetry elements of the crystal.

[0015] The term “structure coordinates” or “three-dimensional coordinates” refers to mathematical coordinates derived from the placement of a polypeptide chain (and the individual atoms thereof) in an electron density map. The electron density map is derived from mathematical equations related to the pattern obtained on diffraction of a monochromatic beam of X-rays by the atoms of a crystal of the invention.

[0016] The term “unit cell” according to the invention, refers to the basic shape block. The entire volume of a crystal can be constructed by regular assembly of such blocks. Each unit cell comprises a complete representation of the unit cell pattern, the repetition of which builds the crystal.

Embodiments

[0017] The present invention relates to a PCSK9 polypeptide, a method of crystallizing a PCSK9 polypeptide and a PCSK9 polypeptide crystal. The invention further relates to the X-ray coordinates (also referred to as three dimensional or structural coordinates) of the structure of a PCSK9 polypeptide elucidated from a PCSK9 polypeptide crystal. Still further, the present invention relates to using the coordinates of a PCSK9 polypeptide to design and developing compounds that modulate the activity of said PCSK9 polypeptide.

[0018] The full length sequence of human PCSK9 is known and is set forth in Genbank Accession Number gi:119627065, gb|EAX06660.1, which are incorporated herein by reference. As used herein, the PCSK9 polypeptide refers to that of SEQ. ID. No.: 1.

[0019] SEQ. ID. No.: 1:

MGTVSSRRSWWPLPLLLLLLLLLGPAGARAQEDGDYEELVLALRSEEDGLAEAPHGTTATFHRC AKD
 PWRLPGTYVVVLKEETHLSQSERTARRLQAQAARRGYLT KILHVFHGLLP GFLVKMSGDLLELALKLPHV
 DYIEEDSSVFAQSIPWNLERITPPRYRADEYQPPDGGSLVEVYLLDTSIQSDHREIEGRVMVTD FENVPE
 EDGTRFHRQASKCD SHGTHLAGVVSGRDAGVAKGASMRSLRVLNCQGKGT VSGTLIGLEFIRKSQLVQP V
 GPLVLLPLAGGYSRVLNAAQRLARAGVVLVTAAGNFRDDACLYSPASAPEVITVGATNAQDQPVT LGT
 LGTNFGRCVDLFAPGEDII GASSDCSTCFVSQSGTSQAAAHVAGIAAMMLSAEPELT LAELRQRLIH FSA
 KDVINEAWFPEDQRVLT PNLVAALPPSTHGAGWQLFCRTVWSAHSGPTRMATAIARCAPDEELLSCSSFS
 RSGKRRGERMEAQGGKLV CRAHNAFGGEGVYAIARCCLLPQANCSVHTAPPAEASMGTRVHCHQQGHVLT
 GCSSHWEVEDLGTHKPPVLRPRGQPNQCVGHREASIHASCCHAPGLECKVKEHGIPAPQEQT VACEEGW

TLTGCSALPGTSHVLGAYAVDNTCVVRSRDVSTTGSTSEEAVTAVAICCRSRHLAQASQELQ

[0020] According to the invention, cDNA encoding PCSK9 (i.e., amino acid residues detailed in SEQ. ID No: 1) is inserted into a suitable expression vector and expressed in a suitable cell line. The cDNA also can include other regions that facilitate expression or achieve other objects, such as flanking regions, that otherwise do not depart from the essence of the invention. The cDNAs encoding the PCSK9 polypeptide, or functional portions thereof, can be altered by addition, substitution, deletion, or insertion. Such alterations can be made, for example, to prevent glycosylation, prevent formation of incorrect or undesired disulfide bridges, and to enhance expression, purification and/or crystallization.

[0021] Recombinant expression vectors containing the nucleotide sequence encoding PCSK9, or a portion thereof, can be prepared using methods known to those of skill in the art. Suitable host cells for expression of PCSK9 polypeptides include prokaryotic, yeast, and higher eukaryotic cells. Further examples of suitable expression systems that can be employed to express recombinant PCSK9 according to the present invention including mammalian or insect host cell culture expression systems, including baculovirus systems in insect cells and mammalian cell lines.

[0022] In one aspect of the invention, there is provided a composition comprising a polypeptide in crystalline form, wherein the polypeptide is a PCSK9 polypeptide.

[0023] In a further embodiment, the PCSK9 polypeptide is the expression product of a polynucleotide encoded by the amino acid residues of SEQ. ID No.: 1, or fragments and/or homologs thereof.

[0024] In a further embodiment of the invention, the composition above further comprises an optional binding partner suitable for co-crystallization with PCSK9.

[0025] In a further embodiment, the binding partner is a small molecule or polypeptide binding partner.

[0026] In a further embodiment, the binding partner is a small molecule or an antibody (or fragment thereof).

[0027] One aspect of the invention relates to a method of crystallizing a PCSK9 polypeptide with or without a binding partner. Crystals can be grown or formed

by any suitable crystallization method such as vapor diffusion, sitting drop and the like (see Ducruix and Giege "Crystallization of Nucleic Acids and Proteins: A Practical Approach", Oxford University Press, 1992) and can be set up manually or automatically (using robotics) known in the art. The crystallization buffer can optionally comprise a number of elements that include, without limitation, buffers, salts, organics, additives, precipitating agents, etc. The pH can range, for example from about 4.0 to about 9.0. The claimed invention can encompass any and all methods of crystallization. One skilled in the art can choose any such methods and vary the parameters such that the chosen method results in the desired crystals. Crystals of the invention are screened for their ability to diffract X-rays to a resolution of 3.0 Å or better and a complete data set can be collected from one or more crystals.

[0028] In a further aspect of the invention, is provided a method for crystallizing a PCSK9 polypeptide, comprising mixing a solution comprising a PCSK9 polypeptide, optionally a binding partner and a crystallization buffer, or soaking an existing binding partner into a preformed PCSK9 crystals.

[0029] In a further embodiment, the method of crystallization is by sitting drop, the crystallization precipitant can be PEG-6000 or PEG-8000 at a concentration between 14 and 28% with a CAPS or CHES buffer at a pH ranging from about pH 8.0 to about pH 11.0 with or without additional salts such as 0.1M-0.4M Sodium Chloride. The PCSK9 polypeptide is at a final concentration of 10 mg/mL and the crystals are prepared in a temperature ranging from about 4 to about 20 °C. A detailed description of the crystallization of the PCSK9 polypeptide of the invention is described in Example 1, *infra*.

[0030] In a further aspect, a PCSK9 crystal of the invention diffracts X-rays to a resolution of at least 3.0 Å, is of space group $P2_12_12_1$ with unit cell dimensions: $a=62.5 \pm 5 \text{ Å}$, $b=70.1 \pm 5 \text{ Å}$, $c=148.6.0 \pm 5 \text{ Å}$, $\alpha=90$ degrees, $\beta=90$ degrees and $\gamma=90$ degrees. Depending on the particular conditions for crystallization, the parameters characterizing the unit cell can vary with a limited range, for example, a, b, and c each vary by up to 10 Å and α , β and γ vary by up to 10 degrees.

[0031] Another aspect of the invention relates to the atomic structure of PCSK9. The three dimensional coordinates of PCSK9 can be determined utilizing a

crystal comprising a PCSK9 polypeptide of the invention. According to the present invention, the structure of PCSK9 is determined using X-ray crystallography. Any suitable X-ray diffraction method for obtaining three-dimensional structural coordinates of a polypeptide can be used (see, for example, International Tables for Crystallography: Volume F: Crystallography of biological macromolecules, editor M. G. Rossmann. For the present invention, see Example 2 (*infra*) for a detailed description of the structure determination of PCSK9.

[0032] In a further embodiment of the invention, the crystalline PCSK9 polypeptide has a three-dimensional structure characterized by the atomic structure coordinates given in Table 1, *infra*.

[0033] In another aspect of the invention is provided a computer-readable medium (such as, for example, a floppy disc, a hard disc, computer tape, RAM, ROM, CD, DVD, a magnetic disk, an optical disk, and the like) having recorded thereon structural coordinate data for PCSK9 (such as set forth in Table 1), or a portion thereof.

[0034] In one embodiment, the computer-readable medium has recorded thereon machine-readable data, wherein the computer-readable medium, when used in conjunction with a machine programmed with instructions for using the data, is capable of generating image signals for depicting a graphical, three-dimensional representation of the PCSK9 polypeptide, or portion thereof.

[0035] In a further embodiment of the invention, there is provided a system for studying a PCSK9 polypeptide, said system comprising (a) a memory capable of storing information representing at least a portion of the PCSK9 polypeptide, wherein said memory comprises at least one first-type storage region, including a set of spatial coordinates specifying a location in a three dimensional space, and at least one second-type storage region comprising information representing a characteristic of one of a plurality of amino acids, said second-type storage regions being logically associated with said first-type storage regions in said memory to represent a geometric arrangement of at least one characteristic of said PCSK9 peptide in said three dimensional space; (b) a processor coupled to said memory to access said first-type storage regions and said second-type storage regions, wherein the processor generates image signals for depicting a visual image representing three dimensional image of said PCSK9 polypeptide in said

three dimensional space based on data from said memory; and (c) a display coupled to said processor to receive said image signals, wherein the display depicts a visual three dimensional image of said PCSK9 polypeptide in said three dimensional space based on said image signals.

[0036] The use of X-ray structure determination, molecular design and selection and synthesis of compounds that associate with other polypeptides is known in the art. This invention, however, for the first time allows the use of structural coordinates from the PCSK9 polypeptide of SEQ. ID. No.: 1 for molecular design, and selection and synthesis of compounds that associate with PCSK9.

[0037] In one aspect of the invention, the structure coordinates of the invention can be displayed as, or converted to, a graphical representation, including three-dimensional shape representations. This can be accomplished using commercially available computer programs capable of generating graphical representations of molecules, or parts thereof, from a set of structural coordinates. Examples of computer programs capable of generating graphical representations of molecules, or parts thereof, from a set of structural coordinates are O (Alwyn Jones), Xfit, PyMOL, RasMol, and the like.

[0038] In another aspect of the invention, the structure of PCSK9 can be compared to, or superimposed over, other similar molecules, such as PCSK9-like molecules. Comparison of PCSK9 and other molecules for which a graphical structure or three-dimensional structural coordinates are available can be carried out with the aide of available software applications, such as the Molecular Similarity application of QUANTA (Molecular Simulations, Inc., Waltham, Mass.).

[0039] Compounds that associate with PCSK9 can also be computationally evaluated and designed by screening and selecting chemical entities or fragments thereof for their ability to associate with PCSK9. Several methods can be used to accomplish this aspect of the invention.

[0040] In one embodiment, one may visually inspect a computer-generated model of PCSK9 based on the structure coordinates described herein. Computer generated models of chemical entities or specific chemical moieties can then be positioned in or around the catalytic domain and evaluated based on energy minimization and molecular dynamics, using, for example, available programs such as CHARMM or AMBER. Positioning of the chemical

entity or fragment can be accomplished, for example, with docking software such as Quanta and Sybyl. Additionally, known and commercially available computer programs can be used in selecting chemical entities or fragments. Once suitable chemical entities or fragments are selected, they can be assembled into a single compound, such as an inhibitor, mediator, or other regulatory compound. Known and commercially available model building software may assist in assembly.

[0041] In one aspect of the invention, compounds that associate with PCSK9 can be designed as a whole, rather than by assembly of specific chemical moieties or chemical entities. This embodiment can be carried out using computer programs such as LUDI (Biosym Technologies, San Diego, Calif.), LEGEND (Molecular Simulations, Burlington, Mass.), and Leap Frog (Tripos Associates, St. Louis, Mo.).

[0042] In one embodiment, a candidate compound is chosen based upon the desired sites of interaction with PCSK9 and the candidate compound in light of the sites of interaction identified previously. Once the specific candidate compound-PCSK9 interactions are determined, docking studies, using commercially available docking software, are performed to provide preliminary "modeled" complexes of selected candidate compound with PCSK9.

[0043] Constrained conformational analysis is performed using, for example, molecular dynamics (MD) to check the integrity of the modeled PCSK9-compound complex. Once the complex reaches its most favorable conformational state, the structure as proposed by the MD study is analyzed visually to ensure that the modeled complex complies with known experimental SAR/QSAR (structure-activity relationship/quantitative structure-activity relationship) based on measured binding affinities.

[0044] Other modeling techniques can also be used in accordance with the invention. Examples of these techniques are disclosed in Cohen et al., "Molecular Modeling Software and Methods for Medicinal Chemistry," J. Med. Chem., 33:883-894 (1990) and Navia et al., "The Use of Structural Information in Drug Design," Current Opinions in Structural Biology, 2:202-210 (1992), "Structure Based Drug Design", editor Verapandian herein incorporated by reference in the entirety.

[0045] Compounds developed or designed to associate with PCSK9 can be optimized or the efficiency of association can be tested using a number of methods known in the art. For example, the deformation energy and electrostatic interactions can be determined

and optimized. Known and commercially available software and hardware systems can be used. Structure-based analoging for optimization of the PCSK9 associating compound's potency, selectivity and physical drug-like properties in an iterative manner can also be performed by one skilled in the art of drug design.

[0046] Substitutions can also be made to selected or designed compounds. These substitutions can be made to improve or modify the association properties of the compound. Such substitutions can be made, for example, in side groups or particular atoms of the compounds. Generally, one should begin with conservative substitutions that have approximately the same size, shape, charge and other characteristics of the original group or atom. Substituted compounds can be further analyzed and optimized as described above.

[0047] In a further aspect of the invention, the potential inhibitory, mediatory, regulatory, or other binding effect of a compound can be analyzed and evaluated, using, for example, commercially available computer software, prior to actual synthesis and testing of such compound. In this way, one can evaluate the probability of synthesizing and testing of inoperative compounds.

[0048] In a further aspect of the invention, there is provided a method of identifying a compound that associates with PCSK9, comprising: (a) designing an associating compound for said polypeptide that forms a bond with a site on the PCSK9 molecule based on all or part of the coordinates of a PCSK9 polypeptide crystal (Table 1); (b) synthesizing said compound; and (c) determining the capability of said compound to modulate the activity of said PCSK9 polypeptide.

[0049] In one embodiment, the identified compound or polypeptide interacts with a site on PCSK9 defined by at least one of the sets of amino acids listed in Table 3.

[0050] As used herein, "associate" means that the compounds may bind to or interact with PCSK9 ionically, covalently, via hydrogen bonding, Van der Waals interactions, salt bridges, steric interactions, hydrophilic interactions and/or hydrophobic interactions. Moreover, the term "associate" encompasses associations with any portion of PCSK9. For example, compounds that associate with PCSK9 can be compounds that act as competitive inhibitors, un-competitive inhibitors, and non-competitive inhibitors. Compounds that associate with PCSK9 can also be compounds that act as mediators or other regulatory compounds. Compounds that associate with PCSK9 can also be compounds that isomerize to short-lived reaction intermediates in the chemical reaction

of a substrate with PCSK9. In particular, compounds designed to associate with PCSK9 can be used therapeutically as modulators of PCSK9 activity, such as inhibitors, mediators and other regulatory compounds.

[0051] In vitro procedures for measuring the effect compounds have on modulating the activity of PCSK9 generally are known in the art and are described in Example 3, *infra*.

Description of PCSK9 Structure

[0052] The crystal structure contains residues 29 to residues 692 of SEQ. ID 1. For this structure, the construct contains a serine as residue 29 (replaces an alanine of residue 29 in SEQ. ID 1). Of these residues 29 to 60, 168 to 175, 213 to 219, 450 to 451, 572 to 583, 617 to 618, 640 to 641, 660 to 670 and 683 to 692 are not visible in the electron density and are not included in the three dimensional co-ordinates of table 1.

[0053] The three dimensional PCSK9 molecule of the invention can be described, with reference to the Figures.

[0054] FIG. 1 is a ribbon diagram of PCSK9: Ribbon diagram of PCSK9 molecule detailing the overall fold of the molecule, the pro (auto-inhibitory domain) is colored red, the catalytic domain blue and the disulfide rich C-terminal domain green. Disulfide bonds within the molecule are represented as yellow sticks. Figure produced with Pymol (www.pymol.org).

[0055] FIG. 2 is a surface representation: Electrostatic surface representation of PCSK9. Surface is colored red, blue and white to indicate electronegativity, electropositivity and neutrality respectively. Figure produced with PYMOL (www.pymol.org).

[0056] In designing and developing compounds that modulate PCSK9 activity, such as inhibitors, polypeptides, mediators and other compounds having activities with biological significance, that associate with PCSK9, it is desirable to select compounds with a view toward the particular surface contour, charge, shape, and other physical characteristics of PCSK9. Generally, the compounds should be capable of physically and structurally associating with PCSK9.

[0057] The PCSK9 crystal structure of the invention demonstrates several structural peculiarities regarding surface contour, charge and shape, which facilitates the design of potent selective modulators of PCSK9 activity, particularly modulators that associate with the residues (or sets thereof) described in Table 3.

[0058] Mutations in PCSK9 are strongly associated with levels of low density lipoprotein cholesterol (LDL-c) in the blood plasma and thereby occurrence or resistance to atherosclerosis and coronary heart disease. Linkage to autosomal dominant familial hypercholesterolemia (ADH) *via* various genetic observations have suggested that gain of function mutations increase plasma levels of LDL-c whilst nonsense or missense mutations which interfere with folding or targeting of PCSK9 lead to a reduction of plasma levels of LDL-c. Over expression of PCSK9 in mice results in degradation of LDL-R and increased plasma LDL-c, suggesting that PCSK9 is involved in the regulation of LDL-R and its ability to clear LDL-c from the plasma.

[0059] The present invention is a crystal structure of a full-length construct of PCSK-9 solved to 1.9Å resolution. This represents the first structure of a full length mammalian pro-protein convertase enzyme and the first showing of an intact auto-inhibitory pro-domain. The structure contains a fully folded C-terminal disulfide rich domain (DRD), which differs in size, orientation and topology to the P domains of its eukaryotic relatives but shows a distinct structural similarity to the resistin homo-trimer, a small cytokine associated with obesity and diabetes. This structural relationship between the DRD of PCSK9 and resistin is not observed in primary sequence comparisons. The three-dimensional structure of the present invention gives insight into the function of PCSK9 at the molecular level and provides further association of PCSK9 with CHD, emphasizing its importance as a potential therapeutic target.

[0060] The core of the structure, conforms to a standard subtilisin-like serine protease domain, an alpha/beta protein consisting of a seven stranded parallel beta strand sandwiches between sets of helices, inhibited by its pro-domain. A C-terminal, accessory disulfide rich domain (DRD) is situated next to the catalytic domain forming a clover leaf of three sub-domains displaying clear pseudo-threefold axis. The DRD is loosely attached to the catalytic domain occluding a surface area of $1450\text{\AA}^2$ at the interface between the protease domain. Despite the relatively weak binding between the domains and the presence of a flexible linker between them, it seems likely that this is the physiological conformation of the

molecule as indicated by the solution and rigid body refinement of a structure at much lower resolution structure ($\sim 4.0\text{\AA}$) in an unrelated space group which exhibited the same conformation (data not shown). Both chains are well defined in the electron density with the backbone clearly traced between Thr61-Arg 682 of the 692 residues in the full length construct. The exceptions are residues of loops 168-175 and 213-219 in the protease domain, the linker residues between the protease and the DRD (449-452) and two loops of this domain (572-583, 660-672) which are undefined in the electron density. A calcium atom is located in one of the known calcium binding sights co-ordinate by the side chains of Asp360 and Thr335 and the carbonyl side chain interactions of Ala 328, Ala 330, Val 333 and Cys 358.

[0061] The structure is closely aligned in both sequence and structure to the Furin/Kexin/Subtilisin-like family of serine proteases. The structures of both murine Furin and yeast Kexin (Kex2) have been previously determined. As would be expected the structural homology between Kex2 and Furin is much closer (48% sequence identical) than that of PCSK9, (22 and 21% sequence identity respectively) with the root mean square deviations between Furin and Kex2 being to $0.95\text{\AA}$ (on 301 aligned Ca s) as opposed to 1.57 and $1.51\text{\AA}$ with PCSK9 (on 192 and 172 aligned Ca).

[0062] Seven of the characterized mammalian pro-protein convertases, including Furin and Kex2 show a preference for mono- and di-basic substrate residues at the S1 pocket of the enzyme whilst one other family member, PCSK8 (also known as SKI-1 and Site-1 protease) shows preference for non-basic substrate residues at the S1 pocket. The catalytic triad of PCSK9 (H224, S386 and D186) is conserved and completely superimposable with all serine protease active sites suggesting that in the absence of the inhibitory pro-domain, PCSK9 would be an active protease. The active site of PCSK9 contains the consensus sequence, GTS(A/V)(A/S)P, found in the S8B clan of proteases that contains the active serine nucleophile S386 with the exception that the C-terminal proline is substituted by an alanine and the traditionally aliphatic A/V residue is a glutamine. The DDG motif associated with the active site D384 is not conserved in PCSK9 showing instead a DTS motif and the HGTR, containing (H226), motif is altered at the C-terminal position by a histidine. Relative to the other members of the proprotein convertase family PCSK9 is an outlier, the only known physiologic substrate, the auto-processing sequence LVFAQISIPWN and structure suggest a preference in the P1 site for a glutamine or glutamic acid followed by hydrophobic residues in P2, P3 and P4. The active site of Furin is more occluded at the P1 position largely due to

the insertion of two loops relative to PCSK9. In contrast to the Kex2 proteases Asp306 at the bottom of the P1 pocket is substituted by a tyrosine residue (325) excluding the possibility of a non-basic P1 specificity for PCSK9. The inhibitory Gln152 from the pro-domain does not extend far into the S1 pocket but instead the side chain is directed to the side of the pocket by a side chain oxygen and main chain nitrogen (Asn317) hydrogen bond (2.7Å). An alanine positioned at the P2 position, of the prodomain peptide fits tightly within the hydrophobic lined S2 pocket suggesting a preference for a small residue. The site of the naturally occurring human loss-of-function mutation L253F is present in the catalytic S2 pocket suggesting that this highly conserved residue is essential for correct functioning of the molecule and is sensitive to mutation.

[0063] A number of structures of bacterial subtilisin-like proteases complexed with their prodomain inhibitors are publicly available. These proteins are expressed as a single chain with the pro-domain constituting the first 70 or so residues of the N-terminus. This pro-domain appears to be essential for proper folding of the intact molecule. Maturation of the protease is a two step process initiated by an auto-cleavage event whereby the immature protease cleaves itself, (at site LVFAQISIPWN in PCSK9) into a two chain molecule leaving the C-terminus of the pro-domain in the active site and the pro-domain attached to the head of the protease domain. The second maturation step is generally achieved via further proteolytic processing or a change in environmental stimulus, such as a change in pH or increase in Ca^{2+} concentration. The PCSK9 catalytic/pro-domain pair is structurally very similar to the bacterial structures (rmsds 1.59Å and 1.60Å with pdb ids 1scj and 1spb on 293 and 286 aligned Ca atoms respectively). An ordered motif at the N-terminal end of the PCSK9 pro-domain exists relative to the bacterial structures (aa 61-76). This serves to extend the central pro-domain beta sheet from four to five strands and to form a “cover” over the active site. These ancillary residues increase the occluded area between the two domains from 2180 Å² in the bacterial proteases to 2638 Å² in PCSK9 and contribute a number of additional interactions with the catalytic domain.

[0064] Other members of the subtilisin/kexin family have a conserved 150 residue P-domain mostly present in eukaryotic proprotein convertases/kexins. The presence of this domain appears to have arisen at the same time the protein's specificity for basic residues was established. The P-domain appears to be necessary for the correct functioning/folding of the protein. Of the two eukaryotic proteases solved furin and Kex2 both adopt the same

conformation for the 150 residues P-domain which exhibits a jelly roll like fold consisting of two four-stranded anti-parallel beta sheets with a single helix. As a result of its jelly roll beta structure the domain shares a loose topological homology to many beta-barrel structures. In contrast to this, PCSK-9 has a larger C-terminal domain of around 240 residues (residues 453-692) containing a large number of cysteine residues paired to form nine disulfide bonds. There are some similarities between the C-terminal domains from Furin and PCSK9 in that both contain jelly roll type structures. However, the C-terminal domain from PCSK9 consists of three, three-stranded beta domains arranged in a pseudo-threefold with no helices whereas the P-domain of furin has one four stranded anti-parallel beta sheet. In addition the disulfide rich C-terminal domain (DRD) of PCSK9 is positioned in a different orientation relative to the P-domain of Furin and does not appear to form the tight binding interface that Furin shares with its P-domain. Each of the sub-domains in the DRD of PCSK9 consists of three structurally conserved disulfide bonds, arranged such that the six cysteines are bonded in a 1-6,2-5,3-4 arrangement with a consensus pattern of C(aa18-20)C(aa9-10)C(aa23-26)C(aa18)CC within each sub-domain. Searching the human proteome for this pattern reveals a number of plasma proteins which display this motif. Domains from Fibronectin, the ADAM family of proteins and the urokinase type plasminogen Activator (uPA) receptor (uPA) contain the motif but do not exhibit the same fold. Other proprotein convertase family members also include the motif, proprotein convertase-5 and proprotein convertase-6, both basic paired proteases, contain only one instance. Indeed, excluding proteins from the extremely cysteine rich keratin family only PCSK9 and a hypothetical protein (genbank accession number XP_001133083.1) contain this motif exactly three times. Of those proteins found which match the cysteine pattern and whose structures are known, none are structurally homologous, with the exception of a remarkably similarity seen between one of the jelly roll “sub-domains” of the DRD and the C-terminal 70 residues of the structure of resistin (FIZZ3, pdb reference 1RHF), the only other six-stranded beta barrel known. Recently, the adipocytokine resistin has been linked with Type II diabetes and is thought to antagonize insulin secretion. The resistin protein is characterized by an approximately 30 residue three-stranded alpha helical coiled-coil topped by a 70 residue six-stranded beta strand jelly roll structure. This results in a homo-trimeric arrangement of the molecule with each monomer containing five disulfide bonds of which three are in the six stranded jelly role “head” domain. The remaining disulfides occur in the alpha helical coiled coil segment the N-

terminal disulfide contributing to an inter-chain disulfide responsible for the formation of resistin hexamers. In comparison to this, the DRD C-terminal domain of PCSK-9 contains two hundred and ten residues and forms a hetero-pseudotrimeric structure, completely structurally equivalent to the resistin homo-trimer but without the alpha helical "tails" of resistin. The sequence identity between the hetero- and homo-trimer is 15.28%, whereas a structural alignment over the whole hetero- versus homo-trimer produces an rmsd of 1.9Å on aligned C α atoms. This coupled with the identical positions of the disulfides within the primary sequence and the structure, insinuates that the two have an evolutionary relationship and indicates a receptor-like function for the DRD. The most obvious candidate region for interaction region being the head region containing the nine loops of the beta turns surrounding the deep cleft at the center of the pseudo-threefold. The topological arrangement of beta strands between the two molecules is identical but the loops connecting the beta strands to the head of the trimer in resistin of the molecule are conformationally divergent suggesting an alternative binding partner. An RGD primary sequence motif present in the P-domains (residues 496-498, RGE) is situated in the beta sheet of the second lobe of the first sub-domain of the DRD and is largely occluded from the solvent.

[0065] A number of genetic studies of naturally occurring variants of PCSK9 have indicated that loss-of-function results in the maintenance of very low plasma levels of LDL-c whilst gain-of-function mutations are associated with hypercholesterolemia and risk of coronary heart disease. If the general model that PCSK9 is responsible for plasma LDL-R levels and thus plasma LDL-c levels, then loss-of-function mutations can be linked with nonsense mutations or those mutation related to processing/folding/active site abnormalities within PCSK9 which thus increase levels of LDL-R. One example in the DRD is the nonsense mutation C679X; this mutation occurs in the penultimate disulfide bond suggesting a disruption in the folding pattern of the DRD and thus a loss-of-function from incorrect processing or folding of the molecule. Gain-of-function mutations are likely more diverse in their phenotypic action, the general hypothesis being that the mutations increase the binding affinity for substrates or decrease the affinity of pro-domain inhibitors thus providing a more active molecule. There are three main regions of gain-of-function mutations: one region at the negatively charged lip of the active site where D374T presumably increases the binding affinity for its substrate; one mutation in the prodomain S127R almost certainly increasing the susceptibility of the domain to cleavage by proteases such as furin; and one region at both

the front and back ends of the first sub-domain of the DRD. Those in the DRD are particularly interesting and validate the importance of the DRD in function. The two mutations R469W and F515L occur in the putative binding region of the DRD at the head of the domain within the first monomer of the hetero-trimer.

[0066] The structure of the present invention provides valuable insight into its specificity and function and the structural relationship to other cellular proteins, involved in similar interactions. Given the orientation of the DRD C-terminal domain and the enzymatic binding site it can be suggested that the C-terminal domain provides a means to localize the protease to the substrate molecule (LDL-R) or a receptor which localizes function, allowing the PCSK9 protease domain to facilitate degradation or removal of LDL-R. An alternative hypothesis would be the absence of proteolytic activity in PCSK9 altogether whereby binding of the DRD to the LDL-R (or other receptor) provides a signal to lower LDL-R levels. A non-proteolytic mechanism has been shown to exist in proteases of the trypsin family such as hepatocyte growth factor (HGF) whereby the protease has lost catalytic activity but functions as a growth factor receptor. An analogous situation may occur in PCSK9, with the exception that positive selection for the maintenance of the active site is apparent, as the protein must auto-cleave itself to enable the correct folding and secretion of the protein. This connection between structure and disease may be important to dissecting the complex pathway of PCSK9 in CHD.

Examples:

[0067] The following examples serve to illustrate the present invention but should not be construed as a limitation thereof.

Example 1

Expression and Crystallization of PCSK9

[0068] The full length DNA sequence encoding PCSK9 is amplified from a full length construct in the baculovirus expression vector pFastBac1 by PCR. The full length baculovirus construct includes a fused hexa-histidine C-terminal affinity tag and the honeybee mellitin secretion signal substituted for the native signal peptide. The forward primer (5'-CCC AAG CTT GCC GCC ACC ATG AAA TTC TTA GTC AAC-3') incorporates a 5' *HindIII* restriction site and Kozak sequence. The reverse primer (5'-GC

TCT AGA TCA GTG GTG GTG GTG GTG GTG GTG CTG GAG-3') includes a 3' *XbaI* restriction site and introduces a TGA stop codon. The amplified PCR product is purified, digested with *HindIII* and *XbaI*, and cloned into these respective sites of the pRS5a mammalian expression vector.

[0069] PCSK9 is expressed in a transient mammalian expression system. Two 500 mL HEK293 Freestyle (Invitrogen) suspension cultures at a density equal to 1×10^6 cells/mL are prepared in 1L vented shake flasks (Corning). The transfection mixture is prepared with 1 mg PCSK9 plasmid DNA and 1.5 mL 293fectin (Invitrogen). Each component is diluted separately in 50 mL OptiMEM I reduced serum free medium (Invitrogen). The 293fectin-OptiMEM I mixture is incubated for 5 minutes at room temperature before adding to the DNA-OptiMEM I mixture. The transfection mixture is incubated at room temperature for 30 minutes. 50 mL of the DNA-lipid complex is added to each HEK293 Freestyle suspension culture. Cultures are incubated at 37°C with 5% CO₂ on an orbital shaking platform at 125 rpm.

[0070] Forty-eight hours post-transfection, cultures are harvested by centrifugation at 1,200 rpm. The supernatant is reserved for affinity purification. Supernatant is loaded directly on to a 4 mL NiNTA (QIAGEN) gravity column equilibrated with 50 mM TrisHCl pH 7.4, 300 mM NaCl, 1 mM CaCl₂, 2 mM β-mercaptoethanol. The column is washed with 20 mL of equilibration buffer plus 20 mM imidazole. Bound PCSK9 is eluted in 12 mL of 50 mM TrisHCl pH 7.4, 250 mM imidazole, 300 mM NaCl, 1 mM CaCl₂, 2 mM β-mercaptoethanol. The protein is analyzed by SDS-PAGE and the identity verified by Western Blot with a PCSK9 specific antibody.

[0071] The eluted PCSK9 protein is subsequently dialyzed against 50 mM TrisHCl pH 7.4, 150 mM NaCl, 1 mM CaCl₂, 2 mM β-mercaptoethanol and concentrated to 10 mg/mL in a 30,000 MWCO spin concentrator (Amicon).

[0072] Sitting drop vapour diffusion crystallization trials are set up in low profile Greiner 96 well crystallization plates. A reservoir of 50μl of crystallization solution is added to the well reservoir whilst equal volumes of protein and crystallization solution (250nl) are added to the crystallization shelf. Crystals formed within 3 weeks in a variety conditions all involving 16-26% w/v PEG-8000 and a pH greater than about 8.0.

Example 2

Structure Determination of PCSK9

[0073] Data for the PCSK9 structure is collected at a synchrotron X-ray source or on a rotating anode system. Data are processed with standard data reduction packages such as Mosflm or HKL2000 and diffract in excess of 3.0Å resolution. The three dimensional structure is solved using the molecular replacement method using two ensembles of a pro-domain structure (PDB identification: 1scj and 1spb) and one containing five representatives from the subtilisin-like serine protease family (PDB identifications: 1cnm, 1sh7, 2b6n, 1p8j, 1r64) and all data to 4.0Å resolution. The structure is then built and refined until convergence with the crystallographic refinement program Refmac5.

[0074] The structure coordinates obtained from a PCSK9 crystal of the invention are detailed in Table 1, *infra*. Data collection and refinement statistics for a crystal of the invention are detailed in table 2, *infra*.

Example 3

Assay of PCSK9 Activity

[0075] Cell-based assays can be used for screening “loss of PCSK9 function” mediated by small molecule or polypeptides. The following list of cell-based assay strategies are applied to screen small molecule or polypeptides (therapeutic antibodies) that suppress PCSK9 function in low density lipoprotein receptor (LDLR) down-regulation: (1) PCSK9 secretion assay; (2) LDLR assay with adenoviral expression of PCSK9 or with exogenously added PCSK9 protein; (3) LDL-C uptake assay with adenoviral expression of PCSK9 or with exogenously added PCSK9 protein.

[0076] (1) PCSK9 secretion assay: This assay is based on evidence that secreted PCSK9 plays an important role in LDLR down-regulation and only the auto-processed PCSK9 is secreted. Therefore, inhibition of PCSK9 auto-processing and/or the subsequent intracellular trafficking will reduce the level of PCSK9 secreted into medium. To enable a high throughput screen, HTRF readouts have been established to detect secreted PCSK9-His-Strep-3xFlag using anti-His^{Eu}/anti-Flag^{XL} or using anti-Pcsk9^{Cy5}/anti-His^{Eu}. Stable HEK293 and HepG2 cell lines constitutively expressing this PCSK fusion construct are generated and used for small molecule inhibitor screening.

[0077] (2) LDLR assay with adenoviral expression of PCSK9 or with exogenously added PCSK9 protein: PCSK9 exerts its function in lipid regulation mainly

by down-regulating hepatic LDLR level as shown with in vivo mouse studies using adenoviral expression or parabiosis. In cultured hepatocytes such as HepG2, either adenoviral expression of PCSK9 or addition of isolated PCSK9 protein decreases total intracellular or surface level of LDLR. The change in LDLR level has been detected by ELISA, flow cytometry, immunofluorescence or other traditional methods. To support small molecule and polypeptide screening, HTRF readout has been established for endogenous LDLR as well as for the HA-Strep-His-LDLR fusion protein. The LDLR-HTRF assay is being used to screen small molecule and polypeptide inhibitors using the native HepG2 or a HEK293 clone constitutively expressing HA-Strep-His-LDLR.

[0078] (3) LDL-C uptake assay with adenoviral expression of PCSK9 or with exogenously added PCSK9 protein: LDLR is the major cellular receptor that internalizes the circulating LDL-C. The level of LDL-C uptake correlates well with the total or surface level of LDLR. Therefore, LDL-C uptake is used as the surrogate confirmation readout for regulation of LDLR mediated by PCSK9 expression or recombinant PCSK9 protein. Human or mouse hepatocytes are infected by adenovirus to endogenously express PCSK9 or incubated with exogenously added PCSK9 protein prior to exposure to LDL-Dil. The cells are then washed and subjected to FACS measurement for the internalized LDL-Dil.

Table 1

[0079] From left to right the columns of table 1 detail the atom number, the atom (for example nitrogen (N), and the like), the three dimensional amino acid code (for example, Threonine (THR), and the like), chain identifier (A, B, C, and the like; W for water molecules, residue number, 3 dimensional coordinates (next 3 columns), occupancy and atomic displacement factors.

ATOM	1	N	THR	A	61	46.124	28.260	51.047	1.00	40.07
ATOM	2	CA	THR	A	61	45.734	28.183	49.607	1.00	40.27
ATOM	4	CB	THR	A	61	46.472	26.973	48.861	1.00	42.02
ATOM	6	OG1	THR	A	61	46.374	25.761	49.638	1.00	47.94
ATOM	8	CG2	THR	A	61	47.947	27.272	48.598	1.00	44.99
ATOM	12	C	THR	A	61	44.196	28.074	49.375	1.00	35.75
ATOM	13	O	THR	A	61	43.765	27.962	48.221	1.00	37.30
ATOM	17	N	ALA	A	62	43.370	28.055	50.424	1.00	30.10
ATOM	18	CA	ALA	A	62	41.922	27.828	50.210	1.00	27.58
ATOM	20	CB	ALA	A	62	41.241	27.287	51.447	1.00	28.06
ATOM	24	C	ALA	A	62	41.274	29.133	49.813	1.00	25.74
ATOM	25	O	ALA	A	62	41.530	30.139	50.457	1.00	21.65

ATOM	27	N	THR	A	63	40.450	29.132	48.759	1.00	22.80
ATOM	28	CA	THR	A	63	39.885	30.379	48.258	1.00	21.63
ATOM	30	CB	THR	A	63	40.441	30.689	46.821	1.00	21.88
ATOM	32	OG1	THR	A	63	40.197	29.561	45.970	1.00	19.67
ATOM	34	CG2	THR	A	63	41.975	30.996	46.902	1.00	20.54
ATOM	38	C	THR	A	63	38.359	30.345	48.236	1.00	19.79
ATOM	39	O	THR	A	63	37.735	29.293	48.230	1.00	16.19
ATOM	41	N	PHE	A	64	37.765	31.521	48.192	1.00	18.87
ATOM	42	CA	PHE	A	64	36.330	31.672	48.180	1.00	18.58
ATOM	44	CB	PHE	A	64	35.921	32.631	49.300	1.00	18.73
ATOM	47	CG	PHE	A	64	34.455	32.909	49.347	1.00	19.19
ATOM	48	CD1	PHE	A	64	33.527	31.876	49.323	1.00	17.66
ATOM	50	CE1	PHE	A	64	32.148	32.148	49.351	1.00	14.67
ATOM	52	CZ	PHE	A	64	31.708	33.458	49.374	1.00	18.59
ATOM	54	CE2	PHE	A	64	32.614	34.493	49.369	1.00	16.94
ATOM	56	CD2	PHE	A	64	33.977	34.239	49.359	1.00	18.27
ATOM	58	C	PHE	A	64	35.873	32.282	46.843	1.00	20.49
ATOM	59	O	PHE	A	64	36.534	33.192	46.291	1.00	22.00
ATOM	61	N	HIS	A	65	34.721	31.841	46.370	1.00	17.01
ATOM	62	CA	HIS	A	65	34.196	32.293	45.126	1.00	18.21
ATOM	64	CB	HIS	A	65	34.542	31.301	44.004	1.00	17.04
ATOM	67	CG	HIS	A	65	35.993	30.972	43.932	1.00	21.26
ATOM	68	ND1	HIS	A	65	36.900	31.738	43.236	1.00	21.01
ATOM	70	CE1	HIS	A	65	38.110	31.233	43.395	1.00	22.80
ATOM	72	NE2	HIS	A	65	38.022	30.171	44.178	1.00	18.66
ATOM	74	CD2	HIS	A	65	36.711	30.001	44.544	1.00	23.03
ATOM	76	C	HIS	A	65	32.715	32.424	45.200	1.00	18.13
ATOM	77	O	HIS	A	65	32.023	31.563	45.754	1.00	19.70
ATOM	79	N	ARG	A	66	32.204	33.473	44.587	1.00	16.77
ATOM	80	CA	ARG	A	66	30.789	33.587	44.403	1.00	17.07
ATOM	82	CB	ARG	A	66	30.160	34.401	45.521	1.00	18.51
ATOM	85	CG	ARG	A	66	30.499	35.849	45.495	1.00	19.27
ATOM	88	CD	ARG	A	66	30.107	36.382	46.807	1.00	22.69
ATOM	91	NE	ARG	A	66	30.129	37.812	46.886	1.00	24.76
ATOM	93	CZ	ARG	A	66	30.034	38.463	48.048	1.00	29.10
ATOM	94	NH1	ARG	A	66	29.952	37.804	49.224	1.00	30.76
ATOM	97	NH2	ARG	A	66	30.039	39.760	48.025	1.00	25.28
ATOM	100	C	ARG	A	66	30.461	34.208	43.061	1.00	17.38
ATOM	101	O	ARG	A	66	31.298	34.784	42.419	1.00	17.97
ATOM	103	N	CYS	A	67	29.216	34.039	42.679	1.00	18.77
ATOM	104	CA	CYS	A	67	28.754	34.350	41.349	1.00	19.72
ATOM	106	CB	CYS	A	67	27.304	33.939	41.194	1.00	19.83
ATOM	109	SG	CYS	A	67	26.668	34.117	39.563	1.00	22.90
ATOM	111	C	CYS	A	67	28.949	35.841	41.136	1.00	19.21
ATOM	112	O	CYS	A	67	28.659	36.661	42.023	1.00	19.12
ATOM	114	N	ALA	A	68	29.546	36.155	39.989	1.00	19.35
ATOM	115	CA	ALA	A	68	29.768	37.547	39.557	1.00	21.27
ATOM	117	CB	ALA	A	68	30.692	37.567	38.367	1.00	18.69
ATOM	121	C	ALA	A	68	28.458	38.234	39.191	1.00	21.44
ATOM	122	O	ALA	A	68	28.364	39.453	39.266	1.00	22.05
ATOM	124	N	LYS	A	69	27.473	37.467	38.726	1.00	23.30
ATOM	125	CA	LYS	A	69	26.148	37.998	38.386	1.00	24.17
ATOM	127	CB	LYS	A	69	25.406	37.100	37.379	1.00	26.65
ATOM	130	CG	LYS	A	69	26.163	36.723	36.100	1.00	32.44
ATOM	133	CD	LYS	A	69	25.743	37.555	34.898	1.00	39.94
ATOM	136	CE	LYS	A	69	26.635	37.283	33.656	1.00	38.40
ATOM	139	NZ	LYS	A	69	26.973	38.572	33.008	1.00	34.53
ATOM	143	C	LYS	A	69	25.397	38.051	39.697	1.00	24.94
ATOM	144	O	LYS	A	69	24.807	37.058	40.127	1.00	22.43
ATOM	146	N	ASP	A	70	25.431	39.207	40.358	1.00	24.62
ATOM	147	CA	ASP	A	70	24.951	39.305	41.739	1.00	26.48

ATOM	149	CB	ASP	A	70	25.096	40.745	42.294	1.00	27.40
ATOM	152	CG	ASP	A	70	25.299	40.780	43.806	1.00	31.37
ATOM	153	OD1	ASP	A	70	26.377	40.350	44.288	1.00	33.70
ATOM	154	OD2	ASP	A	70	24.409	41.282	44.503	1.00	35.38
ATOM	155	C	ASP	A	70	23.519	38.797	41.939	1.00	25.68
ATOM	156	O	ASP	A	70	23.272	38.099	42.926	1.00	25.70
ATOM	158	N	PRO	A	71	22.587	39.094	41.009	1.00	26.11
ATOM	159	CA	PRO	A	71	21.204	38.592	41.158	1.00	25.50
ATOM	161	CB	PRO	A	71	20.498	39.125	39.894	1.00	24.92
ATOM	164	CG	PRO	A	71	21.362	40.245	39.412	1.00	28.03
ATOM	167	CD	PRO	A	71	22.738	39.873	39.762	1.00	26.69
ATOM	170	C	PRO	A	71	21.064	37.067	41.189	1.00	24.59
ATOM	171	O	PRO	A	71	20.040	36.555	41.651	1.00	26.36
ATOM	172	N	TRP	A	72	22.076	36.349	40.706	1.00	22.35
ATOM	173	CA	TRP	A	72	21.984	34.887	40.601	1.00	20.96
ATOM	175	CB	TRP	A	72	22.669	34.438	39.354	1.00	22.05
ATOM	178	CG	TRP	A	72	21.976	34.904	38.113	1.00	21.32
ATOM	179	CD1	TRP	A	72	20.777	35.555	38.021	1.00	23.10
ATOM	181	NE1	TRP	A	72	20.468	35.785	36.713	1.00	24.49
ATOM	183	CE2	TRP	A	72	21.452	35.251	35.926	1.00	23.62
ATOM	184	CD2	TRP	A	72	22.418	34.692	36.783	1.00	23.69
ATOM	185	CE3	TRP	A	72	23.520	34.059	36.225	1.00	20.82
ATOM	187	CZ3	TRP	A	72	23.658	34.054	34.858	1.00	25.03
ATOM	189	CH2	TRP	A	72	22.691	34.620	34.037	1.00	24.58
ATOM	191	CZ2	TRP	A	72	21.579	35.214	34.551	1.00	26.39
ATOM	193	C	TRP	A	72	22.579	34.176	41.802	1.00	20.82
ATOM	194	O	TRP	A	72	22.515	32.952	41.894	1.00	19.40
ATOM	196	N	ARG	A	73	23.156	34.952	42.710	1.00	19.01
ATOM	197	CA	ARG	A	73	23.741	34.417	43.927	1.00	20.90
ATOM	199	CB	ARG	A	73	24.528	35.503	44.643	1.00	20.26
ATOM	202	CG	ARG	A	73	25.732	36.060	43.893	1.00	20.50
ATOM	205	CD	ARG	A	73	26.345	37.219	44.679	1.00	22.84
ATOM	208	NE	ARG	A	73	26.510	36.851	46.098	1.00	20.75
ATOM	210	CZ	ARG	A	73	26.513	37.716	47.099	1.00	24.89
ATOM	211	NH1	ARG	A	73	26.648	37.296	48.347	1.00	21.53
ATOM	214	NH2	ARG	A	73	26.416	39.007	46.868	1.00	23.83
ATOM	217	C	ARG	A	73	22.666	33.889	44.877	1.00	20.94
ATOM	218	O	ARG	A	73	21.566	34.384	44.886	1.00	19.47
ATOM	220	N	LEU	A	74	23.016	32.886	45.688	1.00	22.01
ATOM	221	CA	LEU	A	74	22.134	32.331	46.698	1.00	23.08
ATOM	223	CB	LEU	A	74	21.636	30.939	46.274	1.00	23.51
ATOM	226	CG	LEU	A	74	20.786	30.909	44.997	1.00	23.71
ATOM	228	CD1	LEU	A	74	20.561	29.477	44.579	1.00	21.07
ATOM	232	CD2	LEU	A	74	19.409	31.649	45.175	1.00	19.29
ATOM	236	C	LEU	A	74	22.919	32.237	47.996	1.00	23.33
ATOM	237	O	LEU	A	74	23.330	31.154	48.406	1.00	24.13
ATOM	239	N	PRO	A	75	23.133	33.383	48.652	1.00	24.14
ATOM	240	CA	PRO	A	75	23.889	33.481	49.882	1.00	24.26
ATOM	242	CB	PRO	A	75	23.693	34.943	50.315	1.00	24.21
ATOM	245	CG	PRO	A	75	23.171	35.658	49.145	1.00	24.55
ATOM	248	CD	PRO	A	75	22.600	34.686	48.203	1.00	24.14
ATOM	251	C	PRO	A	75	23.288	32.564	50.940	1.00	24.53
ATOM	252	O	PRO	A	75	22.093	32.250	50.887	1.00	25.54
ATOM	253	N	GLY	A	76	24.109	32.125	51.871	1.00	22.90
ATOM	254	CA	GLY	A	76	23.636	31.281	52.950	1.00	23.50
ATOM	257	C	GLY	A	76	23.802	29.794	52.720	1.00	22.12
ATOM	258	O	GLY	A	76	23.574	29.032	53.639	1.00	20.23
ATOM	260	N	THR	A	77	24.178	29.368	51.504	1.00	21.36
ATOM	261	CA	THR	A	77	24.510	27.951	51.241	1.00	20.60
ATOM	263	CB	THR	A	77	23.401	27.275	50.453	1.00	22.94
ATOM	265	OG1	THR	A	77	22.176	27.409	51.177	1.00	26.25

ATOM	267	CG2	THR	A	77	23.700	25.773	50.207	1.00	25.19
ATOM	271	C	THR	A	77	25.788	27.936	50.448	1.00	19.96
ATOM	272	O	THR	A	77	25.936	28.746	49.532	1.00	15.71
ATOM	274	N	TYR	A	78	26.721	27.071	50.837	1.00	17.04
ATOM	275	CA	TYR	A	78	28.072	27.047	50.328	1.00	17.28
ATOM	277	CB	TYR	A	78	29.057	27.619	51.373	1.00	19.45
ATOM	280	CG	TYR	A	78	28.711	29.024	51.682	1.00	19.64
ATOM	281	CD1	TYR	A	78	29.234	30.068	50.900	1.00	21.78
ATOM	283	CE1	TYR	A	78	28.858	31.375	51.114	1.00	21.39
ATOM	285	CZ	TYR	A	78	27.996	31.696	52.140	1.00	21.66
ATOM	286	OH	TYR	A	78	27.688	33.047	52.299	1.00	24.77
ATOM	288	CE2	TYR	A	78	27.455	30.700	52.946	1.00	19.70
ATOM	290	CD2	TYR	A	78	27.805	29.346	52.696	1.00	24.39
ATOM	292	C	TYR	A	78	28.453	25.620	49.984	1.00	17.56
ATOM	293	O	TYR	A	78	28.123	24.666	50.729	1.00	15.34
ATOM	295	N	VAL	A	79	29.119	25.482	48.843	1.00	16.89
ATOM	296	CA	VAL	A	79	29.737	24.234	48.431	1.00	16.96
ATOM	298	CB	VAL	A	79	29.566	24.005	46.905	1.00	15.47
ATOM	300	CG1	VAL	A	79	30.168	22.691	46.501	1.00	17.82
ATOM	304	CG2	VAL	A	79	28.104	24.012	46.524	1.00	19.40
ATOM	308	C	VAL	A	79	31.211	24.250	48.836	1.00	16.73
ATOM	309	O	VAL	A	79	32.008	25.103	48.365	1.00	18.86
ATOM	311	N	VAL	A	80	31.579	23.336	49.728	1.00	14.56
ATOM	312	CA	VAL	A	80	32.903	23.254	50.260	1.00	15.07
ATOM	314	CB	VAL	A	80	32.942	23.019	51.786	1.00	16.71
ATOM	316	CG1	VAL	A	80	34.416	22.833	52.279	1.00	14.49
ATOM	320	CG2	VAL	A	80	32.271	24.198	52.502	1.00	18.68
ATOM	324	C	VAL	A	80	33.578	22.180	49.495	1.00	17.77
ATOM	325	O	VAL	A	80	33.159	20.993	49.547	1.00	17.28
ATOM	327	N	VAL	A	81	34.557	22.600	48.689	1.00	15.64
ATOM	328	CA	VAL	A	81	35.246	21.675	47.838	1.00	17.24
ATOM	330	CB	VAL	A	81	35.400	22.200	46.415	1.00	18.07
ATOM	332	CG1	VAL	A	81	36.092	21.156	45.580	1.00	17.37
ATOM	336	CG2	VAL	A	81	34.026	22.652	45.855	1.00	16.77
ATOM	340	C	VAL	A	81	36.592	21.349	48.411	1.00	17.70
ATOM	341	O	VAL	A	81	37.418	22.219	48.659	1.00	17.75
ATOM	343	N	LEU	A	82	36.817	20.056	48.627	1.00	19.11
ATOM	344	CA	LEU	A	82	38.032	19.607	49.255	1.00	18.52
ATOM	346	CB	LEU	A	82	37.729	18.517	50.276	1.00	18.66
ATOM	349	CG	LEU	A	82	36.703	18.851	51.369	1.00	18.46
ATOM	351	CD1	LEU	A	82	36.510	17.700	52.321	1.00	21.45
ATOM	355	CD2	LEU	A	82	37.058	20.116	52.120	1.00	20.91
ATOM	359	C	LEU	A	82	39.020	19.154	48.188	1.00	19.65
ATOM	360	O	LEU	A	82	38.642	18.986	47.042	1.00	19.85
ATOM	362	N	LYS	A	83	40.276	18.954	48.565	1.00	20.15
ATOM	363	CA	LYS	A	83	41.318	18.645	47.606	1.00	24.36
ATOM	365	CB	LYS	A	83	42.704	18.715	48.244	1.00	26.15
ATOM	368	CG	LYS	A	83	43.128	20.153	48.628	1.00	31.52
ATOM	371	CD	LYS	A	83	44.236	20.093	49.673	1.00	35.75
ATOM	374	CE	LYS	A	83	44.766	21.468	50.058	1.00	39.37
ATOM	377	NZ	LYS	A	83	45.177	21.428	51.529	1.00	43.52
ATOM	381	C	LYS	A	83	41.059	17.284	47.006	1.00	25.08
ATOM	382	O	LYS	A	83	40.482	16.440	47.652	1.00	22.66
ATOM	384	N	GLU	A	84	41.472	17.123	45.757	1.00	27.88
ATOM	385	CA	GLU	A	84	41.138	15.982	44.902	1.00	31.24
ATOM	387	CB	GLU	A	84	42.116	15.979	43.718	1.00	31.58
ATOM	390	CG	GLU	A	84	41.916	14.831	42.745	1.00	38.76
ATOM	393	CD	GLU	A	84	42.379	15.166	41.324	1.00	48.02
ATOM	394	OE1	GLU	A	84	42.520	16.376	40.999	1.00	51.76
ATOM	395	OE2	GLU	A	84	42.579	14.213	40.530	1.00	50.52
ATOM	396	C	GLU	A	84	41.166	14.596	45.542	1.00	31.83

ATOM	397	O	GLU	A	84	40.267	13.775	45.337	1.00	34.86
ATOM	399	N	GLU	A	85	42.199	14.301	46.282	1.00	32.26
ATOM	400	CA	GLU	A	85	42.347	12.914	46.760	1.00	33.71
ATOM	402	CB	GLU	A	85	43.831	12.534	46.751	1.00	34.02
ATOM	405	CG	GLU	A	85	44.447	12.504	45.302	1.00	40.71
ATOM	408	CD	GLU	A	85	45.922	12.993	45.235	1.00	40.42
ATOM	409	OE1	GLU	A	85	46.183	14.237	45.290	1.00	50.83
ATOM	410	OE2	GLU	A	85	46.822	12.121	45.104	1.00	53.51
ATOM	411	C	GLU	A	85	41.652	12.697	48.128	1.00	28.90
ATOM	412	O	GLU	A	85	41.686	11.610	48.704	1.00	29.09
ATOM	414	N	THR	A	86	40.945	13.710	48.607	1.00	24.66
ATOM	415	CA	THR	A	86	40.237	13.605	49.890	1.00	22.50
ATOM	417	CB	THR	A	86	39.556	14.916	50.257	1.00	21.92
ATOM	419	OG1	THR	A	86	40.543	15.960	50.191	1.00	19.83
ATOM	421	CG2	THR	A	86	38.971	14.819	51.642	1.00	21.98
ATOM	425	C	THR	A	86	39.205	12.484	49.877	1.00	21.35
ATOM	426	O	THR	A	86	38.409	12.351	48.938	1.00	18.96
ATOM	428	N	HIS	A	87	39.224	11.692	50.938	1.00	19.62
ATOM	429	CA	HIS	A	87	38.349	10.537	51.054	1.00	20.66
ATOM	431	CB	HIS	A	87	39.037	9.445	51.879	1.00	19.67
ATOM	434	CG	HIS	A	87	38.345	8.126	51.827	1.00	21.72
ATOM	435	ND1	HIS	A	87	37.291	7.792	52.657	1.00	25.25
ATOM	437	CE1	HIS	A	87	36.896	6.558	52.392	1.00	24.05
ATOM	439	NE2	HIS	A	87	37.646	6.087	51.406	1.00	19.08
ATOM	441	CD2	HIS	A	87	38.567	7.043	51.043	1.00	21.68
ATOM	443	C	HIS	A	87	37.024	10.911	51.702	1.00	20.82
ATOM	444	O	HIS	A	87	36.948	11.837	52.543	1.00	21.25
ATOM	446	N	LEU	A	88	35.959	10.212	51.309	1.00	18.24
ATOM	447	CA	LEU	A	88	34.640	10.451	51.886	1.00	18.74
ATOM	449	CB	LEU	A	88	33.681	9.348	51.476	1.00	19.56
ATOM	452	CG	LEU	A	88	32.306	9.458	52.083	1.00	17.20
ATOM	454	CD1	LEU	A	88	31.669	10.841	51.823	1.00	14.60
ATOM	458	CD2	LEU	A	88	31.413	8.319	51.566	1.00	18.58
ATOM	462	C	LEU	A	88	34.672	10.552	53.425	1.00	19.42
ATOM	463	O	LEU	A	88	33.990	11.388	54.006	1.00	17.71
ATOM	465	N	SER	A	89	35.397	9.658	54.088	1.00	19.06
ATOM	466	CA	SER	A	89	35.481	9.704	55.548	1.00	19.73
ATOM	468	CB	SER	A	89	36.348	8.569	56.084	1.00	19.70
ATOM	471	OG	SER	A	89	35.636	7.347	56.051	1.00	22.04
ATOM	473	C	SER	A	89	36.074	11.040	56.023	1.00	19.99
ATOM	474	O	SER	A	89	35.629	11.599	57.033	1.00	21.65
ATOM	476	N	GLN	A	90	37.073	11.533	55.305	1.00	19.97
ATOM	477	CA	GLN	A	90	37.695	12.810	55.642	1.00	21.64
ATOM	479	CB	GLN	A	90	39.001	13.012	54.880	1.00	22.89
ATOM	482	CG	GLN	A	90	40.092	11.990	55.190	1.00	24.91
ATOM	485	CD	GLN	A	90	41.258	12.077	54.224	1.00	24.49
ATOM	486	OE1	GLN	A	90	41.103	11.958	53.014	1.00	23.77
ATOM	487	NE2	GLN	A	90	42.434	12.302	54.763	1.00	30.91
ATOM	490	C	GLN	A	90	36.703	13.942	55.361	1.00	21.04
ATOM	491	O	GLN	A	90	36.609	14.879	56.145	1.00	21.41
ATOM	493	N	SER	A	91	35.924	13.865	54.275	1.00	19.52
ATOM	494	CA	SER	A	91	34.898	14.893	53.989	1.00	17.58
ATOM	496	CB	SER	A	91	34.226	14.662	52.604	1.00	18.24
ATOM	499	OG	SER	A	91	35.197	14.633	51.574	1.00	17.59
ATOM	501	C	SER	A	91	33.835	14.978	55.076	1.00	19.62
ATOM	502	O	SER	A	91	33.452	16.075	55.532	1.00	18.65
ATOM	504	N	GLU	A	92	33.360	13.820	55.516	1.00	19.15
ATOM	505	CA	GLU	A	92	32.367	13.776	56.562	1.00	19.86
ATOM	507	CB	GLU	A	92	31.879	12.330	56.758	1.00	19.73
ATOM	510	CG	GLU	A	92	31.041	11.837	55.646	1.00	21.15
ATOM	513	CD	GLU	A	92	30.666	10.339	55.740	1.00	23.18

ATOM	514	OE1	GLU	A	92	31.281	9.605	56.544	1.00	21.93
ATOM	515	OE2	GLU	A	92	29.751	9.917	54.981	1.00	29.46
ATOM	516	C	GLU	A	92	32.929	14.338	57.872	1.00	20.32
ATOM	517	O	GLU	A	92	32.251	15.089	58.566	1.00	21.04
ATOM	519	N	ARG	A	93	34.155	13.950	58.215	1.00	20.28
ATOM	520	CA	ARG	A	93	34.786	14.465	59.405	1.00	22.23
ATOM	522	CB	ARG	A	93	36.118	13.788	59.641	1.00	22.64
ATOM	525	CG	ARG	A	93	35.936	12.388	60.186	1.00	25.89
ATOM	528	CD	ARG	A	93	37.230	11.630	60.193	1.00	34.60
ATOM	531	NE	ARG	A	93	36.985	10.197	60.093	1.00	41.42
ATOM	533	CZ	ARG	A	93	37.860	9.317	59.615	1.00	44.83
ATOM	534	NH1	ARG	A	93	39.049	9.710	59.154	1.00	47.13
ATOM	537	NH2	ARG	A	93	37.528	8.028	59.581	1.00	46.63
ATOM	540	C	ARG	A	93	34.991	15.967	59.310	1.00	21.23
ATOM	541	O	ARG	A	93	34.844	16.663	60.287	1.00	20.77
ATOM	543	N	THR	A	94	35.348	16.450	58.132	1.00	21.12
ATOM	544	CA	THR	A	94	35.514	17.905	57.932	1.00	21.24
ATOM	546	CB	THR	A	94	36.188	18.194	56.631	1.00	21.22
ATOM	548	OG1	THR	A	94	37.481	17.597	56.669	1.00	21.29
ATOM	550	CG2	THR	A	94	36.346	19.720	56.431	1.00	20.81
ATOM	554	C	THR	A	94	34.202	18.658	58.089	1.00	19.88
ATOM	555	O	THR	A	94	34.156	19.715	58.739	1.00	22.72
ATOM	557	N	ALA	A	95	33.119	18.103	57.578	1.00	17.95
ATOM	558	CA	ALA	A	95	31.810	18.672	57.781	1.00	19.53
ATOM	560	CB	ALA	A	95	30.756	17.902	57.019	1.00	18.04
ATOM	564	C	ALA	A	95	31.436	18.751	59.244	1.00	21.80
ATOM	565	O	ALA	A	95	30.897	19.757	59.681	1.00	24.23
ATOM	567	N	ARG	A	96	31.668	17.666	59.978	1.00	22.17
ATOM	568	CA	ARG	A	96	31.364	17.613	61.392	1.00	23.01
ATOM	570	CB	ARG	A	96	31.642	16.204	61.969	1.00	25.38
ATOM	573	CG	ARG	A	96	30.864	15.056	61.307	1.00	31.81
ATOM	576	CD	ARG	A	96	29.474	15.434	60.700	1.00	40.78
ATOM	579	NE	ARG	A	96	29.210	14.700	59.449	1.00	43.63
ATOM	581	CZ	ARG	A	96	28.140	14.830	58.673	1.00	41.98
ATOM	582	NH1	ARG	A	96	27.138	15.648	58.995	1.00	40.63
ATOM	585	NH2	ARG	A	96	28.067	14.098	57.560	1.00	43.83
ATOM	588	C	ARG	A	96	32.200	18.619	62.144	1.00	20.36
ATOM	589	O	ARG	A	96	31.697	19.257	63.029	1.00	23.81
ATOM	591	N	ARG	A	97	33.459	18.765	61.781	1.00	21.26
ATOM	592	CA	ARG	A	97	34.335	19.698	62.434	1.00	22.35
ATOM	594	CB	ARG	A	97	35.723	19.549	61.885	1.00	24.23
ATOM	597	CG	ARG	A	97	36.744	20.409	62.572	1.00	30.00
ATOM	600	CD	ARG	A	97	38.081	20.151	61.974	1.00	40.83
ATOM	603	NE	ARG	A	97	39.043	21.121	62.485	1.00	49.89
ATOM	605	CZ	ARG	A	97	39.808	20.946	63.559	1.00	52.36
ATOM	606	NH1	ARG	A	97	39.782	19.803	64.247	1.00	56.64
ATOM	609	NH2	ARG	A	97	40.639	21.913	63.927	1.00	53.15
ATOM	612	C	ARG	A	97	33.803	21.117	62.278	1.00	23.46
ATOM	613	O	ARG	A	97	33.674	21.849	63.255	1.00	22.37
ATOM	615	N	LEU	A	98	33.434	21.481	61.052	1.00	22.70
ATOM	616	CA	LEU	A	98	32.786	22.755	60.787	1.00	21.01
ATOM	618	CB	LEU	A	98	32.398	22.825	59.298	1.00	20.40
ATOM	621	CG	LEU	A	98	31.662	24.097	58.945	1.00	21.66
ATOM	623	CD1	LEU	A	98	32.512	25.329	59.478	1.00	18.63
ATOM	627	CD2	LEU	A	98	31.415	24.106	57.454	1.00	21.66
ATOM	631	C	LEU	A	98	31.554	22.984	61.655	1.00	22.15
ATOM	632	O	LEU	A	98	31.392	24.054	62.267	1.00	22.68
ATOM	634	N	GLN	A	99	30.673	22.002	61.740	1.00	21.87
ATOM	635	CA	GLN	A	99	29.437	22.180	62.497	1.00	23.30
ATOM	637	CB	GLN	A	99	28.536	20.976	62.366	1.00	24.75
ATOM	640	CG	GLN	A	99	27.944	20.735	60.978	1.00	27.62

ATOM	643	CD	GLN	A	99	26.695	19.915	61.074	1.00	30.39
ATOM	644	OE1	GLN	A	99	26.760	18.696	61.274	1.00	28.23
ATOM	645	NE2	GLN	A	99	25.539	20.571	60.950	1.00	29.68
ATOM	648	C	GLN	A	99	29.746	22.382	63.976	1.00	23.44
ATOM	649	O	GLN	A	99	29.045	23.121	64.647	1.00	25.44
ATOM	651	N	ALA	A	100	30.764	21.682	64.469	1.00	25.47
ATOM	652	CA	ALA	A	100	31.208	21.793	65.874	1.00	26.77
ATOM	654	CB	ALA	A	100	32.207	20.707	66.207	1.00	25.56
ATOM	658	C	ALA	A	100	31.829	23.159	66.140	1.00	27.48
ATOM	659	O	ALA	A	100	31.506	23.814	67.114	1.00	25.92
ATOM	661	N	GLN	A	101	32.750	23.558	65.268	1.00	28.11
ATOM	662	CA	GLN	A	101	33.402	24.867	65.370	1.00	28.47
ATOM	664	CB	GLN	A	101	34.500	24.997	64.338	1.00	28.73
ATOM	667	CG	GLN	A	101	35.713	24.157	64.649	1.00	28.34
ATOM	670	CD	GLN	A	101	36.786	24.288	63.618	1.00	32.66
ATOM	671	OE1	GLN	A	101	36.598	24.960	62.607	1.00	34.10
ATOM	672	NE2	GLN	A	101	37.939	23.649	63.857	1.00	37.34
ATOM	675	C	GLN	A	101	32.403	25.991	65.230	1.00	28.38
ATOM	676	O	GLN	A	101	32.513	27.011	65.919	1.00	31.09
ATOM	678	N	ALA	A	102	31.415	25.810	64.364	1.00	26.27
ATOM	679	CA	ALA	A	102	30.315	26.776	64.221	1.00	26.30
ATOM	681	CB	ALA	A	102	29.428	26.416	63.008	1.00	24.45
ATOM	685	C	ALA	A	102	29.467	26.876	65.490	1.00	28.17
ATOM	686	O	ALA	A	102	29.185	27.967	65.988	1.00	27.47
ATOM	688	N	ALA	A	103	29.029	25.722	65.983	1.00	30.23
ATOM	689	CA	ALA	A	103	28.211	25.620	67.195	1.00	31.50
ATOM	691	CB	ALA	A	103	27.912	24.154	67.552	1.00	31.13
ATOM	695	C	ALA	A	103	28.877	26.275	68.359	1.00	32.17
ATOM	696	O	ALA	A	103	28.205	26.887	69.149	1.00	33.96
ATOM	698	N	ARG	A	104	30.184	26.153	68.462	1.00	34.27
ATOM	699	CA	ARG	A	104	30.929	26.792	69.538	1.00	37.26
ATOM	701	CB	ARG	A	104	32.380	26.316	69.552	1.00	37.13
ATOM	704	CG	ARG	A	104	32.542	24.885	70.031	1.00	40.21
ATOM	707	CD	ARG	A	104	34.011	24.570	70.346	1.00	43.53
ATOM	710	NE	ARG	A	104	34.613	23.629	69.386	1.00	50.51
ATOM	712	CZ	ARG	A	104	35.491	23.932	68.425	1.00	53.48
ATOM	713	NH1	ARG	A	104	35.921	25.185	68.212	1.00	52.59
ATOM	716	NH2	ARG	A	104	35.938	22.949	67.649	1.00	54.70
ATOM	719	C	ARG	A	104	30.907	28.314	69.405	1.00	36.44
ATOM	720	O	ARG	A	104	31.108	29.030	70.385	1.00	36.87
ATOM	722	N	ARG	A	105	30.679	28.807	68.198	1.00	34.92
ATOM	723	CA	ARG	A	105	30.601	30.237	67.983	1.00	34.30
ATOM	725	CB	ARG	A	105	31.266	30.616	66.660	1.00	34.97
ATOM	728	CG	ARG	A	105	32.746	30.370	66.669	1.00	37.96
ATOM	731	CD	ARG	A	105	33.399	30.989	65.466	1.00	47.66
ATOM	734	NE	ARG	A	105	34.836	30.726	65.445	1.00	52.43
ATOM	736	CZ	ARG	A	105	35.759	31.528	64.907	1.00	54.43
ATOM	737	NH1	ARG	A	105	35.438	32.690	64.349	1.00	55.32
ATOM	740	NH2	ARG	A	105	37.037	31.167	64.944	1.00	54.39
ATOM	743	C	ARG	A	105	29.176	30.725	68.011	1.00	33.41
ATOM	744	O	ARG	A	105	28.922	31.889	67.721	1.00	33.89
ATOM	746	N	GLY	A	106	28.239	29.842	68.332	1.00	31.85
ATOM	747	CA	GLY	A	106	26.834	30.211	68.429	1.00	31.48
ATOM	750	C	GLY	A	106	26.067	30.134	67.122	1.00	31.96
ATOM	751	O	GLY	A	106	24.960	30.649	67.036	1.00	32.62
ATOM	753	N	TYR	A	107	26.637	29.468	66.109	1.00	31.03
ATOM	754	CA	TYR	A	107	26.031	29.380	64.788	1.00	30.11
ATOM	756	CB	TYR	A	107	27.106	29.640	63.738	1.00	29.61
ATOM	759	CG	TYR	A	107	27.522	31.082	63.633	1.00	28.69
ATOM	760	CD1	TYR	A	107	26.989	31.903	62.645	1.00	27.49
ATOM	762	CE1	TYR	A	107	27.371	33.221	62.523	1.00	28.65

ATOM	764	CZ	TYR	A	107	28.285	33.739	63.394	1.00	29.50
ATOM	765	OH	TYR	A	107	28.654	35.056	63.263	1.00	30.48
ATOM	767	CE2	TYR	A	107	28.846	32.943	64.389	1.00	27.99
ATOM	769	CD2	TYR	A	107	28.461	31.629	64.502	1.00	30.28
ATOM	771	C	TYR	A	107	25.405	28.015	64.519	1.00	29.88
ATOM	772	O	TYR	A	107	26.039	27.006	64.745	1.00	30.39
ATOM	774	N	LEU	A	108	24.171	28.010	64.036	1.00	30.30
ATOM	775	CA	LEU	A	108	23.515	26.820	63.519	1.00	32.25
ATOM	777	CB	LEU	A	108	21.992	27.007	63.489	1.00	32.68
ATOM	780	CG	LEU	A	108	21.326	27.106	64.888	1.00	39.70
ATOM	782	CD1	LEU	A	108	19.986	27.843	64.848	1.00	40.95
ATOM	786	CD2	LEU	A	108	21.153	25.726	65.505	1.00	41.98
ATOM	790	C	LEU	A	108	24.055	26.552	62.101	1.00	31.53
ATOM	791	O	LEU	A	108	24.299	27.482	61.338	1.00	32.12
ATOM	793	N	THR	A	109	24.301	25.290	61.793	1.00	30.07
ATOM	794	CA	THR	A	109	24.663	24.880	60.443	1.00	29.19
ATOM	796	CB	THR	A	109	26.145	24.566	60.319	1.00	29.51
ATOM	798	OG1	THR	A	109	26.510	23.574	61.276	1.00	30.19
ATOM	800	CG2	THR	A	109	26.970	25.806	60.551	1.00	28.82
ATOM	804	C	THR	A	109	23.853	23.658	60.044	1.00	28.65
ATOM	805	O	THR	A	109	23.315	22.955	60.886	1.00	27.97
ATOM	807	N	LYS	A	110	23.748	23.417	58.749	1.00	26.86
ATOM	808	CA	LYS	A	110	23.123	22.213	58.264	1.00	26.84
ATOM	810	CB	LYS	A	110	21.686	22.509	57.860	1.00	25.55
ATOM	813	CG	LYS	A	110	20.771	21.310	57.919	1.00	34.50
ATOM	816	CD	LYS	A	110	19.290	21.692	57.659	1.00	35.04
ATOM	819	CE	LYS	A	110	18.599	20.651	56.757	1.00	41.97
ATOM	822	NZ	LYS	A	110	17.314	21.164	56.137	1.00	44.90
ATOM	826	C	LYS	A	110	23.948	21.720	57.099	1.00	23.77
ATOM	827	O	LYS	A	110	24.216	22.480	56.154	1.00	20.20
ATOM	829	N	ILE	A	111	24.391	20.460	57.196	1.00	22.69
ATOM	830	CA	ILE	A	111	25.090	19.798	56.123	1.00	22.55
ATOM	832	CB	ILE	A	111	26.141	18.762	56.616	1.00	21.81
ATOM	834	CG1	ILE	A	111	27.087	19.399	57.639	1.00	24.46
ATOM	837	CD1	ILE	A	111	28.017	20.503	57.092	1.00	22.90
ATOM	841	CG2	ILE	A	111	26.967	18.165	55.459	1.00	22.65
ATOM	845	C	ILE	A	111	24.006	19.171	55.287	1.00	24.00
ATOM	846	O	ILE	A	111	23.380	18.164	55.668	1.00	24.00
ATOM	848	N	LEU	A	112	23.781	19.767	54.132	1.00	22.11
ATOM	849	CA	LEU	A	112	22.731	19.323	53.245	1.00	21.19
ATOM	851	CB	LEU	A	112	22.337	20.452	52.302	1.00	20.79
ATOM	854	CG	LEU	A	112	21.931	21.785	52.956	1.00	21.21
ATOM	856	CD1	LEU	A	112	21.566	22.802	51.894	1.00	23.96
ATOM	860	CD2	LEU	A	112	20.784	21.584	53.913	1.00	23.24
ATOM	864	C	LEU	A	112	23.095	18.095	52.435	1.00	20.03
ATOM	865	O	LEU	A	112	22.225	17.379	52.006	1.00	21.02
ATOM	867	N	HIS	A	113	24.368	17.877	52.184	1.00	20.26
ATOM	868	CA	HIS	A	113	24.816	16.835	51.255	1.00	19.13
ATOM	870	CB	HIS	A	113	24.502	17.216	49.797	1.00	18.30
ATOM	873	CG	HIS	A	113	24.741	16.102	48.822	1.00	14.94
ATOM	874	ND1	HIS	A	113	25.902	15.982	48.096	1.00	20.54
ATOM	876	CE1	HIS	A	113	25.858	14.864	47.388	1.00	19.48
ATOM	878	NE2	HIS	A	113	24.712	14.262	47.631	1.00	21.61
ATOM	880	CD2	HIS	A	113	24.007	15.007	48.542	1.00	18.43
ATOM	882	C	HIS	A	113	26.318	16.694	51.420	1.00	18.82
ATOM	883	O	HIS	A	113	27.002	17.682	51.657	1.00	18.40
ATOM	885	N	VAL	A	114	26.825	15.467	51.340	1.00	16.87
ATOM	886	CA	VAL	A	114	28.256	15.233	51.307	1.00	17.73
ATOM	888	CB	VAL	A	114	28.757	14.305	52.438	1.00	18.30
ATOM	890	CG1	VAL	A	114	30.252	13.995	52.280	1.00	15.74
ATOM	894	CG2	VAL	A	114	28.435	14.903	53.853	1.00	18.88

ATOM	898	C	VAL	A	114	28.538	14.651	49.955	1.00	17.51
ATOM	899	O	VAL	A	114	27.917	13.660	49.547	1.00	18.33
ATOM	901	N	PHE	A	115	29.443	15.308	49.245	1.00	19.67
ATOM	902	CA	PHE	A	115	29.791	14.986	47.915	1.00	19.19
ATOM	904	CB	PHE	A	115	30.342	16.188	47.187	1.00	19.66
ATOM	907	CG	PHE	A	115	29.306	17.178	46.815	1.00	19.52
ATOM	908	CD1	PHE	A	115	28.401	16.896	45.792	1.00	15.32
ATOM	910	CE1	PHE	A	115	27.451	17.813	45.430	1.00	18.69
ATOM	912	CZ	PHE	A	115	27.357	19.009	46.117	1.00	19.14
ATOM	914	CE2	PHE	A	115	28.244	19.295	47.155	1.00	20.26
ATOM	916	CD2	PHE	A	115	29.224	18.377	47.474	1.00	20.21
ATOM	918	C	PHE	A	115	30.853	13.925	47.941	1.00	22.74
ATOM	919	O	PHE	A	115	31.849	14.038	48.648	1.00	22.79
ATOM	921	N	HIS	A	116	30.645	12.895	47.142	1.00	23.93
ATOM	922	CA	HIS	A	116	31.738	12.014	46.801	1.00	27.66
ATOM	924	CB	HIS	A	116	31.985	11.001	47.909	1.00	27.91
ATOM	927	CG	HIS	A	116	30.943	9.936	48.013	1.00	29.99
ATOM	928	ND1	HIS	A	116	29.710	10.158	48.585	1.00	32.35
ATOM	930	CE1	HIS	A	116	29.000	9.044	48.544	1.00	33.35
ATOM	932	NE2	HIS	A	116	29.745	8.098	47.996	1.00	34.28
ATOM	934	CD2	HIS	A	116	30.971	8.626	47.665	1.00	28.95
ATOM	936	C	HIS	A	116	31.437	11.353	45.457	1.00	28.33
ATOM	937	O	HIS	A	116	30.283	11.132	45.107	1.00	30.47
ATOM	939	N	GLY	A	117	32.471	11.090	44.686	1.00	29.53
ATOM	940	CA	GLY	A	117	32.251	10.426	43.395	1.00	30.30
ATOM	943	C	GLY	A	117	32.684	11.251	42.216	1.00	29.68
ATOM	944	O	GLY	A	117	33.132	10.705	41.211	1.00	31.20
ATOM	946	N	LEU	A	118	32.536	12.565	42.313	1.00	28.81
ATOM	947	CA	LEU	A	118	33.154	13.444	41.327	1.00	28.48
ATOM	949	CB	LEU	A	118	32.086	14.246	40.591	1.00	28.90
ATOM	952	CG	LEU	A	118	31.282	13.484	39.542	1.00	24.46
ATOM	954	CD1	LEU	A	118	30.218	14.416	38.927	1.00	20.55
ATOM	958	CD2	LEU	A	118	32.229	12.909	38.471	1.00	22.65
ATOM	962	C	LEU	A	118	34.145	14.363	42.013	1.00	27.75
ATOM	963	O	LEU	A	118	35.342	14.329	41.734	1.00	30.09
ATOM	965	N	LEU	A	119	33.618	15.184	42.910	1.00	25.75
ATOM	966	CA	LEU	A	119	34.384	16.092	43.719	1.00	25.53
ATOM	968	CB	LEU	A	119	33.843	17.516	43.571	1.00	25.93
ATOM	971	CG	LEU	A	119	34.118	18.256	42.261	1.00	30.52
ATOM	973	CD1	LEU	A	119	33.602	19.670	42.359	1.00	32.32
ATOM	977	CD2	LEU	A	119	35.630	18.268	41.885	1.00	33.49
ATOM	981	C	LEU	A	119	34.150	15.645	45.150	1.00	23.19
ATOM	982	O	LEU	A	119	33.037	15.272	45.502	1.00	23.12
ATOM	984	N	PRO	A	120	35.183	15.676	45.984	1.00	21.09
ATOM	985	CA	PRO	A	120	34.872	15.530	47.400	1.00	19.69
ATOM	987	CB	PRO	A	120	36.164	14.982	47.973	1.00	19.25
ATOM	990	CG	PRO	A	120	37.223	15.510	47.141	1.00	21.58
ATOM	993	CD	PRO	A	120	36.624	15.798	45.751	1.00	21.48
ATOM	996	C	PRO	A	120	34.527	16.878	48.042	1.00	19.05
ATOM	997	O	PRO	A	120	35.079	17.913	47.661	1.00	18.18
ATOM	998	N	GLY	A	121	33.631	16.854	49.015	1.00	17.31
ATOM	999	CA	GLY	A	121	33.247	18.051	49.723	1.00	18.89
ATOM	1002	C	GLY	A	121	31.875	17.874	50.329	1.00	18.22
ATOM	1003	O	GLY	A	121	31.389	16.754	50.504	1.00	17.63
ATOM	1005	N	PHE	A	122	31.234	18.998	50.603	1.00	15.51
ATOM	1006	CA	PHE	A	122	29.918	18.996	51.173	1.00	15.94
ATOM	1008	CB	PHE	A	122	29.959	18.712	52.667	1.00	17.86
ATOM	1011	CG	PHE	A	122	30.896	19.595	53.457	1.00	15.14
ATOM	1012	CD1	PHE	A	122	32.191	19.253	53.630	1.00	16.64
ATOM	1014	CE1	PHE	A	122	33.039	20.050	54.396	1.00	19.92
ATOM	1016	CZ	PHE	A	122	32.560	21.188	54.968	1.00	14.91

ATOM	1018	CE2	PHE	A	122	31.264	21.529	54.810	1.00	14.44
ATOM	1020	CD2	PHE	A	122	30.429	20.732	54.056	1.00	18.95
ATOM	1022	C	PHE	A	122	29.180	20.297	50.859	1.00	15.80
ATOM	1023	O	PHE	A	122	29.790	21.304	50.527	1.00	14.99
ATOM	1025	N	LEU	A	123	27.876	20.247	50.964	1.00	15.69
ATOM	1026	CA	LEU	A	123	27.046	21.400	50.779	1.00	17.50
ATOM	1028	CB	LEU	A	123	25.831	21.034	49.936	1.00	16.92
ATOM	1031	CG	LEU	A	123	24.776	22.100	49.635	1.00	20.69
ATOM	1033	CD1	LEU	A	123	25.438	23.264	48.823	1.00	18.86
ATOM	1037	CD2	LEU	A	123	23.613	21.409	48.851	1.00	17.69
ATOM	1041	C	LEU	A	123	26.580	21.753	52.165	1.00	17.89
ATOM	1042	O	LEU	A	123	26.021	20.911	52.828	1.00	17.98
ATOM	1044	N	VAL	A	124	26.732	23.015	52.558	1.00	16.86
ATOM	1045	CA	VAL	A	124	26.387	23.457	53.915	1.00	16.90
ATOM	1047	CB	VAL	A	124	27.644	23.595	54.763	1.00	16.52
ATOM	1049	CG1	VAL	A	124	28.619	24.564	54.097	1.00	16.77
ATOM	1053	CG2	VAL	A	124	27.323	23.987	56.295	1.00	19.09
ATOM	1057	C	VAL	A	124	25.574	24.754	53.901	1.00	18.64
ATOM	1058	O	VAL	A	124	25.861	25.711	53.126	1.00	15.90
ATOM	1060	N	LYS	A	125	24.524	24.753	54.709	1.00	18.61
ATOM	1061	CA	LYS	A	125	23.692	25.917	54.952	1.00	20.01
ATOM	1063	CB	LYS	A	125	22.230	25.531	55.045	1.00	20.52
ATOM	1066	CG	LYS	A	125	21.323	26.680	55.238	1.00	27.43
ATOM	1069	CD	LYS	A	125	19.889	26.325	54.906	1.00	35.56
ATOM	1072	CE	LYS	A	125	18.932	27.449	55.374	1.00	42.11
ATOM	1075	NZ	LYS	A	125	17.521	26.975	55.562	1.00	48.29
ATOM	1079	C	LYS	A	125	24.170	26.528	56.214	1.00	21.10
ATOM	1080	O	LYS	A	125	24.135	25.899	57.280	1.00	18.90
ATOM	1082	N	MET	A	126	24.715	27.735	56.089	1.00	21.18
ATOM	1083	CA	MET	A	126	25.344	28.408	57.199	1.00	21.77
ATOM	1085	CB	MET	A	126	26.749	27.871	57.498	1.00	21.97
ATOM	1088	CG	MET	A	126	27.779	28.110	56.411	1.00	22.35
ATOM	1091	SD	MET	A	126	29.363	27.485	56.820	1.00	24.40
ATOM	1092	CE	MET	A	126	30.427	28.364	55.674	1.00	23.86
ATOM	1096	C	MET	A	126	25.441	29.879	56.845	1.00	22.77
ATOM	1097	O	MET	A	126	25.360	30.272	55.668	1.00	21.00
ATOM	1099	N	SER	A	127	25.698	30.663	57.864	1.00	22.49
ATOM	1100	CA	SER	A	127	26.022	32.058	57.668	1.00	23.32
ATOM	1102	CB	SER	A	127	26.015	32.793	59.011	1.00	25.01
ATOM	1105	OG	SER	A	127	26.694	34.054	58.921	1.00	22.15
ATOM	1107	C	SER	A	127	27.377	32.201	57.015	1.00	21.95
ATOM	1108	O	SER	A	127	28.340	31.501	57.334	1.00	23.54
ATOM	1110	N	GLY	A	128	27.480	33.163	56.116	1.00	22.67
ATOM	1111	CA	GLY	A	128	28.764	33.475	55.480	1.00	22.62
ATOM	1114	C	GLY	A	128	29.793	33.982	56.465	1.00	21.95
ATOM	1115	O	GLY	A	128	30.981	33.975	56.186	1.00	22.07
ATOM	1117	N	ASP	A	129	29.339	34.425	57.634	1.00	23.16
ATOM	1118	CA	ASP	A	129	30.258	34.758	58.726	1.00	22.49
ATOM	1120	CB	ASP	A	129	29.473	34.942	60.022	1.00	22.51
ATOM	1123	CG	ASP	A	129	28.638	36.197	60.029	1.00	27.90
ATOM	1124	OD1	ASP	A	129	28.472	36.856	58.971	1.00	26.60
ATOM	1125	OD2	ASP	A	129	28.126	36.500	61.110	1.00	29.81
ATOM	1126	C	ASP	A	129	31.284	33.671	58.963	1.00	23.78
ATOM	1127	O	ASP	A	129	32.403	33.942	59.338	1.00	25.24
ATOM	1129	N	LEU	A	130	30.886	32.416	58.786	1.00	22.71
ATOM	1130	CA	LEU	A	130	31.788	31.296	59.056	1.00	22.02
ATOM	1132	CB	LEU	A	130	30.947	30.040	59.303	1.00	20.82
ATOM	1135	CG	LEU	A	130	29.975	30.132	60.473	1.00	22.58
ATOM	1137	CD1	LEU	A	130	28.964	28.990	60.429	1.00	23.45
ATOM	1141	CD2	LEU	A	130	30.784	30.136	61.763	1.00	19.20
ATOM	1145	C	LEU	A	130	32.784	30.997	57.953	1.00	22.31

ATOM	1146	O	LEU	A	130	33.521	30.016	58.061	1.00	22.55
ATOM	1148	N	LEU	A	131	32.815	31.778	56.866	1.00	21.98
ATOM	1149	CA	LEU	A	131	33.674	31.391	55.752	1.00	20.41
ATOM	1151	CB	LEU	A	131	33.405	32.239	54.514	1.00	21.40
ATOM	1154	CG	LEU	A	131	32.137	31.923	53.754	1.00	19.24
ATOM	1156	CD1	LEU	A	131	31.827	33.079	52.774	1.00	24.38
ATOM	1160	CD2	LEU	A	131	32.316	30.527	53.043	1.00	19.51
ATOM	1164	C	LEU	A	131	35.153	31.438	56.047	1.00	21.28
ATOM	1165	O	LEU	A	131	35.890	30.600	55.599	1.00	20.68
ATOM	1167	N	GLU	A	132	35.613	32.442	56.765	1.00	23.13
ATOM	1168	CA	GLU	A	132	37.007	32.469	57.178	1.00	25.27
ATOM	1170	CB	GLU	A	132	37.314	33.713	58.001	1.00	25.87
ATOM	1173	CG	GLU	A	132	37.704	34.917	57.200	1.00	28.36
ATOM	1176	CD	GLU	A	132	38.071	36.124	58.109	1.00	32.76
ATOM	1177	OE1	GLU	A	132	37.639	36.138	59.294	1.00	40.57
ATOM	1178	OE2	GLU	A	132	38.780	37.060	57.632	1.00	42.25
ATOM	1179	C	GLU	A	132	37.344	31.225	58.009	1.00	24.01
ATOM	1180	O	GLU	A	132	38.381	30.632	57.835	1.00	26.42
ATOM	1182	N	LEU	A	133	36.464	30.849	58.918	1.00	24.18
ATOM	1183	CA	LEU	A	133	36.675	29.626	59.703	1.00	24.40
ATOM	1185	CB	LEU	A	133	35.557	29.481	60.714	1.00	23.85
ATOM	1188	CG	LEU	A	133	35.491	28.227	61.602	1.00	28.48
ATOM	1190	CD1	LEU	A	133	36.770	28.039	62.378	1.00	34.21
ATOM	1194	CD2	LEU	A	133	34.311	28.358	62.543	1.00	27.10
ATOM	1198	C	LEU	A	133	36.742	28.383	58.780	1.00	23.51
ATOM	1199	O	LEU	A	133	37.655	27.569	58.888	1.00	23.74
ATOM	1201	N	ALA	A	134	35.772	28.300	57.867	1.00	22.81
ATOM	1202	CA	ALA	A	134	35.632	27.188	56.930	1.00	23.23
ATOM	1204	CB	ALA	A	134	34.347	27.332	56.151	1.00	22.63
ATOM	1208	C	ALA	A	134	36.818	27.038	56.001	1.00	22.64
ATOM	1209	O	ALA	A	134	37.226	25.920	55.676	1.00	21.99
ATOM	1211	N	LEU	A	135	37.372	28.161	55.552	1.00	21.14
ATOM	1212	CA	LEU	A	135	38.529	28.118	54.706	1.00	20.36
ATOM	1214	CB	LEU	A	135	38.846	29.513	54.147	1.00	20.52
ATOM	1217	CG	LEU	A	135	37.810	29.995	53.116	1.00	19.46
ATOM	1219	CD1	LEU	A	135	37.903	31.524	52.938	1.00	21.93
ATOM	1223	CD2	LEU	A	135	37.893	29.190	51.746	1.00	17.11
ATOM	1227	C	LEU	A	135	39.747	27.566	55.402	1.00	20.31
ATOM	1228	O	LEU	A	135	40.710	27.214	54.743	1.00	21.25
ATOM	1230	N	LYS	A	136	39.745	27.536	56.737	1.00	20.33
ATOM	1231	CA	LYS	A	136	40.875	27.020	57.484	1.00	22.47
ATOM	1233	CB	LYS	A	136	41.055	27.845	58.752	1.00	24.55
ATOM	1236	CG	LYS	A	136	41.638	29.189	58.454	1.00	27.65
ATOM	1239	CD	LYS	A	136	41.595	30.060	59.682	1.00	38.13
ATOM	1242	CE	LYS	A	136	42.482	31.282	59.517	1.00	41.57
ATOM	1245	NZ	LYS	A	136	42.939	31.809	60.830	1.00	45.94
ATOM	1249	C	LYS	A	136	40.704	25.535	57.827	1.00	23.72
ATOM	1250	O	LYS	A	136	41.569	24.939	58.417	1.00	24.76
ATOM	1252	N	LEU	A	137	39.599	24.931	57.432	1.00	24.07
ATOM	1253	CA	LEU	A	137	39.417	23.503	57.692	1.00	25.02
ATOM	1255	CB	LEU	A	137	38.018	23.057	57.297	1.00	25.39
ATOM	1258	CG	LEU	A	137	36.821	23.593	58.072	1.00	23.72
ATOM	1260	CD1	LEU	A	137	35.512	23.400	57.241	1.00	21.38
ATOM	1264	CD2	LEU	A	137	36.720	22.957	59.436	1.00	22.04
ATOM	1268	C	LEU	A	137	40.417	22.670	56.923	1.00	26.38
ATOM	1269	O	LEU	A	137	40.858	23.038	55.824	1.00	24.11
ATOM	1271	N	PRO	A	138	40.718	21.466	57.451	1.00	27.87
ATOM	1272	CA	PRO	A	138	41.626	20.615	56.716	1.00	27.68
ATOM	1274	CB	PRO	A	138	41.781	19.387	57.624	1.00	27.70
ATOM	1277	CG	PRO	A	138	40.535	19.384	58.473	1.00	32.57
ATOM	1280	CD	PRO	A	138	40.225	20.837	58.685	1.00	28.24

ATOM	1283	C	PRO	A	138	41.020	20.204	55.386	1.00	24.72
ATOM	1284	O	PRO	A	138	39.820	20.058	55.279	1.00	24.52
ATOM	1285	N	HIS	A	139	41.866	19.961	54.413	1.00	24.02
ATOM	1286	CA	HIS	A	139	41.443	19.470	53.108	1.00	23.65
ATOM	1288	CB	HIS	A	139	40.552	18.225	53.223	1.00	24.23
ATOM	1291	CG	HIS	A	139	41.078	17.195	54.186	1.00	26.62
ATOM	1292	ND1	HIS	A	139	42.271	16.530	53.986	1.00	31.10
ATOM	1294	CE1	HIS	A	139	42.495	15.712	55.000	1.00	29.89
ATOM	1296	NE2	HIS	A	139	41.498	15.831	55.857	1.00	25.88
ATOM	1298	CD2	HIS	A	139	40.596	16.751	55.368	1.00	29.57
ATOM	1300	C	HIS	A	139	40.753	20.461	52.205	1.00	22.71
ATOM	1301	O	HIS	A	139	40.497	20.093	51.064	1.00	21.21
ATOM	1303	N	VAL	A	140	40.473	21.694	52.652	1.00	20.59
ATOM	1304	CA	VAL	A	140	39.706	22.603	51.803	1.00	20.07
ATOM	1306	CB	VAL	A	140	39.142	23.821	52.580	1.00	21.66
ATOM	1308	CG1	VAL	A	140	38.391	24.794	51.642	1.00	17.13
ATOM	1312	CG2	VAL	A	140	38.232	23.342	53.719	1.00	22.97
ATOM	1316	C	VAL	A	140	40.521	23.055	50.587	1.00	18.81
ATOM	1317	O	VAL	A	140	41.658	23.545	50.707	1.00	19.20
ATOM	1319	N	ASP	A	141	39.917	22.909	49.414	1.00	17.61
ATOM	1320	CA	ASP	A	141	40.480	23.487	48.191	1.00	17.16
ATOM	1322	CB	ASP	A	141	40.222	22.532	47.028	1.00	16.43
ATOM	1325	CG	ASP	A	141	41.063	22.842	45.828	1.00	20.04
ATOM	1326	OD1	ASP	A	141	41.854	23.799	45.857	1.00	23.18
ATOM	1327	OD2	ASP	A	141	40.899	22.148	44.820	1.00	23.66
ATOM	1328	C	ASP	A	141	39.886	24.896	47.959	1.00	16.76
ATOM	1329	O	ASP	A	141	40.620	25.894	47.911	1.00	18.31
ATOM	1331	N	TYR	A	142	38.557	24.987	47.897	1.00	15.46
ATOM	1332	CA	TYR	A	142	37.879	26.251	47.796	1.00	17.14
ATOM	1334	CB	TYR	A	142	37.959	26.805	46.358	1.00	18.35
ATOM	1337	CG	TYR	A	142	37.462	25.851	45.302	1.00	13.69
ATOM	1338	CD1	TYR	A	142	38.285	24.876	44.760	1.00	17.10
ATOM	1340	CE1	TYR	A	142	37.796	23.968	43.769	1.00	18.36
ATOM	1342	CZ	TYR	A	142	36.485	24.103	43.336	1.00	21.76
ATOM	1343	OH	TYR	A	142	35.948	23.259	42.382	1.00	19.25
ATOM	1345	CE2	TYR	A	142	35.671	25.083	43.879	1.00	20.48
ATOM	1347	CD2	TYR	A	142	36.161	25.939	44.843	1.00	18.44
ATOM	1349	C	TYR	A	142	36.439	26.070	48.241	1.00	18.58
ATOM	1350	O	TYR	A	142	35.947	24.934	48.412	1.00	16.62
ATOM	1352	N	ILE	A	143	35.776	27.197	48.465	1.00	16.86
ATOM	1353	CA	ILE	A	143	34.410	27.232	48.827	1.00	16.07
ATOM	1355	CB	ILE	A	143	34.228	27.740	50.277	1.00	17.56
ATOM	1357	CG1	ILE	A	143	34.949	26.818	51.281	1.00	14.57
ATOM	1360	CD1	ILE	A	143	34.939	27.330	52.778	1.00	15.60
ATOM	1364	CG2	ILE	A	143	32.746	27.818	50.617	1.00	17.34
ATOM	1368	C	ILE	A	143	33.688	28.164	47.835	1.00	17.37
ATOM	1369	O	ILE	A	143	34.164	29.287	47.551	1.00	14.89
ATOM	1371	N	GLU	A	144	32.557	27.692	47.313	1.00	15.14
ATOM	1372	CA	GLU	A	144	31.733	28.491	46.431	1.00	16.42
ATOM	1374	CB	GLU	A	144	31.804	27.877	45.000	1.00	15.98
ATOM	1377	CG	GLU	A	144	30.997	28.658	43.931	1.00	18.89
ATOM	1380	CD	GLU	A	144	31.126	28.087	42.528	1.00	19.87
ATOM	1381	OE1	GLU	A	144	32.266	27.673	42.222	1.00	19.84
ATOM	1382	OE2	GLU	A	144	30.087	28.069	41.764	1.00	23.17
ATOM	1383	C	GLU	A	144	30.317	28.677	46.962	1.00	17.06
ATOM	1384	O	GLU	A	144	29.653	27.733	47.355	1.00	15.66
ATOM	1386	N	GLU	A	145	29.843	29.921	46.967	1.00	16.78
ATOM	1387	CA	GLU	A	145	28.501	30.233	47.379	1.00	16.23
ATOM	1389	CB	GLU	A	145	28.314	31.734	47.443	1.00	17.29
ATOM	1392	CG	GLU	A	145	26.949	32.186	47.836	1.00	18.63
ATOM	1395	CD	GLU	A	145	26.790	33.653	47.598	1.00	25.65

ATOM	1396	OE1	GLU	A	145	26.716	34.052	46.426	1.00	22.04
ATOM	1397	OE2	GLU	A	145	26.789	34.398	48.578	1.00	21.17
ATOM	1398	C	GLU	A	145	27.593	29.641	46.321	1.00	18.48
ATOM	1399	O	GLU	A	145	27.887	29.730	45.110	1.00	16.69
ATOM	1401	N	ASP	A	146	26.472	29.066	46.738	1.00	17.98
ATOM	1402	CA	ASP	A	146	25.553	28.484	45.772	1.00	19.19
ATOM	1404	CB	ASP	A	146	24.430	27.721	46.499	1.00	19.86
ATOM	1407	CG	ASP	A	146	23.797	26.627	45.663	1.00	23.29
ATOM	1408	OD1	ASP	A	146	24.218	26.395	44.512	1.00	20.21
ATOM	1409	OD2	ASP	A	146	22.825	26.008	46.164	1.00	23.57
ATOM	1410	C	ASP	A	146	24.994	29.611	44.905	1.00	20.15
ATOM	1411	O	ASP	A	146	25.014	30.780	45.299	1.00	20.88
ATOM	1413	N	SER	A	147	24.516	29.256	43.728	1.00	20.91
ATOM	1414	CA	SER	A	147	23.959	30.201	42.776	1.00	20.54
ATOM	1416	CB	SER	A	147	25.066	30.856	41.984	1.00	21.84
ATOM	1419	OG	SER	A	147	25.711	29.882	41.178	1.00	27.64
ATOM	1421	C	SER	A	147	22.975	29.539	41.844	1.00	19.61
ATOM	1422	O	SER	A	147	22.812	28.324	41.850	1.00	17.81
ATOM	1424	N	SER	A	148	22.299	30.366	41.060	1.00	19.03
ATOM	1425	CA	SER	A	148	21.187	29.952	40.218	1.00	19.46
ATOM	1427	CB	SER	A	148	20.160	31.093	40.134	1.00	20.12
ATOM	1430	OG	SER	A	148	19.538	31.292	41.364	1.00	19.29
ATOM	1432	C	SER	A	148	21.629	29.561	38.795	1.00	16.83
ATOM	1433	O	SER	A	148	22.616	30.107	38.256	1.00	17.26
ATOM	1435	N	VAL	A	149	20.954	28.558	38.247	1.00	16.78
ATOM	1436	CA	VAL	A	149	21.076	28.197	36.838	1.00	17.21
ATOM	1438	CB	VAL	A	149	21.752	26.788	36.666	1.00	16.21
ATOM	1440	CG1	VAL	A	149	23.208	26.844	37.175	1.00	18.06
ATOM	1444	CG2	VAL	A	149	20.941	25.706	37.382	1.00	16.50
ATOM	1448	C	VAL	A	149	19.690	28.216	36.269	1.00	17.76
ATOM	1449	O	VAL	A	149	18.698	28.170	37.015	1.00	19.13
ATOM	1451	N	PHE	A	150	19.602	28.320	34.943	1.00	18.00
ATOM	1452	CA	PHE	A	150	18.352	28.542	34.277	1.00	16.87
ATOM	1454	CB	PHE	A	150	18.213	30.035	33.933	1.00	18.62
ATOM	1457	CG	PHE	A	150	18.346	30.924	35.124	1.00	17.98
ATOM	1458	CD1	PHE	A	150	17.226	31.240	35.878	1.00	19.96
ATOM	1460	CE1	PHE	A	150	17.328	32.040	37.007	1.00	20.59
ATOM	1462	CZ	PHE	A	150	18.548	32.552	37.362	1.00	19.20
ATOM	1464	CE2	PHE	A	150	19.681	32.244	36.607	1.00	20.00
ATOM	1466	CD2	PHE	A	150	19.574	31.433	35.500	1.00	21.39
ATOM	1468	C	PHE	A	150	18.284	27.765	32.993	1.00	16.70
ATOM	1469	O	PHE	A	150	19.269	27.628	32.289	1.00	16.22
ATOM	1471	N	ALA	A	151	17.089	27.263	32.706	1.00	16.44
ATOM	1472	CA	ALA	A	151	16.748	26.591	31.480	1.00	17.92
ATOM	1474	CB	ALA	A	151	15.215	26.372	31.460	1.00	17.84
ATOM	1478	C	ALA	A	151	17.107	27.466	30.309	1.00	18.02
ATOM	1479	O	ALA	A	151	16.757	28.641	30.315	1.00	17.97
ATOM	1481	N	GLN	A	152	17.740	26.910	29.280	1.00	17.44
ATOM	1482	CA	GLN	A	152	18.103	27.717	28.127	1.00	18.99
ATOM	1484	CB	GLN	A	152	19.600	27.607	27.815	1.00	19.14
ATOM	1487	CG	GLN	A	152	20.474	28.166	28.904	1.00	19.32
ATOM	1490	CD	GLN	A	152	20.181	29.635	29.225	1.00	21.76
ATOM	1491	OE1	GLN	A	152	20.311	30.487	28.372	1.00	18.80
ATOM	1492	NE2	GLN	A	152	19.761	29.920	30.462	1.00	15.35
ATOM	1495	C	GLN	A	152	17.219	27.347	26.952	1.00	20.98
ATOM	1496	O	GLN	A	152	17.564	27.443	25.773	1.00	18.27
ATOM	1498	OXT	GLN	A	152	16.054	26.982	27.213	1.00	23.34
ATOM	1499	N	SER	B	153	7.638	18.191	4.804	1.00	39.93
ATOM	1500	CA	SER	B	153	7.059	17.662	6.072	1.00	40.03
ATOM	1502	CB	SER	B	153	6.305	16.368	5.819	1.00	40.68
ATOM	1505	OG	SER	B	153	7.204	15.395	5.299	1.00	44.13

ATOM	1507	C	SER B 153	8.142	17.402	7.139	1.00	37.73
ATOM	1508	O	SER B 153	7.865	17.600	8.332	1.00	39.18
ATOM	1512	N	ILE B 154	9.348	16.964	6.731	1.00	33.52
ATOM	1513	CA	ILE B 154	10.461	16.786	7.691	1.00	30.21
ATOM	1515	CB	ILE B 154	11.788	16.310	7.036	1.00	31.11
ATOM	1517	CG1	ILE B 154	11.641	14.949	6.324	1.00	32.31
ATOM	1520	CD1	ILE B 154	11.339	13.754	7.226	1.00	32.28
ATOM	1524	CG2	ILE B 154	12.931	16.187	8.095	1.00	32.05
ATOM	1528	C	ILE B 154	10.700	18.152	8.355	1.00	26.79
ATOM	1529	O	ILE B 154	10.890	19.146	7.663	1.00	26.19
ATOM	1531	N	PRO B 155	10.674	18.221	9.692	1.00	23.55
ATOM	1532	CA	PRO B 155	11.082	19.470	10.330	1.00	22.56
ATOM	1534	CB	PRO B 155	11.200	19.073	11.785	1.00	21.02
ATOM	1537	CG	PRO B 155	10.200	18.004	11.978	1.00	24.79
ATOM	1540	CD	PRO B 155	10.288	17.206	10.687	1.00	24.46
ATOM	1543	C	PRO B 155	12.420	19.964	9.808	1.00	20.28
ATOM	1544	O	PRO B 155	13.306	19.173	9.599	1.00	23.58
ATOM	1545	N	TRP B 156	12.554	21.265	9.595	1.00	19.87
ATOM	1546	CA	TRP B 156	13.726	21.868	8.952	1.00	18.61
ATOM	1548	CB	TRP B 156	13.582	23.411	8.950	1.00	18.00
ATOM	1551	CG	TRP B 156	13.972	24.130	10.265	1.00	18.20
ATOM	1552	CD1	TRP B 156	13.143	24.547	11.252	1.00	18.53
ATOM	1554	NE1	TRP B 156	13.857	25.137	12.268	1.00	19.97
ATOM	1556	CE2	TRP B 156	15.187	25.152	11.920	1.00	18.24
ATOM	1557	CD2	TRP B 156	15.297	24.524	10.664	1.00	17.74
ATOM	1558	CE3	TRP B 156	16.558	24.390	10.089	1.00	20.64
ATOM	1560	CZ3	TRP B 156	17.646	24.890	10.755	1.00	19.41
ATOM	1562	CH2	TRP B 156	17.505	25.507	12.001	1.00	16.28
ATOM	1564	CZ2	TRP B 156	16.291	25.622	12.606	1.00	19.41
ATOM	1566	C	TRP B 156	15.044	21.487	9.627	1.00	17.64
ATOM	1567	O	TRP B 156	16.059	21.346	8.991	1.00	15.73
ATOM	1569	N	ASN B 157	14.987	21.412	10.947	1.00	16.99
ATOM	1570	CA	ASN B 157	16.136	21.137	11.794	1.00	15.68
ATOM	1572	CB	ASN B 157	15.784	21.397	13.257	1.00	13.09
ATOM	1575	CG	ASN B 157	14.536	20.731	13.692	1.00	18.68
ATOM	1576	OD1	ASN B 157	13.458	21.085	13.244	1.00	20.07
ATOM	1577	ND2	ASN B 157	14.643	19.812	14.644	1.00	15.33
ATOM	1580	C	ASN B 157	16.650	19.753	11.622	1.00	16.79
ATOM	1581	O	ASN B 157	17.862	19.517	11.658	1.00	16.10
ATOM	1583	N	LEU B 158	15.737	18.819	11.438	1.00	17.71
ATOM	1584	CA	LEU B 158	16.148	17.436	11.206	1.00	19.42
ATOM	1586	CB	LEU B 158	14.996	16.481	11.528	1.00	20.61
ATOM	1589	CG	LEU B 158	14.431	16.459	12.942	1.00	23.16
ATOM	1591	CD1	LEU B 158	13.293	15.440	13.028	1.00	22.45
ATOM	1595	CD2	LEU B 158	15.576	16.153	13.914	1.00	20.65
ATOM	1599	C	LEU B 158	16.673	17.254	9.790	1.00	19.94
ATOM	1600	O	LEU B 158	17.623	16.494	9.574	1.00	20.75
ATOM	1602	N	GLU B 159	16.138	18.000	8.821	1.00	20.59
ATOM	1603	CA	GLU B 159	16.762	18.042	7.514	1.00	20.18
ATOM	1605	CB	GLU B 159	15.878	18.766	6.491	1.00	20.12
ATOM	1608	CG	GLU B 159	16.312	18.554	5.043	1.00	24.15
ATOM	1611	CD	GLU B 159	16.459	17.044	4.644	1.00	30.99
ATOM	1612	OE1	GLU B 159	15.529	16.203	4.917	1.00	36.32
ATOM	1613	OE2	GLU B 159	17.528	16.697	4.064	1.00	31.09
ATOM	1614	C	GLU B 159	18.157	18.715	7.570	1.00	20.79
ATOM	1615	O	GLU B 159	19.107	18.305	6.907	1.00	18.87
ATOM	1617	N	ARG B 160	18.291	19.751	8.375	1.00	21.53
ATOM	1618	CA	ARG B 160	19.533	20.502	8.397	1.00	20.93
ATOM	1620	CB	ARG B 160	19.391	21.696	9.317	1.00	20.43
ATOM	1623	CG	ARG B 160	20.535	22.681	9.227	1.00	21.82
ATOM	1626	CD	ARG B 160	20.714	23.220	7.849	1.00	24.51

ATOM	1629	NE	ARG	B	160	19.410	23.613	7.276	1.00	35.05
ATOM	1631	CZ	ARG	B	160	18.927	24.859	7.244	1.00	31.36
ATOM	1632	NH1	ARG	B	160	19.633	25.871	7.726	1.00	33.05
ATOM	1635	NH2	ARG	B	160	17.734	25.095	6.708	1.00	31.88
ATOM	1638	C	ARG	B	160	20.724	19.635	8.842	1.00	19.10
ATOM	1639	O	ARG	B	160	21.829	19.809	8.365	1.00	19.18
ATOM	1641	N	ILE	B	161	20.477	18.724	9.772	1.00	17.91
ATOM	1642	CA	ILE	B	161	21.518	17.873	10.312	1.00	18.20
ATOM	1644	CB	ILE	B	161	21.269	17.563	11.821	1.00	15.17
ATOM	1646	CG1	ILE	B	161	19.949	16.861	12.051	1.00	18.43
ATOM	1649	CD1	ILE	B	161	19.917	15.986	13.209	1.00	15.58
ATOM	1653	CG2	ILE	B	161	21.271	18.854	12.629	1.00	15.43
ATOM	1657	C	ILE	B	161	21.694	16.573	9.517	1.00	19.49
ATOM	1658	O	ILE	B	161	22.574	15.743	9.821	1.00	19.04
ATOM	1660	N	THR	B	162	20.869	16.399	8.490	1.00	20.94
ATOM	1661	CA	THR	B	162	20.976	15.242	7.617	1.00	22.52
ATOM	1663	CB	THR	B	162	19.663	14.964	6.877	1.00	22.75
ATOM	1665	OG1	THR	B	162	18.644	14.694	7.850	1.00	21.80
ATOM	1667	CG2	THR	B	162	19.803	13.757	5.886	1.00	22.47
ATOM	1671	C	THR	B	162	22.084	15.480	6.615	1.00	23.41
ATOM	1672	O	THR	B	162	22.085	16.461	5.895	1.00	24.92
ATOM	1674	N	PRO	B	163	23.015	14.540	6.531	1.00	24.83
ATOM	1675	CA	PRO	B	163	24.179	14.700	5.715	1.00	24.85
ATOM	1677	CB	PRO	B	163	25.088	13.589	6.212	1.00	25.41
ATOM	1680	CG	PRO	B	163	24.204	12.566	6.659	1.00	24.27
ATOM	1683	CD	PRO	B	163	22.994	13.231	7.197	1.00	23.37
ATOM	1686	C	PRO	B	163	23.850	14.529	4.224	1.00	26.58
ATOM	1687	O	PRO	B	163	22.753	14.098	3.879	1.00	24.53
ATOM	1688	N	PRO	B	164	24.780	14.920	3.363	1.00	28.57
ATOM	1689	CA	PRO	B	164	24.576	14.887	1.925	1.00	31.24
ATOM	1691	CB	PRO	B	164	25.822	15.589	1.381	1.00	30.93
ATOM	1694	CG	PRO	B	164	26.354	16.364	2.514	1.00	32.47
ATOM	1697	CD	PRO	B	164	26.098	15.498	3.692	1.00	30.33
ATOM	1700	C	PRO	B	164	24.483	13.476	1.376	1.00	31.99
ATOM	1701	O	PRO	B	164	24.123	13.303	0.226	1.00	32.79
ATOM	1702	N	ARG	B	165	24.841	12.488	2.186	1.00	32.74
ATOM	1703	CA	ARG	B	165	24.714	11.113	1.815	1.00	33.89
ATOM	1705	CB	ARG	B	165	26.046	10.614	1.262	1.00	34.65
ATOM	1708	CG	ARG	B	165	26.228	9.126	1.324	1.00	39.62
ATOM	1711	CD	ARG	B	165	25.314	8.428	0.387	1.00	46.57
ATOM	1714	NE	ARG	B	165	25.925	8.285	-0.936	1.00	53.24
ATOM	1716	CZ	ARG	B	165	26.663	7.248	-1.328	1.00	54.08
ATOM	1717	NH1	ARG	B	165	26.931	6.244	-0.491	1.00	57.66
ATOM	1720	NH2	ARG	B	165	27.152	7.218	-2.566	1.00	49.65
ATOM	1723	C	ARG	B	165	24.287	10.315	3.018	1.00	34.38
ATOM	1724	O	ARG	B	165	24.944	10.354	4.062	1.00	32.89
ATOM	1726	N	TYR	B	166	23.192	9.581	2.890	1.00	35.19
ATOM	1727	CA	TYR	B	166	22.706	8.815	4.025	1.00	36.84
ATOM	1729	CB	TYR	B	166	21.934	9.714	4.985	1.00	36.96
ATOM	1732	CG	TYR	B	166	20.659	10.256	4.434	1.00	36.43
ATOM	1733	CD1	TYR	B	166	20.674	11.299	3.541	1.00	35.09
ATOM	1735	CE1	TYR	B	166	19.522	11.820	3.037	1.00	38.50
ATOM	1737	CZ	TYR	B	166	18.315	11.293	3.414	1.00	38.49
ATOM	1738	OH	TYR	B	166	17.170	11.839	2.876	1.00	40.10
ATOM	1740	CE2	TYR	B	166	18.258	10.248	4.307	1.00	39.17
ATOM	1742	CD2	TYR	B	166	19.435	9.725	4.805	1.00	38.40
ATOM	1744	C	TYR	B	166	21.869	7.602	3.649	1.00	39.08
ATOM	1745	O	TYR	B	166	21.407	7.460	2.507	1.00	38.27
ATOM	1747	N	ARG	B	167	21.696	6.745	4.648	1.00	40.73
ATOM	1748	CA	ARG	B	167	21.148	5.407	4.505	1.00	42.73
ATOM	1750	CB	ARG	B	167	22.210	4.399	4.957	1.00	43.56

ATOM	1753	CG	ARG	B	167	21.873	2.949	4.765	1.00	48.59
ATOM	1756	CD	ARG	B	167	22.456	2.397	3.470	1.00	55.13
ATOM	1759	NE	ARG	B	167	22.039	1.010	3.257	1.00	59.51
ATOM	1761	CZ	ARG	B	167	22.551	0.191	2.338	1.00	61.37
ATOM	1762	NH1	ARG	B	167	22.095	-1.053	2.244	1.00	62.36
ATOM	1765	NH2	ARG	B	167	23.519	0.601	1.517	1.00	61.68
ATOM	1768	C	ARG	B	167	19.914	5.291	5.374	1.00	42.89
ATOM	1769	O	ARG	B	167	19.144	6.245	5.505	1.00	43.23
ATOM	1771	N	GLY	B	176	18.180	5.522	15.981	1.00	42.38
ATOM	1772	CA	GLY	B	176	19.579	5.253	16.276	1.00	42.22
ATOM	1775	C	GLY	B	176	19.852	5.596	17.722	1.00	41.02
ATOM	1776	O	GLY	B	176	18.931	5.970	18.450	1.00	41.84
ATOM	1778	N	GLY	B	177	21.109	5.463	18.133	1.00	39.74
ATOM	1779	CA	GLY	B	177	21.526	5.816	19.489	1.00	38.96
ATOM	1782	C	GLY	B	177	21.322	4.803	20.620	1.00	39.06
ATOM	1783	O	GLY	B	177	21.409	5.197	21.769	1.00	40.51
ATOM	1785	N	SER	B	178	21.105	3.510	20.329	1.00	38.16
ATOM	1786	CA	SER	B	178	20.522	2.542	21.321	1.00	37.26
ATOM	1788	CB	SER	B	178	19.845	1.430	20.551	1.00	38.19
ATOM	1791	OG	SER	B	178	20.771	0.890	19.617	1.00	39.55
ATOM	1793	C	SER	B	178	21.482	1.897	22.349	1.00	34.79
ATOM	1794	O	SER	B	178	21.118	1.568	23.468	1.00	34.98
ATOM	1796	N	LEU	B	179	22.708	1.705	21.927	1.00	33.15
ATOM	1797	CA	LEU	B	179	23.830	1.295	22.749	1.00	30.93
ATOM	1799	CB	LEU	B	179	24.925	1.004	21.716	1.00	31.42
ATOM	1802	CG	LEU	B	179	26.400	0.769	21.914	1.00	35.64
ATOM	1804	CD1	LEU	B	179	26.905	-0.079	20.770	1.00	33.28
ATOM	1808	CD2	LEU	B	179	27.141	2.088	21.975	1.00	39.93
ATOM	1812	C	LEU	B	179	24.236	2.421	23.763	1.00	28.34
ATOM	1813	O	LEU	B	179	24.913	2.187	24.756	1.00	24.28
ATOM	1815	N	VAL	B	180	23.806	3.645	23.475	1.00	27.32
ATOM	1816	CA	VAL	B	180	24.125	4.828	24.239	1.00	26.77
ATOM	1818	CB	VAL	B	180	24.409	5.991	23.252	1.00	27.32
ATOM	1820	CG1	VAL	B	180	24.640	7.315	23.973	1.00	28.14
ATOM	1824	CG2	VAL	B	180	25.557	5.627	22.372	1.00	25.87
ATOM	1828	C	VAL	B	180	22.931	5.201	25.104	1.00	27.57
ATOM	1829	O	VAL	B	180	21.787	4.994	24.720	1.00	27.44
ATOM	1831	N	GLU	B	181	23.207	5.795	26.256	1.00	27.27
ATOM	1832	CA	GLU	B	181	22.183	6.370	27.090	1.00	27.77
ATOM	1834	CB	GLU	B	181	22.228	5.723	28.470	1.00	27.82
ATOM	1837	CG	GLU	B	181	20.980	4.969	28.810	1.00	37.21
ATOM	1840	CD	GLU	B	181	21.099	4.208	30.112	1.00	42.56
ATOM	1841	OE1	GLU	B	181	21.686	4.753	31.068	1.00	40.96
ATOM	1842	OE2	GLU	B	181	20.613	3.061	30.161	1.00	49.28
ATOM	1843	C	GLU	B	181	22.427	7.870	27.191	1.00	26.52
ATOM	1844	O	GLU	B	181	23.572	8.294	27.358	1.00	26.25
ATOM	1846	N	VAL	B	182	21.360	8.661	27.074	1.00	24.62
ATOM	1847	CA	VAL	B	182	21.433	10.113	27.196	1.00	21.86
ATOM	1849	CB	VAL	B	182	20.743	10.814	26.053	1.00	21.55
ATOM	1851	CG1	VAL	B	182	21.260	10.243	24.697	1.00	17.66
ATOM	1855	CG2	VAL	B	182	20.931	12.334	26.166	1.00	19.52
ATOM	1859	C	VAL	B	182	20.760	10.492	28.490	1.00	23.04
ATOM	1860	O	VAL	B	182	19.558	10.251	28.684	1.00	24.67
ATOM	1862	N	TYR	B	183	21.514	11.075	29.405	1.00	21.90
ATOM	1863	CA	TYR	B	183	20.905	11.637	30.627	1.00	20.05
ATOM	1865	CB	TYR	B	183	21.883	11.581	31.758	1.00	20.97
ATOM	1868	CG	TYR	B	183	21.906	10.267	32.498	1.00	18.96
ATOM	1869	CD1	TYR	B	183	21.172	10.108	33.662	1.00	22.07
ATOM	1871	CE1	TYR	B	183	21.214	8.934	34.381	1.00	17.81
ATOM	1873	CZ	TYR	B	183	21.970	7.880	33.937	1.00	22.08
ATOM	1874	OH	TYR	B	183	21.965	6.695	34.662	1.00	23.31

ATOM	1876	CE2	TYR	B	183	22.708	7.984	32.765	1.00	22.41
ATOM	1878	CD2	TYR	B	183	22.674	9.204	32.049	1.00	21.30
ATOM	1880	C	TYR	B	183	20.481	13.086	30.396	1.00	20.23
ATOM	1881	O	TYR	B	183	21.200	13.823	29.752	1.00	21.09
ATOM	1883	N	LEU	B	184	19.328	13.478	30.918	1.00	19.83
ATOM	1884	CA	LEU	B	184	18.835	14.854	30.781	1.00	19.80
ATOM	1886	CB	LEU	B	184	17.474	14.857	30.103	1.00	20.40
ATOM	1889	CG	LEU	B	184	16.769	16.209	29.920	1.00	21.76
ATOM	1891	CD1	LEU	B	184	15.353	15.996	29.328	1.00	21.45
ATOM	1895	CD2	LEU	B	184	17.598	17.170	29.023	1.00	19.56
ATOM	1899	C	LEU	B	184	18.736	15.465	32.162	1.00	19.58
ATOM	1900	O	LEU	B	184	18.026	14.947	33.009	1.00	19.35
ATOM	1902	N	LEU	B	185	19.382	16.598	32.398	1.00	19.22
ATOM	1903	CA	LEU	B	185	19.204	17.304	33.673	1.00	18.87
ATOM	1905	CB	LEU	B	185	20.545	17.678	34.283	1.00	19.35
ATOM	1908	CG	LEU	B	185	21.255	16.515	34.961	1.00	24.53
ATOM	1910	CD1	LEU	B	185	21.874	15.665	33.905	1.00	29.83
ATOM	1914	CD2	LEU	B	185	22.289	17.038	35.909	1.00	29.34
ATOM	1918	C	LEU	B	185	18.360	18.554	33.397	1.00	20.60
ATOM	1919	O	LEU	B	185	18.813	19.484	32.718	1.00	21.55
ATOM	1921	N	ASP	B	186	17.118	18.585	33.857	1.00	18.61
ATOM	1922	CA	ASP	B	186	16.194	19.595	33.298	1.00	20.48
ATOM	1924	CB	ASP	B	186	15.756	19.147	31.903	1.00	20.01
ATOM	1927	CG	ASP	B	186	15.438	20.303	30.955	1.00	29.91
ATOM	1928	OD1	ASP	B	186	14.726	21.278	31.305	1.00	35.34
ATOM	1929	OD2	ASP	B	186	15.866	20.197	29.800	1.00	42.82
ATOM	1930	C	ASP	B	186	15.020	19.731	34.232	1.00	19.19
ATOM	1931	O	ASP	B	186	15.130	19.456	35.396	1.00	20.15
ATOM	1933	N	THR	B	187	13.905	20.206	33.712	1.00	21.33
ATOM	1934	CA	THR	B	187	12.651	20.288	34.425	1.00	20.10
ATOM	1936	CB	THR	B	187	11.625	21.147	33.650	1.00	20.41
ATOM	1938	OG1	THR	B	187	11.351	20.520	32.393	1.00	23.91
ATOM	1940	CG2	THR	B	187	12.117	22.555	33.432	1.00	17.39
ATOM	1944	C	THR	B	187	12.100	18.892	34.510	1.00	21.34
ATOM	1945	O	THR	B	187	12.674	17.964	33.988	1.00	20.55
ATOM	1947	N	SER	B	188	10.963	18.745	35.170	1.00	23.51
ATOM	1948	CA	SER	B	188	10.282	17.468	35.126	1.00	24.41
ATOM	1950	CB	SER	B	188	9.113	17.515	36.060	1.00	25.53
ATOM	1953	OG	SER	B	188	8.361	18.670	35.798	1.00	32.10
ATOM	1955	C	SER	B	188	9.832	17.233	33.680	1.00	23.69
ATOM	1956	O	SER	B	188	9.847	18.147	32.860	1.00	22.48
ATOM	1958	N	ILE	B	189	9.526	16.000	33.341	1.00	23.61
ATOM	1959	CA	ILE	B	189	9.107	15.706	31.976	1.00	23.32
ATOM	1961	CB	ILE	B	189	10.162	14.941	31.200	1.00	23.80
ATOM	1963	CG1	ILE	B	189	10.289	13.520	31.698	1.00	27.64
ATOM	1966	CD1	ILE	B	189	11.064	12.652	30.755	1.00	34.45
ATOM	1970	CG2	ILE	B	189	11.597	15.685	31.223	1.00	20.33
ATOM	1974	C	ILE	B	189	7.767	14.953	32.002	1.00	25.00
ATOM	1975	O	ILE	B	189	7.463	14.230	32.964	1.00	23.76
ATOM	1977	N	GLN	B	190	6.997	15.094	30.930	1.00	25.33
ATOM	1978	CA	GLN	B	190	5.793	14.290	30.727	1.00	26.35
ATOM	1980	CB	GLN	B	190	4.807	15.083	29.875	1.00	24.39
ATOM	1983	CG	GLN	B	190	3.366	14.543	29.805	1.00	31.67
ATOM	1986	CD	GLN	B	190	2.605	15.084	28.578	1.00	32.69
ATOM	1987	OE1	GLN	B	190	3.145	15.080	27.457	1.00	47.96
ATOM	1988	NE2	GLN	B	190	1.347	15.516	28.775	1.00	44.09
ATOM	1991	C	GLN	B	190	6.245	12.996	30.051	1.00	26.28
ATOM	1992	O	GLN	B	190	6.298	12.896	28.830	1.00	24.60
ATOM	1994	N	SER	B	191	6.588	11.992	30.855	1.00	26.26
ATOM	1995	CA	SER	B	191	7.221	10.787	30.324	1.00	28.14
ATOM	1997	CB	SER	B	191	7.833	9.974	31.470	1.00	28.22

ATOM	2000	OG	SER B 191	6.888	9.802	32.495	1.00	30.87
ATOM	2002	C	SER B 191	6.297	9.860	29.518	1.00	28.60
ATOM	2003	O	SER B 191	6.776	8.955	28.835	1.00	27.43
ATOM	2005	N	ASP B 192	4.998	10.095	29.602	1.00	30.41
ATOM	2006	CA	ASP B 192	4.004	9.327	28.852	1.00	32.72
ATOM	2008	CB	ASP B 192	2.733	9.182	29.691	1.00	34.20
ATOM	2011	CG	ASP B 192	2.975	8.399	30.982	1.00	40.62
ATOM	2012	OD1	ASP B 192	3.968	7.633	31.043	1.00	49.18
ATOM	2013	OD2	ASP B 192	2.195	8.562	31.952	1.00	53.45
ATOM	2014	C	ASP B 192	3.658	9.945	27.493	1.00	32.61
ATOM	2015	O	ASP B 192	2.855	9.400	26.758	1.00	31.88
ATOM	2017	N	HIS B 193	4.253	11.076	27.147	1.00	31.19
ATOM	2018	CA	HIS B 193	4.052	11.620	25.823	1.00	29.09
ATOM	2020	CB	HIS B 193	4.864	12.903	25.650	1.00	30.00
ATOM	2023	CG	HIS B 193	4.463	13.711	24.459	1.00	24.99
ATOM	2024	ND1	HIS B 193	3.675	14.833	24.559	1.00	27.86
ATOM	2026	CE1	HIS B 193	3.495	15.342	23.349	1.00	23.52
ATOM	2028	NE2	HIS B 193	4.129	14.586	22.474	1.00	24.92
ATOM	2030	CD2	HIS B 193	4.742	13.555	23.148	1.00	23.22
ATOM	2032	C	HIS B 193	4.469	10.580	24.801	1.00	29.92
ATOM	2033	O	HIS B 193	5.420	9.842	25.004	1.00	28.20
ATOM	2035	N	ARG B 194	3.766	10.521	23.676	1.00	31.25
ATOM	2036	CA	ARG B 194	3.987	9.413	22.738	1.00	31.66
ATOM	2038	CB	ARG B 194	2.790	9.263	21.795	1.00	33.84
ATOM	2041	CG	ARG B 194	1.443	9.267	22.526	1.00	39.06
ATOM	2044	CD	ARG B 194	1.107	7.904	23.177	1.00	50.44
ATOM	2047	NE	ARG B 194	0.320	8.090	24.406	1.00	56.22
ATOM	2049	CZ	ARG B 194	0.710	7.759	25.644	1.00	58.63
ATOM	2050	NH1	ARG B 194	1.884	7.176	25.872	1.00	59.40
ATOM	2053	NH2	ARG B 194	-0.092	8.013	26.677	1.00	58.85
ATOM	2056	C	ARG B 194	5.281	9.501	21.937	1.00	30.75
ATOM	2057	O	ARG B 194	5.744	8.513	21.371	1.00	29.72
ATOM	2059	N	GLU B 195	5.879	10.690	21.870	1.00	29.92
ATOM	2060	CA	GLU B 195	7.189	10.826	21.253	1.00	29.61
ATOM	2062	CB	GLU B 195	7.601	12.303	21.193	1.00	29.61
ATOM	2065	CG	GLU B 195	7.071	13.026	19.976	1.00	29.12
ATOM	2068	CD	GLU B 195	7.816	12.637	18.745	1.00	27.54
ATOM	2069	OE1	GLU B 195	7.432	11.624	18.129	1.00	29.33
ATOM	2070	OE2	GLU B 195	8.805	13.329	18.390	1.00	28.87
ATOM	2071	C	GLU B 195	8.231	10.066	22.018	1.00	28.56
ATOM	2072	O	GLU B 195	9.199	9.604	21.443	1.00	28.39
ATOM	2074	N	ILE B 196	8.047	9.967	23.331	1.00	29.09
ATOM	2075	CA	ILE B 196	9.107	9.479	24.214	1.00	29.15
ATOM	2077	CB	ILE B 196	9.710	10.643	25.004	1.00	29.75
ATOM	2079	CG1	ILE B 196	8.661	11.299	25.906	1.00	29.12
ATOM	2082	CD1	ILE B 196	9.223	12.367	26.852	1.00	28.82
ATOM	2086	CG2	ILE B 196	10.319	11.677	24.022	1.00	27.67
ATOM	2090	C	ILE B 196	8.697	8.341	25.164	1.00	30.72
ATOM	2091	O	ILE B 196	9.563	7.634	25.671	1.00	29.17
ATOM	2093	N	GLU B 197	7.391	8.149	25.365	1.00	32.34
ATOM	2094	CA	GLU B 197	6.856	6.980	26.084	1.00	34.63
ATOM	2096	CB	GLU B 197	5.422	6.694	25.599	1.00	34.70
ATOM	2099	CG	GLU B 197	4.954	5.254	25.801	1.00	40.31
ATOM	2102	CD	GLU B 197	3.726	4.916	24.960	1.00	41.68
ATOM	2103	OE1	GLU B 197	3.822	4.910	23.702	1.00	48.28
ATOM	2104	OE2	GLU B 197	2.659	4.660	25.579	1.00	54.66
ATOM	2105	C	GLU B 197	7.693	5.733	25.899	1.00	32.48
ATOM	2106	O	GLU B 197	7.938	5.311	24.786	1.00	31.88
ATOM	2108	N	GLY B 198	8.126	5.133	27.006	1.00	34.67
ATOM	2109	CA	GLY B 198	8.899	3.885	26.955	1.00	36.01
ATOM	2112	C	GLY B 198	10.370	4.060	26.576	1.00	37.17

ATOM	2113	O	GLY	B	198	11.131	3.098	26.560	1.00	38.71
ATOM	2115	N	ARG	B	199	10.779	5.271	26.240	1.00	36.80
ATOM	2116	CA	ARG	B	199	12.172	5.510	25.897	1.00	37.64
ATOM	2118	CB	ARG	B	199	12.291	6.091	24.481	1.00	38.72
ATOM	2121	CG	ARG	B	199	12.018	5.067	23.366	1.00	46.22
ATOM	2124	CD	ARG	B	199	12.870	3.791	23.539	1.00	55.59
ATOM	2127	NE	ARG	B	199	12.964	3.027	22.296	1.00	61.07
ATOM	2129	CZ	ARG	B	199	12.028	2.191	21.835	1.00	64.76
ATOM	2130	NH1	ARG	B	199	10.899	1.976	22.509	1.00	66.28
ATOM	2133	NH2	ARG	B	199	12.222	1.556	20.682	1.00	64.09
ATOM	2136	C	ARG	B	199	12.871	6.391	26.928	1.00	35.61
ATOM	2137	O	ARG	B	199	14.083	6.289	27.068	1.00	36.14
ATOM	2139	N	VAL	B	200	12.115	7.220	27.645	1.00	33.60
ATOM	2140	CA	VAL	B	200	12.654	8.002	28.744	1.00	33.84
ATOM	2142	CB	VAL	B	200	12.192	9.478	28.703	1.00	34.15
ATOM	2144	CG1	VAL	B	200	12.856	10.281	29.822	1.00	34.37
ATOM	2148	CG2	VAL	B	200	12.532	10.105	27.347	1.00	37.10
ATOM	2152	C	VAL	B	200	12.273	7.386	30.094	1.00	33.84
ATOM	2153	O	VAL	B	200	11.096	7.153	30.381	1.00	34.28
ATOM	2155	N	MET	B	201	13.276	7.111	30.916	1.00	32.29
ATOM	2156	CA	MET	B	201	13.041	6.732	32.296	1.00	34.15
ATOM	2158	CB	MET	B	201	14.006	5.635	32.705	1.00	33.49
ATOM	2161	CG	MET	B	201	13.694	5.077	34.106	1.00	38.48
ATOM	2164	SD	MET	B	201	15.081	5.152	35.250	1.00	46.27
ATOM	2165	CE	MET	B	201	15.689	6.810	34.976	1.00	47.30
ATOM	2169	C	MET	B	201	13.228	7.938	33.200	1.00	31.09
ATOM	2170	O	MET	B	201	14.317	8.543	33.222	1.00	29.86
ATOM	2172	N	VAL	B	202	12.187	8.280	33.961	1.00	28.56
ATOM	2173	CA	VAL	B	202	12.261	9.331	34.977	1.00	27.49
ATOM	2175	CB	VAL	B	202	10.882	9.936	35.339	1.00	27.71
ATOM	2177	CG1	VAL	B	202	11.008	10.967	36.430	1.00	23.95
ATOM	2181	CG2	VAL	B	202	10.231	10.566	34.129	1.00	28.16
ATOM	2185	C	VAL	B	202	12.911	8.726	36.227	1.00	27.46
ATOM	2186	O	VAL	B	202	12.416	7.771	36.797	1.00	25.25
ATOM	2188	N	THR	B	203	14.040	9.294	36.632	1.00	26.32
ATOM	2189	CA	THR	B	203	14.811	8.719	37.704	1.00	25.48
ATOM	2191	CB	THR	B	203	16.261	9.295	37.728	1.00	25.49
ATOM	2193	OG1	THR	B	203	16.202	10.725	37.870	1.00	24.05
ATOM	2195	CG2	THR	B	203	17.022	8.916	36.465	1.00	23.68
ATOM	2199	C	THR	B	203	14.120	9.033	39.028	1.00	25.59
ATOM	2200	O	THR	B	203	14.357	8.356	40.034	1.00	25.69
ATOM	2202	N	ASP	B	204	13.329	10.105	39.003	1.00	24.87
ATOM	2203	CA	ASP	B	204	12.763	10.787	40.159	1.00	25.87
ATOM	2205	CB	ASP	B	204	11.747	9.914	40.904	1.00	27.22
ATOM	2208	CG	ASP	B	204	10.438	9.747	40.134	1.00	30.34
ATOM	2209	OD1	ASP	B	204	9.904	10.763	39.625	1.00	34.20
ATOM	2210	OD2	ASP	B	204	9.945	8.601	40.038	1.00	32.63
ATOM	2211	C	ASP	B	204	13.823	11.377	41.095	1.00	25.22
ATOM	2212	O	ASP	B	204	13.525	11.764	42.206	1.00	23.80
ATOM	2214	N	PHE	B	205	15.062	11.489	40.623	1.00	25.15
ATOM	2215	CA	PHE	B	205	15.983	12.415	41.251	1.00	22.16
ATOM	2217	CB	PHE	B	205	17.355	12.366	40.635	1.00	23.22
ATOM	2220	CG	PHE	B	205	18.267	13.400	41.193	1.00	21.32
ATOM	2221	CD1	PHE	B	205	19.082	13.109	42.274	1.00	21.25
ATOM	2223	CE1	PHE	B	205	19.902	14.091	42.806	1.00	21.45
ATOM	2225	CZ	PHE	B	205	19.891	15.379	42.294	1.00	18.23
ATOM	2227	CE2	PHE	B	205	19.068	15.685	41.245	1.00	19.72
ATOM	2229	CD2	PHE	B	205	18.266	14.687	40.683	1.00	19.83
ATOM	2231	C	PHE	B	205	15.420	13.815	41.061	1.00	22.70
ATOM	2232	O	PHE	B	205	15.015	14.168	39.965	1.00	23.82
ATOM	2234	N	GLU	B	206	15.381	14.574	42.134	1.00	22.59

ATOM	2235	CA	GLU	B	206	14.907	15.937	42.107	1.00	23.79
ATOM	2237	CB	GLU	B	206	13.434	15.937	42.474	1.00	24.54
ATOM	2240	CG	GLU	B	206	12.834	17.261	42.735	1.00	32.80
ATOM	2243	CD	GLU	B	206	11.324	17.159	42.898	1.00	43.05
ATOM	2244	OE1	GLU	B	206	10.678	16.515	42.035	1.00	43.70
ATOM	2245	OE2	GLU	B	206	10.793	17.723	43.887	1.00	51.80
ATOM	2246	C	GLU	B	206	15.678	16.745	43.088	1.00	23.70
ATOM	2247	O	GLU	B	206	15.758	16.390	44.288	1.00	24.09
ATOM	2249	N	ASN	B	207	16.245	17.852	42.624	1.00	21.65
ATOM	2250	CA	ASN	B	207	16.849	18.814	43.528	1.00	19.96
ATOM	2252	CB	ASN	B	207	18.339	18.530	43.725	1.00	20.00
ATOM	2255	CG	ASN	B	207	18.902	19.241	44.937	1.00	20.57
ATOM	2256	OD1	ASN	B	207	18.991	20.469	44.963	1.00	24.19
ATOM	2257	ND2	ASN	B	207	19.257	18.480	45.970	1.00	20.50
ATOM	2260	C	ASN	B	207	16.640	20.191	42.928	1.00	19.56
ATOM	2261	O	ASN	B	207	17.333	20.569	41.978	1.00	20.13
ATOM	2263	N	VAL	B	208	15.620	20.882	43.386	1.00	21.26
ATOM	2264	CA	VAL	B	208	15.224	22.136	42.755	1.00	21.87
ATOM	2266	CB	VAL	B	208	13.967	21.984	41.882	1.00	23.13
ATOM	2268	CG1	VAL	B	208	14.205	20.967	40.762	1.00	21.63
ATOM	2272	CG2	VAL	B	208	12.744	21.598	42.753	1.00	27.61
ATOM	2276	C	VAL	B	208	14.939	23.158	43.829	1.00	23.68
ATOM	2277	O	VAL	B	208	14.464	22.816	44.900	1.00	22.08
ATOM	2279	N	PRO	B	209	15.190	24.438	43.529	1.00	25.08
ATOM	2280	CA	PRO	B	209	14.868	25.486	44.500	1.00	26.20
ATOM	2282	CB	PRO	B	209	15.665	26.682	43.981	1.00	24.91
ATOM	2285	CG	PRO	B	209	15.693	26.475	42.457	1.00	23.24
ATOM	2288	CD	PRO	B	209	15.706	24.976	42.253	1.00	25.66
ATOM	2291	C	PRO	B	209	13.339	25.734	44.485	1.00	28.51
ATOM	2292	O	PRO	B	209	12.671	25.363	43.535	1.00	27.22
ATOM	2293	N	GLU	B	210	12.780	26.336	45.525	1.00	32.75
ATOM	2294	CA	GLU	B	210	11.332	26.607	45.535	1.00	37.13
ATOM	2296	CB	GLU	B	210	10.874	27.109	46.923	1.00	37.56
ATOM	2299	CG	GLU	B	210	11.558	28.395	47.429	1.00	42.41
ATOM	2302	CD	GLU	B	210	10.983	28.855	48.778	1.00	43.34
ATOM	2303	OE1	GLU	B	210	9.886	29.473	48.778	1.00	52.09
ATOM	2304	OE2	GLU	B	210	11.626	28.580	49.825	1.00	53.62
ATOM	2305	C	GLU	B	210	10.973	27.632	44.471	1.00	37.93
ATOM	2306	O	GLU	B	210	11.803	28.464	44.121	1.00	36.74
ATOM	2308	N	GLU	B	211	9.747	27.562	43.947	1.00	40.62
ATOM	2309	CA	GLU	B	211	9.287	28.518	42.932	1.00	42.76
ATOM	2311	CB	GLU	B	211	7.925	28.098	42.338	1.00	43.56
ATOM	2314	CG	GLU	B	211	7.990	27.010	41.229	1.00	42.69
ATOM	2317	CD	GLU	B	211	8.311	25.629	41.771	1.00	46.11
ATOM	2318	OE1	GLU	B	211	8.289	25.487	43.008	1.00	51.60
ATOM	2319	OE2	GLU	B	211	8.604	24.689	40.986	1.00	40.22
ATOM	2320	C	GLU	B	211	9.218	29.916	43.551	1.00	45.72
ATOM	2321	O	GLU	B	211	9.116	30.031	44.757	1.00	46.29
ATOM	2323	N	ASP	B	212	9.313	30.966	42.733	1.00	49.37
ATOM	2324	CA	ASP	B	212	9.389	32.356	43.224	1.00	51.73
ATOM	2326	CB	ASP	B	212	10.720	32.616	43.943	1.00	52.74
ATOM	2329	CG	ASP	B	212	11.914	32.698	42.979	1.00	58.17
ATOM	2330	OD1	ASP	B	212	12.054	31.803	42.108	1.00	64.75
ATOM	2331	OD2	ASP	B	212	12.722	33.652	43.110	1.00	62.05
ATOM	2332	C	ASP	B	212	9.236	33.383	42.106	1.00	52.46
ATOM	2333	O	ASP	B	212	8.262	33.354	41.350	1.00	54.12
ATOM	2335	N	ALA	B	220	1.386	21.910	35.528	1.00	50.44
ATOM	2336	CA	ALA	B	220	2.038	20.637	35.269	1.00	51.17
ATOM	2338	CB	ALA	B	220	1.131	19.475	35.625	1.00	51.38
ATOM	2342	C	ALA	B	220	2.440	20.577	33.800	1.00	51.88
ATOM	2343	O	ALA	B	220	3.568	20.210	33.486	1.00	52.98

ATOM	2345	N	SER B 221	1.508	20.931	32.913	1.00	50.92
ATOM	2346	CA	SER B 221	1.806	21.233	31.514	1.00	49.86
ATOM	2348	CB	SER B 221	0.548	21.765	30.829	1.00	49.82
ATOM	2351	OG	SER B 221	0.870	22.382	29.593	1.00	53.18
ATOM	2353	C	SER B 221	2.941	22.271	31.384	1.00	48.49
ATOM	2354	O	SER B 221	3.854	22.111	30.578	1.00	49.82
ATOM	2356	N	LYS B 222	2.879	23.330	32.180	1.00	45.88
ATOM	2357	CA	LYS B 222	3.920	24.357	32.183	1.00	43.08
ATOM	2359	CB	LYS B 222	3.401	25.604	32.891	1.00	44.08
ATOM	2362	CG	LYS B 222	4.457	26.674	33.159	1.00	46.97
ATOM	2365	CD	LYS B 222	4.167	27.455	34.444	1.00	49.04
ATOM	2368	CE	LYS B 222	5.447	27.707	35.224	1.00	48.68
ATOM	2371	NZ	LYS B 222	6.529	28.245	34.340	1.00	47.93
ATOM	2375	C	LYS B 222	5.215	23.875	32.851	1.00	40.40
ATOM	2376	O	LYS B 222	6.313	24.128	32.333	1.00	39.24
ATOM	2378	N	CYS B 223	5.086	23.201	33.999	1.00	36.98
ATOM	2379	CA	CYS B 223	6.239	22.676	34.737	1.00	34.97
ATOM	2381	CB	CYS B 223	5.823	21.842	35.957	1.00	35.37
ATOM	2384	SG	CYS B 223	5.091	22.836	37.262	1.00	44.07
ATOM	2386	C	CYS B 223	7.142	21.811	33.892	1.00	31.35
ATOM	2387	O	CYS B 223	8.350	21.890	34.047	1.00	32.43
ATOM	2389	N	ASP B 224	6.580	20.973	33.033	1.00	27.58
ATOM	2390	CA	ASP B 224	7.402	20.022	32.279	1.00	26.95
ATOM	2392	CB	ASP B 224	6.978	18.573	32.511	1.00	29.49
ATOM	2395	CG	ASP B 224	5.511	18.358	32.470	1.00	37.39
ATOM	2396	OD1	ASP B 224	4.808	19.099	31.733	1.00	48.29
ATOM	2397	OD2	ASP B 224	5.079	17.419	33.191	1.00	41.62
ATOM	2398	C	ASP B 224	7.539	20.345	30.789	1.00	23.68
ATOM	2399	O	ASP B 224	7.901	19.507	29.965	1.00	23.36
ATOM	2401	N	SER B 225	7.268	21.587	30.467	1.00	21.42
ATOM	2402	CA	SER B 225	7.305	22.019	29.108	1.00	21.65
ATOM	2404	CB	SER B 225	6.813	23.458	29.055	1.00	21.72
ATOM	2407	OG	SER B 225	7.154	24.034	27.820	1.00	26.20
ATOM	2409	C	SER B 225	8.729	21.899	28.534	1.00	21.04
ATOM	2410	O	SER B 225	8.955	21.291	27.462	1.00	21.55
ATOM	2412	N	HIS B 226	9.699	22.469	29.236	1.00	19.91
ATOM	2413	CA	HIS B 226	11.093	22.537	28.693	1.00	18.34
ATOM	2415	CB	HIS B 226	11.907	23.411	29.614	1.00	18.03
ATOM	2418	CG	HIS B 226	13.316	23.648	29.175	1.00	17.21
ATOM	2419	ND1	HIS B 226	14.397	23.058	29.807	1.00	21.58
ATOM	2421	CE1	HIS B 226	15.519	23.483	29.248	1.00	19.36
ATOM	2423	NE2	HIS B 226	15.205	24.357	28.303	1.00	21.10
ATOM	2425	CD2	HIS B 226	13.835	24.477	28.239	1.00	17.46
ATOM	2427	C	HIS B 226	11.703	21.147	28.552	1.00	18.14
ATOM	2428	O	HIS B 226	12.154	20.758	27.477	1.00	19.23
ATOM	2430	N	GLY B 227	11.677	20.378	29.633	1.00	17.66
ATOM	2431	CA	GLY B 227	12.250	19.050	29.645	1.00	18.03
ATOM	2434	C	GLY B 227	11.594	18.122	28.648	1.00	17.81
ATOM	2435	O	GLY B 227	12.266	17.369	27.932	1.00	17.29
ATOM	2437	N	THR B 228	10.266	18.163	28.598	1.00	17.16
ATOM	2438	CA	THR B 228	9.546	17.271	27.676	1.00	18.16
ATOM	2440	CB	THR B 228	8.009	17.383	27.842	1.00	17.28
ATOM	2442	OG1	THR B 228	7.658	17.147	29.212	1.00	21.19
ATOM	2444	CG2	THR B 228	7.307	16.384	26.966	1.00	17.57
ATOM	2448	C	THR B 228	9.939	17.558	26.239	1.00	15.21
ATOM	2449	O	THR B 228	10.168	16.647	25.452	1.00	17.17
ATOM	2451	N	HIS B 229	10.029	18.830	25.888	1.00	18.00
ATOM	2452	CA	HIS B 229	10.401	19.202	24.523	1.00	15.34
ATOM	2454	CB	HIS B 229	10.348	20.726	24.350	1.00	16.03
ATOM	2457	CG	HIS B 229	10.509	21.180	22.919	1.00	14.56
ATOM	2458	ND1	HIS B 229	11.724	21.510	22.373	1.00	16.07

ATOM	2460	CE1	HIS	B	229	11.567	21.860	21.108	1.00	13.30
ATOM	2462	NE2	HIS	B	229	10.282	21.765	20.806	1.00	15.38
ATOM	2464	CD2	HIS	B	229	9.597	21.348	21.929	1.00	16.01
ATOM	2466	C	HIS	B	229	11.783	18.670	24.166	1.00	16.38
ATOM	2467	O	HIS	B	229	12.001	18.134	23.104	1.00	16.39
ATOM	2469	N	LEU	B	230	12.728	18.812	25.084	1.00	16.05
ATOM	2470	CA	LEU	B	230	14.114	18.446	24.830	1.00	15.82
ATOM	2472	CB	LEU	B	230	15.008	19.019	25.929	1.00	15.94
ATOM	2475	CG	LEU	B	230	15.067	20.537	25.989	1.00	17.34
ATOM	2477	CD1	LEU	B	230	15.953	20.871	27.196	1.00	21.40
ATOM	2481	CD2	LEU	B	230	15.593	21.105	24.733	1.00	18.77
ATOM	2485	C	LEU	B	230	14.314	16.929	24.760	1.00	15.67
ATOM	2486	O	LEU	B	230	15.053	16.446	23.918	1.00	18.03
ATOM	2488	N	ALA	B	231	13.627	16.188	25.618	1.00	17.55
ATOM	2489	CA	ALA	B	231	13.614	14.711	25.497	1.00	19.40
ATOM	2491	CB	ALA	B	231	12.771	14.115	26.584	1.00	20.60
ATOM	2495	C	ALA	B	231	13.116	14.298	24.102	1.00	19.38
ATOM	2496	O	ALA	B	231	13.667	13.389	23.460	1.00	20.70
ATOM	2498	N	GLY	B	232	12.149	15.046	23.594	1.00	20.68
ATOM	2499	CA	GLY	B	232	11.612	14.826	22.266	1.00	19.87
ATOM	2502	C	GLY	B	232	12.549	15.206	21.165	1.00	20.24
ATOM	2503	O	GLY	B	232	12.605	14.510	20.174	1.00	21.29
ATOM	2505	N	VAL	B	233	13.258	16.336	21.305	1.00	19.28
ATOM	2506	CA	VAL	B	233	14.315	16.670	20.358	1.00	17.98
ATOM	2508	CB	VAL	B	233	14.909	18.070	20.611	1.00	18.38
ATOM	2510	CG1	VAL	B	233	16.009	18.353	19.596	1.00	16.54
ATOM	2514	CG2	VAL	B	233	13.804	19.115	20.542	1.00	17.08
ATOM	2518	C	VAL	B	233	15.415	15.589	20.328	1.00	17.70
ATOM	2519	O	VAL	B	233	15.881	15.170	19.234	1.00	17.74
ATOM	2521	N	VAL	B	234	15.789	15.087	21.489	1.00	18.46
ATOM	2522	CA	VAL	B	234	16.871	14.076	21.530	1.00	19.86
ATOM	2524	CB	VAL	B	234	17.468	13.890	22.937	1.00	19.90
ATOM	2526	CG1	VAL	B	234	18.486	12.737	22.956	1.00	17.67
ATOM	2530	CG2	VAL	B	234	18.118	15.209	23.399	1.00	16.21
ATOM	2534	C	VAL	B	234	16.393	12.744	20.969	1.00	21.68
ATOM	2535	O	VAL	B	234	17.012	12.216	20.045	1.00	23.25
ATOM	2537	N	SER	B	235	15.257	12.258	21.452	1.00	23.20
ATOM	2538	CA	SER	B	235	14.879	10.863	21.227	1.00	24.87
ATOM	2540	CB	SER	B	235	15.069	10.103	22.554	1.00	25.88
ATOM	2543	OG	SER	B	235	14.160	10.571	23.529	1.00	28.18
ATOM	2545	C	SER	B	235	13.462	10.623	20.675	1.00	26.03
ATOM	2546	O	SER	B	235	13.071	9.482	20.511	1.00	25.55
ATOM	2548	N	GLY	B	236	12.712	11.684	20.349	1.00	27.03
ATOM	2549	CA	GLY	B	236	11.292	11.561	19.988	1.00	26.93
ATOM	2552	C	GLY	B	236	11.072	10.679	18.769	1.00	28.09
ATOM	2553	O	GLY	B	236	11.784	10.796	17.773	1.00	26.27
ATOM	2555	N	ARG	B	237	10.078	9.793	18.818	1.00	31.52
ATOM	2556	CA	ARG	B	237	9.945	8.804	17.718	1.00	34.32
ATOM	2558	CB	ARG	B	237	8.952	7.680	18.039	1.00	34.45
ATOM	2561	CG	ARG	B	237	7.505	8.088	18.340	1.00	39.37
ATOM	2564	CD	ARG	B	237	6.651	6.815	18.642	1.00	42.02
ATOM	2567	NE	ARG	B	237	7.312	5.970	19.653	1.00	50.71
ATOM	2569	CZ	ARG	B	237	6.807	5.598	20.832	1.00	53.20
ATOM	2570	NH1	ARG	B	237	5.568	5.920	21.198	1.00	55.83
ATOM	2573	NH2	ARG	B	237	7.555	4.856	21.650	1.00	53.75
ATOM	2576	C	ARG	B	237	9.660	9.439	16.368	1.00	32.55
ATOM	2577	O	ARG	B	237	10.149	8.949	15.357	1.00	33.65
ATOM	2579	N	ASP	B	238	8.935	10.546	16.346	1.00	32.79
ATOM	2580	CA	ASP	B	238	8.652	11.249	15.084	1.00	32.82
ATOM	2582	CB	ASP	B	238	7.219	11.781	15.058	1.00	33.87
ATOM	2585	CG	ASP	B	238	6.166	10.682	14.849	1.00	39.24

ATOM	2586	OD1	ASP	B	238	6.501	9.561	14.395	1.00	47.70
ATOM	2587	OD2	ASP	B	238	4.976	10.961	15.125	1.00	43.68
ATOM	2588	C	ASP	B	238	9.597	12.424	14.807	1.00	31.42
ATOM	2589	O	ASP	B	238	10.006	12.627	13.675	1.00	34.31
ATOM	2591	N	ALA	B	239	9.928	13.221	15.819	1.00	28.02
ATOM	2592	CA	ALA	B	239	10.657	14.464	15.586	1.00	25.76
ATOM	2594	CB	ALA	B	239	9.800	15.654	15.980	1.00	25.09
ATOM	2598	C	ALA	B	239	12.022	14.519	16.288	1.00	25.27
ATOM	2599	O	ALA	B	239	12.640	15.582	16.372	1.00	23.73
ATOM	2601	N	GLY	B	240	12.513	13.373	16.746	1.00	24.70
ATOM	2602	CA	GLY	B	240	13.785	13.319	17.462	1.00	24.75
ATOM	2605	C	GLY	B	240	14.961	13.145	16.541	1.00	24.53
ATOM	2606	O	GLY	B	240	14.802	12.739	15.385	1.00	25.27
ATOM	2608	N	VAL	B	241	16.161	13.397	17.070	1.00	23.46
ATOM	2609	CA	VAL	B	241	17.383	13.232	16.315	1.00	22.38
ATOM	2611	CB	VAL	B	241	18.500	14.198	16.850	1.00	21.54
ATOM	2613	CG1	VAL	B	241	19.886	13.890	16.226	1.00	20.26
ATOM	2617	CG2	VAL	B	241	18.108	15.639	16.567	1.00	13.44
ATOM	2621	C	VAL	B	241	17.861	11.771	16.346	1.00	24.35
ATOM	2622	O	VAL	B	241	18.268	11.209	15.320	1.00	25.23
ATOM	2624	N	ALA	B	242	17.863	11.200	17.537	1.00	24.34
ATOM	2625	CA	ALA	B	242	18.352	9.854	17.767	1.00	25.81
ATOM	2627	CB	ALA	B	242	19.351	9.830	18.898	1.00	23.63
ATOM	2631	C	ALA	B	242	17.088	9.110	18.123	1.00	27.82
ATOM	2632	O	ALA	B	242	16.860	8.773	19.280	1.00	26.33
ATOM	2634	N	LYS	B	243	16.243	8.906	17.108	1.00	31.40
ATOM	2635	CA	LYS	B	243	14.853	8.466	17.341	1.00	35.61
ATOM	2637	CB	LYS	B	243	14.104	8.210	16.023	1.00	35.56
ATOM	2640	CG	LYS	B	243	13.981	9.445	15.165	1.00	38.14
ATOM	2643	CD	LYS	B	243	13.050	9.272	13.973	1.00	37.68
ATOM	2646	CE	LYS	B	243	12.605	10.619	13.423	1.00	40.31
ATOM	2649	NZ	LYS	B	243	13.734	11.459	12.910	1.00	38.68
ATOM	2653	C	LYS	B	243	14.797	7.255	18.262	1.00	36.62
ATOM	2654	O	LYS	B	243	13.964	7.178	19.163	1.00	38.72
ATOM	2656	N	GLY	B	244	15.710	6.321	18.084	1.00	38.67
ATOM	2657	CA	GLY	B	244	15.847	5.222	19.062	1.00	39.67
ATOM	2660	C	GLY	B	244	16.007	5.632	20.531	1.00	40.99
ATOM	2661	O	GLY	B	244	15.173	5.285	21.391	1.00	41.66
ATOM	2663	N	ALA	B	245	17.033	6.449	20.771	1.00	39.28
ATOM	2664	CA	ALA	B	245	17.805	6.485	22.013	1.00	36.45
ATOM	2666	CB	ALA	B	245	18.671	7.731	22.039	1.00	37.64
ATOM	2670	C	ALA	B	245	17.059	6.382	23.337	1.00	34.10
ATOM	2671	O	ALA	B	245	15.992	6.951	23.523	1.00	33.55
ATOM	2673	N	SER	B	246	17.697	5.693	24.271	1.00	30.34
ATOM	2674	CA	SER	B	246	17.227	5.618	25.643	1.00	28.64
ATOM	2676	CB	SER	B	246	17.821	4.388	26.304	1.00	29.07
ATOM	2679	OG	SER	B	246	17.459	3.243	25.526	1.00	34.00
ATOM	2681	C	SER	B	246	17.658	6.855	26.394	1.00	26.09
ATOM	2682	O	SER	B	246	18.793	7.315	26.232	1.00	25.12
ATOM	2684	N	MET	B	247	16.752	7.393	27.203	1.00	24.66
ATOM	2685	CA	MET	B	247	17.065	8.527	28.045	1.00	23.12
ATOM	2687	CB	MET	B	247	16.331	9.763	27.554	1.00	22.25
ATOM	2690	CG	MET	B	247	16.574	10.106	26.110	1.00	24.78
ATOM	2693	SD	MET	B	247	15.878	11.745	25.706	1.00	27.44
ATOM	2694	CE	MET	B	247	17.035	12.864	26.551	1.00	25.93
ATOM	2698	C	MET	B	247	16.694	8.262	29.498	1.00	23.84
ATOM	2699	O	MET	B	247	15.785	7.466	29.800	1.00	23.89
ATOM	2701	N	ARG	B	248	17.401	8.938	30.389	1.00	20.61
ATOM	2702	CA	ARG	B	248	17.067	8.985	31.800	1.00	21.16
ATOM	2704	CB	ARG	B	248	18.088	8.204	32.626	1.00	21.92
ATOM	2707	CG	ARG	B	248	18.289	6.756	32.146	1.00	24.64

ATOM	2710	CD	ARG	B	248	19.062	5.969	33.181	1.00	35.33
ATOM	2713	NE	ARG	B	248	19.263	4.589	32.780	1.00	38.66
ATOM	2715	CZ	ARG	B	248	18.312	3.648	32.812	1.00	45.14
ATOM	2716	NH1	ARG	B	248	18.590	2.403	32.421	1.00	45.75
ATOM	2719	NH2	ARG	B	248	17.081	3.931	33.233	1.00	48.53
ATOM	2722	C	ARG	B	248	17.032	10.436	32.216	1.00	21.02
ATOM	2723	O	ARG	B	248	17.934	11.224	31.850	1.00	20.78
ATOM	2725	N	SER	B	249	16.012	10.821	32.970	1.00	19.87
ATOM	2726	CA	SER	B	249	15.840	12.238	33.292	1.00	20.22
ATOM	2728	CB	SER	B	249	14.473	12.726	32.862	1.00	21.06
ATOM	2731	OG	SER	B	249	13.505	11.754	33.137	1.00	25.26
ATOM	2733	C	SER	B	249	15.999	12.474	34.778	1.00	21.77
ATOM	2734	O	SER	B	249	15.486	11.686	35.590	1.00	19.25
ATOM	2736	N	LEU	B	250	16.706	13.565	35.105	1.00	19.71
ATOM	2737	CA	LEU	B	250	16.877	14.063	36.471	1.00	20.22
ATOM	2739	CB	LEU	B	250	18.350	14.182	36.866	1.00	19.27
ATOM	2742	CG	LEU	B	250	19.156	12.908	37.132	1.00	22.70
ATOM	2744	CD1	LEU	B	250	19.357	12.124	35.882	1.00	22.97
ATOM	2748	CD2	LEU	B	250	20.526	13.265	37.748	1.00	21.41
ATOM	2752	C	LEU	B	250	16.271	15.462	36.484	1.00	19.76
ATOM	2753	O	LEU	B	250	16.396	16.222	35.485	1.00	19.27
ATOM	2755	N	ARG	B	251	15.597	15.792	37.580	1.00	17.73
ATOM	2756	CA	ARG	B	251	14.972	17.071	37.693	1.00	18.06
ATOM	2758	CB	ARG	B	251	13.563	16.984	38.282	1.00	19.18
ATOM	2761	CG	ARG	B	251	12.861	18.316	38.279	1.00	21.53
ATOM	2764	CD	ARG	B	251	11.574	18.298	39.059	1.00	26.60
ATOM	2767	NE	ARG	B	251	10.865	19.566	38.892	1.00	28.22
ATOM	2769	CZ	ARG	B	251	9.980	20.068	39.749	1.00	26.37
ATOM	2770	NH1	ARG	B	251	9.393	21.221	39.487	1.00	31.60
ATOM	2773	NH2	ARG	B	251	9.673	19.430	40.873	1.00	32.51
ATOM	2776	C	ARG	B	251	15.846	17.973	38.510	1.00	19.61
ATOM	2777	O	ARG	B	251	16.002	17.783	39.731	1.00	20.34
ATOM	2779	N	VAL	B	252	16.441	18.954	37.837	1.00	19.82
ATOM	2780	CA	VAL	B	252	17.226	19.953	38.529	1.00	18.92
ATOM	2782	CB	VAL	B	252	18.737	19.826	38.220	1.00	19.07
ATOM	2784	CG1	VAL	B	252	19.191	18.390	38.408	1.00	19.18
ATOM	2788	CG2	VAL	B	252	19.059	20.250	36.809	1.00	18.18
ATOM	2792	C	VAL	B	252	16.723	21.361	38.268	1.00	18.96
ATOM	2793	O	VAL	B	252	17.302	22.317	38.821	1.00	19.45
ATOM	2795	N	LEU	B	253	15.623	21.475	37.505	1.00	16.50
ATOM	2796	CA	LEU	B	253	14.981	22.738	37.241	1.00	16.03
ATOM	2798	CB	LEU	B	253	15.009	23.036	35.741	1.00	13.30
ATOM	2801	CG	LEU	B	253	16.376	23.216	35.087	1.00	13.33
ATOM	2803	CD1	LEU	B	253	16.198	23.568	33.590	1.00	20.46
ATOM	2807	CD2	LEU	B	253	17.365	24.173	35.855	1.00	16.69
ATOM	2811	C	LEU	B	253	13.558	22.691	37.737	1.00	18.15
ATOM	2812	O	LEU	B	253	12.828	21.712	37.507	1.00	19.38
ATOM	2814	N	ASN	B	254	13.178	23.744	38.439	1.00	19.54
ATOM	2815	CA	ASN	B	254	11.824	23.903	38.928	1.00	20.65
ATOM	2817	CB	ASN	B	254	11.784	24.807	40.160	1.00	20.51
ATOM	2820	CG	ASN	B	254	11.953	26.300	39.855	1.00	23.05
ATOM	2821	OD1	ASN	B	254	11.833	26.749	38.712	1.00	21.24
ATOM	2822	ND2	ASN	B	254	12.238	27.074	40.905	1.00	16.35
ATOM	2825	C	ASN	B	254	10.834	24.306	37.820	1.00	22.49
ATOM	2826	O	ASN	B	254	11.172	24.361	36.603	1.00	20.91
ATOM	2828	N	CYS	B	255	9.592	24.524	38.221	1.00	23.99
ATOM	2829	CA	CYS	B	255	8.539	24.815	37.270	1.00	25.54
ATOM	2831	CB	CYS	B	255	7.187	24.903	37.972	1.00	27.13
ATOM	2834	SG	CYS	B	255	6.668	23.304	38.531	1.00	33.60
ATOM	2836	C	CYS	B	255	8.767	26.095	36.536	1.00	24.98
ATOM	2837	O	CYS	B	255	8.150	26.304	35.502	1.00	26.60

ATOM	2839	N	GLN	B	256	9.619	26.962	37.062	1.00	23.95
ATOM	2840	CA	GLN	B	256	9.935	28.213	36.376	1.00	25.63
ATOM	2842	CB	GLN	B	256	10.052	29.352	37.382	1.00	25.36
ATOM	2845	CG	GLN	B	256	8.694	29.753	38.019	1.00	29.22
ATOM	2848	CD	GLN	B	256	8.834	30.614	39.270	1.00	30.53
ATOM	2849	OE1	GLN	B	256	9.716	30.401	40.091	1.00	39.63
ATOM	2850	NE2	GLN	B	256	7.930	31.576	39.435	1.00	41.64
ATOM	2853	C	GLN	B	256	11.226	28.101	35.570	1.00	24.21
ATOM	2854	O	GLN	B	256	11.713	29.108	35.052	1.00	22.29
ATOM	2856	N	GLY	B	257	11.781	26.885	35.473	1.00	21.45
ATOM	2857	CA	GLY	B	257	13.048	26.658	34.796	1.00	19.96
ATOM	2860	C	GLY	B	257	14.278	27.093	35.552	1.00	20.19
ATOM	2861	O	GLY	B	257	15.301	27.310	34.939	1.00	18.71
ATOM	2863	N	LYS	B	258	14.194	27.188	36.887	1.00	18.44
ATOM	2864	CA	LYS	B	258	15.287	27.617	37.712	1.00	18.95
ATOM	2866	CB	LYS	B	258	14.887	28.826	38.550	1.00	18.90
ATOM	2869	CG	LYS	B	258	16.054	29.451	39.278	1.00	27.42
ATOM	2872	CD	LYS	B	258	15.643	30.770	40.014	1.00	25.50
ATOM	2875	CE	LYS	B	258	15.124	30.531	41.432	1.00	37.19
ATOM	2878	NZ	LYS	B	258	15.218	31.798	42.255	1.00	37.59
ATOM	2882	C	LYS	B	258	15.816	26.487	38.591	1.00	17.89
ATOM	2883	O	LYS	B	258	15.040	25.682	39.156	1.00	15.91
ATOM	2885	N	GLY	B	259	17.139	26.402	38.644	1.00	17.74
ATOM	2886	CA	GLY	B	259	17.825	25.409	39.453	1.00	18.44
ATOM	2889	C	GLY	B	259	18.948	26.044	40.235	1.00	17.77
ATOM	2890	O	GLY	B	259	19.110	27.283	40.268	1.00	15.21
ATOM	2892	N	THR	B	260	19.750	25.192	40.851	1.00	15.87
ATOM	2893	CA	THR	B	260	20.898	25.663	41.576	1.00	15.79
ATOM	2895	CB	THR	B	260	20.731	25.502	43.096	1.00	17.33
ATOM	2897	OG1	THR	B	260	20.725	24.108	43.447	1.00	17.97
ATOM	2899	CG2	THR	B	260	19.427	26.155	43.608	1.00	17.26
ATOM	2903	C	THR	B	260	22.160	24.950	41.093	1.00	16.27
ATOM	2904	O	THR	B	260	22.105	23.852	40.533	1.00	15.69
ATOM	2906	N	VAL	B	261	23.308	25.591	41.309	1.00	15.64
ATOM	2907	CA	VAL	B	261	24.558	24.952	41.046	1.00	16.51
ATOM	2909	CB	VAL	B	261	25.749	25.888	41.246	1.00	18.01
ATOM	2911	CG1	VAL	B	261	27.057	25.086	41.328	1.00	18.73
ATOM	2915	CG2	VAL	B	261	25.786	26.934	40.104	1.00	13.24
ATOM	2919	C	VAL	B	261	24.677	23.707	41.909	1.00	16.29
ATOM	2920	O	VAL	B	261	25.056	22.648	41.410	1.00	15.83
ATOM	2922	N	SER	B	262	24.339	23.801	43.193	1.00	16.49
ATOM	2923	CA	SER	B	262	24.419	22.620	44.040	1.00	16.93
ATOM	2925	CB	SER	B	262	24.114	22.984	45.505	1.00	16.60
ATOM	2928	OG	SER	B	262	22.780	23.433	45.665	1.00	16.37
ATOM	2930	C	SER	B	262	23.512	21.463	43.567	1.00	17.49
ATOM	2931	O	SER	B	262	23.931	20.314	43.570	1.00	20.66
ATOM	2933	N	GLY	B	263	22.270	21.752	43.197	1.00	18.15
ATOM	2934	CA	GLY	B	263	21.373	20.721	42.712	1.00	16.96
ATOM	2937	C	GLY	B	263	21.938	20.085	41.462	1.00	17.83
ATOM	2938	O	GLY	B	263	21.882	18.872	41.289	1.00	15.63
ATOM	2940	N	THR	B	264	22.562	20.893	40.612	1.00	17.55
ATOM	2941	CA	THR	B	264	23.157	20.384	39.359	1.00	17.76
ATOM	2943	CB	THR	B	264	23.568	21.537	38.434	1.00	19.13
ATOM	2945	OG1	THR	B	264	22.437	22.418	38.283	1.00	21.69
ATOM	2947	CG2	THR	B	264	23.997	21.013	37.051	1.00	21.13
ATOM	2951	C	THR	B	264	24.346	19.466	39.682	1.00	18.18
ATOM	2952	O	THR	B	264	24.457	18.426	39.084	1.00	16.68
ATOM	2954	N	LEU	B	265	25.208	19.871	40.618	1.00	16.60
ATOM	2955	CA	LEU	B	265	26.326	19.046	41.103	1.00	17.85
ATOM	2957	CB	LEU	B	265	27.104	19.746	42.219	1.00	19.68
ATOM	2960	CG	LEU	B	265	27.800	21.103	41.947	1.00	19.76

ATOM	2962	CD1	LEU	B	265	28.380	21.645	43.225	1.00	14.87
ATOM	2966	CD2	LEU	B	265	28.896	20.896	40.936	1.00	19.21
ATOM	2970	C	LEU	B	265	25.834	17.720	41.661	1.00	18.41
ATOM	2971	O	LEU	B	265	26.420	16.683	41.368	1.00	17.21
ATOM	2973	N	ILE	B	266	24.785	17.778	42.496	1.00	17.14
ATOM	2974	CA	ILE	B	266	24.210	16.581	43.095	1.00	16.99
ATOM	2976	CB	ILE	B	266	23.213	16.948	44.194	1.00	17.87
ATOM	2978	CG1	ILE	B	266	23.952	17.630	45.343	1.00	16.08
ATOM	2981	CD1	ILE	B	266	23.035	18.315	46.403	1.00	19.37
ATOM	2985	CG2	ILE	B	266	22.475	15.670	44.690	1.00	16.80
ATOM	2989	C	ILE	B	266	23.654	15.669	41.976	1.00	17.80
ATOM	2990	O	ILE	B	266	23.850	14.441	41.974	1.00	15.44
ATOM	2992	N	GLY	B	267	23.070	16.281	40.953	1.00	16.00
ATOM	2993	CA	GLY	B	267	22.587	15.553	39.776	1.00	16.33
ATOM	2996	C	GLY	B	267	23.701	14.870	39.015	1.00	17.58
ATOM	2997	O	GLY	B	267	23.602	13.681	38.751	1.00	15.57
ATOM	2999	N	LEU	B	268	24.777	15.612	38.696	1.00	17.31
ATOM	3000	CA	LEU	B	268	25.940	15.035	38.017	1.00	17.00
ATOM	3002	CB	LEU	B	268	27.024	16.098	37.751	1.00	17.02
ATOM	3005	CG	LEU	B	268	26.620	17.218	36.779	1.00	16.08
ATOM	3007	CD1	LEU	B	268	27.614	18.390	36.907	1.00	12.54
ATOM	3011	CD2	LEU	B	268	26.560	16.683	35.369	1.00	21.33
ATOM	3015	C	LEU	B	268	26.535	13.913	38.821	1.00	17.02
ATOM	3016	O	LEU	B	268	26.846	12.867	38.287	1.00	16.54
ATOM	3018	N	GLU	B	269	26.608	14.102	40.125	1.00	15.43
ATOM	3019	CA	GLU	B	269	27.113	13.076	40.993	1.00	16.57
ATOM	3021	CB	GLU	B	269	27.203	13.628	42.414	1.00	16.60
ATOM	3024	CG	GLU	B	269	27.797	12.631	43.365	1.00	20.80
ATOM	3027	CD	GLU	B	269	27.672	13.106	44.794	1.00	26.71
ATOM	3028	OE1	GLU	B	269	26.569	12.967	45.335	1.00	24.34
ATOM	3029	OE2	GLU	B	269	28.665	13.614	45.329	1.00	30.28
ATOM	3030	C	GLU	B	269	26.227	11.828	40.967	1.00	16.03
ATOM	3031	O	GLU	B	269	26.721	10.690	40.934	1.00	16.16
ATOM	3033	N	PHE	B	270	24.923	12.032	40.951	1.00	16.45
ATOM	3034	CA	PHE	B	270	23.972	10.930	40.864	1.00	17.03
ATOM	3036	CB	PHE	B	270	22.563	11.505	40.897	1.00	18.70
ATOM	3039	CG	PHE	B	270	21.512	10.499	40.784	1.00	20.40
ATOM	3040	CD1	PHE	B	270	20.993	9.905	41.919	1.00	23.73
ATOM	3042	CE1	PHE	B	270	19.996	8.954	41.804	1.00	24.58
ATOM	3044	CZ	PHE	B	270	19.529	8.588	40.540	1.00	21.89
ATOM	3046	CE2	PHE	B	270	20.041	9.175	39.423	1.00	26.65
ATOM	3048	CD2	PHE	B	270	21.035	10.131	39.539	1.00	16.27
ATOM	3050	C	PHE	B	270	24.169	10.101	39.612	1.00	18.22
ATOM	3051	O	PHE	B	270	24.090	8.875	39.628	1.00	16.13
ATOM	3053	N	ILE	B	271	24.408	10.763	38.497	1.00	18.38
ATOM	3054	CA	ILE	B	271	24.703	10.047	37.251	1.00	18.10
ATOM	3056	CB	ILE	B	271	24.920	11.047	36.092	1.00	19.72
ATOM	3058	CG1	ILE	B	271	23.637	11.822	35.802	1.00	22.36
ATOM	3061	CD1	ILE	B	271	23.833	13.004	34.769	1.00	20.94
ATOM	3065	CG2	ILE	B	271	25.428	10.316	34.842	1.00	17.92
ATOM	3069	C	ILE	B	271	25.945	9.167	37.394	1.00	17.68
ATOM	3070	O	ILE	B	271	25.981	8.002	36.944	1.00	16.61
ATOM	3072	N	ARG	B	272	26.985	9.723	37.993	1.00	17.62
ATOM	3073	CA	ARG	B	272	28.228	8.991	38.166	1.00	16.92
ATOM	3075	CB	ARG	B	272	29.332	9.904	38.690	1.00	15.25
ATOM	3078	CG	ARG	B	272	30.675	9.218	38.982	1.00	19.10
ATOM	3081	CD	ARG	B	272	31.161	8.442	37.759	1.00	18.53
ATOM	3084	NE	ARG	B	272	32.504	7.908	37.967	1.00	21.50
ATOM	3086	CZ	ARG	B	272	33.097	7.045	37.141	1.00	22.96
ATOM	3087	NH1	ARG	B	272	32.513	6.672	36.050	1.00	17.41
ATOM	3090	NH2	ARG	B	272	34.307	6.614	37.381	1.00	20.61

ATOM	3093	C	ARG	B	272	28.052	7.781	39.089	1.00	17.93
ATOM	3094	O	ARG	B	272	28.539	6.693	38.774	1.00	17.03
ATOM	3096	N	LYS	B	273	27.327	7.971	40.183	1.00	18.92
ATOM	3097	CA	LYS	B	273	27.017	6.873	41.100	1.00	22.34
ATOM	3099	CB	LYS	B	273	26.293	7.377	42.346	1.00	21.55
ATOM	3102	CG	LYS	B	273	27.141	8.299	43.205	1.00	26.69
ATOM	3105	CD	LYS	B	273	26.388	8.760	44.462	1.00	27.81
ATOM	3108	CE	LYS	B	273	27.342	9.008	45.629	1.00	36.02
ATOM	3111	NZ	LYS	B	273	26.784	10.060	46.521	1.00	39.85
ATOM	3115	C	LYS	B	273	26.174	5.798	40.433	1.00	22.94
ATOM	3116	O	LYS	B	273	26.427	4.607	40.621	1.00	22.86
ATOM	3118	N	SER	B	274	25.177	6.212	39.652	1.00	22.74
ATOM	3119	CA	SER	B	274	24.369	5.253	38.908	1.00	23.90
ATOM	3121	CB	SER	B	274	23.302	5.984	38.107	1.00	24.17
ATOM	3124	OG	SER	B	274	22.444	6.679	38.999	1.00	29.16
ATOM	3126	C	SER	B	274	25.237	4.406	37.983	1.00	22.56
ATOM	3127	O	SER	B	274	25.102	3.195	37.926	1.00	21.83
ATOM	3129	N	GLN	B	275	26.164	5.040	37.285	1.00	22.07
ATOM	3130	CA	GLN	B	275	27.034	4.349	36.375	1.00	21.25
ATOM	3132	CB	GLN	B	275	27.898	5.375	35.659	1.00	22.38
ATOM	3135	CG	GLN	B	275	28.671	4.878	34.492	1.00	24.80
ATOM	3138	CD	GLN	B	275	29.697	5.894	34.017	1.00	27.71
ATOM	3139	OE1	GLN	B	275	30.016	6.854	34.711	1.00	28.63
ATOM	3140	NE2	GLN	B	275	30.217	5.678	32.846	1.00	30.24
ATOM	3143	C	GLN	B	275	27.903	3.324	37.078	1.00	21.38
ATOM	3144	O	GLN	B	275	28.083	2.230	36.579	1.00	21.88
ATOM	3146	N	LEU	B	276	28.464	3.699	38.227	1.00	20.98
ATOM	3147	CA	LEU	B	276	29.344	2.823	39.038	1.00	20.73
ATOM	3149	CB	LEU	B	276	29.903	3.591	40.247	1.00	19.14
ATOM	3152	CG	LEU	B	276	30.989	4.615	39.895	1.00	19.29
ATOM	3154	CD1	LEU	B	276	31.238	5.522	41.093	1.00	19.13
ATOM	3158	CD2	LEU	B	276	32.288	3.962	39.482	1.00	18.31
ATOM	3162	C	LEU	B	276	28.634	1.589	39.543	1.00	20.82
ATOM	3163	O	LEU	B	276	29.231	0.517	39.612	1.00	21.43
ATOM	3165	N	VAL	B	277	27.362	1.753	39.877	1.00	21.37
ATOM	3166	CA	VAL	B	277	26.558	0.693	40.434	1.00	23.58
ATOM	3168	CB	VAL	B	277	25.347	1.263	41.218	1.00	23.95
ATOM	3170	CG1	VAL	B	277	24.455	0.120	41.672	1.00	27.24
ATOM	3174	CG2	VAL	B	277	25.809	2.112	42.434	1.00	27.16
ATOM	3178	C	VAL	B	277	26.039	-0.237	39.333	1.00	24.27
ATOM	3179	O	VAL	B	277	25.906	-1.449	39.552	1.00	25.29
ATOM	3181	N	GLN	B	278	25.716	0.335	38.172	1.00	23.89
ATOM	3182	CA	GLN	B	278	25.203	-0.443	37.059	1.00	25.35
ATOM	3184	CB	GLN	B	278	23.658	-0.504	37.092	1.00	27.39
ATOM	3187	CG	GLN	B	278	22.940	0.848	37.198	1.00	36.05
ATOM	3190	CD	GLN	B	278	22.278	1.136	38.582	1.00	45.81
ATOM	3191	OE1	GLN	B	278	21.732	0.228	39.255	1.00	50.62
ATOM	3192	NE2	GLN	B	278	22.291	2.420	38.978	1.00	36.00
ATOM	3195	C	GLN	B	278	25.738	0.078	35.721	1.00	24.85
ATOM	3196	O	GLN	B	278	25.067	0.833	35.016	1.00	25.49
ATOM	3198	N	PRO	B	279	26.975	-0.327	35.384	1.00	24.17
ATOM	3199	CA	PRO	B	279	27.705	0.153	34.223	1.00	23.50
ATOM	3201	CB	PRO	B	279	29.043	-0.579	34.312	1.00	21.89
ATOM	3204	CG	PRO	B	279	29.119	-1.133	35.683	1.00	25.96
ATOM	3207	CD	PRO	B	279	27.759	-1.293	36.178	1.00	23.35
ATOM	3210	C	PRO	B	279	26.962	-0.217	32.958	1.00	23.55
ATOM	3211	O	PRO	B	279	26.419	-1.318	32.862	1.00	20.25
ATOM	3212	N	VAL	B	280	26.892	0.723	32.022	1.00	21.97
ATOM	3213	CA	VAL	B	280	26.268	0.469	30.744	1.00	22.21
ATOM	3215	CB	VAL	B	280	24.896	1.170	30.604	1.00	22.93
ATOM	3217	CG1	VAL	B	280	23.905	0.546	31.550	1.00	27.39

ATOM	3221	CG2	VAL	B	280	25.014	2.678	30.875	1.00	27.20
ATOM	3225	C	VAL	B	280	27.293	0.865	29.703	1.00	21.02
ATOM	3226	O	VAL	B	280	28.468	0.666	29.942	1.00	21.37
ATOM	3228	N	GLY	B	281	26.871	1.349	28.533	1.00	20.32
ATOM	3229	CA	GLY	B	281	27.808	1.755	27.500	1.00	20.81
ATOM	3232	C	GLY	B	281	28.090	3.247	27.592	1.00	21.06
ATOM	3233	O	GLY	B	281	27.991	3.842	28.666	1.00	20.35
ATOM	3235	N	PRO	B	282	28.407	3.858	26.458	1.00	20.46
ATOM	3236	CA	PRO	B	282	28.653	5.297	26.411	1.00	21.00
ATOM	3238	CB	PRO	B	282	28.736	5.579	24.923	1.00	21.46
ATOM	3241	CG	PRO	B	282	29.084	4.298	24.296	1.00	21.09
ATOM	3244	CD	PRO	B	282	28.588	3.225	25.143	1.00	20.35
ATOM	3247	C	PRO	B	282	27.501	6.065	26.984	1.00	19.84
ATOM	3248	O	PRO	B	282	26.368	5.721	26.723	1.00	19.08
ATOM	3249	N	LEU	B	283	27.813	7.126	27.723	1.00	19.27
ATOM	3250	CA	LEU	B	283	26.829	8.014	28.285	1.00	19.73
ATOM	3252	CB	LEU	B	283	26.963	8.060	29.800	1.00	21.66
ATOM	3255	CG	LEU	B	283	26.100	7.209	30.711	1.00	26.79
ATOM	3257	CD1	LEU	B	283	25.957	5.791	30.197	1.00	28.67
ATOM	3261	CD2	LEU	B	283	26.649	7.265	32.176	1.00	22.49
ATOM	3265	C	LEU	B	283	27.030	9.413	27.740	1.00	18.75
ATOM	3266	O	LEU	B	283	28.168	9.905	27.652	1.00	17.80
ATOM	3268	N	VAL	B	284	25.912	10.030	27.372	1.00	16.74
ATOM	3269	CA	VAL	B	284	25.854	11.426	27.001	1.00	16.11
ATOM	3271	CB	VAL	B	284	25.281	11.648	25.586	1.00	15.80
ATOM	3273	CG1	VAL	B	284	25.203	13.165	25.288	1.00	14.77
ATOM	3277	CG2	VAL	B	284	26.116	10.933	24.576	1.00	14.94
ATOM	3281	C	VAL	B	284	24.980	12.131	28.007	1.00	16.11
ATOM	3282	O	VAL	B	284	23.884	11.667	28.369	1.00	17.91
ATOM	3284	N	VAL	B	285	25.482	13.243	28.529	1.00	16.51
ATOM	3285	CA	VAL	B	285	24.728	14.003	29.513	1.00	14.98
ATOM	3287	CB	VAL	B	285	25.508	14.122	30.816	1.00	16.39
ATOM	3289	CG1	VAL	B	285	24.754	15.060	31.832	1.00	16.39
ATOM	3293	CG2	VAL	B	285	25.792	12.711	31.349	1.00	17.44
ATOM	3297	C	VAL	B	285	24.452	15.335	28.924	1.00	15.44
ATOM	3298	O	VAL	B	285	25.375	16.043	28.558	1.00	14.70
ATOM	3300	N	LEU	B	286	23.160	15.663	28.820	1.00	17.15
ATOM	3301	CA	LEU	B	286	22.694	16.913	28.301	1.00	17.28
ATOM	3303	CB	LEU	B	286	21.452	16.692	27.452	1.00	18.58
ATOM	3306	CG	LEU	B	286	20.811	17.898	26.766	1.00	19.37
ATOM	3308	CD1	LEU	B	286	21.807	18.632	25.902	1.00	14.20
ATOM	3312	CD2	LEU	B	286	19.631	17.374	25.901	1.00	15.88
ATOM	3316	C	LEU	B	286	22.341	17.817	29.447	1.00	16.70
ATOM	3317	O	LEU	B	286	21.505	17.496	30.282	1.00	19.35
ATOM	3319	N	LEU	B	287	22.958	18.989	29.431	1.00	17.68
ATOM	3320	CA	LEU	B	287	22.789	20.040	30.416	1.00	16.97
ATOM	3322	CB	LEU	B	287	24.152	20.345	31.019	1.00	18.11
ATOM	3325	CG	LEU	B	287	24.656	19.285	31.995	1.00	21.31
ATOM	3327	CD1	LEU	B	287	26.163	19.345	32.130	1.00	23.48
ATOM	3331	CD2	LEU	B	287	23.967	19.525	33.322	1.00	22.14
ATOM	3335	C	LEU	B	287	22.242	21.260	29.699	1.00	18.35
ATOM	3336	O	LEU	B	287	23.004	22.116	29.237	1.00	16.83
ATOM	3338	N	PRO	B	288	20.916	21.321	29.529	1.00	19.25
ATOM	3339	CA	PRO	B	288	20.237	22.406	28.802	1.00	20.16
ATOM	3341	CB	PRO	B	288	18.916	21.752	28.398	1.00	20.93
ATOM	3344	CG	PRO	B	288	18.654	20.812	29.534	1.00	20.59
ATOM	3347	CD	PRO	B	288	19.971	20.298	29.986	1.00	19.60
ATOM	3350	C	PRO	B	288	19.960	23.620	29.688	1.00	18.10
ATOM	3351	O	PRO	B	288	18.801	24.078	29.805	1.00	19.63
ATOM	3352	N	LEU	B	289	21.012	24.103	30.323	1.00	17.28
ATOM	3353	CA	LEU	B	289	20.938	25.098	31.397	1.00	17.63

ATOM	3355	CB	LEU	B	289	20.655	24.415	32.745	1.00	17.47
ATOM	3358	CG	LEU	B	289	21.679	23.373	33.243	1.00	19.42
ATOM	3360	CD1	LEU	B	289	22.948	23.993	33.786	1.00	17.36
ATOM	3364	CD2	LEU	B	289	21.048	22.412	34.250	1.00	19.17
ATOM	3368	C	LEU	B	289	22.218	25.875	31.494	1.00	16.27
ATOM	3369	O	LEU	B	289	23.251	25.416	30.998	1.00	16.52
ATOM	3371	N	ALA	B	290	22.156	27.056	32.130	1.00	16.51
ATOM	3372	CA	ALA	B	290	23.341	27.925	32.309	1.00	15.15
ATOM	3374	CB	ALA	B	290	23.651	28.797	31.040	1.00	14.85
ATOM	3378	C	ALA	B	290	23.152	28.837	33.523	1.00	15.74
ATOM	3379	O	ALA	B	290	22.039	29.241	33.889	1.00	15.62
ATOM	3381	N	GLY	B	291	24.272	29.134	34.145	1.00	17.44
ATOM	3382	CA	GLY	B	291	24.363	30.193	35.131	1.00	17.44
ATOM	3385	C	GLY	B	291	25.625	30.930	34.777	1.00	17.06
ATOM	3386	O	GLY	B	291	26.219	30.674	33.745	1.00	17.20
ATOM	3388	N	GLY	B	292	26.065	31.822	35.648	1.00	16.97
ATOM	3389	CA	GLY	B	292	27.316	32.473	35.445	1.00	16.67
ATOM	3392	C	GLY	B	292	28.479	31.514	35.597	1.00	17.38
ATOM	3393	O	GLY	B	292	28.316	30.309	35.919	1.00	19.36
ATOM	3395	N	TYR	B	293	29.680	32.008	35.332	1.00	16.87
ATOM	3396	CA	TYR	B	293	30.855	31.176	35.469	1.00	15.50
ATOM	3398	CB	TYR	B	293	32.111	31.998	35.279	1.00	16.18
ATOM	3401	CG	TYR	B	293	33.354	31.172	35.324	1.00	16.93
ATOM	3402	CD1	TYR	B	293	33.898	30.633	34.158	1.00	22.03
ATOM	3404	CE1	TYR	B	293	35.049	29.853	34.203	1.00	23.46
ATOM	3406	CZ	TYR	B	293	35.660	29.619	35.421	1.00	19.79
ATOM	3407	OH	TYR	B	293	36.806	28.854	35.452	1.00	21.00
ATOM	3409	CE2	TYR	B	293	35.141	30.133	36.567	1.00	19.63
ATOM	3411	CD2	TYR	B	293	34.016	30.928	36.526	1.00	15.87
ATOM	3413	C	TYR	B	293	30.880	30.553	36.877	1.00	13.83
ATOM	3414	O	TYR	B	293	30.763	31.255	37.862	1.00	15.94
ATOM	3416	N	SER	B	294	31.033	29.249	36.962	1.00	15.24
ATOM	3417	CA	SER	B	294	31.134	28.564	38.254	1.00	15.64
ATOM	3419	CB	SER	B	294	29.833	27.809	38.570	1.00	17.21
ATOM	3422	OG	SER	B	294	30.046	26.832	39.610	1.00	14.68
ATOM	3424	C	SER	B	294	32.337	27.633	38.260	1.00	16.45
ATOM	3425	O	SER	B	294	32.409	26.681	37.491	1.00	16.53
ATOM	3427	N	ARG	B	295	33.281	27.877	39.169	1.00	18.16
ATOM	3428	CA	ARG	B	295	34.442	27.037	39.259	1.00	17.23
ATOM	3430	CB	ARG	B	295	35.349	27.558	40.390	1.00	17.74
ATOM	3433	CG	ARG	B	295	36.583	26.774	40.535	1.00	20.63
ATOM	3436	CD	ARG	B	295	37.479	27.342	41.548	1.00	17.92
ATOM	3439	NE	ARG	B	295	38.659	26.512	41.626	1.00	20.25
ATOM	3441	CZ	ARG	B	295	39.696	26.749	42.413	1.00	20.48
ATOM	3442	NH1	ARG	B	295	39.686	27.791	43.207	1.00	20.44
ATOM	3445	NH2	ARG	B	295	40.736	25.933	42.394	1.00	20.49
ATOM	3448	C	ARG	B	295	33.991	25.622	39.572	1.00	15.83
ATOM	3449	O	ARG	B	295	34.438	24.666	38.942	1.00	16.90
ATOM	3451	N	VAL	B	296	33.113	25.471	40.576	1.00	17.72
ATOM	3452	CA	VAL	B	296	32.779	24.122	41.038	1.00	17.67
ATOM	3454	CB	VAL	B	296	32.078	24.092	42.431	1.00	18.61
ATOM	3456	CG1	VAL	B	296	30.709	24.717	42.370	1.00	18.71
ATOM	3460	CG2	VAL	B	296	31.997	22.679	42.919	1.00	18.03
ATOM	3464	C	VAL	B	296	31.971	23.375	39.980	1.00	16.69
ATOM	3465	O	VAL	B	296	32.216	22.179	39.736	1.00	18.49
ATOM	3467	N	LEU	B	297	31.064	24.055	39.284	1.00	17.25
ATOM	3468	CA	LEU	B	297	30.285	23.361	38.274	1.00	18.07
ATOM	3470	CB	LEU	B	297	29.106	24.196	37.799	1.00	19.22
ATOM	3473	CG	LEU	B	297	28.145	23.535	36.815	1.00	21.95
ATOM	3475	CD1	LEU	B	297	27.600	22.195	37.376	1.00	18.64
ATOM	3479	CD2	LEU	B	297	27.010	24.512	36.537	1.00	17.55

ATOM	3483	C	LEU	B	297	31.214	22.961	37.129	1.00	18.01
ATOM	3484	O	LEU	B	297	31.194	21.830	36.651	1.00	18.28
ATOM	3486	N	ASN	B	298	32.069	23.877	36.697	1.00	17.58
ATOM	3487	CA	ASN	B	298	33.035	23.530	35.672	1.00	15.65
ATOM	3489	CB	ASN	B	298	33.884	24.729	35.325	1.00	16.44
ATOM	3492	CG	ASN	B	298	33.142	25.718	34.453	1.00	16.19
ATOM	3493	OD1	ASN	B	298	31.932	25.584	34.176	1.00	17.86
ATOM	3494	ND2	ASN	B	298	33.884	26.691	33.952	1.00	17.93
ATOM	3497	C	ASN	B	298	33.920	22.378	36.096	1.00	15.86
ATOM	3498	O	ASN	B	298	34.210	21.481	35.283	1.00	14.60
ATOM	3500	N	ALA	B	299	34.308	22.342	37.384	1.00	15.85
ATOM	3501	CA	ALA	B	299	35.199	21.284	37.851	1.00	15.85
ATOM	3503	CB	ALA	B	299	35.786	21.651	39.273	1.00	16.64
ATOM	3507	C	ALA	B	299	34.500	19.926	37.860	1.00	16.08
ATOM	3508	O	ALA	B	299	35.097	18.885	37.540	1.00	15.74
ATOM	3510	N	ALA	B	300	33.221	19.933	38.216	1.00	16.25
ATOM	3511	CA	ALA	B	300	32.451	18.714	38.297	1.00	17.35
ATOM	3513	CB	ALA	B	300	31.138	18.995	38.930	1.00	16.86
ATOM	3517	C	ALA	B	300	32.256	18.129	36.904	1.00	18.00
ATOM	3518	O	ALA	B	300	32.319	16.913	36.692	1.00	17.64
ATOM	3520	N	CYS	B	301	31.970	19.010	35.959	1.00	17.98
ATOM	3521	CA	CYS	B	301	31.874	18.628	34.555	1.00	18.65
ATOM	3523	CB	CYS	B	301	31.413	19.861	33.758	1.00	18.28
ATOM	3526	SG	CYS	B	301	29.682	20.301	34.038	1.00	20.98
ATOM	3528	C	CYS	B	301	33.169	18.021	34.023	1.00	18.94
ATOM	3529	O	CYS	B	301	33.165	16.986	33.347	1.00	18.46
ATOM	3531	N	GLN	B	302	34.281	18.683	34.303	1.00	20.74
ATOM	3532	CA	GLN	B	302	35.578	18.206	33.887	1.00	22.34
ATOM	3534	CB	GLN	B	302	36.646	19.169	34.360	1.00	21.88
ATOM	3537	CG	GLN	B	302	38.052	18.918	33.850	1.00	26.92
ATOM	3540	CD	GLN	B	302	39.058	20.011	34.364	1.00	29.48
ATOM	3541	OE1	GLN	B	302	38.815	20.678	35.392	1.00	47.49
ATOM	3542	NE2	GLN	B	302	40.170	20.167	33.675	1.00	34.78
ATOM	3545	C	GLN	B	302	35.838	16.833	34.473	1.00	20.71
ATOM	3546	O	GLN	B	302	36.319	15.945	33.794	1.00	17.42
ATOM	3548	N	ARG	B	303	35.542	16.668	35.763	1.00	19.89
ATOM	3549	CA	ARG	B	303	35.771	15.393	36.393	1.00	20.76
ATOM	3551	CB	ARG	B	303	35.508	15.520	37.876	1.00	21.29
ATOM	3554	CG	ARG	B	303	35.729	14.246	38.618	1.00	33.08
ATOM	3557	CD	ARG	B	303	37.146	14.143	39.157	1.00	48.33
ATOM	3560	NE	ARG	B	303	37.252	13.026	40.101	1.00	55.74
ATOM	3562	CZ	ARG	B	303	38.386	12.627	40.667	1.00	60.25
ATOM	3563	NH1	ARG	B	303	39.535	13.252	40.395	1.00	63.38
ATOM	3566	NH2	ARG	B	303	38.371	11.596	41.510	1.00	60.81
ATOM	3569	C	ARG	B	303	34.888	14.330	35.753	1.00	18.93
ATOM	3570	O	ARG	B	303	35.318	13.186	35.519	1.00	19.75
ATOM	3572	N	LEU	B	304	33.654	14.679	35.421	1.00	18.67
ATOM	3573	CA	LEU	B	304	32.761	13.691	34.860	1.00	18.89
ATOM	3575	CB	LEU	B	304	31.303	14.150	34.991	1.00	18.62
ATOM	3578	CG	LEU	B	304	30.199	13.209	34.552	1.00	19.56
ATOM	3580	CD1	LEU	B	304	30.239	11.851	35.295	1.00	22.63
ATOM	3584	CD2	LEU	B	304	28.813	13.856	34.668	1.00	19.84
ATOM	3588	C	LEU	B	304	33.191	13.370	33.438	1.00	20.27
ATOM	3589	O	LEU	B	304	33.116	12.200	32.993	1.00	21.71
ATOM	3591	N	ALA	B	305	33.691	14.385	32.732	1.00	20.02
ATOM	3592	CA	ALA	B	305	34.251	14.179	31.377	1.00	21.39
ATOM	3594	CB	ALA	B	305	34.627	15.498	30.743	1.00	19.90
ATOM	3598	C	ALA	B	305	35.478	13.272	31.462	1.00	22.57
ATOM	3599	O	ALA	B	305	35.612	12.323	30.694	1.00	22.17
ATOM	3601	N	ARG	B	306	36.344	13.526	32.440	1.00	24.43
ATOM	3602	CA	ARG	B	306	37.572	12.721	32.581	1.00	25.75

ATOM	3604	CB	ARG	B	306	38.538	13.381	33.564	1.00	26.46
ATOM	3607	CG	ARG	B	306	39.044	14.690	33.005	1.00	34.85
ATOM	3610	CD	ARG	B	306	40.202	15.303	33.769	1.00	45.29
ATOM	3613	NE	ARG	B	306	40.455	16.636	33.232	1.00	50.75
ATOM	3615	CZ	ARG	B	306	40.992	16.883	32.036	1.00	54.41
ATOM	3616	NH1	ARG	B	306	41.389	15.886	31.240	1.00	58.55
ATOM	3619	NH2	ARG	B	306	41.152	18.142	31.631	1.00	51.70
ATOM	3622	C	ARG	B	306	37.275	11.291	32.967	1.00	25.14
ATOM	3623	O	ARG	B	306	38.023	10.391	32.646	1.00	25.01
ATOM	3625	N	ALA	B	307	36.126	11.096	33.597	1.00	26.28
ATOM	3626	CA	ALA	B	307	35.641	9.796	33.966	1.00	26.37
ATOM	3628	CB	ALA	B	307	34.593	9.950	35.101	1.00	26.65
ATOM	3632	C	ALA	B	307	35.068	9.054	32.765	1.00	26.01
ATOM	3633	O	ALA	B	307	34.641	7.917	32.907	1.00	27.58
ATOM	3635	N	GLY	B	308	35.047	9.700	31.585	1.00	25.20
ATOM	3636	CA	GLY	B	308	34.616	9.066	30.316	1.00	23.33
ATOM	3639	C	GLY	B	308	33.140	9.275	29.937	1.00	23.28
ATOM	3640	O	GLY	B	308	32.573	8.508	29.165	1.00	23.95
ATOM	3642	N	VAL	B	309	32.488	10.294	30.482	1.00	23.06
ATOM	3643	CA	VAL	B	309	31.091	10.577	30.129	1.00	21.39
ATOM	3645	CB	VAL	B	309	30.267	10.886	31.410	1.00	20.73
ATOM	3647	CG1	VAL	B	309	28.881	11.456	31.051	1.00	23.05
ATOM	3651	CG2	VAL	B	309	30.127	9.618	32.334	1.00	19.94
ATOM	3655	C	VAL	B	309	31.131	11.787	29.180	1.00	20.17
ATOM	3656	O	VAL	B	309	31.913	12.704	29.401	1.00	20.65
ATOM	3658	N	VAL	B	310	30.316	11.798	28.126	1.00	19.95
ATOM	3659	CA	VAL	B	310	30.306	12.910	27.197	1.00	18.42
ATOM	3661	CB	VAL	B	310	29.933	12.461	25.774	1.00	19.30
ATOM	3663	CG1	VAL	B	310	29.635	13.669	24.879	1.00	18.19
ATOM	3667	CG2	VAL	B	310	30.997	11.593	25.164	1.00	16.99
ATOM	3671	C	VAL	B	310	29.263	13.915	27.711	1.00	18.62
ATOM	3672	O	VAL	B	310	28.115	13.543	28.018	1.00	18.85
ATOM	3674	N	LEU	B	311	29.646	15.183	27.825	1.00	16.29
ATOM	3675	CA	LEU	B	311	28.734	16.215	28.291	1.00	15.70
ATOM	3677	CB	LEU	B	311	29.280	16.896	29.562	1.00	15.71
ATOM	3680	CG	LEU	B	311	29.027	16.189	30.896	1.00	18.68
ATOM	3682	CD1	LEU	B	311	29.905	15.008	31.001	1.00	25.60
ATOM	3686	CD2	LEU	B	311	29.298	17.132	32.057	1.00	19.86
ATOM	3690	C	LEU	B	311	28.486	17.238	27.194	1.00	14.15
ATOM	3691	O	LEU	B	311	29.433	17.665	26.533	1.00	13.58
ATOM	3693	N	VAL	B	312	27.219	17.582	26.981	1.00	12.17
ATOM	3694	CA	VAL	B	312	26.800	18.567	25.994	1.00	14.60
ATOM	3696	CB	VAL	B	312	25.978	17.926	24.856	1.00	13.39
ATOM	3698	CG1	VAL	B	312	25.564	18.952	23.829	1.00	12.58
ATOM	3702	CG2	VAL	B	312	26.788	16.847	24.204	1.00	16.78
ATOM	3706	C	VAL	B	312	25.972	19.604	26.761	1.00	15.13
ATOM	3707	O	VAL	B	312	25.118	19.265	27.552	1.00	17.44
ATOM	3709	N	THR	B	313	26.271	20.879	26.581	1.00	16.08
ATOM	3710	CA	THR	B	313	25.558	21.908	27.274	1.00	15.51
ATOM	3712	CB	THR	B	313	26.416	22.495	28.407	1.00	18.31
ATOM	3714	OG1	THR	B	313	25.606	23.262	29.342	1.00	18.19
ATOM	3716	CG2	THR	B	313	27.516	23.341	27.827	1.00	13.51
ATOM	3720	C	THR	B	313	25.153	23.004	26.304	1.00	16.15
ATOM	3721	O	THR	B	313	25.715	23.149	25.225	1.00	12.09
ATOM	3723	N	ALA	B	314	24.181	23.789	26.744	1.00	16.69
ATOM	3724	CA	ALA	B	314	23.730	24.960	26.034	1.00	15.08
ATOM	3726	CB	ALA	B	314	22.390	25.416	26.576	1.00	14.11
ATOM	3730	C	ALA	B	314	24.772	26.058	26.181	1.00	14.78
ATOM	3731	O	ALA	B	314	25.321	26.231	27.268	1.00	14.51
ATOM	3733	N	ALA	B	315	25.050	26.774	25.094	1.00	12.63
ATOM	3734	CA	ALA	B	315	25.928	27.959	25.163	1.00	13.78

ATOM	3736	CB	ALA	B	315	26.163	28.536	23.814	1.00	13.05
ATOM	3740	C	ALA	B	315	25.402	29.061	26.082	1.00	13.08
ATOM	3741	O	ALA	B	315	26.203	29.834	26.571	1.00	13.30
ATOM	3743	N	GLY	B	316	24.065	29.157	26.226	1.00	12.71
ATOM	3744	CA	GLY	B	316	23.409	30.254	26.939	1.00	12.41
ATOM	3747	C	GLY	B	316	22.692	31.166	25.940	1.00	13.26
ATOM	3748	O	GLY	B	316	23.132	31.301	24.797	1.00	13.20
ATOM	3750	N	ASN	B	317	21.627	31.800	26.398	1.00	13.73
ATOM	3751	CA	ASN	B	317	20.755	32.619	25.570	1.00	14.33
ATOM	3753	CB	ASN	B	317	19.319	32.234	25.826	1.00	14.53
ATOM	3756	CG	ASN	B	317	19.012	30.832	25.419	1.00	14.04
ATOM	3757	OD1	ASN	B	317	19.714	30.216	24.592	1.00	14.47
ATOM	3758	ND2	ASN	B	317	17.840	30.357	25.877	1.00	12.33
ATOM	3761	C	ASN	B	317	20.918	34.134	25.840	1.00	15.42
ATOM	3762	O	ASN	B	317	19.965	34.886	25.711	1.00	15.17
ATOM	3764	N	PHE	B	318	22.141	34.555	26.155	1.00	15.64
ATOM	3765	CA	PHE	B	318	22.397	35.910	26.666	1.00	16.34
ATOM	3767	CB	PHE	B	318	23.193	35.813	27.955	1.00	17.47
ATOM	3770	CG	PHE	B	318	22.522	34.936	28.999	1.00	19.40
ATOM	3771	CD1	PHE	B	318	21.406	35.366	29.655	1.00	26.12
ATOM	3773	CE1	PHE	B	318	20.787	34.552	30.594	1.00	23.34
ATOM	3775	CZ	PHE	B	318	21.270	33.298	30.829	1.00	23.98
ATOM	3777	CE2	PHE	B	318	22.339	32.852	30.151	1.00	20.79
ATOM	3779	CD2	PHE	B	318	22.970	33.674	29.249	1.00	19.58
ATOM	3781	C	PHE	B	318	23.079	36.805	25.679	1.00	15.58
ATOM	3782	O	PHE	B	318	23.462	37.907	26.027	1.00	16.72
ATOM	3784	N	ARG	B	319	23.179	36.356	24.434	1.00	16.37
ATOM	3785	CA	ARG	B	319	23.888	37.072	23.395	1.00	17.51
ATOM	3787	CB	ARG	B	319	23.029	38.182	22.810	1.00	18.57
ATOM	3790	CG	ARG	B	319	23.453	38.545	21.421	1.00	21.29
ATOM	3793	CD	ARG	B	319	22.688	39.753	20.897	1.00	29.42
ATOM	3796	NE	ARG	B	319	22.615	39.671	19.450	1.00	38.20
ATOM	3798	CZ	ARG	B	319	22.268	40.672	18.652	1.00	46.05
ATOM	3799	NH1	ARG	B	319	22.028	41.911	19.138	1.00	50.21
ATOM	3802	NH2	ARG	B	319	22.209	40.435	17.345	1.00	42.94
ATOM	3805	C	ARG	B	319	25.193	37.619	23.907	1.00	16.62
ATOM	3806	O	ARG	B	319	25.508	38.807	23.751	1.00	16.62
ATOM	3808	N	ASP	B	320	25.973	36.725	24.491	1.00	15.44
ATOM	3809	CA	ASP	B	320	27.161	37.086	25.244	1.00	16.60
ATOM	3811	CB	ASP	B	320	26.742	37.201	26.717	1.00	15.46
ATOM	3814	CG	ASP	B	320	27.673	38.024	27.560	1.00	21.03
ATOM	3815	OD1	ASP	B	320	28.645	38.618	27.039	1.00	20.09
ATOM	3816	OD2	ASP	B	320	27.452	38.008	28.805	1.00	23.61
ATOM	3817	C	ASP	B	320	28.202	36.015	25.071	1.00	14.78
ATOM	3818	O	ASP	B	320	27.982	34.988	24.430	1.00	12.61
ATOM	3820	N	ASP	B	321	29.360	36.273	25.625	1.00	13.62
ATOM	3821	CA	ASP	B	321	30.476	35.379	25.512	1.00	14.77
ATOM	3823	CB	ASP	B	321	31.708	36.105	26.024	1.00	14.54
ATOM	3826	CG	ASP	B	321	32.949	35.331	25.832	1.00	16.59
ATOM	3827	OD1	ASP	B	321	32.908	34.081	25.715	1.00	19.71
ATOM	3828	OD2	ASP	B	321	33.990	35.978	25.843	1.00	21.50
ATOM	3829	C	ASP	B	321	30.182	34.183	26.388	1.00	14.50
ATOM	3830	O	ASP	B	321	30.058	34.316	27.597	1.00	13.85
ATOM	3832	N	ALA	B	322	30.143	33.009	25.786	1.00	15.29
ATOM	3833	CA	ALA	B	322	29.815	31.797	26.548	1.00	15.97
ATOM	3835	CB	ALA	B	322	29.661	30.587	25.576	1.00	16.07
ATOM	3839	C	ALA	B	322	30.819	31.504	27.635	1.00	16.59
ATOM	3840	O	ALA	B	322	30.501	30.807	28.592	1.00	18.44
ATOM	3842	N	CYS	B	323	32.038	32.034	27.532	1.00	17.57
ATOM	3843	CA	CYS	B	323	33.055	31.812	28.586	1.00	17.41
ATOM	3845	CB	CYS	B	323	34.425	32.317	28.143	1.00	20.76

ATOM	3848	SG	CYS	B	323	35.010	31.572	26.572	1.00	25.17
ATOM	3850	C	CYS	B	323	32.708	32.418	29.936	1.00	17.31
ATOM	3851	O	CYS	B	323	33.359	32.120	30.954	1.00	16.28
ATOM	3853	N	LEU	B	324	31.699	33.273	29.949	1.00	15.50
ATOM	3854	CA	LEU	B	324	31.215	33.900	31.190	1.00	15.38
ATOM	3856	CB	LEU	B	324	30.765	35.338	30.880	1.00	14.75
ATOM	3859	CG	LEU	B	324	31.848	36.162	30.199	1.00	13.58
ATOM	3861	CD1	LEU	B	324	31.359	37.613	30.080	1.00	17.93
ATOM	3865	CD2	LEU	B	324	33.169	36.103	30.893	1.00	17.73
ATOM	3869	C	LEU	B	324	30.122	33.110	31.863	1.00	14.64
ATOM	3870	O	LEU	B	324	29.583	33.560	32.887	1.00	14.12
ATOM	3872	N	TYR	B	325	29.843	31.889	31.347	1.00	13.48
ATOM	3873	CA	TYR	B	325	28.735	31.090	31.792	1.00	12.18
ATOM	3875	CB	TYR	B	325	27.587	31.075	30.803	1.00	11.75
ATOM	3878	CG	TYR	B	325	27.072	32.478	30.588	1.00	15.09
ATOM	3879	CD1	TYR	B	325	26.025	32.977	31.366	1.00	16.43
ATOM	3881	CE1	TYR	B	325	25.617	34.315	31.258	1.00	16.77
ATOM	3883	CZ	TYR	B	325	26.209	35.145	30.313	1.00	16.01
ATOM	3884	OH	TYR	B	325	25.784	36.463	30.164	1.00	19.17
ATOM	3886	CE2	TYR	B	325	27.261	34.695	29.522	1.00	13.11
ATOM	3888	CD2	TYR	B	325	27.685	33.323	29.658	1.00	13.41
ATOM	3890	C	TYR	B	325	29.191	29.692	32.041	1.00	13.04
ATOM	3891	O	TYR	B	325	30.180	29.271	31.489	1.00	13.57
ATOM	3893	N	SER	B	326	28.472	29.018	32.911	1.00	14.84
ATOM	3894	CA	SER	B	326	28.678	27.595	33.134	1.00	14.59
ATOM	3896	CB	SER	B	326	29.301	27.403	34.518	1.00	13.38
ATOM	3899	OG	SER	B	326	30.623	27.864	34.543	1.00	15.84
ATOM	3901	C	SER	B	326	27.372	26.805	33.055	1.00	15.36
ATOM	3902	O	SER	B	326	26.310	27.298	33.431	1.00	15.57
ATOM	3904	N	PRO	B	327	27.444	25.536	32.645	1.00	17.28
ATOM	3905	CA	PRO	B	327	28.616	24.792	32.217	1.00	17.44
ATOM	3907	CB	PRO	B	327	28.138	23.325	32.225	1.00	17.86
ATOM	3910	CG	PRO	B	327	26.708	23.337	32.376	1.00	18.87
ATOM	3913	CD	PRO	B	327	26.235	24.690	32.705	1.00	17.16
ATOM	3916	C	PRO	B	327	29.214	25.156	30.862	1.00	17.12
ATOM	3917	O	PRO	B	327	30.211	24.568	30.526	1.00	17.20
ATOM	3918	N	ALA	B	328	28.644	26.120	30.130	1.00	15.37
ATOM	3919	CA	ALA	B	328	29.129	26.508	28.795	1.00	15.63
ATOM	3921	CB	ALA	B	328	28.489	27.833	28.360	1.00	15.50
ATOM	3925	C	ALA	B	328	30.648	26.616	28.751	1.00	14.79
ATOM	3926	O	ALA	B	328	31.274	26.132	27.816	1.00	16.03
ATOM	3928	N	SER	B	329	31.243	27.276	29.747	1.00	13.30
ATOM	3929	CA	SER	B	329	32.664	27.571	29.771	1.00	15.00
ATOM	3931	CB	SER	B	329	32.958	28.714	30.739	1.00	14.72
ATOM	3934	OG	SER	B	329	32.634	28.347	32.078	1.00	15.86
ATOM	3936	C	SER	B	329	33.612	26.388	30.092	1.00	19.20
ATOM	3937	O	SER	B	329	34.799	26.524	29.941	1.00	18.81
ATOM	3939	N	ALA	B	330	33.098	25.246	30.501	1.00	20.38
ATOM	3940	CA	ALA	B	330	33.944	24.099	30.847	1.00	21.93
ATOM	3942	CB	ALA	B	330	33.064	23.110	31.636	1.00	20.68
ATOM	3946	C	ALA	B	330	34.526	23.478	29.560	1.00	24.51
ATOM	3947	O	ALA	B	330	33.784	23.012	28.743	1.00	25.77
ATOM	3949	N	PRO	B	331	35.875	23.447	29.367	1.00	29.32
ATOM	3950	CA	PRO	B	331	36.401	23.035	28.051	1.00	28.74
ATOM	3952	CB	PRO	B	331	37.924	23.198	28.208	1.00	30.94
ATOM	3955	CG	PRO	B	331	38.099	24.102	29.420	1.00	32.15
ATOM	3958	CD	PRO	B	331	36.977	23.698	30.312	1.00	29.16
ATOM	3961	C	PRO	B	331	36.072	21.588	27.635	1.00	28.68
ATOM	3962	O	PRO	B	331	35.938	21.308	26.418	1.00	26.89
ATOM	3963	N	GLU	B	332	35.951	20.689	28.620	1.00	24.38
ATOM	3964	CA	GLU	B	332	35.641	19.299	28.312	1.00	25.73

ATOM	3966	CB	GLU	B	332	36.001	18.383	29.464	1.00	25.63
ATOM	3969	CG	GLU	B	332	37.471	18.415	29.841	1.00	34.53
ATOM	3972	CD	GLU	B	332	38.308	17.424	29.050	1.00	47.45
ATOM	3973	OE1	GLU	B	332	38.434	17.615	27.815	1.00	50.90
ATOM	3974	OE2	GLU	B	332	38.837	16.457	29.667	1.00	54.82
ATOM	3975	C	GLU	B	332	34.162	19.066	27.957	1.00	23.57
ATOM	3976	O	GLU	B	332	33.804	17.980	27.536	1.00	26.83
ATOM	3978	N	VAL	B	333	33.325	20.072	28.109	1.00	20.31
ATOM	3979	CA	VAL	B	333	31.894	19.971	27.793	1.00	19.32
ATOM	3981	CB	VAL	B	333	31.076	20.804	28.796	1.00	20.15
ATOM	3983	CG1	VAL	B	333	29.580	20.816	28.485	1.00	21.98
ATOM	3987	CG2	VAL	B	333	31.307	20.273	30.203	1.00	19.75
ATOM	3991	C	VAL	B	333	31.723	20.495	26.370	1.00	18.79
ATOM	3992	O	VAL	B	333	32.327	21.513	25.996	1.00	19.77
ATOM	3994	N	ILE	B	334	30.910	19.810	25.582	1.00	15.88
ATOM	3995	CA	ILE	B	334	30.594	20.265	24.225	1.00	15.23
ATOM	3997	CB	ILE	B	334	30.129	19.132	23.325	1.00	16.29
ATOM	3999	CG1	ILE	B	334	31.240	18.077	23.244	1.00	18.35
ATOM	4002	CD1	ILE	B	334	30.738	16.656	23.005	1.00	29.66
ATOM	4006	CG2	ILE	B	334	29.798	19.684	21.892	1.00	13.85
ATOM	4010	C	ILE	B	334	29.535	21.340	24.351	1.00	14.34
ATOM	4011	O	ILE	B	334	28.424	21.094	24.794	1.00	15.84
ATOM	4013	N	THR	B	335	29.914	22.565	24.027	1.00	14.66
ATOM	4014	CA	THR	B	335	29.027	23.716	24.201	1.00	13.57
ATOM	4016	CB	THR	B	335	29.822	24.854	24.764	1.00	15.63
ATOM	4018	OG1	THR	B	335	30.412	24.425	26.001	1.00	12.95
ATOM	4020	CG2	THR	B	335	28.952	26.059	25.013	1.00	13.53
ATOM	4024	C	THR	B	335	28.407	24.148	22.890	1.00	13.30
ATOM	4025	O	THR	B	335	29.111	24.364	21.916	1.00	14.28
ATOM	4027	N	VAL	B	336	27.088	24.283	22.877	1.00	13.15
ATOM	4028	CA	VAL	B	336	26.367	24.387	21.633	1.00	13.18
ATOM	4030	CB	VAL	B	336	25.469	23.201	21.421	1.00	10.68
ATOM	4032	CG1	VAL	B	336	24.844	23.237	19.992	1.00	9.87
ATOM	4036	CG2	VAL	B	336	26.248	21.870	21.699	1.00	13.46
ATOM	4040	C	VAL	B	336	25.549	25.683	21.537	1.00	13.50
ATOM	4041	O	VAL	B	336	24.712	25.983	22.398	1.00	13.08
ATOM	4043	N	GLY	B	337	25.838	26.457	20.505	1.00	13.09
ATOM	4044	CA	GLY	B	337	25.076	27.686	20.237	1.00	13.43
ATOM	4047	C	GLY	B	337	23.913	27.353	19.303	1.00	13.22
ATOM	4048	O	GLY	B	337	23.824	26.250	18.757	1.00	13.91
ATOM	4050	N	ALA	B	338	23.041	28.323	19.048	1.00	13.14
ATOM	4051	CA	ALA	B	338	21.790	28.039	18.304	1.00	12.86
ATOM	4053	CB	ALA	B	338	20.586	28.413	19.127	1.00	14.72
ATOM	4057	C	ALA	B	338	21.806	28.829	17.025	1.00	14.01
ATOM	4058	O	ALA	B	338	22.072	30.027	17.054	1.00	13.68
ATOM	4060	N	THR	B	339	21.504	28.162	15.921	1.00	15.40
ATOM	4061	CA	THR	B	339	21.297	28.813	14.624	1.00	15.57
ATOM	4063	CB	THR	B	339	22.312	28.368	13.603	1.00	13.81
ATOM	4065	OG1	THR	B	339	22.410	26.924	13.600	1.00	15.72
ATOM	4067	CG2	THR	B	339	23.671	28.925	13.932	1.00	17.36
ATOM	4071	C	THR	B	339	19.861	28.502	14.133	1.00	16.23
ATOM	4072	O	THR	B	339	19.205	27.516	14.551	1.00	14.74
ATOM	4074	N	ASN	B	340	19.391	29.358	13.235	1.00	17.63
ATOM	4075	CA	ASN	B	340	18.053	29.249	12.694	1.00	18.18
ATOM	4077	CB	ASN	B	340	17.396	30.623	12.680	1.00	18.53
ATOM	4080	CG	ASN	B	340	18.041	31.588	11.745	1.00	21.80
ATOM	4081	OD1	ASN	B	340	18.808	31.216	10.859	1.00	19.04
ATOM	4082	ND2	ASN	B	340	17.766	32.867	11.959	1.00	25.11
ATOM	4085	C	ASN	B	340	18.052	28.603	11.314	1.00	20.46
ATOM	4086	O	ASN	B	340	19.081	28.141	10.838	1.00	19.97
ATOM	4088	N	ALA	B	341	16.883	28.554	10.690	1.00	20.37

ATOM	4089	CA	ALA	B	341	16.708	27.950	9.378	1.00	20.96
ATOM	4091	CB	ALA	B	341	15.231	27.991	8.970	1.00	20.11
ATOM	4095	C	ALA	B	341	17.538	28.595	8.312	1.00	21.68
ATOM	4096	O	ALA	B	341	17.784	27.971	7.309	1.00	21.13
ATOM	4098	N	GLN	B	342	17.960	29.838	8.513	1.00	22.38
ATOM	4099	CA	GLN	B	342	18.849	30.487	7.573	1.00	25.37
ATOM	4101	CB	GLN	B	342	18.380	31.922	7.364	1.00	26.97
ATOM	4104	CG	GLN	B	342	17.006	31.981	6.605	1.00	31.45
ATOM	4107	CD	GLN	B	342	15.784	31.655	7.486	1.00	39.59
ATOM	4108	OE1	GLN	B	342	15.650	32.170	8.594	1.00	46.41
ATOM	4109	NE2	GLN	B	342	14.893	30.790	6.989	1.00	46.40
ATOM	4112	C	GLN	B	342	20.344	30.370	7.965	1.00	25.31
ATOM	4113	O	GLN	B	342	21.216	31.056	7.419	1.00	24.65
ATOM	4115	N	ASP	B	343	20.606	29.444	8.890	1.00	24.78
ATOM	4116	CA	ASP	B	343	21.921	29.187	9.474	1.00	25.42
ATOM	4118	CB	ASP	B	343	22.909	28.609	8.447	1.00	26.88
ATOM	4121	CG	ASP	B	343	22.623	27.154	8.079	1.00	28.59
ATOM	4122	OD1	ASP	B	343	22.202	26.310	8.938	1.00	24.01
ATOM	4123	OD2	ASP	B	343	22.850	26.844	6.898	1.00	37.07
ATOM	4124	C	ASP	B	343	22.516	30.413	10.126	1.00	23.76
ATOM	4125	O	ASP	B	343	23.731	30.517	10.238	1.00	23.46
ATOM	4127	N	GLN	B	344	21.671	31.331	10.577	1.00	21.97
ATOM	4128	CA	GLN	B	344	22.154	32.514	11.283	1.00	20.73
ATOM	4130	CB	GLN	B	344	21.461	33.759	10.727	1.00	21.10
ATOM	4133	CG	GLN	B	344	21.743	33.925	9.221	1.00	26.30
ATOM	4136	CD	GLN	B	344	23.219	33.706	8.884	1.00	32.79
ATOM	4137	OE1	GLN	B	344	24.087	34.415	9.415	1.00	30.48
ATOM	4138	NE2	GLN	B	344	23.517	32.703	8.019	1.00	30.39
ATOM	4141	C	GLN	B	344	21.940	32.365	12.799	1.00	18.88
ATOM	4142	O	GLN	B	344	21.094	31.585	13.223	1.00	17.17
ATOM	4144	N	PRO	B	345	22.756	33.056	13.605	1.00	16.29
ATOM	4145	CA	PRO	B	345	22.572	32.920	15.046	1.00	18.40
ATOM	4147	CB	PRO	B	345	23.707	33.741	15.671	1.00	18.04
ATOM	4150	CG	PRO	B	345	24.618	34.101	14.539	1.00	21.74
ATOM	4153	CD	PRO	B	345	23.857	33.954	13.250	1.00	19.82
ATOM	4156	C	PRO	B	345	21.185	33.357	15.502	1.00	18.04
ATOM	4157	O	PRO	B	345	20.618	34.331	14.991	1.00	19.53
ATOM	4158	N	VAL	B	346	20.631	32.603	16.428	1.00	15.99
ATOM	4159	CA	VAL	B	346	19.253	32.812	16.857	1.00	16.62
ATOM	4161	CB	VAL	B	346	18.729	31.614	17.576	1.00	15.02
ATOM	4163	CG1	VAL	B	346	17.317	31.902	18.090	1.00	20.57
ATOM	4167	CG2	VAL	B	346	18.714	30.385	16.660	1.00	15.59
ATOM	4171	C	VAL	B	346	19.139	34.055	17.794	1.00	18.62
ATOM	4172	O	VAL	B	346	19.915	34.206	18.737	1.00	17.67
ATOM	4174	N	THR	B	347	18.214	34.963	17.461	1.00	20.81
ATOM	4175	CA	THR	B	347	17.788	36.052	18.333	1.00	21.37
ATOM	4177	CB	THR	B	347	17.253	37.270	17.490	1.00	22.48
ATOM	4179	OG1	THR	B	347	18.283	37.718	16.596	1.00	25.33
ATOM	4181	CG2	THR	B	347	16.895	38.415	18.398	1.00	24.91
ATOM	4185	C	THR	B	347	16.641	35.543	19.200	1.00	22.25
ATOM	4186	O	THR	B	347	15.735	34.867	18.723	1.00	21.97
ATOM	4188	N	LEU	B	348	16.691	35.861	20.483	1.00	25.21
ATOM	4189	CA	LEU	B	348	15.728	35.410	21.461	1.00	26.36
ATOM	4191	CB	LEU	B	348	16.347	34.346	22.386	1.00	26.95
ATOM	4194	CG	LEU	B	348	16.755	33.036	21.714	1.00	28.31
ATOM	4196	CD1	LEU	B	348	17.701	32.225	22.604	1.00	31.12
ATOM	4200	CD2	LEU	B	348	15.502	32.239	21.320	1.00	30.54
ATOM	4204	C	LEU	B	348	15.347	36.659	22.263	1.00	28.26
ATOM	4205	O	LEU	B	348	16.049	37.064	23.188	1.00	27.92
ATOM	4207	N	GLY	B	349	14.262	37.303	21.845	1.00	29.78
ATOM	4208	CA	GLY	B	349	13.897	38.629	22.356	1.00	29.79

ATOM	4211	C	GLY	B	349	14.970	39.650	22.056	1.00	28.34
ATOM	4212	O	GLY	B	349	15.372	39.824	20.921	1.00	28.40
ATOM	4214	N	THR	B	350	15.455	40.305	23.100	1.00	27.89
ATOM	4215	CA	THR	B	350	16.512	41.287	22.968	1.00	27.06
ATOM	4217	CB	THR	B	350	16.437	42.368	24.059	1.00	27.24
ATOM	4219	OG1	THR	B	350	16.302	41.738	25.346	1.00	30.04
ATOM	4221	CG2	THR	B	350	15.260	43.308	23.792	1.00	32.20
ATOM	4225	C	THR	B	350	17.864	40.623	23.102	1.00	24.36
ATOM	4226	O	THR	B	350	18.886	41.277	22.939	1.00	22.36
ATOM	4228	N	LEU	B	351	17.881	39.318	23.368	1.00	22.06
ATOM	4229	CA	LEU	B	351	19.146	38.611	23.480	1.00	18.32
ATOM	4231	CB	LEU	B	351	19.348	38.091	24.921	1.00	19.42
ATOM	4234	CG	LEU	B	351	19.400	39.156	26.060	1.00	21.73
ATOM	4236	CD1	LEU	B	351	19.577	38.539	27.448	1.00	23.59
ATOM	4240	CD2	LEU	B	351	20.479	40.161	25.781	1.00	25.94
ATOM	4244	C	LEU	B	351	19.227	37.537	22.383	1.00	17.52
ATOM	4245	O	LEU	B	351	18.831	37.775	21.220	1.00	17.04
ATOM	4247	N	GLY	B	352	19.748	36.366	22.706	1.00	15.96
ATOM	4248	CA	GLY	B	352	20.066	35.392	21.673	1.00	15.88
ATOM	4251	C	GLY	B	352	21.170	34.443	22.065	1.00	14.39
ATOM	4252	O	GLY	B	352	21.659	34.450	23.209	1.00	15.36
ATOM	4254	N	THR	B	353	21.539	33.611	21.119	1.00	13.51
ATOM	4255	CA	THR	B	353	22.600	32.638	21.351	1.00	13.30
ATOM	4257	CB	THR	B	353	22.878	31.787	20.137	1.00	13.54
ATOM	4259	OG1	THR	B	353	23.826	30.777	20.480	1.00	14.11
ATOM	4261	CG2	THR	B	353	23.460	32.639	18.956	1.00	11.61
ATOM	4265	C	THR	B	353	23.862	33.328	21.809	1.00	13.46
ATOM	4266	O	THR	B	353	24.233	34.416	21.327	1.00	13.26
ATOM	4268	N	ASN	B	354	24.507	32.734	22.799	1.00	13.95
ATOM	4269	CA	ASN	B	354	25.863	33.108	23.136	1.00	13.45
ATOM	4271	CB	ASN	B	354	26.286	32.488	24.448	1.00	14.06
ATOM	4274	CG	ASN	B	354	25.739	33.191	25.650	1.00	13.19
ATOM	4275	OD1	ASN	B	354	25.113	34.242	25.560	1.00	13.53
ATOM	4276	ND2	ASN	B	354	25.977	32.592	26.824	1.00	14.57
ATOM	4279	C	ASN	B	354	26.831	32.691	22.026	1.00	13.77
ATOM	4280	O	ASN	B	354	26.486	31.952	21.116	1.00	13.94
ATOM	4282	N	PHE	B	355	28.071	33.148	22.123	1.00	14.16
ATOM	4283	CA	PHE	B	355	29.058	32.927	21.081	1.00	11.85
ATOM	4285	CB	PHE	B	355	28.925	34.058	20.051	1.00	13.16
ATOM	4288	CG	PHE	B	355	28.735	35.428	20.696	1.00	9.16
ATOM	4289	CD1	PHE	B	355	27.491	36.022	20.736	1.00	15.69
ATOM	4291	CE1	PHE	B	355	27.298	37.220	21.367	1.00	14.51
ATOM	4293	CZ	PHE	B	355	28.350	37.852	21.964	1.00	11.82
ATOM	4295	CE2	PHE	B	355	29.573	37.294	21.982	1.00	12.53
ATOM	4297	CD2	PHE	B	355	29.784	36.052	21.341	1.00	16.86
ATOM	4299	C	PHE	B	355	30.431	32.944	21.746	1.00	12.21
ATOM	4300	O	PHE	B	355	30.558	32.918	22.989	1.00	11.59
ATOM	4302	N	GLY	B	356	31.468	32.969	20.936	1.00	12.19
ATOM	4303	CA	GLY	B	356	32.822	33.049	21.437	1.00	12.85
ATOM	4306	C	GLY	B	356	33.543	31.720	21.512	1.00	14.36
ATOM	4307	O	GLY	B	356	33.060	30.699	21.036	1.00	15.73
ATOM	4309	N	ARG	B	357	34.738	31.736	22.108	1.00	15.39
ATOM	4310	CA	ARG	B	357	35.644	30.615	21.953	1.00	16.15
ATOM	4312	CB	ARG	B	357	37.090	31.002	22.238	1.00	16.02
ATOM	4315	CG	ARG	B	357	37.263	31.623	23.547	1.00	19.39
ATOM	4318	CD	ARG	B	357	38.740	31.618	24.016	1.00	23.64
ATOM	4321	NE	ARG	B	357	38.667	31.933	25.435	1.00	30.05
ATOM	4323	CZ	ARG	B	357	38.639	31.059	26.431	1.00	23.41
ATOM	4324	NH1	ARG	B	357	38.796	29.766	26.222	1.00	30.78
ATOM	4327	NH2	ARG	B	357	38.530	31.515	27.664	1.00	35.25
ATOM	4330	C	ARG	B	357	35.272	29.401	22.811	1.00	14.84

ATOM	4331	O	ARG	B	357	35.810	28.356	22.577	1.00	16.04
ATOM	4333	N	CYS	B	358	34.398	29.549	23.806	1.00	15.95
ATOM	4334	CA	CYS	B	358	33.872	28.398	24.550	1.00	14.72
ATOM	4336	CB	CYS	B	358	33.484	28.848	25.962	1.00	15.84
ATOM	4339	SG	CYS	B	358	34.987	29.471	26.895	1.00	19.90
ATOM	4341	C	CYS	B	358	32.718	27.681	23.829	1.00	17.68
ATOM	4342	O	CYS	B	358	32.235	26.668	24.302	1.00	17.09
ATOM	4344	N	VAL	B	359	32.250	28.215	22.702	1.00	16.69
ATOM	4345	CA	VAL	B	359	31.234	27.515	21.937	1.00	15.11
ATOM	4347	CB	VAL	B	359	30.282	28.493	21.153	1.00	14.97
ATOM	4349	CG1	VAL	B	359	29.339	27.715	20.225	1.00	16.62
ATOM	4353	CG2	VAL	B	359	29.466	29.375	22.089	1.00	14.64
ATOM	4357	C	VAL	B	359	31.994	26.596	20.971	1.00	15.08
ATOM	4358	O	VAL	B	359	32.881	27.039	20.259	1.00	14.07
ATOM	4360	N	ASP	B	360	31.620	25.324	20.947	1.00	14.70
ATOM	4361	CA	ASP	B	360	32.234	24.316	20.111	1.00	15.40
ATOM	4363	CB	ASP	B	360	32.062	22.942	20.793	1.00	15.25
ATOM	4366	CG	ASP	B	360	32.920	22.825	22.011	1.00	18.36
ATOM	4367	OD1	ASP	B	360	34.139	22.777	21.821	1.00	18.51
ATOM	4368	OD2	ASP	B	360	32.427	22.867	23.148	1.00	20.47
ATOM	4369	C	ASP	B	360	31.639	24.323	18.705	1.00	15.87
ATOM	4370	O	ASP	B	360	32.359	24.189	17.704	1.00	16.23
ATOM	4372	N	LEU	B	361	30.320	24.464	18.637	1.00	15.50
ATOM	4373	CA	LEU	B	361	29.617	24.497	17.391	1.00	15.35
ATOM	4375	CB	LEU	B	361	29.564	23.119	16.731	1.00	16.33
ATOM	4378	CG	LEU	B	361	28.661	22.018	17.273	1.00	17.60
ATOM	4380	CD1	LEU	B	361	28.848	21.643	18.759	1.00	17.15
ATOM	4384	CD2	LEU	B	361	28.908	20.762	16.346	1.00	14.47
ATOM	4388	C	LEU	B	361	28.228	24.999	17.605	1.00	13.98
ATOM	4389	O	LEU	B	361	27.777	25.172	18.743	1.00	14.80
ATOM	4391	N	PHE	B	362	27.548	25.258	16.497	1.00	13.52
ATOM	4392	CA	PHE	B	362	26.136	25.623	16.550	1.00	12.57
ATOM	4394	CB	PHE	B	362	25.877	26.889	15.731	1.00	13.14
ATOM	4397	CG	PHE	B	362	26.537	28.099	16.311	1.00	12.16
ATOM	4398	CD1	PHE	B	362	25.809	29.006	17.053	1.00	12.48
ATOM	4400	CE1	PHE	B	362	26.408	30.063	17.650	1.00	12.16
ATOM	4402	CZ	PHE	B	362	27.802	30.281	17.470	1.00	11.71
ATOM	4404	CE2	PHE	B	362	28.535	29.412	16.750	1.00	14.68
ATOM	4406	CD2	PHE	B	362	27.908	28.314	16.161	1.00	14.61
ATOM	4408	C	PHE	B	362	25.292	24.465	16.048	1.00	13.31
ATOM	4409	O	PHE	B	362	25.769	23.601	15.328	1.00	15.26
ATOM	4411	N	ALA	B	363	24.012	24.514	16.370	1.00	14.68
ATOM	4412	CA	ALA	B	363	23.066	23.547	15.904	1.00	16.41
ATOM	4414	CB	ALA	B	363	23.095	22.278	16.818	1.00	10.91
ATOM	4418	C	ALA	B	363	21.667	24.206	15.839	1.00	15.83
ATOM	4419	O	ALA	B	363	21.453	25.295	16.404	1.00	15.36
ATOM	4421	N	PRO	B	364	20.734	23.594	15.087	1.00	16.59
ATOM	4422	CA	PRO	B	364	19.379	24.144	15.003	1.00	16.04
ATOM	4424	CB	PRO	B	364	18.633	23.052	14.242	1.00	15.78
ATOM	4427	CG	PRO	B	364	19.654	22.539	13.327	1.00	14.72
ATOM	4430	CD	PRO	B	364	20.860	22.433	14.196	1.00	16.80
ATOM	4433	C	PRO	B	364	18.769	24.425	16.350	1.00	17.25
ATOM	4434	O	PRO	B	364	18.720	23.543	17.203	1.00	17.50
ATOM	4435	N	GLY	B	365	18.383	25.684	16.573	1.00	15.13
ATOM	4436	CA	GLY	B	365	17.788	26.102	17.833	1.00	17.93
ATOM	4439	C	GLY	B	365	16.753	27.219	17.735	1.00	18.01
ATOM	4440	O	GLY	B	365	16.508	27.949	18.707	1.00	16.73
ATOM	4442	N	GLU	B	366	16.094	27.319	16.583	1.00	18.78
ATOM	4443	CA	GLU	B	366	14.938	28.188	16.428	1.00	18.73
ATOM	4445	CB	GLU	B	366	15.290	29.360	15.527	1.00	21.06
ATOM	4448	CG	GLU	B	366	14.170	30.369	15.423	1.00	20.47

ATOM	4451	CD	GLU	B	366	14.580	31.702	14.878	1.00	28.78
ATOM	4452	OE1	GLU	B	366	15.658	32.210	15.216	1.00	32.86
ATOM	4453	OE2	GLU	B	366	13.803	32.251	14.094	1.00	33.94
ATOM	4454	C	GLU	B	366	13.801	27.407	15.793	1.00	19.31
ATOM	4455	O	GLU	B	366	14.044	26.643	14.846	1.00	16.45
ATOM	4457	N	ASP	B	367	12.586	27.557	16.306	1.00	18.91
ATOM	4458	CA	ASP	B	367	11.423	26.947	15.678	1.00	19.09
ATOM	4460	CB	ASP	B	367	11.180	27.547	14.299	1.00	21.48
ATOM	4463	CG	ASP	B	367	9.895	27.023	13.625	1.00	26.56
ATOM	4464	OD1	ASP	B	367	8.991	26.497	14.324	1.00	33.14
ATOM	4465	OD2	ASP	B	367	9.819	27.144	12.377	1.00	36.96
ATOM	4466	C	ASP	B	367	11.616	25.441	15.554	1.00	19.61
ATOM	4467	O	ASP	B	367	11.486	24.844	14.469	1.00	18.25
ATOM	4469	N	ILE	B	368	11.962	24.832	16.680	1.00	18.31
ATOM	4470	CA	ILE	B	368	12.306	23.414	16.698	1.00	17.47
ATOM	4472	CB	ILE	B	368	13.479	23.123	17.659	1.00	16.96
ATOM	4474	CG1	ILE	B	368	14.735	23.881	17.204	1.00	15.48
ATOM	4477	CD1	ILE	B	368	15.239	23.630	15.747	1.00	18.36
ATOM	4481	CG2	ILE	B	368	13.720	21.612	17.828	1.00	13.56
ATOM	4485	C	ILE	B	368	11.085	22.689	17.192	1.00	17.94
ATOM	4486	O	ILE	B	368	10.692	22.831	18.341	1.00	16.39
ATOM	4488	N	ILE	B	369	10.481	21.881	16.331	1.00	19.66
ATOM	4489	CA	ILE	B	369	9.251	21.214	16.762	1.00	21.02
ATOM	4491	CB	ILE	B	369	8.346	20.872	15.561	1.00	22.63
ATOM	4493	CG1	ILE	B	369	6.861	20.695	16.032	1.00	27.84
ATOM	4496	CD1	ILE	B	369	6.047	22.049	16.269	1.00	27.28
ATOM	4500	CG2	ILE	B	369	8.901	19.702	14.845	1.00	23.24
ATOM	4504	C	ILE	B	369	9.582	19.990	17.610	1.00	20.33
ATOM	4505	O	ILE	B	369	10.537	19.256	17.346	1.00	21.17
ATOM	4507	N	GLY	B	370	8.841	19.817	18.684	1.00	20.75
ATOM	4508	CA	GLY	B	370	9.002	18.637	19.515	1.00	20.70
ATOM	4511	C	GLY	B	370	7.859	18.445	20.480	1.00	21.39
ATOM	4512	O	GLY	B	370	6.966	19.272	20.594	1.00	22.77
ATOM	4514	N	ALA	B	371	7.913	17.362	21.227	1.00	21.28
ATOM	4515	CA	ALA	B	371	6.876	17.047	22.194	1.00	22.75
ATOM	4517	CB	ALA	B	371	7.351	15.926	23.125	1.00	22.69
ATOM	4521	C	ALA	B	371	6.441	18.211	23.041	1.00	22.16
ATOM	4522	O	ALA	B	371	7.279	18.879	23.651	1.00	22.27
ATOM	4524	N	SER	B	372	5.120	18.396	23.146	1.00	20.60
ATOM	4525	CA	SER	B	372	4.516	19.406	24.009	1.00	22.20
ATOM	4527	CB	SER	B	372	3.450	20.184	23.255	1.00	23.00
ATOM	4530	OG	SER	B	372	2.847	21.141	24.117	1.00	24.89
ATOM	4532	C	SER	B	372	3.840	18.702	25.172	1.00	24.01
ATOM	4533	O	SER	B	372	2.994	17.824	24.958	1.00	25.44
ATOM	4535	N	SER	B	373	4.140	19.120	26.386	1.00	24.84
ATOM	4536	CA	SER	B	373	3.530	18.530	27.550	1.00	27.08
ATOM	4538	CB	SER	B	373	4.339	18.866	28.792	1.00	27.78
ATOM	4541	OG	SER	B	373	4.348	20.247	29.024	1.00	26.48
ATOM	4543	C	SER	B	373	2.089	18.995	27.753	1.00	29.21
ATOM	4544	O	SER	B	373	1.467	18.675	28.768	1.00	30.43
ATOM	4546	N	ASP	B	374	1.557	19.761	26.813	1.00	30.44
ATOM	4547	CA	ASP	B	374	0.124	20.084	26.843	1.00	32.69
ATOM	4549	CB	ASP	B	374	-0.230	21.028	25.706	1.00	33.07
ATOM	4552	CG	ASP	B	374	0.277	22.413	25.938	1.00	37.98
ATOM	4553	OD1	ASP	B	374	0.633	22.734	27.106	1.00	47.15
ATOM	4554	OD2	ASP	B	374	0.334	23.185	24.952	1.00	46.97
ATOM	4555	C	ASP	B	374	-0.719	18.841	26.761	1.00	33.27
ATOM	4556	O	ASP	B	374	-1.688	18.684	27.504	1.00	35.45
ATOM	4558	N	CYS	B	375	-0.348	17.942	25.864	1.00	33.77
ATOM	4559	CA	CYS	B	375	-1.092	16.713	25.724	1.00	34.47
ATOM	4561	CB	CYS	B	375	-2.351	16.958	24.868	1.00	34.59

ATOM	4564	SG	CYS	B	375	-2.126	16.611	23.124	1.00	41.57
ATOM	4566	C	CYS	B	375	-0.179	15.675	25.130	1.00	32.73
ATOM	4567	O	CYS	B	375	0.813	15.996	24.478	1.00	31.76
ATOM	4569	N	SER	B	376	-0.519	14.419	25.342	1.00	30.37
ATOM	4570	CA	SER	B	376	0.404	13.348	25.066	1.00	30.58
ATOM	4572	CB	SER	B	376	-0.147	12.040	25.616	1.00	31.42
ATOM	4575	OG	SER	B	376	-1.224	11.636	24.800	1.00	37.25
ATOM	4577	C	SER	B	376	0.717	13.164	23.596	1.00	28.59
ATOM	4578	O	SER	B	376	1.616	12.415	23.247	1.00	28.11
ATOM	4580	N	THR	B	377	-0.009	13.841	22.713	1.00	28.14
ATOM	4581	CA	THR	B	377	0.292	13.744	21.297	1.00	27.34
ATOM	4583	CB	THR	B	377	-0.815	13.007	20.571	1.00	28.76
ATOM	4585	OG1	THR	B	377	-2.037	13.728	20.763	1.00	27.89
ATOM	4587	CG2	THR	B	377	-0.915	11.571	21.133	1.00	30.46
ATOM	4591	C	THR	B	377	0.522	15.110	20.664	1.00	25.78
ATOM	4592	O	THR	B	377	0.720	15.198	19.471	1.00	25.01
ATOM	4594	N	CYS	B	378	0.577	16.148	21.490	1.00	23.78
ATOM	4595	CA	CYS	B	378	0.726	17.498	21.027	1.00	24.71
ATOM	4597	CB	CYS	B	378	0.179	18.436	22.073	1.00	24.65
ATOM	4600	SG	CYS	B	378	-1.630	18.412	22.235	1.00	33.23
ATOM	4602	C	CYS	B	378	2.199	17.832	20.763	1.00	24.42
ATOM	4603	O	CYS	B	378	3.105	17.215	21.342	1.00	22.76
ATOM	4605	N	PHE	B	379	2.421	18.840	19.932	1.00	21.02
ATOM	4606	CA	PHE	B	379	3.759	19.315	19.589	1.00	20.66
ATOM	4608	CB	PHE	B	379	4.125	18.910	18.171	1.00	21.77
ATOM	4611	CG	PHE	B	379	4.514	17.460	18.035	1.00	23.69
ATOM	4612	CD1	PHE	B	379	5.839	17.080	18.017	1.00	24.11
ATOM	4614	CE1	PHE	B	379	6.199	15.751	17.910	1.00	26.53
ATOM	4616	CZ	PHE	B	379	5.230	14.786	17.797	1.00	26.77
ATOM	4618	CE2	PHE	B	379	3.891	15.144	17.800	1.00	30.78
ATOM	4620	CD2	PHE	B	379	3.539	16.477	17.923	1.00	27.22
ATOM	4622	C	PHE	B	379	3.798	20.815	19.728	1.00	20.56
ATOM	4623	O	PHE	B	379	2.756	21.478	19.670	1.00	20.49
ATOM	4625	N	VAL	B	380	4.994	21.355	19.981	1.00	19.16
ATOM	4626	CA	VAL	B	380	5.203	22.798	20.145	1.00	19.03
ATOM	4628	CB	VAL	B	380	5.110	23.236	21.613	1.00	19.76
ATOM	4630	CG1	VAL	B	380	6.250	22.606	22.434	1.00	21.43
ATOM	4634	CG2	VAL	B	380	5.093	24.813	21.760	1.00	16.45
ATOM	4638	C	VAL	B	380	6.583	23.119	19.576	1.00	19.53
ATOM	4639	O	VAL	B	380	7.503	22.286	19.677	1.00	18.62
ATOM	4641	N	SER	B	381	6.714	24.274	18.933	1.00	21.42
ATOM	4642	CA	SER	B	381	8.033	24.771	18.496	1.00	22.67
ATOM	4644	CB	SER	B	381	7.989	25.582	17.194	1.00	24.74
ATOM	4647	OG	SER	B	381	7.662	24.744	16.092	1.00	34.61
ATOM	4649	C	SER	B	381	8.615	25.621	19.611	1.00	21.99
ATOM	4650	O	SER	B	381	7.958	26.493	20.179	1.00	22.38
ATOM	4652	N	GLN	B	382	9.884	25.371	19.907	1.00	20.31
ATOM	4653	CA	GLN	B	382	10.607	26.111	20.904	1.00	19.45
ATOM	4655	CB	GLN	B	382	10.807	25.251	22.137	1.00	18.23
ATOM	4658	CG	GLN	B	382	9.510	25.021	22.929	1.00	20.85
ATOM	4661	CD	GLN	B	382	9.727	24.467	24.360	1.00	24.15
ATOM	4662	OE1	GLN	B	382	10.856	24.396	24.857	1.00	30.86
ATOM	4663	NE2	GLN	B	382	8.625	24.080	25.019	1.00	26.38
ATOM	4666	C	GLN	B	382	11.954	26.538	20.321	1.00	17.64
ATOM	4667	O	GLN	B	382	12.407	25.984	19.323	1.00	16.73
ATOM	4669	N	SER	B	383	12.540	27.576	20.907	1.00	16.56
ATOM	4670	CA	SER	B	383	13.809	28.105	20.440	1.00	15.38
ATOM	4672	CB	SER	B	383	13.612	29.471	19.741	1.00	17.69
ATOM	4675	OG	SER	B	383	12.721	29.370	18.616	1.00	16.48
ATOM	4677	C	SER	B	383	14.759	28.231	21.623	1.00	15.39
ATOM	4678	O	SER	B	383	14.346	28.525	22.749	1.00	14.53

ATOM	4680	N	GLY	B	384	16.045	28.026	21.391	1.00	15.01
ATOM	4681	CA	GLY	B	384	17.015	28.247	22.481	1.00	14.44
ATOM	4684	C	GLY	B	384	18.246	27.441	22.262	1.00	13.97
ATOM	4685	O	GLY	B	384	18.298	26.522	21.395	1.00	14.28
ATOM	4687	N	THR	B	385	19.293	27.812	22.977	1.00	13.25
ATOM	4688	CA	THR	B	385	20.500	27.027	22.878	1.00	14.51
ATOM	4690	CB	THR	B	385	21.731	27.749	23.450	1.00	13.06
ATOM	4692	OG1	THR	B	385	21.463	28.103	24.805	1.00	13.63
ATOM	4694	CG2	THR	B	385	22.076	28.960	22.600	1.00	11.69
ATOM	4698	C	THR	B	385	20.292	25.647	23.574	1.00	14.11
ATOM	4699	O	THR	B	385	21.050	24.740	23.276	1.00	15.70
ATOM	4701	N	SER	B	386	19.319	25.489	24.493	1.00	15.31
ATOM	4702	CA	SER	B	386	18.991	24.118	25.004	1.00	15.42
ATOM	4704	CB	SER	B	386	17.793	24.127	25.920	1.00	17.71
ATOM	4707	OG	SER	B	386	18.003	24.948	27.067	1.00	25.51
ATOM	4709	C	SER	B	386	18.585	23.186	23.846	1.00	14.82
ATOM	4710	O	SER	B	386	18.951	22.013	23.818	1.00	14.31
ATOM	4712	N	GLN	B	387	17.728	23.704	22.959	1.00	14.91
ATOM	4713	CA	GLN	B	387	17.259	22.941	21.788	1.00	14.75
ATOM	4715	CB	GLN	B	387	16.184	23.683	20.999	1.00	13.83
ATOM	4718	CG	GLN	B	387	14.772	23.521	21.533	1.00	13.66
ATOM	4721	CD	GLN	B	387	14.533	24.291	22.781	1.00	16.54
ATOM	4722	OE1	GLN	B	387	15.211	25.275	23.042	1.00	18.38
ATOM	4723	NE2	GLN	B	387	13.622	23.786	23.626	1.00	19.49
ATOM	4726	C	GLN	B	387	18.433	22.592	20.893	1.00	15.63
ATOM	4727	O	GLN	B	387	18.561	21.447	20.428	1.00	15.84
ATOM	4729	N	ALA	B	388	19.301	23.571	20.666	1.00	14.83
ATOM	4730	CA	ALA	B	388	20.527	23.345	19.909	1.00	14.54
ATOM	4732	CB	ALA	B	388	21.300	24.645	19.811	1.00	14.70
ATOM	4736	C	ALA	B	388	21.361	22.254	20.544	1.00	13.76
ATOM	4737	O	ALA	B	388	21.773	21.296	19.873	1.00	18.18
ATOM	4739	N	ALA	B	389	21.554	22.348	21.855	1.00	15.18
ATOM	4740	CA	ALA	B	389	22.352	21.370	22.569	1.00	12.80
ATOM	4742	CB	ALA	B	389	22.490	21.782	24.023	1.00	12.89
ATOM	4746	C	ALA	B	389	21.734	19.966	22.443	1.00	13.04
ATOM	4747	O	ALA	B	389	22.446	18.997	22.348	1.00	14.74
ATOM	4749	N	ALA	B	390	20.418	19.879	22.431	1.00	13.16
ATOM	4750	CA	ALA	B	390	19.696	18.592	22.295	1.00	14.21
ATOM	4752	CB	ALA	B	390	18.163	18.816	22.439	1.00	13.60
ATOM	4756	C	ALA	B	390	20.000	17.951	20.968	1.00	14.57
ATOM	4757	O	ALA	B	390	20.102	16.731	20.883	1.00	14.85
ATOM	4759	N	HIS	B	391	20.125	18.750	19.908	1.00	14.35
ATOM	4760	CA	HIS	B	391	20.519	18.199	18.617	1.00	15.43
ATOM	4762	CB	HIS	B	391	20.575	19.307	17.571	1.00	15.24
ATOM	4765	CG	HIS	B	391	19.237	19.673	17.061	1.00	19.47
ATOM	4766	ND1	HIS	B	391	18.358	20.460	17.779	1.00	18.55
ATOM	4768	CE1	HIS	B	391	17.241	20.599	17.075	1.00	20.75
ATOM	4770	NE2	HIS	B	391	17.354	19.887	15.958	1.00	12.32
ATOM	4772	CD2	HIS	B	391	18.613	19.346	15.902	1.00	13.68
ATOM	4774	C	HIS	B	391	21.883	17.546	18.675	1.00	15.10
ATOM	4775	O	HIS	B	391	22.102	16.424	18.192	1.00	15.33
ATOM	4777	N	VAL	B	392	22.798	18.221	19.355	1.00	14.82
ATOM	4778	CA	VAL	B	392	24.167	17.735	19.423	1.00	13.56
ATOM	4780	CB	VAL	B	392	25.138	18.852	19.817	1.00	14.60
ATOM	4782	CG1	VAL	B	392	26.542	18.295	20.169	1.00	15.65
ATOM	4786	CG2	VAL	B	392	25.208	19.883	18.678	1.00	13.78
ATOM	4790	C	VAL	B	392	24.197	16.525	20.356	1.00	13.43
ATOM	4791	O	VAL	B	392	24.887	15.598	20.077	1.00	16.72
ATOM	4793	N	ALA	B	393	23.418	16.523	21.421	1.00	15.76
ATOM	4794	CA	ALA	B	393	23.303	15.309	22.249	1.00	16.04
ATOM	4796	CB	ALA	B	393	22.385	15.540	23.441	1.00	17.33

ATOM	4800	C	ALA	B	393	22.813	14.122	21.418	1.00	16.90
ATOM	4801	O	ALA	B	393	23.373	13.032	21.501	1.00	16.59
ATOM	4803	N	GLY	B	394	21.769	14.333	20.611	1.00	17.09
ATOM	4804	CA	GLY	B	394	21.298	13.328	19.661	1.00	16.65
ATOM	4807	C	GLY	B	394	22.330	12.857	18.656	1.00	17.37
ATOM	4808	O	GLY	B	394	22.489	11.657	18.449	1.00	18.09
ATOM	4810	N	ILE	B	395	23.040	13.787	18.027	1.00	14.37
ATOM	4811	CA	ILE	B	395	24.110	13.472	17.079	1.00	15.08
ATOM	4813	CB	ILE	B	395	24.709	14.756	16.432	1.00	14.81
ATOM	4815	CG1	ILE	B	395	23.652	15.430	15.558	1.00	19.14
ATOM	4818	CD1	ILE	B	395	24.043	16.800	15.030	1.00	17.06
ATOM	4822	CG2	ILE	B	395	25.998	14.412	15.645	1.00	15.01
ATOM	4826	C	ILE	B	395	25.233	12.688	17.755	1.00	16.58
ATOM	4827	O	ILE	B	395	25.734	11.691	17.188	1.00	16.92
ATOM	4829	N	ALA	B	396	25.579	13.071	18.992	1.00	15.94
ATOM	4830	CA	ALA	B	396	26.639	12.383	19.742	1.00	16.38
ATOM	4832	CB	ALA	B	396	26.941	13.098	21.069	1.00	15.66
ATOM	4836	C	ALA	B	396	26.208	10.957	20.024	1.00	17.03
ATOM	4837	O	ALA	B	396	27.007	10.031	19.911	1.00	18.99
ATOM	4839	N	ALA	B	397	24.956	10.793	20.413	1.00	17.20
ATOM	4840	CA	ALA	B	397	24.412	9.477	20.723	1.00	18.30
ATOM	4842	CB	ALA	B	397	23.007	9.603	21.260	1.00	17.28
ATOM	4846	C	ALA	B	397	24.470	8.588	19.490	1.00	19.82
ATOM	4847	O	ALA	B	397	24.840	7.417	19.571	1.00	19.53
ATOM	4849	N	MET	B	398	24.168	9.167	18.333	1.00	19.94
ATOM	4850	CA	MET	B	398	24.236	8.428	17.078	1.00	21.16
ATOM	4852	CB	MET	B	398	23.604	9.263	15.978	1.00	21.56
ATOM	4855	CG	MET	B	398	22.155	9.561	16.290	1.00	30.90
ATOM	4858	SD	MET	B	398	21.160	8.288	15.591	1.00	40.95
ATOM	4859	CE	MET	B	398	21.079	9.027	13.954	1.00	35.61
ATOM	4863	C	MET	B	398	25.666	8.074	16.705	1.00	20.26
ATOM	4864	O	MET	B	398	25.971	6.953	16.273	1.00	21.19
ATOM	4866	N	MET	B	399	26.560	9.032	16.859	1.00	18.36
ATOM	4867	CA	MET	B	399	27.927	8.807	16.526	1.00	17.82
ATOM	4869	CB	MET	B	399	28.719	10.106	16.629	1.00	18.09
ATOM	4872	CG	MET	B	399	28.489	11.089	15.483	1.00	22.35
ATOM	4875	SD	MET	B	399	29.393	12.585	15.847	1.00	24.05
ATOM	4876	CE	MET	B	399	29.188	13.522	14.298	1.00	23.79
ATOM	4880	C	MET	B	399	28.574	7.759	17.401	1.00	17.58
ATOM	4881	O	MET	B	399	29.379	6.960	16.927	1.00	16.17
ATOM	4883	N	LEU	B	400	28.220	7.775	18.685	1.00	17.56
ATOM	4884	CA	LEU	B	400	28.756	6.861	19.663	1.00	17.63
ATOM	4886	CB	LEU	B	400	28.538	7.393	21.067	1.00	16.67
ATOM	4889	CG	LEU	B	400	29.372	8.580	21.523	1.00	19.99
ATOM	4891	CD1	LEU	B	400	28.809	9.182	22.848	1.00	21.81
ATOM	4895	CD2	LEU	B	400	30.823	8.161	21.670	1.00	23.77
ATOM	4899	C	LEU	B	400	28.128	5.463	19.542	1.00	20.89
ATOM	4900	O	LEU	B	400	28.763	4.484	19.887	1.00	20.50
ATOM	4902	N	SER	B	401	26.900	5.373	19.037	1.00	22.71
ATOM	4903	CA	SER	B	401	26.302	4.073	18.743	1.00	23.25
ATOM	4905	CB	SER	B	401	24.834	4.238	18.428	1.00	24.69
ATOM	4908	OG	SER	B	401	24.263	4.931	19.514	1.00	33.74
ATOM	4910	C	SER	B	401	27.038	3.410	17.603	1.00	22.74
ATOM	4911	O	SER	B	401	27.265	2.202	17.616	1.00	20.11
ATOM	4913	N	ALA	B	402	27.474	4.225	16.655	1.00	22.91
ATOM	4914	CA	ALA	B	402	28.191	3.746	15.481	1.00	22.65
ATOM	4916	CB	ALA	B	402	28.084	4.798	14.342	1.00	23.10
ATOM	4920	C	ALA	B	402	29.651	3.431	15.793	1.00	22.81
ATOM	4921	O	ALA	B	402	30.224	2.462	15.263	1.00	24.50
ATOM	4923	N	GLU	B	403	30.273	4.245	16.640	1.00	19.88
ATOM	4924	CA	GLU	B	403	31.684	4.104	16.972	1.00	19.26

ATOM	4926	CB	GLU	B	403	32.524	5.165	16.273	1.00	20.21
ATOM	4929	CG	GLU	B	403	32.473	5.118	14.732	1.00	20.78
ATOM	4932	CD	GLU	B	403	33.383	6.171	14.127	1.00	20.39
ATOM	4933	OE1	GLU	B	403	32.991	7.342	14.088	1.00	28.28
ATOM	4934	OE2	GLU	B	403	34.526	5.849	13.760	1.00	28.88
ATOM	4935	C	GLU	B	403	31.809	4.258	18.495	1.00	19.94
ATOM	4936	O	GLU	B	403	32.200	5.308	19.013	1.00	17.96
ATOM	4938	N	PRO	B	404	31.431	3.215	19.222	1.00	21.15
ATOM	4939	CA	PRO	B	404	31.332	3.321	20.679	1.00	21.45
ATOM	4941	CB	PRO	B	404	30.790	1.949	21.083	1.00	21.72
ATOM	4944	CG	PRO	B	404	30.171	1.405	19.836	1.00	20.81
ATOM	4947	CD	PRO	B	404	31.030	1.885	18.745	1.00	22.07
ATOM	4950	C	PRO	B	404	32.629	3.615	21.411	1.00	21.32
ATOM	4951	O	PRO	B	404	32.577	4.093	22.544	1.00	22.43
ATOM	4952	N	GLU	B	405	33.766	3.310	20.790	1.00	20.99
ATOM	4953	CA	GLU	B	405	35.057	3.486	21.421	1.00	23.43
ATOM	4955	CB	GLU	B	405	36.053	2.453	20.883	1.00	23.44
ATOM	4958	CG	GLU	B	405	35.648	0.978	21.190	1.00	26.70
ATOM	4961	CD	GLU	B	405	36.590	-0.085	20.577	1.00	29.51
ATOM	4962	OE1	GLU	B	405	37.674	0.263	20.052	1.00	36.83
ATOM	4963	OE2	GLU	B	405	36.250	-1.295	20.639	1.00	38.65
ATOM	4964	C	GLU	B	405	35.600	4.914	21.286	1.00	23.11
ATOM	4965	O	GLU	B	405	36.684	5.199	21.779	1.00	24.33
ATOM	4967	N	LEU	B	406	34.855	5.822	20.655	1.00	21.26
ATOM	4968	CA	LEU	B	406	35.350	7.194	20.481	1.00	19.96
ATOM	4970	CB	LEU	B	406	34.300	8.091	19.824	1.00	19.86
ATOM	4973	CG	LEU	B	406	33.972	7.765	18.363	1.00	18.38
ATOM	4975	CD1	LEU	B	406	32.810	8.630	17.880	1.00	19.26
ATOM	4979	CD2	LEU	B	406	35.241	7.946	17.497	1.00	19.03
ATOM	4983	C	LEU	B	406	35.729	7.798	21.811	1.00	21.94
ATOM	4984	O	LEU	B	406	34.950	7.735	22.744	1.00	23.70
ATOM	4986	N	THR	B	407	36.926	8.381	21.879	1.00	22.33
ATOM	4987	CA	THR	B	407	37.300	9.231	22.995	1.00	22.98
ATOM	4989	CB	THR	B	407	38.806	9.507	23.015	1.00	21.95
ATOM	4991	OG1	THR	B	407	39.155	10.215	21.836	1.00	24.72
ATOM	4993	CG2	THR	B	407	39.592	8.232	23.021	1.00	25.15
ATOM	4997	C	THR	B	407	36.550	10.544	22.820	1.00	23.16
ATOM	4998	O	THR	B	407	36.091	10.869	21.715	1.00	22.81
ATOM	5000	N	LEU	B	408	36.426	11.329	23.891	1.00	22.98
ATOM	5001	CA	LEU	B	408	35.828	12.674	23.764	1.00	22.14
ATOM	5003	CB	LEU	B	408	35.898	13.413	25.097	1.00	23.40
ATOM	5006	CG	LEU	B	408	35.345	14.829	25.074	1.00	26.29
ATOM	5008	CD1	LEU	B	408	33.834	14.849	24.687	1.00	27.51
ATOM	5012	CD2	LEU	B	408	35.582	15.456	26.448	1.00	25.01
ATOM	5016	C	LEU	B	408	36.501	13.492	22.650	1.00	21.18
ATOM	5017	O	LEU	B	408	35.844	14.249	21.900	1.00	21.18
ATOM	5019	N	ALA	B	409	37.820	13.369	22.525	1.00	20.73
ATOM	5020	CA	ALA	B	409	38.547	14.187	21.559	1.00	18.66
ATOM	5022	CB	ALA	B	409	40.077	14.194	21.872	1.00	18.87
ATOM	5026	C	ALA	B	409	38.225	13.722	20.118	1.00	19.53
ATOM	5027	O	ALA	B	409	38.077	14.527	19.201	1.00	17.15
ATOM	5029	N	GLU	B	410	38.059	12.413	19.948	1.00	19.49
ATOM	5030	CA	GLU	B	410	37.671	11.858	18.659	1.00	19.55
ATOM	5032	CB	GLU	B	410	37.839	10.348	18.661	1.00	17.70
ATOM	5035	CG	GLU	B	410	39.286	9.972	18.670	1.00	21.08
ATOM	5038	CD	GLU	B	410	39.499	8.489	18.896	1.00	25.91
ATOM	5039	OE1	GLU	B	410	38.575	7.783	19.383	1.00	25.66
ATOM	5040	OE2	GLU	B	410	40.622	8.049	18.613	1.00	28.32
ATOM	5041	C	GLU	B	410	36.244	12.254	18.313	1.00	19.00
ATOM	5042	O	GLU	B	410	35.937	12.523	17.169	1.00	20.23
ATOM	5044	N	LEU	B	411	35.387	12.298	19.314	1.00	19.16

ATOM	5045	CA	LEU	B	411	34.012	12.660	19.086	1.00	20.33
ATOM	5047	CB	LEU	B	411	33.174	12.344	20.295	1.00	20.65
ATOM	5050	CG	LEU	B	411	31.710	12.770	20.289	1.00	25.11
ATOM	5052	CD1	LEU	B	411	30.948	12.012	19.233	1.00	23.49
ATOM	5056	CD2	LEU	B	411	31.154	12.502	21.709	1.00	21.48
ATOM	5060	C	LEU	B	411	33.922	14.131	18.757	1.00	18.64
ATOM	5061	O	LEU	B	411	33.169	14.532	17.887	1.00	18.44
ATOM	5063	N	ARG	B	412	34.676	14.951	19.470	1.00	18.38
ATOM	5064	CA	ARG	B	412	34.661	16.375	19.208	1.00	18.05
ATOM	5066	CB	ARG	B	412	35.496	17.094	20.243	1.00	20.37
ATOM	5069	CG	ARG	B	412	35.413	18.572	20.119	1.00	22.89
ATOM	5072	CD	ARG	B	412	36.406	19.233	21.007	1.00	21.06
ATOM	5075	NE	ARG	B	412	36.133	19.013	22.421	1.00	25.29
ATOM	5077	CZ	ARG	B	412	36.879	18.286	23.250	1.00	32.02
ATOM	5078	NH1	ARG	B	412	37.959	17.639	22.827	1.00	26.77
ATOM	5081	NH2	ARG	B	412	36.528	18.198	24.534	1.00	32.64
ATOM	5084	C	ARG	B	412	35.190	16.682	17.810	1.00	17.91
ATOM	5085	O	ARG	B	412	34.641	17.499	17.116	1.00	16.45
ATOM	5087	N	GLN	B	413	36.244	15.993	17.390	1.00	18.24
ATOM	5088	CA	GLN	B	413	36.838	16.223	16.068	1.00	19.52
ATOM	5090	CB	GLN	B	413	38.151	15.450	15.957	1.00	19.60
ATOM	5093	CG	GLN	B	413	39.290	16.029	16.846	1.00	18.75
ATOM	5096	CD	GLN	B	413	40.262	16.854	16.105	1.00	19.68
ATOM	5097	OE1	GLN	B	413	40.016	17.227	14.950	1.00	17.78
ATOM	5098	NE2	GLN	B	413	41.433	17.112	16.722	1.00	14.93
ATOM	5101	C	GLN	B	413	35.874	15.821	14.952	1.00	18.60
ATOM	5102	O	GLN	B	413	35.856	16.436	13.911	1.00	19.35
ATOM	5104	N	ARG	B	414	35.110	14.759	15.179	1.00	20.27
ATOM	5105	CA	ARG	B	414	34.069	14.331	14.256	1.00	19.30
ATOM	5107	CB	ARG	B	414	33.553	12.943	14.631	1.00	20.52
ATOM	5110	CG	ARG	B	414	34.475	11.847	14.141	1.00	20.47
ATOM	5113	CD	ARG	B	414	34.312	10.611	14.939	1.00	23.85
ATOM	5116	NE	ARG	B	414	35.100	9.539	14.370	1.00	25.56
ATOM	5118	CZ	ARG	B	414	36.415	9.405	14.509	1.00	34.87
ATOM	5119	NH1	ARG	B	414	37.013	8.366	13.929	1.00	37.93
ATOM	5122	NH2	ARG	B	414	37.141	10.312	15.169	1.00	31.43
ATOM	5125	C	ARG	B	414	32.917	15.324	14.191	1.00	19.42
ATOM	5126	O	ARG	B	414	32.471	15.683	13.101	1.00	20.13
ATOM	5128	N	LEU	B	415	32.476	15.816	15.348	1.00	17.85
ATOM	5129	CA	LEU	B	415	31.419	16.812	15.370	1.00	18.01
ATOM	5131	CB	LEU	B	415	31.099	17.237	16.792	1.00	17.70
ATOM	5134	CG	LEU	B	415	30.328	16.196	17.567	1.00	20.17
ATOM	5136	CD1	LEU	B	415	30.373	16.532	19.063	1.00	13.80
ATOM	5140	CD2	LEU	B	415	28.895	16.141	17.048	1.00	20.92
ATOM	5144	C	LEU	B	415	31.820	18.030	14.567	1.00	17.48
ATOM	5145	O	LEU	B	415	31.011	18.572	13.825	1.00	19.60
ATOM	5147	N	ILE	B	416	33.082	18.441	14.686	1.00	17.22
ATOM	5148	CA	ILE	B	416	33.598	19.602	13.949	1.00	16.72
ATOM	5150	CB	ILE	B	416	35.006	20.038	14.479	1.00	15.52
ATOM	5152	CG1	ILE	B	416	34.905	20.622	15.919	1.00	18.10
ATOM	5155	CD1	ILE	B	416	36.251	20.762	16.652	1.00	16.74
ATOM	5159	CG2	ILE	B	416	35.673	20.974	13.523	1.00	17.75
ATOM	5163	C	ILE	B	416	33.701	19.209	12.471	1.00	16.76
ATOM	5164	O	ILE	B	416	33.305	19.952	11.582	1.00	17.60
ATOM	5166	N	HIS	B	417	34.257	18.036	12.202	1.00	18.02
ATOM	5167	CA	HIS	B	417	34.553	17.661	10.822	1.00	19.54
ATOM	5169	CB	HIS	B	417	35.375	16.375	10.769	1.00	21.39
ATOM	5172	CG	HIS	B	417	35.599	15.877	9.372	1.00	24.45
ATOM	5173	ND1	HIS	B	417	36.456	16.490	8.491	1.00	27.35
ATOM	5175	CE1	HIS	B	417	36.406	15.868	7.323	1.00	27.02
ATOM	5177	NE2	HIS	B	417	35.552	14.868	7.421	1.00	26.01

ATOM	5179	CD2	HIS	B	417	35.024	14.861	8.689	1.00	32.90
ATOM	5181	C	HIS	B	417	33.281	17.519	9.966	1.00	21.48
ATOM	5182	O	HIS	B	417	33.238	17.946	8.801	1.00	21.65
ATOM	5184	N	PHE	B	418	32.257	16.901	10.539	1.00	20.21
ATOM	5185	CA	PHE	B	418	30.993	16.703	9.841	1.00	21.05
ATOM	5187	CB	PHE	B	418	30.348	15.419	10.347	1.00	21.62
ATOM	5190	CG	PHE	B	418	31.174	14.207	10.024	1.00	20.30
ATOM	5191	CD1	PHE	B	418	31.516	13.939	8.700	1.00	26.27
ATOM	5193	CE1	PHE	B	418	32.298	12.816	8.367	1.00	27.18
ATOM	5195	CZ	PHE	B	418	32.774	11.993	9.358	1.00	26.46
ATOM	5197	CE2	PHE	B	418	32.455	12.255	10.696	1.00	23.13
ATOM	5199	CD2	PHE	B	418	31.656	13.379	11.017	1.00	27.68
ATOM	5201	C	PHE	B	418	30.035	17.891	9.884	1.00	20.70
ATOM	5202	O	PHE	B	418	28.951	17.826	9.325	1.00	19.08
ATOM	5204	N	SER	B	419	30.449	18.995	10.505	1.00	19.87
ATOM	5205	CA	SER	B	419	29.609	20.181	10.538	1.00	18.07
ATOM	5207	CB	SER	B	419	30.091	21.178	11.605	1.00	18.62
ATOM	5210	OG	SER	B	419	29.657	20.773	12.901	1.00	21.88
ATOM	5212	C	SER	B	419	29.619	20.875	9.197	1.00	18.20
ATOM	5213	O	SER	B	419	30.591	20.779	8.459	1.00	20.29
ATOM	5215	N	ALA	B	420	28.555	21.600	8.921	1.00	18.61
ATOM	5216	CA	ALA	B	420	28.493	22.589	7.819	1.00	20.19
ATOM	5218	CB	ALA	B	420	27.026	23.058	7.587	1.00	18.00
ATOM	5222	C	ALA	B	420	29.380	23.759	8.202	1.00	20.27
ATOM	5223	O	ALA	B	420	29.325	24.237	9.324	1.00	20.68
ATOM	5225	N	LYS	B	421	30.230	24.193	7.286	1.00	22.05
ATOM	5226	CA	LYS	B	421	31.229	25.192	7.625	1.00	24.20
ATOM	5228	CB	LYS	B	421	32.607	24.653	7.295	1.00	24.63
ATOM	5231	CG	LYS	B	421	32.830	23.338	7.976	1.00	25.94
ATOM	5234	CD	LYS	B	421	34.224	23.029	8.252	1.00	29.05
ATOM	5237	CE	LYS	B	421	34.323	21.684	8.925	1.00	27.68
ATOM	5240	NZ	LYS	B	421	33.578	20.616	8.194	1.00	25.36
ATOM	5244	C	LYS	B	421	30.979	26.499	6.902	1.00	24.85
ATOM	5245	O	LYS	B	421	30.508	26.503	5.773	1.00	24.49
ATOM	5247	N	ASP	B	422	31.282	27.596	7.590	1.00	25.50
ATOM	5248	CA	ASP	B	422	31.273	28.923	7.016	1.00	27.96
ATOM	5250	CB	ASP	B	422	32.358	29.052	5.943	1.00	29.36
ATOM	5253	CG	ASP	B	422	32.621	30.493	5.576	1.00	37.07
ATOM	5254	OD1	ASP	B	422	32.945	31.292	6.476	1.00	49.92
ATOM	5255	OD2	ASP	B	422	32.465	30.844	4.392	1.00	50.69
ATOM	5256	C	ASP	B	422	29.933	29.357	6.452	1.00	26.74
ATOM	5257	O	ASP	B	422	29.871	30.057	5.458	1.00	28.60
ATOM	5259	N	VAL	B	423	28.874	28.974	7.129	1.00	25.48
ATOM	5260	CA	VAL	B	423	27.502	29.272	6.735	1.00	25.60
ATOM	5262	CB	VAL	B	423	26.693	27.977	6.820	1.00	26.37
ATOM	5264	CG1	VAL	B	423	25.257	28.273	6.827	1.00	33.66
ATOM	5268	CG2	VAL	B	423	27.054	27.045	5.649	1.00	23.17
ATOM	5272	C	VAL	B	423	26.855	30.352	7.637	1.00	24.30
ATOM	5273	O	VAL	B	423	25.814	30.907	7.320	1.00	21.02
ATOM	5275	N	ILE	B	424	27.445	30.627	8.792	1.00	24.25
ATOM	5276	CA	ILE	B	424	26.935	31.702	9.656	1.00	24.58
ATOM	5278	CB	ILE	B	424	27.281	31.411	11.152	1.00	24.07
ATOM	5280	CG1	ILE	B	424	26.890	30.003	11.579	1.00	23.80
ATOM	5283	CD1	ILE	B	424	27.370	29.666	12.966	1.00	24.74
ATOM	5287	CG2	ILE	B	424	26.599	32.361	12.073	1.00	25.09
ATOM	5291	C	ILE	B	424	27.518	33.055	9.189	1.00	24.16
ATOM	5292	O	ILE	B	424	28.724	33.156	8.967	1.00	25.06
ATOM	5294	N	ASN	B	425	26.695	34.101	9.051	1.00	25.37
ATOM	5295	CA	ASN	B	425	27.223	35.463	8.809	1.00	27.02
ATOM	5297	CB	ASN	B	425	26.152	36.457	8.279	1.00	27.87
ATOM	5300	CG	ASN	B	425	26.725	37.861	7.959	1.00	27.90

ATOM	5301	OD1	ASN	B	425	27.872	38.188	8.277	1.00	28.69
ATOM	5302	ND2	ASN	B	425	25.917	38.681	7.300	1.00	35.36
ATOM	5305	C	ASN	B	425	27.742	35.968	10.140	1.00	27.90
ATOM	5306	O	ASN	B	425	26.975	36.171	11.077	1.00	28.17
ATOM	5308	N	GLU	B	426	29.038	36.156	10.249	1.00	27.87
ATOM	5309	CA	GLU	B	426	29.573	36.419	11.579	1.00	29.02
ATOM	5311	CB	GLU	B	426	31.033	36.061	11.614	1.00	29.30
ATOM	5314	CG	GLU	B	426	31.297	34.591	11.335	1.00	36.37
ATOM	5317	CD	GLU	B	426	32.785	34.278	11.381	1.00	40.51
ATOM	5318	OE1	GLU	B	426	33.586	35.242	11.285	1.00	41.44
ATOM	5319	OE2	GLU	B	426	33.137	33.078	11.508	1.00	40.28
ATOM	5320	C	GLU	B	426	29.378	37.880	12.019	1.00	28.19
ATOM	5321	O	GLU	B	426	29.676	38.201	13.161	1.00	27.95
ATOM	5323	N	ALA	B	427	28.861	38.729	11.118	1.00	27.10
ATOM	5324	CA	ALA	B	427	28.445	40.133	11.428	1.00	25.54
ATOM	5326	CB	ALA	B	427	27.791	40.792	10.211	1.00	25.46
ATOM	5330	C	ALA	B	427	27.479	40.236	12.594	1.00	23.97
ATOM	5331	O	ALA	B	427	27.412	41.254	13.256	1.00	18.90
ATOM	5333	N	TRP	B	428	26.720	39.186	12.841	1.00	22.45
ATOM	5334	CA	TRP	B	428	25.790	39.165	13.936	1.00	23.21
ATOM	5336	CB	TRP	B	428	25.025	37.849	13.826	1.00	24.45
ATOM	5339	CG	TRP	B	428	23.862	37.719	14.646	1.00	25.56
ATOM	5340	CD1	TRP	B	428	22.580	37.984	14.276	1.00	26.18
ATOM	5342	NE1	TRP	B	428	21.728	37.714	15.317	1.00	30.38
ATOM	5344	CE2	TRP	B	428	22.455	37.236	16.379	1.00	29.35
ATOM	5345	CD2	TRP	B	428	23.806	37.217	15.985	1.00	24.74
ATOM	5346	CE3	TRP	B	428	24.763	36.767	16.899	1.00	24.25
ATOM	5348	CZ3	TRP	B	428	24.347	36.348	18.155	1.00	23.67
ATOM	5350	CH2	TRP	B	428	23.019	36.366	18.520	1.00	24.03
ATOM	5352	CZ2	TRP	B	428	22.041	36.809	17.651	1.00	22.98
ATOM	5354	C	TRP	B	428	26.509	39.244	15.306	1.00	22.41
ATOM	5355	O	TRP	B	428	25.946	39.738	16.303	1.00	21.48
ATOM	5357	N	PHE	B	429	27.739	38.713	15.347	1.00	22.04
ATOM	5358	CA	PHE	B	429	28.541	38.639	16.567	1.00	20.51
ATOM	5360	CB	PHE	B	429	29.556	37.504	16.469	1.00	19.43
ATOM	5363	CG	PHE	B	429	28.964	36.153	16.248	1.00	20.54
ATOM	5364	CD1	PHE	B	429	28.004	35.647	17.098	1.00	19.79
ATOM	5366	CE1	PHE	B	429	27.487	34.386	16.890	1.00	19.69
ATOM	5368	CZ	PHE	B	429	27.952	33.622	15.882	1.00	17.38
ATOM	5370	CE2	PHE	B	429	28.949	34.085	15.068	1.00	18.44
ATOM	5372	CD2	PHE	B	429	29.466	35.326	15.256	1.00	20.19
ATOM	5374	C	PHE	B	429	29.329	39.923	16.761	1.00	19.63
ATOM	5375	O	PHE	B	429	29.756	40.519	15.785	1.00	20.55
ATOM	5377	N	PRO	B	430	29.609	40.303	18.022	1.00	17.75
ATOM	5378	CA	PRO	B	430	30.504	41.415	18.255	1.00	17.83
ATOM	5380	CB	PRO	B	430	30.660	41.436	19.791	1.00	17.73
ATOM	5383	CG	PRO	B	430	29.479	40.689	20.282	1.00	16.15
ATOM	5386	CD	PRO	B	430	29.125	39.706	19.283	1.00	17.57
ATOM	5389	C	PRO	B	430	31.821	41.201	17.529	1.00	18.11
ATOM	5390	O	PRO	B	430	32.265	40.075	17.321	1.00	17.50
ATOM	5391	N	GLU	B	431	32.443	42.291	17.128	1.00	19.54
ATOM	5392	CA	GLU	B	431	33.588	42.221	16.249	1.00	20.79
ATOM	5394	CB	GLU	B	431	34.130	43.635	15.974	1.00	22.92
ATOM	5397	CG	GLU	B	431	33.131	44.436	15.175	1.00	25.25
ATOM	5400	CD	GLU	B	431	33.640	45.776	14.718	1.00	37.87
ATOM	5401	OE1	GLU	B	431	34.817	46.077	15.001	1.00	42.75
ATOM	5402	OE2	GLU	B	431	32.850	46.504	14.058	1.00	39.85
ATOM	5403	C	GLU	B	431	34.692	41.341	16.782	1.00	19.90
ATOM	5404	O	GLU	B	431	35.260	40.569	16.046	1.00	22.94
ATOM	5406	N	ASP	B	432	35.006	41.449	18.060	1.00	20.59
ATOM	5407	CA	ASP	B	432	36.139	40.705	18.595	1.00	22.28

ATOM	5409	CB	ASP	B	432	36.596	41.276	19.923	1.00	25.67
ATOM	5412	CG	ASP	B	432	37.254	42.635	19.766	1.00	29.40
ATOM	5413	OD1	ASP	B	432	37.892	42.870	18.714	1.00	37.79
ATOM	5414	OD2	ASP	B	432	37.100	43.473	20.670	1.00	44.16
ATOM	5415	C	ASP	B	432	35.825	39.230	18.749	1.00	22.18
ATOM	5416	O	ASP	B	432	36.744	38.455	18.925	1.00	22.06
ATOM	5418	N	GLN	B	433	34.543	38.848	18.670	1.00	20.34
ATOM	5419	CA	GLN	B	433	34.137	37.445	18.882	1.00	20.51
ATOM	5421	CB	GLN	B	433	32.822	37.415	19.651	1.00	19.77
ATOM	5424	CG	GLN	B	433	32.980	38.113	20.997	1.00	18.80
ATOM	5427	CD	GLN	B	433	33.576	37.226	22.040	1.00	25.39
ATOM	5428	OE1	GLN	B	433	33.841	36.046	21.800	1.00	24.31
ATOM	5429	NE2	GLN	B	433	33.756	37.765	23.228	1.00	26.34
ATOM	5432	C	GLN	B	433	34.060	36.668	17.605	1.00	21.52
ATOM	5433	O	GLN	B	433	33.986	35.427	17.608	1.00	23.07
ATOM	5435	N	ARG	B	434	34.111	37.374	16.491	1.00	21.36
ATOM	5436	CA	ARG	B	434	33.991	36.726	15.202	1.00	21.56
ATOM	5438	CB	ARG	B	434	33.948	37.771	14.110	1.00	23.76
ATOM	5441	CG	ARG	B	434	32.640	38.520	14.124	1.00	21.89
ATOM	5444	CD	ARG	B	434	32.703	39.739	13.246	1.00	23.75
ATOM	5447	NE	ARG	B	434	31.572	40.585	13.536	1.00	24.28
ATOM	5449	CZ	ARG	B	434	31.391	41.815	13.073	1.00	24.02
ATOM	5450	NH1	ARG	B	434	32.263	42.369	12.249	1.00	19.40
ATOM	5453	NH2	ARG	B	434	30.319	42.482	13.442	1.00	24.74
ATOM	5456	C	ARG	B	434	35.099	35.705	14.992	1.00	22.23
ATOM	5457	O	ARG	B	434	34.802	34.557	14.758	1.00	27.93
ATOM	5459	N	VAL	B	435	36.354	36.097	15.164	1.00	23.17
ATOM	5460	CA	VAL	B	435	37.485	35.184	15.069	1.00	24.69
ATOM	5462	CB	VAL	B	435	38.809	35.920	15.265	1.00	24.45
ATOM	5464	CG1	VAL	B	435	39.950	34.957	15.071	1.00	31.54
ATOM	5468	CG2	VAL	B	435	38.960	37.026	14.254	1.00	30.05
ATOM	5472	C	VAL	B	435	37.458	34.039	16.099	1.00	22.20
ATOM	5473	O	VAL	B	435	37.937	32.957	15.854	1.00	24.96
ATOM	5475	N	LEU	B	436	36.894	34.285	17.259	1.00	20.03
ATOM	5476	CA	LEU	B	436	36.875	33.278	18.302	1.00	18.27
ATOM	5478	CB	LEU	B	436	36.736	34.006	19.630	1.00	17.83
ATOM	5481	CG	LEU	B	436	37.863	34.930	20.059	1.00	20.03
ATOM	5483	CD1	LEU	B	436	37.574	35.599	21.406	1.00	21.95
ATOM	5487	CD2	LEU	B	436	39.135	34.149	20.096	1.00	19.97
ATOM	5491	C	LEU	B	436	35.735	32.264	18.152	1.00	17.69
ATOM	5492	O	LEU	B	436	35.753	31.171	18.767	1.00	16.08
ATOM	5494	N	THR	B	437	34.719	32.626	17.372	1.00	15.63
ATOM	5495	CA	THR	B	437	33.478	31.848	17.326	1.00	15.53
ATOM	5497	CB	THR	B	437	32.267	32.819	17.217	1.00	15.93
ATOM	5499	OG1	THR	B	437	32.206	33.599	18.422	1.00	14.43
ATOM	5501	CG2	THR	B	437	30.973	32.078	17.051	1.00	16.43
ATOM	5505	C	THR	B	437	33.510	30.826	16.173	1.00	17.10
ATOM	5506	O	THR	B	437	33.675	31.196	15.022	1.00	16.80
ATOM	5508	N	PRO	B	438	33.308	29.538	16.459	1.00	16.81
ATOM	5509	CA	PRO	B	438	33.413	28.575	15.360	1.00	18.63
ATOM	5511	CB	PRO	B	438	33.281	27.210	16.043	1.00	18.19
ATOM	5514	CG	PRO	B	438	33.441	27.506	17.530	1.00	22.80
ATOM	5517	CD	PRO	B	438	32.938	28.882	17.731	1.00	21.20
ATOM	5520	C	PRO	B	438	32.265	28.735	14.384	1.00	18.13
ATOM	5521	O	PRO	B	438	31.121	28.786	14.795	1.00	17.59
ATOM	5522	N	ASN	B	439	32.562	28.746	13.101	1.00	17.67
ATOM	5523	CA	ASN	B	439	31.512	28.905	12.122	1.00	17.03
ATOM	5525	CB	ASN	B	439	31.987	29.806	11.002	1.00	18.38
ATOM	5528	CG	ASN	B	439	30.856	30.351	10.223	1.00	17.01
ATOM	5529	OD1	ASN	B	439	29.926	29.630	9.920	1.00	17.34
ATOM	5530	ND2	ASN	B	439	30.925	31.619	9.870	1.00	14.88

ATOM	5533	C	ASN	B	439	31.192	27.514	11.631	1.00	18.73
ATOM	5534	O	ASN	B	439	31.685	27.071	10.570	1.00	19.33
ATOM	5536	N	LEU	B	440	30.395	26.832	12.452	1.00	16.42
ATOM	5537	CA	LEU	B	440	30.039	25.439	12.301	1.00	17.33
ATOM	5539	CB	LEU	B	440	30.886	24.603	13.238	1.00	17.87
ATOM	5542	CG	LEU	B	440	32.403	24.604	13.137	1.00	16.86
ATOM	5544	CD1	LEU	B	440	32.921	23.845	14.367	1.00	11.36
ATOM	5548	CD2	LEU	B	440	32.842	23.960	11.832	1.00	14.50
ATOM	5552	C	LEU	B	440	28.599	25.207	12.713	1.00	17.94
ATOM	5553	O	LEU	B	440	28.171	25.672	13.791	1.00	18.19
ATOM	5555	N	VAL	B	441	27.872	24.458	11.877	1.00	16.37
ATOM	5556	CA	VAL	B	441	26.524	24.037	12.186	1.00	15.34
ATOM	5558	CB	VAL	B	441	25.456	24.632	11.279	1.00	16.07
ATOM	5560	CG1	VAL	B	441	24.085	24.094	11.693	1.00	15.74
ATOM	5564	CG2	VAL	B	441	25.513	26.176	11.362	1.00	16.03
ATOM	5568	C	VAL	B	441	26.531	22.521	12.106	1.00	15.02
ATOM	5569	O	VAL	B	441	26.864	21.948	11.070	1.00	15.18
ATOM	5571	N	ALA	B	442	26.185	21.910	13.224	1.00	13.20
ATOM	5572	CA	ALA	B	442	26.249	20.453	13.421	1.00	13.11
ATOM	5574	CB	ALA	B	442	25.690	20.123	14.768	1.00	12.39
ATOM	5578	C	ALA	B	442	25.481	19.663	12.359	1.00	14.10
ATOM	5579	O	ALA	B	442	24.418	20.097	11.881	1.00	13.84
ATOM	5581	N	ALA	B	443	25.999	18.479	12.034	1.00	15.56
ATOM	5582	CA	ALA	B	443	25.316	17.539	11.180	1.00	15.60
ATOM	5584	CB	ALA	B	443	25.666	17.802	9.705	1.00	14.23
ATOM	5588	C	ALA	B	443	25.751	16.147	11.557	1.00	18.10
ATOM	5589	O	ALA	B	443	26.875	15.931	12.040	1.00	18.04
ATOM	5591	N	LEU	B	444	24.872	15.205	11.271	1.00	19.96
ATOM	5592	CA	LEU	B	444	25.170	13.789	11.344	1.00	20.83
ATOM	5594	CB	LEU	B	444	23.884	12.990	11.094	1.00	21.19
ATOM	5597	CG	LEU	B	444	22.962	13.000	12.308	1.00	23.52
ATOM	5599	CD1	LEU	B	444	21.539	12.667	11.871	1.00	26.99
ATOM	5603	CD2	LEU	B	444	23.493	12.021	13.392	1.00	24.13
ATOM	5607	C	LEU	B	444	26.225	13.383	10.341	1.00	21.33
ATOM	5608	O	LEU	B	444	26.305	13.968	9.269	1.00	20.52
ATOM	5610	N	PRO	B	445	27.046	12.369	10.682	1.00	23.81
ATOM	5611	CA	PRO	B	445	28.051	11.907	9.740	1.00	26.47
ATOM	5613	CB	PRO	B	445	28.860	10.894	10.547	1.00	25.83
ATOM	5616	CG	PRO	B	445	27.987	10.442	11.626	1.00	29.47
ATOM	5619	CD	PRO	B	445	27.055	11.596	11.941	1.00	26.43
ATOM	5622	C	PRO	B	445	27.371	11.276	8.495	1.00	27.81
ATOM	5623	O	PRO	B	445	26.295	10.695	8.621	1.00	26.22
ATOM	5624	N	PRO	B	446	27.957	11.443	7.310	1.00	31.59
ATOM	5625	CA	PRO	B	446	27.349	10.741	6.191	1.00	35.46
ATOM	5627	CB	PRO	B	446	28.080	11.289	4.969	1.00	34.34
ATOM	5630	CG	PRO	B	446	29.357	11.831	5.478	1.00	35.76
ATOM	5633	CD	PRO	B	446	29.115	12.246	6.903	1.00	31.55
ATOM	5636	C	PRO	B	446	27.569	9.248	6.310	1.00	39.92
ATOM	5637	O	PRO	B	446	28.446	8.818	7.035	1.00	38.47
ATOM	5638	N	SER	B	447	26.742	8.480	5.613	1.00	45.17
ATOM	5639	CA	SER	B	447	26.961	7.043	5.438	1.00	50.02
ATOM	5641	CB	SER	B	447	25.769	6.441	4.701	1.00	50.25
ATOM	5644	OG	SER	B	447	24.588	6.729	5.424	1.00	53.91
ATOM	5646	C	SER	B	447	28.252	6.736	4.657	1.00	53.09
ATOM	5647	O	SER	B	447	28.808	5.642	4.797	1.00	54.37
ATOM	5649	N	THR	B	448	28.712	7.686	3.836	1.00	56.17
ATOM	5650	CA	THR	B	448	29.993	7.546	3.112	1.00	59.16
ATOM	5652	CB	THR	B	448	30.233	8.714	2.064	1.00	59.41
ATOM	5654	OG1	THR	B	448	31.542	8.596	1.477	1.00	63.42
ATOM	5656	CG2	THR	B	448	30.090	10.098	2.684	1.00	59.27
ATOM	5660	C	THR	B	448	31.212	7.341	4.049	1.00	60.86

ATOM	5661	O	THR	B	448	32.229	6.792	3.618	1.00	61.85
ATOM	5663	N	HIS	B	449	31.104	7.780	5.310	1.00	62.66
ATOM	5664	CA	HIS	B	449	32.053	7.400	6.391	1.00	63.74
ATOM	5666	CB	HIS	B	449	33.488	7.930	6.148	1.00	64.54
ATOM	5669	CG	HIS	B	449	33.572	9.396	5.834	1.00	66.99
ATOM	5670	ND1	HIS	B	449	34.249	10.290	6.639	1.00	70.88
ATOM	5672	CE1	HIS	B	449	34.185	11.499	6.107	1.00	71.47
ATOM	5674	NE2	HIS	B	449	33.481	11.426	4.989	1.00	73.06
ATOM	5676	CD2	HIS	B	449	33.098	10.119	4.788	1.00	70.30
ATOM	5678	C	HIS	B	449	31.563	7.814	7.786	1.00	63.31
ATOM	5679	O	HIS	B	449	31.151	8.953	8.004	1.00	62.24
ATOM	5681	N	GLY	B	452	38.470	4.250	5.594	1.00	54.33
ATOM	5682	CA	GLY	B	452	39.783	4.232	6.242	1.00	54.43
ATOM	5685	C	GLY	B	452	40.135	5.539	6.942	1.00	54.16
ATOM	5686	O	GLY	B	452	39.299	6.449	7.065	1.00	54.83
ATOM	5688	N	TRP	B	453	41.393	5.630	7.376	1.00	53.20
ATOM	5689	CA	TRP	B	453	41.861	6.703	8.251	1.00	51.78
ATOM	5691	CB	TRP	B	453	43.176	6.290	8.898	1.00	52.90
ATOM	5694	CG	TRP	B	453	43.639	7.247	9.923	1.00	54.73
ATOM	5695	CD1	TRP	B	453	43.299	7.275	11.248	1.00	56.66
ATOM	5697	NE1	TRP	B	453	43.935	8.332	11.872	1.00	57.33
ATOM	5699	CE2	TRP	B	453	44.688	9.004	10.943	1.00	56.83
ATOM	5700	CD2	TRP	B	453	44.526	8.345	9.710	1.00	55.94
ATOM	5701	CE3	TRP	B	453	45.192	8.840	8.591	1.00	56.98
ATOM	5703	CZ3	TRP	B	453	46.002	9.958	8.735	1.00	56.56
ATOM	5705	CH2	TRP	B	453	46.147	10.584	9.973	1.00	55.17
ATOM	5707	CZ2	TRP	B	453	45.503	10.126	11.085	1.00	55.44
ATOM	5709	C	TRP	B	453	42.013	8.084	7.586	1.00	49.31
ATOM	5710	O	TRP	B	453	42.405	8.209	6.419	1.00	49.39
ATOM	5712	N	GLN	B	454	41.704	9.118	8.369	1.00	45.54
ATOM	5713	CA	GLN	B	454	41.714	10.500	7.907	1.00	42.04
ATOM	5715	CB	GLN	B	454	40.300	10.960	7.645	1.00	42.45
ATOM	5718	CG	GLN	B	454	40.180	12.453	7.366	1.00	47.91
ATOM	5721	CD	GLN	B	454	38.979	12.777	6.503	1.00	54.71
ATOM	5722	OE1	GLN	B	454	37.970	12.058	6.521	1.00	59.00
ATOM	5723	NE2	GLN	B	454	39.086	13.849	5.723	1.00	56.79
ATOM	5726	C	GLN	B	454	42.339	11.388	8.974	1.00	37.12
ATOM	5727	O	GLN	B	454	42.232	11.096	10.148	1.00	35.93
ATOM	5729	N	LEU	B	455	42.998	12.456	8.548	1.00	32.29
ATOM	5730	CA	LEU	B	455	43.631	13.377	9.476	1.00	27.76
ATOM	5732	CB	LEU	B	455	44.874	14.021	8.829	1.00	26.61
ATOM	5735	CG	LEU	B	455	45.654	15.021	9.688	1.00	25.09
ATOM	5737	CD1	LEU	B	455	45.945	14.501	11.076	1.00	18.58
ATOM	5741	CD2	LEU	B	455	46.950	15.412	8.944	1.00	25.24
ATOM	5745	C	LEU	B	455	42.668	14.458	9.932	1.00	24.91
ATOM	5746	O	LEU	B	455	42.324	15.329	9.166	1.00	26.00
ATOM	5748	N	PHE	B	456	42.301	14.424	11.212	1.00	23.85
ATOM	5749	CA	PHE	B	456	41.373	15.397	11.810	1.00	23.28
ATOM	5751	CB	PHE	B	456	40.430	14.726	12.787	1.00	24.01
ATOM	5754	CG	PHE	B	456	39.425	13.777	12.164	1.00	30.49
ATOM	5755	CD1	PHE	B	456	38.360	14.256	11.436	1.00	33.65
ATOM	5757	CE1	PHE	B	456	37.416	13.376	10.884	1.00	35.64
ATOM	5759	CZ	PHE	B	456	37.531	12.041	11.083	1.00	31.35
ATOM	5761	CE2	PHE	B	456	38.592	11.545	11.823	1.00	35.31
ATOM	5763	CD2	PHE	B	456	39.521	12.413	12.373	1.00	32.73
ATOM	5765	C	PHE	B	456	42.181	16.360	12.638	1.00	19.90
ATOM	5766	O	PHE	B	456	42.939	15.901	13.463	1.00	17.74
ATOM	5768	N	CYS	B	457	41.983	17.662	12.439	1.00	19.60
ATOM	5769	CA	CYS	B	457	42.640	18.711	13.239	1.00	19.21
ATOM	5771	CB	CYS	B	457	43.717	19.464	12.446	1.00	21.90
ATOM	5774	SG	CYS	B	457	45.167	18.513	12.015	1.00	23.75

ATOM	5776	C	CYS	B	457	41.601	19.705	13.634	1.00	19.41
ATOM	5777	O	CYS	B	457	40.632	19.895	12.898	1.00	20.56
ATOM	5779	N	ARG	B	458	41.849	20.378	14.765	1.00	17.46
ATOM	5780	CA	ARG	B	458	40.979	21.426	15.268	1.00	18.09
ATOM	5782	CB	ARG	B	458	40.017	20.873	16.336	1.00	18.61
ATOM	5785	CG	ARG	B	458	40.736	20.456	17.613	1.00	19.59
ATOM	5788	CD	ARG	B	458	39.815	19.883	18.624	1.00	18.45
ATOM	5791	NE	ARG	B	458	40.487	19.452	19.834	1.00	23.15
ATOM	5793	CZ	ARG	B	458	40.334	20.012	21.021	1.00	23.13
ATOM	5794	NH1	ARG	B	458	39.552	21.078	21.193	1.00	18.12
ATOM	5797	NH2	ARG	B	458	40.997	19.519	22.053	1.00	23.15
ATOM	5800	C	ARG	B	458	41.836	22.542	15.849	1.00	17.25
ATOM	5801	O	ARG	B	458	42.990	22.316	16.284	1.00	17.75
ATOM	5803	N	THR	B	459	41.273	23.745	15.823	1.00	17.33
ATOM	5804	CA	THR	B	459	41.940	24.945	16.279	1.00	17.08
ATOM	5806	CB	THR	B	459	41.666	26.101	15.346	1.00	17.33
ATOM	5808	OG1	THR	B	459	42.111	25.766	14.013	1.00	19.60
ATOM	5810	CG2	THR	B	459	42.393	27.333	15.810	1.00	16.16
ATOM	5814	C	THR	B	459	41.416	25.240	17.703	1.00	18.31
ATOM	5815	O	THR	B	459	40.190	25.286	17.946	1.00	14.09
ATOM	5817	N	VAL	B	460	42.339	25.379	18.637	1.00	17.24
ATOM	5818	CA	VAL	B	460	42.000	25.546	20.058	1.00	16.52
ATOM	5820	CB	VAL	B	460	42.638	24.515	20.913	1.00	15.91
ATOM	5822	CG1	VAL	B	460	42.324	24.808	22.373	1.00	19.06
ATOM	5826	CG2	VAL	B	460	42.166	23.098	20.558	1.00	14.87
ATOM	5830	C	VAL	B	460	42.556	26.919	20.432	1.00	16.91
ATOM	5831	O	VAL	B	460	43.788	27.138	20.396	1.00	19.51
ATOM	5833	N	TRP	B	461	41.673	27.867	20.668	1.00	15.86
ATOM	5834	CA	TRP	B	461	42.093	29.188	21.128	1.00	16.38
ATOM	5836	CB	TRP	B	461	41.071	30.236	20.735	1.00	17.45
ATOM	5839	CG	TRP	B	461	41.123	30.615	19.353	1.00	18.75
ATOM	5840	CD1	TRP	B	461	40.746	29.862	18.305	1.00	16.45
ATOM	5842	NE1	TRP	B	461	40.906	30.542	17.152	1.00	18.58
ATOM	5844	CE2	TRP	B	461	41.432	31.765	17.439	1.00	16.14
ATOM	5845	CD2	TRP	B	461	41.542	31.852	18.834	1.00	18.37
ATOM	5846	CE3	TRP	B	461	42.039	33.027	19.404	1.00	17.27
ATOM	5848	CZ3	TRP	B	461	42.379	34.059	18.562	1.00	18.33
ATOM	5850	CH2	TRP	B	461	42.231	33.938	17.167	1.00	17.10
ATOM	5852	CZ2	TRP	B	461	41.735	32.803	16.603	1.00	18.15
ATOM	5854	C	TRP	B	461	42.190	29.145	22.638	1.00	18.90
ATOM	5855	O	TRP	B	461	41.323	28.562	23.281	1.00	18.75
ATOM	5857	N	SER	B	462	43.251	29.718	23.211	1.00	21.05
ATOM	5858	CA	SER	B	462	43.364	29.855	24.676	1.00	21.95
ATOM	5860	CB	SER	B	462	44.782	30.266	25.095	1.00	22.56
ATOM	5863	OG	SER	B	462	45.101	31.552	24.602	1.00	21.44
ATOM	5865	C	SER	B	462	42.470	30.958	25.165	1.00	22.94
ATOM	5866	O	SER	B	462	42.041	31.830	24.401	1.00	20.65
ATOM	5868	N	ALA	B	463	42.277	30.967	26.478	1.00	25.72
ATOM	5869	CA	ALA	B	463	41.942	32.201	27.155	1.00	25.96
ATOM	5871	CB	ALA	B	463	41.875	31.978	28.686	1.00	26.61
ATOM	5875	C	ALA	B	463	42.978	33.261	26.814	1.00	26.83
ATOM	5876	O	ALA	B	463	44.172	32.987	26.594	1.00	27.13
ATOM	5878	N	HIS	B	464	42.497	34.482	26.741	1.00	27.50
ATOM	5879	CA	HIS	B	464	43.321	35.635	26.525	1.00	28.88
ATOM	5881	CB	HIS	B	464	42.374	36.820	26.435	1.00	29.32
ATOM	5884	CG	HIS	B	464	43.010	38.083	25.985	1.00	33.35
ATOM	5885	ND1	HIS	B	464	43.312	39.103	26.853	1.00	34.77
ATOM	5887	CE1	HIS	B	464	43.839	40.106	26.176	1.00	38.22
ATOM	5889	NE2	HIS	B	464	43.890	39.770	24.898	1.00	40.19
ATOM	5891	CD2	HIS	B	464	43.367	38.511	24.751	1.00	39.63
ATOM	5893	C	HIS	B	464	44.272	35.744	27.742	1.00	29.00

ATOM	5894	O	HIS	B	464	43.837	35.592	28.891	1.00	29.84
ATOM	5896	N	SER	B	465	45.550	35.989	27.497	1.00	27.23
ATOM	5897	CA	SER	B	465	46.562	36.040	28.579	1.00	27.46
ATOM	5899	CB	SER	B	465	47.935	36.248	27.973	1.00	26.38
ATOM	5902	OG	SER	B	465	48.013	37.573	27.459	1.00	25.64
ATOM	5904	C	SER	B	465	46.395	37.177	29.596	1.00	28.33
ATOM	5905	O	SER	B	465	46.998	37.133	30.669	1.00	30.13
ATOM	5907	N	GLY	B	466	45.674	38.223	29.225	1.00	29.34
ATOM	5908	CA	GLY	B	466	45.615	39.442	30.034	1.00	30.07
ATOM	5911	C	GLY	B	466	46.855	40.277	29.823	1.00	30.47
ATOM	5912	O	GLY	B	466	47.797	39.832	29.170	1.00	30.00
ATOM	5914	N	PRO	B	467	46.872	41.498	30.392	1.00	30.39
ATOM	5915	CA	PRO	B	467	47.879	42.476	30.020	1.00	30.73
ATOM	5917	CB	PRO	B	467	47.192	43.801	30.329	1.00	30.58
ATOM	5920	CG	PRO	B	467	46.294	43.493	31.510	1.00	29.19
ATOM	5923	CD	PRO	B	467	45.949	42.016	31.426	1.00	31.58
ATOM	5926	C	PRO	B	467	49.210	42.386	30.774	1.00	30.55
ATOM	5927	O	PRO	B	467	50.088	43.183	30.506	1.00	29.98
ATOM	5928	N	THR	B	468	49.385	41.461	31.706	1.00	32.20
ATOM	5929	CA	THR	B	468	50.658	41.457	32.423	1.00	34.40
ATOM	5931	CB	THR	B	468	50.705	40.431	33.529	1.00	34.88
ATOM	5933	OG1	THR	B	468	50.656	39.130	32.957	1.00	36.97
ATOM	5935	CG2	THR	B	468	49.530	40.626	34.473	1.00	33.57
ATOM	5939	C	THR	B	468	51.840	41.303	31.458	1.00	37.08
ATOM	5940	O	THR	B	468	51.777	40.578	30.454	1.00	36.35
ATOM	5942	N	ARG	B	469	52.918	42.023	31.759	1.00	40.27
ATOM	5943	CA	ARG	B	469	54.043	42.160	30.837	1.00	42.38
ATOM	5945	CB	ARG	B	469	55.143	43.053	31.445	1.00	43.63
ATOM	5948	CG	ARG	B	469	54.736	44.520	31.702	1.00	51.13
ATOM	5951	CD	ARG	B	469	54.407	45.294	30.413	1.00	60.79
ATOM	5954	NE	ARG	B	469	53.562	46.475	30.640	1.00	65.25
ATOM	5956	CZ	ARG	B	469	52.251	46.558	30.371	1.00	68.56
ATOM	5957	NH1	ARG	B	469	51.579	45.524	29.848	1.00	69.29
ATOM	5960	NH2	ARG	B	469	51.599	47.696	30.620	1.00	65.03
ATOM	5963	C	ARG	B	469	54.628	40.809	30.435	1.00	42.39
ATOM	5964	O	ARG	B	469	54.992	40.607	29.265	1.00	42.59
ATOM	5966	N	MET	B	470	54.707	39.900	31.410	1.00	42.34
ATOM	5967	CA	MET	B	470	55.204	38.542	31.206	1.00	43.15
ATOM	5969	CB	MET	B	470	56.050	38.112	32.419	1.00	44.29
ATOM	5972	CG	MET	B	470	57.247	38.998	32.707	1.00	49.48
ATOM	5975	SD	MET	B	470	58.414	38.970	31.337	1.00	59.43
ATOM	5976	CE	MET	B	470	57.902	40.396	30.359	1.00	57.11
ATOM	5980	C	MET	B	470	54.048	37.553	31.063	1.00	41.88
ATOM	5981	O	MET	B	470	54.202	36.358	31.391	1.00	42.02
ATOM	5983	N	ALA	B	471	52.889	38.039	30.611	1.00	39.06
ATOM	5984	CA	ALA	B	471	51.701	37.200	30.534	1.00	37.70
ATOM	5986	CB	ALA	B	471	50.446	38.040	30.225	1.00	36.81
ATOM	5990	C	ALA	B	471	51.938	36.192	29.433	1.00	35.59
ATOM	5991	O	ALA	B	471	52.537	36.524	28.401	1.00	36.03
ATOM	5993	N	THR	B	472	51.502	34.960	29.681	1.00	34.97
ATOM	5994	CA	THR	B	472	51.469	33.942	28.655	1.00	33.70
ATOM	5996	CB	THR	B	472	52.610	32.887	28.824	1.00	34.55
ATOM	5998	OG1	THR	B	472	52.329	32.022	29.929	1.00	37.16
ATOM	6000	CG2	THR	B	472	53.984	33.573	29.037	1.00	33.82
ATOM	6004	C	THR	B	472	50.071	33.291	28.573	1.00	32.35
ATOM	6005	O	THR	B	472	49.389	33.119	29.582	1.00	31.51
ATOM	6007	N	ALA	B	473	49.640	32.989	27.347	1.00	30.39
ATOM	6008	CA	ALA	B	473	48.405	32.236	27.097	1.00	29.44
ATOM	6010	CB	ALA	B	473	47.585	32.892	25.969	1.00	30.02
ATOM	6014	C	ALA	B	473	48.823	30.827	26.713	1.00	28.17
ATOM	6015	O	ALA	B	473	49.845	30.660	26.037	1.00	26.66

ATOM	6017	N	ILE	B	474	48.081	29.826	27.182	1.00	26.51
ATOM	6018	CA	ILE	B	474	48.389	28.429	26.872	1.00	27.47
ATOM	6020	CB	ILE	B	474	48.794	27.609	28.109	1.00	27.19
ATOM	6022	CG1	ILE	B	474	50.108	28.144	28.703	1.00	33.24
ATOM	6025	CD1	ILE	B	474	50.784	27.189	29.662	1.00	37.63
ATOM	6029	CG2	ILE	B	474	49.023	26.159	27.736	1.00	29.79
ATOM	6033	C	ILE	B	474	47.193	27.777	26.204	1.00	26.20
ATOM	6034	O	ILE	B	474	46.104	27.820	26.735	1.00	27.64
ATOM	6036	N	ALA	B	475	47.397	27.223	25.011	1.00	24.50
ATOM	6037	CA	ALA	B	475	46.387	26.418	24.333	1.00	22.28
ATOM	6039	CB	ALA	B	475	46.176	26.895	22.885	1.00	20.81
ATOM	6043	C	ALA	B	475	46.893	25.004	24.371	1.00	22.82
ATOM	6044	O	ALA	B	475	48.019	24.719	23.934	1.00	24.68
ATOM	6046	N	ARG	B	476	46.080	24.119	24.922	1.00	23.13
ATOM	6047	CA	ARG	B	476	46.392	22.714	25.028	1.00	24.36
ATOM	6049	CB	ARG	B	476	46.158	22.259	26.459	1.00	24.97
ATOM	6052	CG	ARG	B	476	46.963	22.991	27.492	1.00	29.94
ATOM	6055	CD	ARG	B	476	46.680	22.405	28.857	1.00	38.16
ATOM	6058	NE	ARG	B	476	47.659	22.917	29.799	1.00	40.26
ATOM	6060	CZ	ARG	B	476	47.627	24.142	30.285	1.00	42.51
ATOM	6061	NH1	ARG	B	476	46.651	24.967	29.938	1.00	43.26
ATOM	6064	NH2	ARG	B	476	48.577	24.538	31.126	1.00	46.28
ATOM	6067	C	ARG	B	476	45.496	21.801	24.173	1.00	25.42
ATOM	6068	O	ARG	B	476	44.317	22.082	23.951	1.00	26.10
ATOM	6070	N	CYS	B	477	46.040	20.638	23.860	1.00	25.21
ATOM	6071	CA	CYS	B	477	45.306	19.608	23.168	1.00	25.29
ATOM	6073	CB	CYS	B	477	46.191	18.971	22.107	1.00	26.12
ATOM	6076	SG	CYS	B	477	46.815	20.161	20.878	1.00	26.43
ATOM	6078	C	CYS	B	477	44.832	18.565	24.165	1.00	25.57
ATOM	6079	O	CYS	B	477	45.215	18.576	25.321	1.00	24.04
ATOM	6081	N	ALA	B	478	43.970	17.686	23.701	1.00	24.42
ATOM	6082	CA	ALA	B	478	43.493	16.593	24.506	1.00	25.97
ATOM	6084	CB	ALA	B	478	42.270	15.925	23.849	1.00	23.55
ATOM	6088	C	ALA	B	478	44.639	15.603	24.633	1.00	25.92
ATOM	6089	O	ALA	B	478	45.582	15.624	23.835	1.00	24.80
ATOM	6091	N	PRO	B	479	44.564	14.727	25.643	1.00	28.67
ATOM	6092	CA	PRO	B	479	45.628	13.750	25.875	1.00	28.52
ATOM	6094	CB	PRO	B	479	45.058	12.865	26.976	1.00	29.34
ATOM	6097	CG	PRO	B	479	44.090	13.722	27.703	1.00	31.35
ATOM	6100	CD	PRO	B	479	43.491	14.634	26.647	1.00	28.74
ATOM	6103	C	PRO	B	479	45.934	12.913	24.648	1.00	28.93
ATOM	6104	O	PRO	B	479	47.106	12.611	24.400	1.00	30.49
ATOM	6105	N	ASP	B	480	44.905	12.555	23.884	1.00	27.54
ATOM	6106	CA	ASP	B	480	45.097	11.699	22.709	1.00	29.00
ATOM	6108	CB	ASP	B	480	43.948	10.683	22.559	1.00	29.15
ATOM	6111	CG	ASP	B	480	42.554	11.304	22.617	1.00	31.64
ATOM	6112	OD1	ASP	B	480	42.326	12.307	23.338	1.00	34.78
ATOM	6113	OD2	ASP	B	480	41.661	10.708	21.966	1.00	27.33
ATOM	6114	C	ASP	B	480	45.352	12.428	21.395	1.00	28.47
ATOM	6115	O	ASP	B	480	45.403	11.807	20.333	1.00	29.98
ATOM	6117	N	GLU	B	481	45.525	13.741	21.466	1.00	27.05
ATOM	6118	CA	GLU	B	481	45.845	14.556	20.297	1.00	25.70
ATOM	6120	CB	GLU	B	481	44.985	15.818	20.319	1.00	25.40
ATOM	6123	CG	GLU	B	481	43.508	15.550	20.043	1.00	22.73
ATOM	6126	CD	GLU	B	481	42.647	16.790	20.209	1.00	25.85
ATOM	6127	OE1	GLU	B	481	42.988	17.646	21.058	1.00	23.44
ATOM	6128	OE2	GLU	B	481	41.639	16.919	19.471	1.00	22.15
ATOM	6129	C	GLU	B	481	47.309	14.984	20.265	1.00	25.96
ATOM	6130	O	GLU	B	481	47.960	15.068	21.311	1.00	26.35
ATOM	6132	N	GLU	B	482	47.800	15.311	19.078	1.00	23.70
ATOM	6133	CA	GLU	B	482	49.106	15.909	18.931	1.00	24.38

ATOM	6135	CB	GLU	B	482	49.899	15.229	17.820	1.00	25.55
ATOM	6138	CG	GLU	B	482	49.943	13.713	17.926	1.00	29.70
ATOM	6141	CD	GLU	B	482	51.049	13.229	18.838	1.00	37.13
ATOM	6142	OE1	GLU	B	482	52.013	13.993	19.071	1.00	34.11
ATOM	6143	OE2	GLU	B	482	50.957	12.075	19.307	1.00	43.94
ATOM	6144	C	GLU	B	482	48.929	17.380	18.587	1.00	23.53
ATOM	6145	O	GLU	B	482	48.082	17.766	17.788	1.00	23.35
ATOM	6147	N	LEU	B	483	49.724	18.208	19.224	1.00	23.27
ATOM	6148	CA	LEU	B	483	49.871	19.599	18.830	1.00	21.43
ATOM	6150	CB	LEU	B	483	50.578	20.329	19.977	1.00	21.88
ATOM	6153	CG	LEU	B	483	50.854	21.814	19.788	1.00	23.10
ATOM	6155	CD1	LEU	B	483	51.744	22.378	20.906	1.00	26.51
ATOM	6159	CD2	LEU	B	483	49.489	22.456	19.725	1.00	18.76
ATOM	6163	C	LEU	B	483	50.729	19.680	17.577	1.00	22.34
ATOM	6164	O	LEU	B	483	51.954	19.513	17.661	1.00	23.27
ATOM	6166	N	LEU	B	484	50.138	19.930	16.401	1.00	20.31
ATOM	6167	CA	LEU	B	484	50.941	20.041	15.184	1.00	18.73
ATOM	6169	CB	LEU	B	484	50.213	19.447	13.957	1.00	18.70
ATOM	6172	CG	LEU	B	484	49.958	17.962	14.086	1.00	20.55
ATOM	6174	CD1	LEU	B	484	49.694	17.354	12.700	1.00	17.34
ATOM	6178	CD2	LEU	B	484	51.064	17.262	14.789	1.00	19.70
ATOM	6182	C	LEU	B	484	51.441	21.422	14.832	1.00	19.62
ATOM	6183	O	LEU	B	484	52.385	21.552	14.044	1.00	19.40
ATOM	6185	N	SER	B	485	50.822	22.450	15.376	1.00	17.61
ATOM	6186	CA	SER	B	485	51.326	23.792	15.234	1.00	19.54
ATOM	6188	CB	SER	B	485	50.973	24.386	13.872	1.00	20.43
ATOM	6191	OG	SER	B	485	49.588	24.681	13.781	1.00	22.36
ATOM	6193	C	SER	B	485	50.780	24.708	16.321	1.00	17.87
ATOM	6194	O	SER	B	485	49.862	24.358	17.056	1.00	17.51
ATOM	6196	N	CYS	B	486	51.299	25.924	16.328	1.00	21.63
ATOM	6197	CA	CYS	B	486	51.000	26.872	17.377	1.00	21.85
ATOM	6199	CB	CYS	B	486	51.965	26.589	18.504	1.00	24.16
ATOM	6202	SG	CYS	B	486	51.986	27.783	19.853	1.00	24.55
ATOM	6204	C	CYS	B	486	51.162	28.247	16.780	1.00	21.47
ATOM	6205	O	CYS	B	486	52.193	28.532	16.143	1.00	22.16
ATOM	6207	N	SER	B	487	50.114	29.063	16.882	1.00	18.64
ATOM	6208	CA	SER	B	487	50.140	30.425	16.424	1.00	17.46
ATOM	6210	CB	SER	B	487	49.381	30.652	15.098	1.00	19.10
ATOM	6213	OG	SER	B	487	47.964	30.434	15.224	1.00	20.43
ATOM	6215	C	SER	B	487	49.603	31.291	17.555	1.00	19.48
ATOM	6216	O	SER	B	487	49.392	30.812	18.689	1.00	20.62
ATOM	6218	N	SER	B	488	49.521	32.574	17.291	1.00	20.85
ATOM	6219	CA	SER	B	488	49.052	33.537	18.296	1.00	22.38
ATOM	6221	CB	SER	B	488	50.199	33.969	19.229	1.00	22.95
ATOM	6224	OG	SER	B	488	51.302	34.497	18.506	1.00	23.01
ATOM	6226	C	SER	B	488	48.469	34.727	17.590	1.00	23.12
ATOM	6227	O	SER	B	488	48.608	34.878	16.374	1.00	22.64
ATOM	6229	N	PHE	B	489	47.799	35.575	18.357	1.00	24.90
ATOM	6230	CA	PHE	B	489	47.056	36.680	17.806	1.00	25.46
ATOM	6232	CB	PHE	B	489	45.696	36.197	17.321	1.00	27.36
ATOM	6235	CG	PHE	B	489	44.791	37.305	16.812	1.00	27.38
ATOM	6236	CD1	PHE	B	489	44.972	37.847	15.558	1.00	27.33
ATOM	6238	CE1	PHE	B	489	44.143	38.842	15.087	1.00	33.03
ATOM	6240	CZ	PHE	B	489	43.107	39.308	15.853	1.00	27.77
ATOM	6242	CE2	PHE	B	489	42.905	38.777	17.102	1.00	29.75
ATOM	6244	CD2	PHE	B	489	43.755	37.786	17.583	1.00	25.67
ATOM	6246	C	PHE	B	489	46.847	37.666	18.921	1.00	26.55
ATOM	6247	O	PHE	B	489	46.518	37.273	20.036	1.00	25.01
ATOM	6249	N	SER	B	490	47.070	38.929	18.607	1.00	29.54
ATOM	6250	CA	SER	B	490	46.557	40.041	19.409	1.00	33.26
ATOM	6252	CB	SER	B	490	47.662	40.695	20.244	1.00	33.83

ATOM	6255	OG	SER B 490	48.181	41.855	19.609	1.00	41.18
ATOM	6257	C	SER B 490	45.920	41.079	18.509	1.00	34.17
ATOM	6258	O	SER B 490	46.377	41.331	17.409	1.00	32.02
ATOM	6260	N	ARG B 491	44.870	41.711	19.012	1.00	36.19
ATOM	6261	CA	ARG B 491	44.135	42.689	18.218	1.00	37.54
ATOM	6263	CB	ARG B 491	42.776	42.983	18.869	1.00	39.02
ATOM	6266	CG	ARG B 491	41.924	41.728	18.915	1.00	43.46
ATOM	6269	CD	ARG B 491	40.734	41.810	19.854	1.00	49.86
ATOM	6272	NE	ARG B 491	40.222	40.468	20.158	1.00	50.06
ATOM	6274	CZ	ARG B 491	39.661	39.643	19.268	1.00	50.78
ATOM	6275	NH1	ARG B 491	39.504	40.004	17.991	1.00	49.99
ATOM	6278	NH2	ARG B 491	39.239	38.445	19.660	1.00	50.09
ATOM	6281	C	ARG B 491	44.973	43.944	18.022	1.00	36.60
ATOM	6282	O	ARG B 491	44.866	44.590	16.984	1.00	35.36
ATOM	6284	N	SER B 492	45.851	44.245	18.976	1.00	37.01
ATOM	6285	CA	SER B 492	46.814	45.356	18.830	1.00	38.21
ATOM	6287	CB	SER B 492	47.302	45.821	20.200	1.00	38.59
ATOM	6290	OG	SER B 492	47.971	44.780	20.880	1.00	38.43
ATOM	6292	C	SER B 492	48.037	45.012	17.962	1.00	39.25
ATOM	6293	O	SER B 492	48.633	45.880	17.325	1.00	39.39
ATOM	6295	N	GLY B 493	48.400	43.735	17.931	1.00	39.95
ATOM	6296	CA	GLY B 493	49.628	43.312	17.299	1.00	40.73
ATOM	6299	C	GLY B 493	50.810	43.424	18.241	1.00	40.54
ATOM	6300	O	GLY B 493	51.930	43.210	17.818	1.00	41.13
ATOM	6302	N	LYS B 494	50.554	43.723	19.520	1.00	39.78
ATOM	6303	CA	LYS B 494	51.593	43.832	20.529	1.00	39.01
ATOM	6305	CB	LYS B 494	51.256	44.943	21.525	1.00	39.84
ATOM	6308	CG	LYS B 494	51.424	46.308	20.900	1.00	42.34
ATOM	6311	CD	LYS B 494	50.788	47.365	21.748	1.00	47.63
ATOM	6314	CE	LYS B 494	50.957	48.731	21.131	1.00	49.73
ATOM	6317	NZ	LYS B 494	50.457	49.761	22.084	1.00	55.20
ATOM	6321	C	LYS B 494	51.834	42.503	21.236	1.00	38.10
ATOM	6322	O	LYS B 494	51.245	42.202	22.262	1.00	36.67
ATOM	6324	N	ARG B 495	52.847	41.806	20.730	1.00	37.21
ATOM	6325	CA	ARG B 495	52.933	40.368	20.726	1.00	36.20
ATOM	6327	CB	ARG B 495	52.368	39.938	19.364	1.00	37.36
ATOM	6330	CG	ARG B 495	51.767	38.601	19.285	1.00	40.90
ATOM	6333	CD	ARG B 495	50.824	38.516	18.094	1.00	40.18
ATOM	6336	NE	ARG B 495	51.508	38.677	16.810	1.00	41.00
ATOM	6338	CZ	ARG B 495	52.164	37.711	16.175	1.00	38.61
ATOM	6339	NH1	ARG B 495	52.739	37.956	15.011	1.00	37.34
ATOM	6342	NH2	ARG B 495	52.266	36.498	16.707	1.00	38.91
ATOM	6345	C	ARG B 495	54.417	40.007	20.790	1.00	32.82
ATOM	6346	O	ARG B 495	55.211	40.655	20.132	1.00	32.40
ATOM	6348	N	ARG B 496	54.785	39.009	21.589	1.00	29.64
ATOM	6349	CA	ARG B 496	56.131	38.414	21.526	1.00	29.45
ATOM	6351	CB	ARG B 496	56.808	38.441	22.902	1.00	29.23
ATOM	6354	CG	ARG B 496	57.428	39.806	23.249	1.00	30.04
ATOM	6357	CD	ARG B 496	58.272	39.776	24.516	1.00	34.21
ATOM	6360	NE	ARG B 496	57.624	39.137	25.668	1.00	43.38
ATOM	6362	CZ	ARG B 496	58.001	37.975	26.225	1.00	49.80
ATOM	6363	NH1	ARG B 496	59.030	37.270	25.748	1.00	50.65
ATOM	6366	NH2	ARG B 496	57.331	37.499	27.279	1.00	49.62
ATOM	6369	C	ARG B 496	56.116	36.988	20.919	1.00	27.73
ATOM	6370	O	ARG B 496	57.045	36.197	21.141	1.00	27.60
ATOM	6372	N	GLY B 497	55.069	36.702	20.138	1.00	25.97
ATOM	6373	CA	GLY B 497	54.906	35.435	19.440	1.00	24.88
ATOM	6376	C	GLY B 497	54.522	34.276	20.328	1.00	24.32
ATOM	6377	O	GLY B 497	53.903	34.436	21.368	1.00	24.49
ATOM	6379	N	GLU B 498	54.926	33.084	19.921	1.00	22.51
ATOM	6380	CA	GLU B 498	54.509	31.881	20.588	1.00	22.63

ATOM	6382	CB	GLU	B	498	53.166	31.390	19.996	1.00	22.69
ATOM	6385	CG	GLU	B	498	53.251	30.774	18.601	1.00	23.38
ATOM	6388	CD	GLU	B	498	53.610	31.728	17.470	1.00	26.32
ATOM	6389	OE1	GLU	B	498	53.066	32.855	17.382	1.00	26.26
ATOM	6390	OE2	GLU	B	498	54.440	31.317	16.621	1.00	23.57
ATOM	6391	C	GLU	B	498	55.543	30.794	20.443	1.00	22.18
ATOM	6392	O	GLU	B	498	56.393	30.843	19.571	1.00	23.05
ATOM	6394	N	ARG	B	499	55.437	29.778	21.270	1.00	22.91
ATOM	6395	CA	ARG	B	499	56.349	28.668	21.198	1.00	25.90
ATOM	6397	CB	ARG	B	499	57.540	28.904	22.148	1.00	25.49
ATOM	6400	CG	ARG	B	499	57.142	28.941	23.604	1.00	34.76
ATOM	6403	CD	ARG	B	499	58.001	29.882	24.474	1.00	48.54
ATOM	6406	NE	ARG	B	499	59.278	29.310	24.877	1.00	55.16
ATOM	6408	CZ	ARG	B	499	60.163	29.919	25.678	1.00	60.28
ATOM	6409	NH1	ARG	B	499	59.928	31.142	26.167	1.00	61.31
ATOM	6412	NH2	ARG	B	499	61.307	29.305	25.985	1.00	58.76
ATOM	6415	C	ARG	B	499	55.604	27.425	21.607	1.00	27.38
ATOM	6416	O	ARG	B	499	54.654	27.495	22.377	1.00	25.40
ATOM	6418	N	MET	B	500	56.046	26.288	21.077	1.00	29.53
ATOM	6419	CA	MET	B	500	55.550	24.990	21.491	1.00	31.87
ATOM	6421	CB	MET	B	500	55.542	24.044	20.288	1.00	31.90
ATOM	6424	CG	MET	B	500	54.644	24.556	19.150	1.00	33.82
ATOM	6427	SD	MET	B	500	54.755	23.652	17.580	1.00	35.97
ATOM	6428	CE	MET	B	500	56.087	24.559	16.753	1.00	33.82
ATOM	6432	C	MET	B	500	56.518	24.523	22.542	1.00	33.97
ATOM	6433	O	MET	B	500	57.712	24.428	22.273	1.00	34.75
ATOM	6435	N	GLU	B	501	56.023	24.278	23.746	1.00	35.51
ATOM	6436	CA	GLU	B	501	56.859	23.891	24.875	1.00	38.56
ATOM	6438	CB	GLU	B	501	56.936	25.032	25.927	1.00	38.68
ATOM	6441	CG	GLU	B	501	55.747	25.120	26.900	1.00	42.36
ATOM	6444	CD	GLU	B	501	56.103	25.779	28.226	1.00	42.22
ATOM	6445	OE1	GLU	B	501	56.727	26.862	28.182	1.00	53.39
ATOM	6446	OE2	GLU	B	501	55.760	25.218	29.304	1.00	44.22
ATOM	6447	C	GLU	B	501	56.252	22.639	25.476	1.00	37.89
ATOM	6448	O	GLU	B	501	55.031	22.503	25.472	1.00	34.87
ATOM	6450	N	ALA	B	502	57.089	21.717	25.952	1.00	39.23
ATOM	6451	CA	ALA	B	502	56.604	20.497	26.602	1.00	42.09
ATOM	6453	CB	ALA	B	502	57.633	19.378	26.515	1.00	42.17
ATOM	6457	C	ALA	B	502	56.207	20.761	28.049	1.00	45.52
ATOM	6458	O	ALA	B	502	56.698	21.691	28.681	1.00	46.82
ATOM	6460	N	GLN	B	503	55.296	19.937	28.563	1.00	48.11
ATOM	6461	CA	GLN	B	503	54.625	20.218	29.825	1.00	49.90
ATOM	6463	CB	GLN	B	503	53.698	21.415	29.646	1.00	50.17
ATOM	6466	CG	GLN	B	503	53.218	22.011	30.928	1.00	52.54
ATOM	6469	CD	GLN	B	503	52.831	23.455	30.755	1.00	55.74
ATOM	6470	OE1	GLN	B	503	53.597	24.252	30.203	1.00	61.35
ATOM	6471	NE2	GLN	B	503	51.641	23.811	31.219	1.00	57.75
ATOM	6474	C	GLN	B	503	53.838	18.997	30.293	1.00	50.58
ATOM	6475	O	GLN	B	503	52.869	18.586	29.650	1.00	51.84
ATOM	6477	N	GLY	B	504	54.264	18.396	31.400	1.00	50.70
ATOM	6478	CA	GLY	B	504	53.716	17.114	31.807	1.00	50.01
ATOM	6481	C	GLY	B	504	53.887	16.082	30.709	1.00	49.99
ATOM	6482	O	GLY	B	504	53.002	15.253	30.489	1.00	50.55
ATOM	6484	N	GLY	B	505	55.026	16.141	30.012	1.00	49.46
ATOM	6485	CA	GLY	B	505	55.358	15.179	28.940	1.00	48.35
ATOM	6488	C	GLY	B	505	54.524	15.324	27.673	1.00	47.17
ATOM	6489	O	GLY	B	505	54.413	14.386	26.859	1.00	48.77
ATOM	6491	N	LYS	B	506	53.940	16.501	27.498	1.00	44.35
ATOM	6492	CA	LYS	B	506	53.058	16.762	26.381	1.00	41.06
ATOM	6494	CB	LYS	B	506	51.636	16.512	26.831	1.00	41.60
ATOM	6497	CG	LYS	B	506	50.604	16.848	25.829	1.00	40.47

ATOM	6500	CD	LYS	B	506	49.310	16.156	26.173	1.00	41.71
ATOM	6503	CE	LYS	B	506	48.221	16.607	25.208	1.00	42.74
ATOM	6506	NZ	LYS	B	506	48.541	16.202	23.808	1.00	37.20
ATOM	6510	C	LYS	B	506	53.220	18.204	25.913	1.00	38.06
ATOM	6511	O	LYS	B	506	53.331	19.110	26.712	1.00	37.73
ATOM	6513	N	LEU	B	507	53.224	18.411	24.606	1.00	34.89
ATOM	6514	CA	LEU	B	507	53.478	19.740	24.061	1.00	32.93
ATOM	6516	CB	LEU	B	507	54.024	19.632	22.645	1.00	33.61
ATOM	6519	CG	LEU	B	507	55.429	19.020	22.591	1.00	37.48
ATOM	6521	CD1	LEU	B	507	55.782	18.620	21.168	1.00	37.56
ATOM	6525	CD2	LEU	B	507	56.447	20.003	23.171	1.00	36.32
ATOM	6529	C	LEU	B	507	52.223	20.619	24.091	1.00	30.88
ATOM	6530	O	LEU	B	507	51.118	20.183	23.718	1.00	31.59
ATOM	6532	N	VAL	B	508	52.428	21.857	24.530	1.00	27.37
ATOM	6533	CA	VAL	B	508	51.410	22.869	24.604	1.00	26.36
ATOM	6535	CB	VAL	B	508	51.110	23.294	26.084	1.00	26.40
ATOM	6537	CG1	VAL	B	508	52.239	24.099	26.637	1.00	27.23
ATOM	6541	CG2	VAL	B	508	50.867	22.058	26.968	1.00	27.03
ATOM	6545	C	VAL	B	508	51.879	24.050	23.774	1.00	24.72
ATOM	6546	O	VAL	B	508	53.074	24.177	23.434	1.00	22.41
ATOM	6548	N	CYS	B	509	50.926	24.897	23.409	1.00	23.87
ATOM	6549	CA	CYS	B	509	51.176	26.102	22.641	1.00	21.79
ATOM	6551	CB	CYS	B	509	50.087	26.282	21.575	1.00	19.78
ATOM	6554	SG	CYS	B	509	50.161	27.752	20.649	1.00	22.49
ATOM	6556	C	CYS	B	509	51.137	27.246	23.635	1.00	22.01
ATOM	6557	O	CYS	B	509	50.121	27.462	24.279	1.00	21.86
ATOM	6559	N	ARG	B	510	52.253	27.947	23.788	1.00	22.47
ATOM	6560	CA	ARG	B	510	52.341	29.069	24.697	1.00	24.42
ATOM	6562	CB	ARG	B	510	53.456	28.794	25.697	1.00	26.40
ATOM	6565	CG	ARG	B	510	53.621	29.821	26.826	1.00	33.57
ATOM	6568	CD	ARG	B	510	54.955	29.527	27.525	1.00	45.70
ATOM	6571	NE	ARG	B	510	54.979	29.872	28.951	1.00	55.34
ATOM	6573	CZ	ARG	B	510	56.090	29.909	29.700	1.00	57.63
ATOM	6574	NH1	ARG	B	510	57.287	29.612	29.171	1.00	56.22
ATOM	6577	NH2	ARG	B	510	56.009	30.246	30.987	1.00	55.70
ATOM	6580	C	ARG	B	510	52.614	30.351	23.944	1.00	23.90
ATOM	6581	O	ARG	B	510	53.529	30.412	23.118	1.00	24.69
ATOM	6583	N	ALA	B	511	51.831	31.385	24.225	1.00	23.86
ATOM	6584	CA	ALA	B	511	52.004	32.675	23.547	1.00	23.72
ATOM	6586	CB	ALA	B	511	50.750	33.114	22.814	1.00	22.99
ATOM	6590	C	ALA	B	511	52.359	33.680	24.577	1.00	24.42
ATOM	6591	O	ALA	B	511	51.922	33.566	25.736	1.00	25.46
ATOM	6593	N	HIS	B	512	53.109	34.673	24.136	1.00	25.35
ATOM	6594	CA	HIS	B	512	53.726	35.664	25.001	1.00	27.02
ATOM	6596	CB	HIS	B	512	55.240	35.620	24.816	1.00	27.59
ATOM	6599	CG	HIS	B	512	55.862	34.362	25.292	1.00	29.32
ATOM	6600	ND1	HIS	B	512	56.103	34.116	26.628	1.00	37.71
ATOM	6602	CE1	HIS	B	512	56.642	32.917	26.759	1.00	41.06
ATOM	6604	NE2	HIS	B	512	56.773	32.388	25.555	1.00	44.34
ATOM	6606	CD2	HIS	B	512	56.289	33.271	24.620	1.00	38.08
ATOM	6608	C	HIS	B	512	53.248	37.056	24.651	1.00	27.22
ATOM	6609	O	HIS	B	512	53.279	37.452	23.503	1.00	27.05
ATOM	6611	N	ASN	B	513	52.843	37.804	25.668	1.00	31.25
ATOM	6612	CA	ASN	B	513	52.401	39.176	25.493	1.00	33.42
ATOM	6614	CB	ASN	B	513	51.554	39.583	26.701	1.00	33.97
ATOM	6617	CG	ASN	B	513	50.888	40.923	26.540	1.00	32.01
ATOM	6618	OD1	ASN	B	513	50.650	41.400	25.422	1.00	30.70
ATOM	6619	ND2	ASN	B	513	50.579	41.560	27.688	1.00	31.23
ATOM	6622	C	ASN	B	513	53.620	40.071	25.362	1.00	36.44
ATOM	6623	O	ASN	B	513	54.703	39.728	25.842	1.00	35.84
ATOM	6625	N	ALA	B	514	53.445	41.188	24.668	1.00	39.09

ATOM	6626	CA	ALA	B	514	54.465	42.212	24.571	1.00	41.65
ATOM	6628	CB	ALA	B	514	54.378	42.917	23.213	1.00	42.63
ATOM	6632	C	ALA	B	514	54.277	43.226	25.689	1.00	44.24
ATOM	6633	O	ALA	B	514	53.181	43.372	26.228	1.00	43.78
ATOM	6635	N	PHE	B	515	55.357	43.932	26.009	1.00	47.03
ATOM	6636	CA	PHE	B	515	55.329	45.076	26.922	1.00	49.16
ATOM	6638	CB	PHE	B	515	56.740	45.685	27.043	1.00	51.57
ATOM	6641	CG	PHE	B	515	56.975	46.443	28.327	1.00	55.58
ATOM	6642	CD1	PHE	B	515	57.560	45.808	29.428	1.00	59.00
ATOM	6644	CE1	PHE	B	515	57.768	46.502	30.623	1.00	58.96
ATOM	6646	CZ	PHE	B	515	57.403	47.850	30.717	1.00	58.98
ATOM	6648	CE2	PHE	B	515	56.832	48.495	29.620	1.00	58.41
ATOM	6650	CD2	PHE	B	515	56.623	47.792	28.432	1.00	58.37
ATOM	6652	C	PHE	B	515	54.352	46.117	26.392	1.00	47.81
ATOM	6653	O	PHE	B	515	54.490	46.604	25.271	1.00	47.21
ATOM	6655	N	GLY	B	516	53.344	46.433	27.188	1.00	47.25
ATOM	6656	CA	GLY	B	516	52.312	47.362	26.765	1.00	47.07
ATOM	6659	C	GLY	B	516	51.201	46.708	25.959	1.00	46.94
ATOM	6660	O	GLY	B	516	50.245	47.381	25.563	1.00	47.64
ATOM	6662	N	GLY	B	517	51.305	45.398	25.715	1.00	45.48
ATOM	6663	CA	GLY	B	517	50.236	44.682	25.031	1.00	43.05
ATOM	6666	C	GLY	B	517	49.081	44.486	25.985	1.00	41.45
ATOM	6667	O	GLY	B	517	49.290	44.332	27.192	1.00	42.72
ATOM	6669	N	GLU	B	518	47.867	44.500	25.450	1.00	38.09
ATOM	6670	CA	GLU	B	518	46.663	44.156	26.206	1.00	37.05
ATOM	6672	CB	GLU	B	518	45.397	44.642	25.487	1.00	37.39
ATOM	6675	CG	GLU	B	518	45.019	43.900	24.190	1.00	43.91
ATOM	6678	CD	GLU	B	518	45.957	44.191	23.020	1.00	53.69
ATOM	6679	OE1	GLU	B	518	46.829	45.086	23.155	1.00	59.72
ATOM	6680	OE2	GLU	B	518	45.827	43.526	21.965	1.00	58.14
ATOM	6681	C	GLU	B	518	46.561	42.658	26.515	1.00	34.36
ATOM	6682	O	GLU	B	518	45.773	42.245	27.371	1.00	32.41
ATOM	6684	N	GLY	B	519	47.385	41.851	25.843	1.00	32.40
ATOM	6685	CA	GLY	B	519	47.349	40.413	26.010	1.00	30.85
ATOM	6688	C	GLY	B	519	47.257	39.748	24.651	1.00	28.45
ATOM	6689	O	GLY	B	519	47.049	40.380	23.637	1.00	28.21
ATOM	6691	N	VAL	B	520	47.413	38.444	24.663	1.00	27.63
ATOM	6692	CA	VAL	B	520	47.454	37.672	23.434	1.00	25.72
ATOM	6694	CB	VAL	B	520	48.926	37.353	23.046	1.00	25.73
ATOM	6696	CG1	VAL	B	520	49.610	36.605	24.186	1.00	27.22
ATOM	6700	CG2	VAL	B	520	49.657	38.602	22.693	1.00	27.51
ATOM	6704	C	VAL	B	520	46.725	36.358	23.621	1.00	24.85
ATOM	6705	O	VAL	B	520	46.524	35.890	24.756	1.00	23.08
ATOM	6707	N	TYR	B	521	46.385	35.754	22.478	1.00	24.59
ATOM	6708	CA	TYR	B	521	45.851	34.413	22.430	1.00	22.99
ATOM	6710	CB	TYR	B	521	44.656	34.347	21.502	1.00	24.70
ATOM	6713	CG	TYR	B	521	43.473	35.176	21.897	1.00	24.93
ATOM	6714	CD1	TYR	B	521	42.573	34.713	22.833	1.00	25.16
ATOM	6716	CE1	TYR	B	521	41.455	35.464	23.190	1.00	26.14
ATOM	6718	CZ	TYR	B	521	41.253	36.666	22.583	1.00	22.99
ATOM	6719	OH	TYR	B	521	40.154	37.405	22.925	1.00	33.21
ATOM	6721	CE2	TYR	B	521	42.135	37.140	21.629	1.00	25.32
ATOM	6723	CD2	TYR	B	521	43.244	36.406	21.306	1.00	24.11
ATOM	6725	C	TYR	B	521	46.891	33.468	21.858	1.00	21.58
ATOM	6726	O	TYR	B	521	47.602	33.828	20.929	1.00	20.74
ATOM	6728	N	ALA	B	522	46.951	32.280	22.442	1.00	20.61
ATOM	6729	CA	ALA	B	522	47.682	31.150	21.905	1.00	21.39
ATOM	6731	CB	ALA	B	522	48.286	30.370	22.985	1.00	20.54
ATOM	6735	C	ALA	B	522	46.665	30.293	21.162	1.00	20.28
ATOM	6736	O	ALA	B	522	45.544	30.102	21.621	1.00	18.05
ATOM	6738	N	ILE	B	523	47.067	29.783	20.000	1.00	20.35

ATOM	6739	CA	ILE	B	523	46.152	29.133	19.078	1.00	18.01
ATOM	6741	CB	ILE	B	523	45.875	29.997	17.884	1.00	19.14
ATOM	6743	CG1	ILE	B	523	45.273	31.325	18.321	1.00	20.01
ATOM	6746	CD1	ILE	B	523	45.485	32.448	17.406	1.00	18.44
ATOM	6750	CG2	ILE	B	523	44.908	29.263	16.927	1.00	15.05
ATOM	6754	C	ILE	B	523	46.809	27.849	18.635	1.00	19.63
ATOM	6755	O	ILE	B	523	47.749	27.888	17.820	1.00	19.61
ATOM	6757	N	ALA	B	524	46.395	26.749	19.248	1.00	17.96
ATOM	6758	CA	ALA	B	524	46.892	25.431	18.908	1.00	19.79
ATOM	6760	CB	ALA	B	524	46.860	24.523	20.117	1.00	17.99
ATOM	6764	C	ALA	B	524	46.115	24.771	17.772	1.00	19.64
ATOM	6765	O	ALA	B	524	44.877	24.914	17.648	1.00	20.88
ATOM	6767	N	ARG	B	525	46.848	24.008	16.991	1.00	18.12
ATOM	6768	CA	ARG	B	525	46.289	23.070	16.070	1.00	17.90
ATOM	6770	CB	ARG	B	525	46.895	23.263	14.698	1.00	19.68
ATOM	6773	CG	ARG	B	525	46.105	22.648	13.661	1.00	21.45
ATOM	6776	CD	ARG	B	525	44.939	23.517	13.209	1.00	21.76
ATOM	6779	NE	ARG	B	525	44.379	22.867	12.043	1.00	17.60
ATOM	6781	CZ	ARG	B	525	43.141	22.991	11.580	1.00	20.12
ATOM	6782	NH1	ARG	B	525	42.254	23.764	12.169	1.00	19.14
ATOM	6785	NH2	ARG	B	525	42.784	22.295	10.507	1.00	24.60
ATOM	6788	C	ARG	B	525	46.497	21.662	16.579	1.00	18.07
ATOM	6789	O	ARG	B	525	47.627	21.162	16.639	1.00	19.30
ATOM	6791	N	CYS	B	526	45.402	21.039	17.000	1.00	17.15
ATOM	6792	CA	CYS	B	526	45.434	19.796	17.729	1.00	18.51
ATOM	6794	CB	CYS	B	526	44.566	19.904	18.972	1.00	21.45
ATOM	6797	SG	CYS	B	526	45.151	21.093	20.196	1.00	22.00
ATOM	6799	C	CYS	B	526	44.839	18.752	16.819	1.00	19.53
ATOM	6800	O	CYS	B	526	43.731	18.952	16.318	1.00	17.49
ATOM	6802	N	CYS	B	527	45.537	17.649	16.628	1.00	18.42
ATOM	6803	CA	CYS	B	527	45.173	16.710	15.555	1.00	20.87
ATOM	6805	CB	CYS	B	527	46.143	16.836	14.396	1.00	19.48
ATOM	6808	SG	CYS	B	527	46.274	18.485	13.739	1.00	24.58
ATOM	6810	C	CYS	B	527	45.199	15.312	16.071	1.00	21.86
ATOM	6811	O	CYS	B	527	45.929	15.006	17.002	1.00	24.20
ATOM	6813	N	LEU	B	528	44.392	14.454	15.471	1.00	23.01
ATOM	6814	CA	LEU	B	528	44.365	13.058	15.857	1.00	22.92
ATOM	6816	CB	LEU	B	528	42.942	12.520	15.833	1.00	21.61
ATOM	6819	CG	LEU	B	528	41.974	13.048	16.875	1.00	22.39
ATOM	6821	CD1	LEU	B	528	40.550	12.604	16.508	1.00	17.53
ATOM	6825	CD2	LEU	B	528	42.379	12.534	18.279	1.00	23.76
ATOM	6829	C	LEU	B	528	45.286	12.325	14.882	1.00	26.09
ATOM	6830	O	LEU	B	528	44.958	12.160	13.703	1.00	26.74
ATOM	6832	N	LEU	B	529	46.456	11.935	15.387	1.00	29.44
ATOM	6833	CA	LEU	B	529	47.533	11.371	14.580	1.00	32.58
ATOM	6835	CB	LEU	B	529	48.601	12.437	14.273	1.00	33.00
ATOM	6838	CG	LEU	B	529	49.642	12.140	13.194	1.00	31.83
ATOM	6840	CD1	LEU	B	529	48.992	11.829	11.831	1.00	30.67
ATOM	6844	CD2	LEU	B	529	50.653	13.305	13.081	1.00	32.36
ATOM	6848	C	LEU	B	529	48.106	10.226	15.399	1.00	36.36
ATOM	6849	O	LEU	B	529	49.014	10.424	16.205	1.00	37.79
ATOM	6851	N	PRO	B	530	47.538	9.031	15.238	1.00	39.96
ATOM	6852	CA	PRO	B	530	48.114	7.854	15.879	1.00	41.93
ATOM	6854	CB	PRO	B	530	47.002	6.822	15.753	1.00	42.13
ATOM	6857	CG	PRO	B	530	46.353	7.165	14.458	1.00	42.94
ATOM	6860	CD	PRO	B	530	46.352	8.683	14.432	1.00	41.29
ATOM	6863	C	PRO	B	530	49.366	7.369	15.136	1.00	42.09
ATOM	6864	O	PRO	B	530	49.475	7.499	13.903	1.00	40.66
ATOM	6865	N	GLN	B	531	50.291	6.811	15.901	1.00	43.63
ATOM	6866	CA	GLN	B	531	51.567	6.300	15.381	1.00	45.30
ATOM	6868	CB	GLN	B	531	51.374	5.380	14.154	1.00	45.99

ATOM	6871	CG	GLN	B	531	50.335	4.253	14.346	1.00	49.74
ATOM	6874	CD	GLN	B	531	50.613	3.385	15.584	1.00	56.46
ATOM	6875	OE1	GLN	B	531	50.339	3.787	16.720	1.00	58.55
ATOM	6876	NE2	GLN	B	531	51.157	2.185	15.359	1.00	58.92
ATOM	6879	C	GLN	B	531	52.546	7.430	15.068	1.00	44.58
ATOM	6880	O	GLN	B	531	53.660	7.173	14.606	1.00	47.45
ATOM	6882	N	ALA	B	532	52.149	8.671	15.343	1.00	42.98
ATOM	6883	CA	ALA	B	532	53.031	9.813	15.158	1.00	41.12
ATOM	6885	CB	ALA	B	532	52.240	11.092	15.065	1.00	40.54
ATOM	6889	C	ALA	B	532	54.007	9.898	16.315	1.00	39.61
ATOM	6890	O	ALA	B	532	53.639	9.698	17.468	1.00	39.61
ATOM	6892	N	ASN	B	533	55.256	10.189	15.980	1.00	38.15
ATOM	6893	CA	ASN	B	533	56.255	10.597	16.937	1.00	37.54
ATOM	6895	CB	ASN	B	533	57.471	9.687	16.830	1.00	37.75
ATOM	6898	CG	ASN	B	533	57.237	8.322	17.473	1.00	40.47
ATOM	6899	OD1	ASN	B	533	56.312	8.158	18.274	1.00	36.79
ATOM	6900	ND2	ASN	B	533	58.076	7.347	17.136	1.00	47.01
ATOM	6902	C	ASN	B	533	56.638	12.027	16.585	1.00	35.45
ATOM	6903	O	ASN	B	533	57.335	12.235	15.594	1.00	35.63
ATOM	6905	N	CYS	B	534	56.150	12.993	17.365	1.00	34.19
ATOM	6906	CA	CYS	B	534	56.363	14.412	17.063	1.00	33.10
ATOM	6908	CB	CYS	B	534	55.049	15.180	16.992	1.00	33.53
ATOM	6911	SG	CYS	B	534	53.894	14.617	15.740	1.00	30.48
ATOM	6913	C	CYS	B	534	57.253	15.062	18.092	1.00	33.33
ATOM	6914	O	CYS	B	534	57.183	14.758	19.274	1.00	31.92
ATOM	6916	N	SER	B	535	58.072	15.995	17.630	1.00	31.34
ATOM	6917	CA	SER	B	535	58.986	16.678	18.501	1.00	30.86
ATOM	6919	CB	SER	B	535	60.362	16.094	18.296	1.00	31.64
ATOM	6922	OG	SER	B	535	60.690	16.239	16.931	1.00	35.53
ATOM	6924	C	SER	B	535	59.016	18.129	18.086	1.00	29.55
ATOM	6925	O	SER	B	535	58.442	18.495	17.058	1.00	28.75
ATOM	6927	N	VAL	B	536	59.729	18.939	18.858	1.00	26.92
ATOM	6928	CA	VAL	B	536	59.964	20.342	18.482	1.00	24.27
ATOM	6930	CB	VAL	B	536	59.357	21.309	19.516	1.00	24.23
ATOM	6932	CG1	VAL	B	536	59.678	22.788	19.135	1.00	20.25
ATOM	6936	CG2	VAL	B	536	57.834	21.064	19.607	1.00	25.78
ATOM	6940	C	VAL	B	536	61.461	20.590	18.333	1.00	23.34
ATOM	6941	O	VAL	B	536	62.272	20.104	19.135	1.00	20.66
ATOM	6943	N	HIS	B	537	61.829	21.315	17.290	1.00	20.96
ATOM	6944	CA	HIS	B	537	63.213	21.672	17.058	1.00	22.14
ATOM	6946	CB	HIS	B	537	63.655	21.265	15.664	1.00	23.09
ATOM	6949	CG	HIS	B	537	63.731	19.785	15.472	1.00	27.48
ATOM	6950	ND1	HIS	B	537	64.591	19.201	14.569	1.00	33.23
ATOM	6952	CE1	HIS	B	537	64.450	17.886	14.624	1.00	34.69
ATOM	6954	NE2	HIS	B	537	63.519	17.603	15.516	1.00	28.32
ATOM	6956	CD2	HIS	B	537	63.058	18.774	16.064	1.00	28.07
ATOM	6958	C	HIS	B	537	63.215	23.182	17.153	1.00	22.86
ATOM	6959	O	HIS	B	537	62.456	23.834	16.413	1.00	21.93
ATOM	6961	N	THR	B	538	64.066	23.714	18.032	1.00	22.58
ATOM	6962	CA	THR	B	538	64.143	25.129	18.325	1.00	23.16
ATOM	6964	CB	THR	B	538	63.819	25.425	19.796	1.00	25.03
ATOM	6966	OG1	THR	B	538	62.446	25.151	20.042	1.00	26.99
ATOM	6968	CG2	THR	B	538	64.090	26.870	20.158	1.00	20.53
ATOM	6972	C	THR	B	538	65.528	25.667	18.034	1.00	24.69
ATOM	6973	O	THR	B	538	66.549	24.975	18.236	1.00	22.73
ATOM	6975	N	ALA	B	539	65.548	26.894	17.517	1.00	24.98
ATOM	6976	CA	ALA	B	539	66.766	27.651	17.404	1.00	25.50
ATOM	6978	CB	ALA	B	539	67.208	27.723	16.004	1.00	23.47
ATOM	6982	C	ALA	B	539	66.534	29.058	17.950	1.00	26.96
ATOM	6983	O	ALA	B	539	65.500	29.695	17.649	1.00	26.32
ATOM	6985	N	PRO	B	540	67.515	29.567	18.719	1.00	27.96

ATOM	6986	CA	PRO B 540	67.488	30.908	19.271	1.00	28.40
ATOM	6988	CB	PRO B 540	68.592	30.878	20.339	1.00	28.24
ATOM	6991	CG	PRO B 540	69.593	29.890	19.804	1.00	28.37
ATOM	6994	CD	PRO B 540	68.771	28.859	19.054	1.00	28.01
ATOM	6997	C	PRO B 540	67.795	31.942	18.189	1.00	29.44
ATOM	6998	O	PRO B 540	68.154	31.585	17.061	1.00	29.18
ATOM	6999	N	PRO B 541	67.637	33.227	18.515	1.00	31.41
ATOM	7000	CA	PRO B 541	67.839	34.243	17.502	1.00	33.44
ATOM	7002	CB	PRO B 541	67.729	35.539	18.295	1.00	33.52
ATOM	7005	CG	PRO B 541	66.913	35.190	19.463	1.00	32.65
ATOM	7008	CD	PRO B 541	67.280	33.809	19.818	1.00	32.18
ATOM	7011	C	PRO B 541	69.219	34.127	16.853	1.00	36.75
ATOM	7012	O	PRO B 541	70.219	33.988	17.555	1.00	34.74
ATOM	7013	N	ALA B 542	69.261	34.151	15.527	1.00	40.63
ATOM	7014	CA	ALA B 542	70.530	34.050	14.806	1.00	44.34
ATOM	7016	CB	ALA B 542	70.284	33.791	13.350	1.00	43.75
ATOM	7020	C	ALA B 542	71.285	35.357	14.978	1.00	47.91
ATOM	7021	O	ALA B 542	72.519	35.374	15.164	1.00	49.26
ATOM	7023	N	GLU B 543	70.508	36.437	14.896	1.00	51.98
ATOM	7024	CA	GLU B 543	70.951	37.816	15.055	1.00	54.88
ATOM	7026	CB	GLU B 543	71.856	37.976	16.285	1.00	55.11
ATOM	7029	CG	GLU B 543	71.141	37.735	17.619	1.00	57.87
ATOM	7032	CD	GLU B 543	70.097	38.803	17.930	1.00	62.30
ATOM	7033	OE1	GLU B 543	69.914	39.730	17.101	1.00	65.31
ATOM	7034	OE2	GLU B 543	69.448	38.711	18.997	1.00	64.33
ATOM	7035	C	GLU B 543	71.616	38.366	13.799	1.00	57.18
ATOM	7036	O	GLU B 543	72.156	39.479	13.821	1.00	58.49
ATOM	7038	N	ALA B 544	71.531	37.622	12.696	1.00	58.77
ATOM	7039	CA	ALA B 544	72.272	37.982	11.498	1.00	59.77
ATOM	7041	CB	ALA B 544	73.720	37.522	11.639	1.00	60.01
ATOM	7045	C	ALA B 544	71.680	37.422	10.205	1.00	60.54
ATOM	7046	O	ALA B 544	71.471	36.219	10.080	1.00	60.99
ATOM	7048	N	SER B 545	71.396	38.331	9.270	1.00	60.86
ATOM	7049	CA	SER B 545	71.370	38.058	7.824	1.00	60.98
ATOM	7051	CB	SER B 545	72.713	37.447	7.366	1.00	61.47
ATOM	7054	OG	SER B 545	72.710	37.159	5.976	1.00	62.34
ATOM	7056	C	SER B 545	70.187	37.241	7.321	1.00	60.53
ATOM	7057	O	SER B 545	69.172	37.809	6.903	1.00	60.68
ATOM	7059	N	MET B 546	70.319	35.914	7.350	1.00	59.90
ATOM	7060	CA	MET B 546	69.348	35.011	6.707	1.00	59.32
ATOM	7062	CB	MET B 546	70.030	33.683	6.313	1.00	60.50
ATOM	7065	CG	MET B 546	71.251	33.807	5.373	1.00	64.31
ATOM	7068	SD	MET B 546	70.881	33.768	3.586	1.00	73.90
ATOM	7069	CE	MET B 546	72.536	33.673	2.885	1.00	67.40
ATOM	7073	C	MET B 546	68.115	34.708	7.590	1.00	56.77
ATOM	7074	O	MET B 546	67.313	33.826	7.253	1.00	56.78
ATOM	7076	N	GLY B 547	67.955	35.428	8.705	1.00	52.69
ATOM	7077	CA	GLY B 547	66.884	35.124	9.651	1.00	49.29
ATOM	7080	C	GLY B 547	67.269	33.940	10.508	1.00	45.84
ATOM	7081	O	GLY B 547	68.354	33.407	10.362	1.00	45.19
ATOM	7083	N	THR B 548	66.382	33.549	11.419	1.00	41.93
ATOM	7084	CA	THR B 548	66.611	32.413	12.305	1.00	38.60
ATOM	7086	CB	THR B 548	66.078	32.684	13.732	1.00	38.19
ATOM	7088	OG1	THR B 548	66.672	33.877	14.231	1.00	37.27
ATOM	7090	CG2	THR B 548	66.430	31.575	14.694	1.00	36.44
ATOM	7094	C	THR B 548	65.918	31.230	11.639	1.00	37.73
ATOM	7095	O	THR B 548	64.823	31.356	11.124	1.00	36.46
ATOM	7097	N	ARG B 549	66.576	30.082	11.624	1.00	35.98
ATOM	7098	CA	ARG B 549	66.105	28.966	10.835	1.00	35.28
ATOM	7100	CB	ARG B 549	66.880	28.887	9.512	1.00	35.85
ATOM	7103	CG	ARG B 549	66.645	30.056	8.558	1.00	38.41

ATOM	7106	CD	ARG	B	549	67.248	29.808	7.187	1.00	39.23
ATOM	7109	NE	ARG	B	549	67.069	30.993	6.341	1.00	46.95
ATOM	7111	CZ	ARG	B	549	66.628	31.011	5.077	1.00	49.53
ATOM	7112	NH1	ARG	B	549	66.338	29.895	4.414	1.00	53.72
ATOM	7115	NH2	ARG	B	549	66.499	32.180	4.449	1.00	50.20
ATOM	7118	C	ARG	B	549	66.310	27.698	11.621	1.00	32.83
ATOM	7119	O	ARG	B	549	67.260	27.590	12.391	1.00	32.64
ATOM	7121	N	VAL	B	550	65.419	26.738	11.417	1.00	30.30
ATOM	7122	CA	VAL	B	550	65.529	25.422	12.023	1.00	28.76
ATOM	7124	CB	VAL	B	550	64.947	25.394	13.452	1.00	27.22
ATOM	7126	CG1	VAL	B	550	63.406	25.303	13.428	1.00	27.16
ATOM	7130	CG2	VAL	B	550	65.524	24.250	14.210	1.00	26.78
ATOM	7134	C	VAL	B	550	64.795	24.466	11.120	1.00	29.31
ATOM	7135	O	VAL	B	550	63.815	24.839	10.463	1.00	31.05
ATOM	7137	N	HIS	B	551	65.269	23.238	11.027	1.00	30.87
ATOM	7138	CA	HIS	B	551	64.595	22.296	10.152	1.00	31.20
ATOM	7140	CB	HIS	B	551	65.275	22.255	8.779	1.00	32.56
ATOM	7143	CG	HIS	B	551	66.611	21.616	8.816	1.00	34.32
ATOM	7144	ND1	HIS	B	551	66.831	20.346	8.336	1.00	42.42
ATOM	7146	CE1	HIS	B	551	68.096	20.018	8.545	1.00	43.67
ATOM	7148	NE2	HIS	B	551	68.694	21.022	9.163	1.00	45.71
ATOM	7150	CD2	HIS	B	551	67.782	22.031	9.357	1.00	38.82
ATOM	7152	C	HIS	B	551	64.492	20.931	10.791	1.00	30.90
ATOM	7153	O	HIS	B	551	65.202	20.640	11.742	1.00	30.88
ATOM	7155	N	CYS	B	552	63.552	20.129	10.295	1.00	32.23
ATOM	7156	CA	CYS	B	552	63.378	18.737	10.710	1.00	34.05
ATOM	7158	CB	CYS	B	552	61.971	18.234	10.359	1.00	34.50
ATOM	7161	SG	CYS	B	552	60.648	19.271	11.036	1.00	33.87
ATOM	7163	C	CYS	B	552	64.418	17.916	9.958	1.00	36.28
ATOM	7164	O	CYS	B	552	64.215	17.543	8.795	1.00	35.58
ATOM	7166	N	HIS	B	553	65.536	17.677	10.618	1.00	38.22
ATOM	7167	CA	HIS	B	553	66.720	17.136	9.961	1.00	40.70
ATOM	7169	CB	HIS	B	553	67.989	17.533	10.733	1.00	40.99
ATOM	7172	CG	HIS	B	553	68.097	16.901	12.083	1.00	41.46
ATOM	7173	ND1	HIS	B	553	67.633	17.511	13.228	1.00	44.82
ATOM	7175	CE1	HIS	B	553	67.862	16.727	14.265	1.00	42.10
ATOM	7177	NE2	HIS	B	553	68.456	15.629	13.832	1.00	46.23
ATOM	7179	CD2	HIS	B	553	68.622	15.717	12.472	1.00	43.09
ATOM	7181	C	HIS	B	553	66.696	15.621	9.790	1.00	42.70
ATOM	7182	O	HIS	B	553	67.479	15.088	8.999	1.00	44.61
ATOM	7184	N	GLN	B	554	65.827	14.925	10.518	1.00	43.56
ATOM	7185	CA	GLN	B	554	65.800	13.473	10.454	1.00	44.64
ATOM	7187	CB	GLN	B	554	65.085	12.909	11.679	1.00	44.96
ATOM	7190	CG	GLN	B	554	65.996	12.912	12.923	1.00	50.54
ATOM	7193	CD	GLN	B	554	65.283	13.237	14.232	1.00	55.67
ATOM	7194	OE1	GLN	B	554	64.485	14.176	14.309	1.00	62.11
ATOM	7195	NE2	GLN	B	554	65.601	12.487	15.276	1.00	57.23
ATOM	7198	C	GLN	B	554	65.175	12.984	9.152	1.00	45.56
ATOM	7199	O	GLN	B	554	64.233	13.588	8.635	1.00	45.24
ATOM	7201	N	GLN	B	555	65.723	11.902	8.598	1.00	45.75
ATOM	7202	CA	GLN	B	555	65.105	11.254	7.427	1.00	46.32
ATOM	7204	CB	GLN	B	555	65.937	10.058	6.928	1.00	46.28
ATOM	7207	CG	GLN	B	555	66.772	10.378	5.679	1.00	50.00
ATOM	7210	CD	GLN	B	555	67.754	9.265	5.307	1.00	50.60
ATOM	7211	OE1	GLN	B	555	67.437	8.065	5.410	1.00	58.68
ATOM	7212	NE2	GLN	B	555	68.956	9.659	4.867	1.00	54.90
ATOM	7215	C	GLN	B	555	63.648	10.836	7.701	1.00	43.49
ATOM	7216	O	GLN	B	555	63.321	10.270	8.753	1.00	42.90
ATOM	7218	N	GLY	B	556	62.775	11.168	6.755	1.00	42.05
ATOM	7219	CA	GLY	B	556	61.343	10.897	6.881	1.00	40.96
ATOM	7222	C	GLY	B	556	60.535	11.708	7.900	1.00	39.89

ATOM	7223	O	GLY	B	556	59.365	11.405	8.116	1.00	40.21
ATOM	7225	N	HIS	B	557	61.128	12.709	8.553	1.00	37.73
ATOM	7226	CA	HIS	B	557	60.326	13.607	9.387	1.00	37.16
ATOM	7228	CB	HIS	B	557	61.147	14.246	10.521	1.00	37.88
ATOM	7231	CG	HIS	B	557	61.278	13.355	11.718	1.00	40.02
ATOM	7232	ND1	HIS	B	557	61.587	12.010	11.613	1.00	45.09
ATOM	7234	CE1	HIS	B	557	61.624	11.472	12.819	1.00	43.02
ATOM	7236	NE2	HIS	B	557	61.349	12.417	13.703	1.00	46.42
ATOM	7238	CD2	HIS	B	557	61.134	13.605	13.040	1.00	44.36
ATOM	7240	C	HIS	B	557	59.638	14.638	8.491	1.00	34.96
ATOM	7241	O	HIS	B	557	60.200	15.055	7.456	1.00	35.38
ATOM	7243	N	VAL	B	558	58.390	14.967	8.838	1.00	31.17
ATOM	7244	CA	VAL	B	558	57.642	16.010	8.151	1.00	28.07
ATOM	7246	CB	VAL	B	558	56.244	15.513	7.652	1.00	28.10
ATOM	7248	CG1	VAL	B	558	56.391	14.245	6.819	1.00	27.56
ATOM	7252	CG2	VAL	B	558	55.345	15.221	8.828	1.00	28.34
ATOM	7256	C	VAL	B	558	57.479	17.196	9.091	1.00	25.89
ATOM	7257	O	VAL	B	558	57.209	17.029	10.277	1.00	23.32
ATOM	7259	N	LEU	B	559	57.637	18.392	8.542	1.00	23.34
ATOM	7260	CA	LEU	B	559	57.340	19.611	9.261	1.00	22.66
ATOM	7262	CB	LEU	B	559	58.087	20.766	8.666	1.00	22.72
ATOM	7265	CG	LEU	B	559	57.746	22.151	9.199	1.00	21.75
ATOM	7267	CD1	LEU	B	559	58.340	22.330	10.573	1.00	18.34
ATOM	7271	CD2	LEU	B	559	58.245	23.173	8.218	1.00	21.65
ATOM	7275	C	LEU	B	559	55.830	19.866	9.163	1.00	21.71
ATOM	7276	O	LEU	B	559	55.230	19.879	8.059	1.00	20.72
ATOM	7278	N	THR	B	560	55.214	20.041	10.318	1.00	19.49
ATOM	7279	CA	THR	B	560	53.772	20.246	10.398	1.00	19.18
ATOM	7281	CB	THR	B	560	53.135	19.254	11.406	1.00	21.35
ATOM	7283	OG1	THR	B	560	53.621	19.542	12.732	1.00	19.91
ATOM	7285	CG2	THR	B	560	53.473	17.797	11.056	1.00	18.11
ATOM	7289	C	THR	B	560	53.389	21.663	10.861	1.00	19.85
ATOM	7290	O	THR	B	560	52.208	22.063	10.742	1.00	19.34
ATOM	7292	N	GLY	B	561	54.369	22.430	11.362	1.00	19.24
ATOM	7293	CA	GLY	B	561	54.090	23.697	12.003	1.00	19.49
ATOM	7296	C	GLY	B	561	55.361	24.437	12.317	1.00	20.05
ATOM	7297	O	GLY	B	561	56.367	23.818	12.762	1.00	18.07
ATOM	7299	N	CYS	B	562	55.330	25.747	12.052	1.00	22.17
ATOM	7300	CA	CYS	B	562	56.357	26.686	12.495	1.00	22.84
ATOM	7302	CB	CYS	B	562	56.915	27.482	11.307	1.00	24.91
ATOM	7305	SG	CYS	B	562	57.647	26.424	10.057	1.00	27.28
ATOM	7307	C	CYS	B	562	55.803	27.703	13.504	1.00	22.52
ATOM	7308	O	CYS	B	562	54.725	28.253	13.292	1.00	22.43
ATOM	7310	N	SER	B	563	56.561	27.966	14.565	1.00	20.03
ATOM	7311	CA	SER	B	563	56.293	29.042	15.520	1.00	19.92
ATOM	7313	CB	SER	B	563	55.884	28.474	16.875	1.00	21.04
ATOM	7316	OG	SER	B	563	54.704	27.683	16.754	1.00	20.98
ATOM	7318	C	SER	B	563	57.548	29.879	15.733	1.00	22.06
ATOM	7319	O	SER	B	563	58.663	29.436	15.466	1.00	20.37
ATOM	7321	N	SER	B	564	57.368	31.079	16.265	1.00	21.39
ATOM	7322	CA	SER	B	564	58.483	31.979	16.528	1.00	22.99
ATOM	7324	CB	SER	B	564	58.766	32.855	15.332	1.00	22.04
ATOM	7327	OG	SER	B	564	59.948	33.625	15.523	1.00	26.63
ATOM	7329	C	SER	B	564	58.094	32.832	17.718	1.00	24.67
ATOM	7330	O	SER	B	564	56.951	33.296	17.793	1.00	26.28
ATOM	7332	N	HIS	B	565	58.994	32.993	18.672	1.00	24.56
ATOM	7333	CA	HIS	B	565	58.799	34.021	19.689	1.00	24.85
ATOM	7335	CB	HIS	B	565	58.397	33.434	21.034	1.00	24.33
ATOM	7338	CG	HIS	B	565	59.540	32.896	21.820	1.00	27.10
ATOM	7339	ND1	HIS	B	565	60.193	31.736	21.470	1.00	25.99
ATOM	7341	CE1	HIS	B	565	61.177	31.511	22.324	1.00	29.49

ATOM	7343	NE2	HIS	B	565	61.183	32.488	23.217	1.00	29.61
ATOM	7345	CD2	HIS	B	565	60.177	33.374	22.917	1.00	34.51
ATOM	7347	C	HIS	B	565	60.065	34.872	19.800	1.00	27.65
ATOM	7348	O	HIS	B	565	61.138	34.443	19.407	1.00	24.24
ATOM	7350	N	TRP	B	566	59.916	36.080	20.329	1.00	29.70
ATOM	7351	CA	TRP	B	566	61.053	36.954	20.537	1.00	34.20
ATOM	7353	CB	TRP	B	566	61.121	38.030	19.431	1.00	35.05
ATOM	7356	CG	TRP	B	566	59.820	38.716	19.107	1.00	36.86
ATOM	7357	CD1	TRP	B	566	59.402	39.935	19.579	1.00	38.44
ATOM	7359	NE1	TRP	B	566	58.157	40.237	19.067	1.00	39.48
ATOM	7361	CE2	TRP	B	566	57.744	39.213	18.246	1.00	38.11
ATOM	7362	CD2	TRP	B	566	58.758	38.229	18.255	1.00	38.82
ATOM	7363	CE3	TRP	B	566	58.568	37.058	17.500	1.00	38.19
ATOM	7365	CZ3	TRP	B	566	57.380	36.915	16.769	1.00	37.47
ATOM	7367	CH2	TRP	B	566	56.394	37.907	16.790	1.00	36.50
ATOM	7369	CZ2	TRP	B	566	56.555	39.061	17.521	1.00	37.39
ATOM	7371	C	TRP	B	566	61.006	37.538	21.963	1.00	38.57
ATOM	7372	O	TRP	B	566	59.967	37.510	22.639	1.00	37.29
ATOM	7374	N	GLU	B	567	62.152	38.011	22.435	1.00	43.02
ATOM	7375	CA	GLU	B	567	62.235	38.612	23.760	1.00	46.95
ATOM	7377	CB	GLU	B	567	63.253	37.845	24.619	1.00	47.48
ATOM	7380	CG	GLU	B	567	62.610	36.649	25.348	1.00	49.99
ATOM	7383	CD	GLU	B	567	63.513	35.429	25.493	1.00	56.28
ATOM	7384	OE1	GLU	B	567	63.936	35.133	26.632	1.00	57.84
ATOM	7385	OE2	GLU	B	567	63.779	34.742	24.477	1.00	60.75
ATOM	7386	C	GLU	B	567	62.523	40.108	23.662	1.00	50.36
ATOM	7387	O	GLU	B	567	62.491	40.810	24.659	1.00	51.61
ATOM	7389	N	VAL	B	568	62.735	40.591	22.442	1.00	54.58
ATOM	7390	CA	VAL	B	568	63.024	41.995	22.189	1.00	57.92
ATOM	7392	CB	VAL	B	568	63.759	42.195	20.825	1.00	58.32
ATOM	7394	CG1	VAL	B	568	62.837	41.876	19.641	1.00	59.07
ATOM	7398	CG2	VAL	B	568	64.314	43.617	20.712	1.00	60.67
ATOM	7402	C	VAL	B	568	61.740	42.802	22.189	1.00	60.35
ATOM	7403	O	VAL	B	568	60.654	42.274	21.923	1.00	60.39
ATOM	7405	N	GLU	B	569	61.880	44.089	22.488	1.00	63.71
ATOM	7406	CA	GLU	B	569	60.750	45.012	22.505	1.00	66.03
ATOM	7408	CB	GLU	B	569	61.138	46.348	23.158	1.00	66.74
ATOM	7411	CG	GLU	B	569	61.877	46.239	24.518	1.00	69.38
ATOM	7414	CD	GLU	B	569	61.171	45.345	25.536	1.00	72.81
ATOM	7415	OE1	GLU	B	569	59.942	45.129	25.415	1.00	75.35
ATOM	7416	OE2	GLU	B	569	61.856	44.863	26.471	1.00	75.21
ATOM	7417	C	GLU	B	569	60.212	45.245	21.096	1.00	67.24
ATOM	7418	O	GLU	B	569	59.009	45.379	20.918	1.00	67.29
ATOM	7420	N	ASP	B	570	61.098	45.288	20.102	1.00	68.97
ATOM	7421	CA	ASP	B	570	60.672	45.331	18.697	1.00	70.39
ATOM	7423	CB	ASP	B	570	60.153	46.733	18.336	1.00	70.74
ATOM	7426	CG	ASP	B	570	58.961	46.691	17.386	1.00	73.17
ATOM	7427	OD1	ASP	B	570	58.915	45.785	16.521	1.00	76.39
ATOM	7428	OD2	ASP	B	570	58.067	47.563	17.507	1.00	74.69
ATOM	7429	C	ASP	B	570	61.791	44.909	17.731	1.00	70.85
ATOM	7430	O	ASP	B	570	62.950	44.764	18.136	1.00	71.17
ATOM	7432	N	LEU	B	571	61.433	44.706	16.462	1.00	71.43
ATOM	7433	CA	LEU	B	571	62.395	44.286	15.434	1.00	72.11
ATOM	7435	CB	LEU	B	571	61.680	43.867	14.137	1.00	72.40
ATOM	7438	CG	LEU	B	571	60.721	44.830	13.410	1.00	73.14
ATOM	7440	CD1	LEU	B	571	61.010	46.311	13.678	1.00	73.57
ATOM	7444	CD2	LEU	B	571	60.715	44.527	11.897	1.00	72.57
ATOM	7448	C	LEU	B	571	63.431	45.367	15.127	1.00	72.21
ATOM	7449	O	LEU	B	571	63.991	45.412	14.030	1.00	72.23
ATOM	7451	N	GLN	B	584	62.379	25.744	1.407	1.00	56.02
ATOM	7452	CA	GLN	B	584	63.337	24.660	1.602	1.00	56.16

ATOM	7454	CB	GLN	B	584	64.683	25.211	2.085	1.00	56.39
ATOM	7457	CG	GLN	B	584	65.454	25.921	0.965	1.00	57.67
ATOM	7460	CD	GLN	B	584	66.659	26.706	1.463	1.00	58.25
ATOM	7461	OE1	GLN	B	584	66.838	26.897	2.666	1.00	61.74
ATOM	7462	NE2	GLN	B	584	67.496	27.167	0.530	1.00	59.48
ATOM	7465	C	GLN	B	584	62.770	23.639	2.588	1.00	54.32
ATOM	7466	O	GLN	B	584	62.605	23.958	3.764	1.00	54.64
ATOM	7468	N	PRO	B	585	62.454	22.419	2.098	1.00	51.66
ATOM	7469	CA	PRO	B	585	61.749	21.363	2.830	1.00	49.24
ATOM	7471	CB	PRO	B	585	62.171	20.090	2.086	1.00	49.60
ATOM	7474	CG	PRO	B	585	62.301	20.522	0.691	1.00	51.27
ATOM	7477	CD	PRO	B	585	62.773	21.970	0.722	1.00	51.85
ATOM	7480	C	PRO	B	585	62.052	21.210	4.322	1.00	45.42
ATOM	7481	O	PRO	B	585	63.198	21.072	4.742	1.00	44.45
ATOM	7482	N	ASN	B	586	60.984	21.229	5.102	1.00	41.52
ATOM	7483	CA	ASN	B	586	61.043	20.955	6.517	1.00	38.48
ATOM	7485	CB	ASN	B	586	61.600	19.551	6.760	1.00	38.05
ATOM	7488	CG	ASN	B	586	60.677	18.457	6.239	1.00	39.25
ATOM	7489	OD1	ASN	B	586	59.507	18.694	5.927	1.00	39.28
ATOM	7490	ND2	ASN	B	586	61.197	17.240	6.169	1.00	44.47
ATOM	7493	C	ASN	B	586	61.796	22.012	7.307	1.00	35.80
ATOM	7494	O	ASN	B	586	62.251	21.751	8.415	1.00	35.48
ATOM	7496	N	GLN	B	587	61.857	23.225	6.758	1.00	33.33
ATOM	7497	CA	GLN	B	587	62.532	24.338	7.382	1.00	32.17
ATOM	7499	CB	GLN	B	587	63.608	24.906	6.451	1.00	32.75
ATOM	7502	CG	GLN	B	587	64.567	25.861	7.155	1.00	34.61
ATOM	7505	CD	GLN	B	587	65.786	26.221	6.322	1.00	35.30
ATOM	7506	OE1	GLN	B	587	65.659	26.750	5.218	1.00	42.19
ATOM	7507	NE2	GLN	B	587	66.970	25.988	6.874	1.00	38.72
ATOM	7510	C	GLN	B	587	61.551	25.450	7.744	1.00	30.29
ATOM	7511	O	GLN	B	587	60.684	25.816	6.942	1.00	29.16
ATOM	7513	N	CYS	B	588	61.711	25.984	8.956	1.00	28.33
ATOM	7514	CA	CYS	B	588	61.020	27.184	9.394	1.00	26.42
ATOM	7516	CB	CYS	B	588	60.498	27.006	10.831	1.00	26.26
ATOM	7519	SG	CYS	B	588	59.341	25.709	10.959	1.00	24.76
ATOM	7521	C	CYS	B	588	62.015	28.326	9.392	1.00	27.89
ATOM	7522	O	CYS	B	588	63.172	28.149	9.751	1.00	28.85
ATOM	7524	N	VAL	B	589	61.552	29.512	9.041	1.00	29.33
ATOM	7525	CA	VAL	B	589	62.388	30.703	9.042	1.00	30.89
ATOM	7527	CB	VAL	B	589	62.637	31.181	7.610	1.00	32.17
ATOM	7529	CG1	VAL	B	589	63.355	32.533	7.613	1.00	33.61
ATOM	7533	CG2	VAL	B	589	63.403	30.103	6.833	1.00	31.87
ATOM	7537	C	VAL	B	589	61.691	31.810	9.827	1.00	31.50
ATOM	7538	O	VAL	B	589	60.508	32.092	9.604	1.00	33.60
ATOM	7540	N	GLY	B	590	62.408	32.397	10.772	1.00	30.85
ATOM	7541	CA	GLY	B	590	61.909	33.512	11.520	1.00	31.31
ATOM	7544	C	GLY	B	590	62.770	34.747	11.336	1.00	32.69
ATOM	7545	O	GLY	B	590	63.804	34.721	10.632	1.00	30.87
ATOM	7547	N	HIS	B	591	62.338	35.821	11.999	1.00	33.83
ATOM	7548	CA	HIS	B	591	63.113	37.043	12.113	1.00	35.87
ATOM	7550	CB	HIS	B	591	62.321	38.109	12.880	1.00	36.91
ATOM	7553	CG	HIS	B	591	62.883	39.487	12.739	1.00	41.60
ATOM	7554	ND1	HIS	B	591	63.969	39.930	13.464	1.00	48.58
ATOM	7556	CE1	HIS	B	591	64.249	41.176	13.122	1.00	48.36
ATOM	7558	NE2	HIS	B	591	63.386	41.556	12.197	1.00	50.21
ATOM	7560	CD2	HIS	B	591	62.519	40.519	11.942	1.00	47.54
ATOM	7562	C	HIS	B	591	64.425	36.751	12.840	1.00	35.86
ATOM	7563	O	HIS	B	591	64.472	35.888	13.713	1.00	36.13
ATOM	7565	N	ARG	B	592	65.475	37.504	12.496	1.00	36.07
ATOM	7566	CA	ARG	B	592	66.826	37.266	13.006	1.00	36.33
ATOM	7568	CB	ARG	B	592	67.832	38.194	12.310	1.00	38.05

ATOM	7571	CG	ARG	B	592	67.663	39.668	12.701	1.00	42.69
ATOM	7574	CD	ARG	B	592	68.178	40.616	11.621	1.00	50.90
ATOM	7577	NE	ARG	B	592	69.628	40.820	11.675	1.00	54.79
ATOM	7579	CZ	ARG	B	592	70.344	41.386	10.698	1.00	57.37
ATOM	7580	NH1	ARG	B	592	69.755	41.791	9.573	1.00	58.59
ATOM	7583	NH2	ARG	B	592	71.659	41.527	10.831	1.00	56.33
ATOM	7586	C	ARG	B	592	66.933	37.453	14.499	1.00	35.61
ATOM	7587	O	ARG	B	592	67.789	36.862	15.128	1.00	36.12
ATOM	7589	N	GLU	B	593	66.030	38.254	15.065	1.00	34.37
ATOM	7590	CA	GLU	B	593	66.011	38.527	16.490	1.00	33.51
ATOM	7592	CB	GLU	B	593	65.609	39.982	16.704	1.00	33.65
ATOM	7595	CG	GLU	B	593	66.474	40.967	15.947	1.00	39.34
ATOM	7598	CD	GLU	B	593	66.132	42.395	16.311	1.00	46.59
ATOM	7599	OE1	GLU	B	593	65.534	43.095	15.464	1.00	48.10
ATOM	7600	OE2	GLU	B	593	66.437	42.792	17.469	1.00	54.07
ATOM	7601	C	GLU	B	593	65.035	37.642	17.228	1.00	30.76
ATOM	7602	O	GLU	B	593	64.845	37.802	18.435	1.00	31.26
ATOM	7604	N	ALA	B	594	64.430	36.693	16.510	1.00	28.22
ATOM	7605	CA	ALA	B	594	63.406	35.804	17.077	1.00	26.81
ATOM	7607	CB	ALA	B	594	62.171	35.838	16.201	1.00	26.82
ATOM	7611	C	ALA	B	594	63.915	34.378	17.129	1.00	25.53
ATOM	7612	O	ALA	B	594	64.730	33.986	16.281	1.00	23.76
ATOM	7614	N	SER	B	595	63.406	33.610	18.089	1.00	21.87
ATOM	7615	CA	SER	B	595	63.602	32.173	18.113	1.00	21.76
ATOM	7617	CB	SER	B	595	63.399	31.619	19.518	1.00	22.39
ATOM	7620	OG	SER	B	595	64.303	32.169	20.445	1.00	27.99
ATOM	7622	C	SER	B	595	62.600	31.511	17.169	1.00	23.73
ATOM	7623	O	SER	B	595	61.515	32.039	16.923	1.00	24.41
ATOM	7625	N	ILE	B	596	62.953	30.351	16.638	1.00	22.63
ATOM	7626	CA	ILE	B	596	62.139	29.701	15.648	1.00	21.28
ATOM	7628	CB	ILE	B	596	62.778	29.788	14.252	1.00	21.63
ATOM	7630	CG1	ILE	B	596	61.806	29.313	13.186	1.00	23.75
ATOM	7633	CD1	ILE	B	596	60.709	30.346	12.879	1.00	21.83
ATOM	7637	CG2	ILE	B	596	64.028	28.961	14.154	1.00	28.31
ATOM	7641	C	ILE	B	596	61.949	28.283	16.143	1.00	21.31
ATOM	7642	O	ILE	B	596	62.889	27.664	16.691	1.00	19.06
ATOM	7644	N	HIS	B	597	60.728	27.777	15.984	1.00	19.10
ATOM	7645	CA	HIS	B	597	60.356	26.466	16.501	1.00	20.77
ATOM	7647	CB	HIS	B	597	59.426	26.598	17.702	1.00	21.37
ATOM	7650	CG	HIS	B	597	59.863	27.619	18.689	1.00	23.99
ATOM	7651	ND1	HIS	B	597	60.868	27.382	19.602	1.00	23.82
ATOM	7653	CE1	HIS	B	597	61.039	28.455	20.352	1.00	25.41
ATOM	7655	NE2	HIS	B	597	60.177	29.374	19.962	1.00	20.86
ATOM	7657	CD2	HIS	B	597	59.428	28.876	18.923	1.00	24.36
ATOM	7659	C	HIS	B	597	59.648	25.696	15.405	1.00	21.37
ATOM	7660	O	HIS	B	597	58.708	26.213	14.813	1.00	22.87
ATOM	7662	N	ALA	B	598	60.083	24.466	15.156	1.00	21.52
ATOM	7663	CA	ALA	B	598	59.490	23.612	14.131	1.00	20.51
ATOM	7665	CB	ALA	B	598	60.535	23.194	13.129	1.00	22.60
ATOM	7669	C	ALA	B	598	58.868	22.399	14.824	1.00	19.57
ATOM	7670	O	ALA	B	598	59.482	21.798	15.708	1.00	20.83
ATOM	7672	N	SER	B	599	57.644	22.058	14.465	1.00	17.63
ATOM	7673	CA	SER	B	599	57.049	20.813	14.882	1.00	17.41
ATOM	7675	CB	SER	B	599	55.525	20.912	15.008	1.00	18.08
ATOM	7678	OG	SER	B	599	54.947	19.593	15.087	1.00	19.22
ATOM	7680	C	SER	B	599	57.372	19.809	13.811	1.00	18.93
ATOM	7681	O	SER	B	599	56.944	19.972	12.665	1.00	18.34
ATOM	7683	N	CYS	B	600	58.089	18.764	14.201	1.00	20.64
ATOM	7684	CA	CYS	B	600	58.590	17.730	13.306	1.00	24.30
ATOM	7686	CB	CYS	B	600	60.107	17.637	13.454	1.00	24.08
ATOM	7689	SG	CYS	B	600	60.923	19.177	13.025	1.00	30.39

ATOM	7691	C	CYS B 600	58.005	16.419	13.758	1.00	26.04
ATOM	7692	O	CYS B 600	58.206	16.054	14.905	1.00	25.85
ATOM	7694	N	CYS B 601	57.316	15.711	12.873	1.00	27.73
ATOM	7695	CA	CYS B 601	56.727	14.414	13.213	1.00	28.38
ATOM	7697	CB	CYS B 601	55.210	14.450	13.049	1.00	29.10
ATOM	7700	SG	CYS B 601	54.392	15.669	14.040	1.00	31.91
ATOM	7702	C	CYS B 601	57.219	13.310	12.318	1.00	30.16
ATOM	7703	O	CYS B 601	57.351	13.504	11.120	1.00	30.42
ATOM	7705	N	HIS B 602	57.462	12.144	12.893	1.00	32.21
ATOM	7706	CA	HIS B 602	57.587	10.961	12.091	1.00	34.64
ATOM	7708	CB	HIS B 602	58.640	9.992	12.622	1.00	36.98
ATOM	7711	CG	HIS B 602	59.084	8.991	11.600	1.00	42.26
ATOM	7712	ND1	HIS B 602	59.415	9.350	10.308	1.00	50.51
ATOM	7714	CE1	HIS B 602	59.747	8.271	9.623	1.00	48.34
ATOM	7716	NE2	HIS B 602	59.638	7.222	10.422	1.00	51.94
ATOM	7718	CD2	HIS B 602	59.216	7.643	11.662	1.00	48.81
ATOM	7720	C	HIS B 602	56.203	10.350	12.055	1.00	35.14
ATOM	7721	O	HIS B 602	55.676	9.883	13.064	1.00	33.24
ATOM	7723	N	ALA B 603	55.599	10.436	10.878	1.00	37.63
ATOM	7724	CA	ALA B 603	54.228	10.007	10.663	1.00	39.27
ATOM	7726	CB	ALA B 603	53.268	11.193	10.792	1.00	38.66
ATOM	7730	C	ALA B 603	54.243	9.430	9.248	1.00	41.12
ATOM	7731	O	ALA B 603	53.990	10.137	8.263	1.00	42.10
ATOM	7733	N	PRO B 604	54.598	8.149	9.140	1.00	43.23
ATOM	7734	CA	PRO B 604	54.983	7.623	7.839	1.00	43.65
ATOM	7736	CB	PRO B 604	55.552	6.229	8.156	1.00	44.26
ATOM	7739	CG	PRO B 604	55.640	6.151	9.683	1.00	45.04
ATOM	7742	CD	PRO B 604	54.631	7.119	10.196	1.00	43.95
ATOM	7745	C	PRO B 604	53.804	7.562	6.870	1.00	43.14
ATOM	7746	O	PRO B 604	54.013	7.699	5.662	1.00	43.76
ATOM	7747	N	GLY B 605	52.587	7.411	7.388	1.00	41.13
ATOM	7748	CA	GLY B 605	51.403	7.524	6.540	1.00	41.40
ATOM	7751	C	GLY B 605	51.013	8.944	6.119	1.00	40.84
ATOM	7752	O	GLY B 605	49.932	9.147	5.552	1.00	42.03
ATOM	7754	N	LEU B 606	51.876	9.929	6.372	1.00	38.58
ATOM	7755	CA	LEU B 606	51.484	11.316	6.252	1.00	37.46
ATOM	7757	CB	LEU B 606	51.808	12.049	7.553	1.00	37.68
ATOM	7760	CG	LEU B 606	50.852	13.164	7.933	1.00	40.49
ATOM	7762	CD1	LEU B 606	49.464	12.539	8.215	1.00	42.92
ATOM	7766	CD2	LEU B 606	51.385	13.918	9.126	1.00	38.22
ATOM	7770	C	LEU B 606	52.239	11.972	5.117	1.00	35.91
ATOM	7771	O	LEU B 606	53.454	11.903	5.078	1.00	35.68
ATOM	7773	N	GLU B 607	51.512	12.604	4.203	1.00	35.19
ATOM	7774	CA	GLU B 607	52.105	13.484	3.200	1.00	34.78
ATOM	7776	CB	GLU B 607	51.599	13.099	1.821	1.00	34.12
ATOM	7779	CG	GLU B 607	51.972	14.079	0.706	1.00	38.00
ATOM	7782	CD	GLU B 607	51.430	13.670	-0.665	1.00	38.16
ATOM	7783	OE1	GLU B 607	50.550	12.775	-0.725	1.00	49.24
ATOM	7784	OE2	GLU B 607	51.874	14.255	-1.679	1.00	38.55
ATOM	7785	C	GLU B 607	51.718	14.922	3.553	1.00	32.17
ATOM	7786	O	GLU B 607	50.580	15.160	3.957	1.00	32.46
ATOM	7788	N	CYS B 608	52.666	15.854	3.456	1.00	29.30
ATOM	7789	CA	CYS B 608	52.403	17.287	3.649	1.00	27.97
ATOM	7791	CB	CYS B 608	52.983	17.815	4.969	1.00	27.60
ATOM	7794	SG	CYS B 608	52.463	16.906	6.423	1.00	30.83
ATOM	7796	C	CYS B 608	52.969	18.130	2.522	1.00	26.36
ATOM	7797	O	CYS B 608	54.033	17.836	1.983	1.00	27.36
ATOM	7799	N	LYS B 609	52.284	19.204	2.191	1.00	25.17
ATOM	7800	CA	LYS B 609	52.795	20.182	1.256	1.00	25.89
ATOM	7802	CB	LYS B 609	52.107	20.075	-0.118	1.00	26.42
ATOM	7805	CG	LYS B 609	52.333	18.719	-0.832	1.00	28.71

ATOM	7808	CD	LYS	B	609	51.723	18.750	-2.260	1.00	27.25
ATOM	7811	CE	LYS	B	609	52.206	17.619	-3.090	1.00	25.92
ATOM	7814	NZ	LYS	B	609	51.373	17.454	-4.316	1.00	29.43
ATOM	7818	C	LYS	B	609	52.593	21.562	1.852	1.00	25.21
ATOM	7819	O	LYS	B	609	51.830	21.712	2.771	1.00	25.27
ATOM	7821	N	VAL	B	610	53.289	22.560	1.317	1.00	25.23
ATOM	7822	CA	VAL	B	610	53.171	23.928	1.784	1.00	26.04
ATOM	7824	CB	VAL	B	610	54.523	24.472	2.223	1.00	27.24
ATOM	7826	CG1	VAL	B	610	54.388	25.904	2.688	1.00	27.01
ATOM	7830	CG2	VAL	B	610	55.111	23.577	3.303	1.00	25.03
ATOM	7834	C	VAL	B	610	52.629	24.806	0.693	1.00	27.51
ATOM	7835	O	VAL	B	610	53.163	24.842	-0.395	1.00	26.11
ATOM	7837	N	LYS	B	611	51.570	25.550	1.010	1.00	28.18
ATOM	7838	CA	LYS	B	611	50.934	26.425	0.069	1.00	29.18
ATOM	7840	CB	LYS	B	611	49.485	25.979	-0.110	1.00	30.67
ATOM	7843	CG	LYS	B	611	48.727	26.684	-1.201	1.00	29.54
ATOM	7846	CD	LYS	B	611	47.334	26.093	-1.348	1.00	30.26
ATOM	7849	CE	LYS	B	611	46.448	26.976	-2.250	1.00	30.63
ATOM	7852	NZ	LYS	B	611	45.093	26.388	-2.499	1.00	27.42
ATOM	7856	C	LYS	B	611	51.034	27.848	0.636	1.00	30.46
ATOM	7857	O	LYS	B	611	50.747	28.083	1.813	1.00	28.08
ATOM	7859	N	GLU	B	612	51.483	28.763	-0.208	1.00	32.32
ATOM	7860	CA	GLU	B	612	51.774	30.140	0.167	1.00	35.16
ATOM	7862	CB	GLU	B	612	53.191	30.511	-0.233	1.00	35.69
ATOM	7865	CG	GLU	B	612	54.234	30.142	0.747	1.00	41.09
ATOM	7868	CD	GLU	B	612	55.569	30.763	0.388	1.00	46.41
ATOM	7869	OE1	GLU	B	612	55.660	31.392	-0.693	1.00	51.85
ATOM	7870	OE2	GLU	B	612	56.511	30.629	1.191	1.00	50.27
ATOM	7871	C	GLU	B	612	50.876	31.064	-0.600	1.00	36.47
ATOM	7872	O	GLU	B	612	50.492	30.767	-1.728	1.00	36.01
ATOM	7874	N	HIS	B	613	50.545	32.195	0.001	1.00	38.61
ATOM	7875	CA	HIS	B	613	49.906	33.254	-0.746	1.00	40.72
ATOM	7877	CB	HIS	B	613	48.401	33.041	-0.825	1.00	40.55
ATOM	7880	CG	HIS	B	613	47.695	34.094	-1.621	1.00	43.13
ATOM	7881	ND1	HIS	B	613	46.529	34.696	-1.201	1.00	43.95
ATOM	7883	CE1	HIS	B	613	46.154	35.590	-2.098	1.00	46.23
ATOM	7885	NE2	HIS	B	613	47.047	35.604	-3.072	1.00	43.38
ATOM	7887	CD2	HIS	B	613	48.018	34.676	-2.800	1.00	42.73
ATOM	7889	C	HIS	B	613	50.208	34.581	-0.102	1.00	42.45
ATOM	7890	O	HIS	B	613	50.066	34.722	1.109	1.00	42.16
ATOM	7892	N	GLY	B	614	50.624	35.551	-0.911	1.00	45.04
ATOM	7893	CA	GLY	B	614	50.913	36.889	-0.404	1.00	47.66
ATOM	7896	C	GLY	B	614	50.371	37.999	-1.282	1.00	50.20
ATOM	7897	O	GLY	B	614	50.198	37.816	-2.491	1.00	49.70
ATOM	7899	N	ILE	B	615	50.113	39.154	-0.663	1.00	53.29
ATOM	7900	CA	ILE	B	615	49.542	40.325	-1.347	1.00	55.96
ATOM	7902	CB	ILE	B	615	47.975	40.336	-1.282	1.00	55.55
ATOM	7904	CG1	ILE	B	615	47.459	39.897	0.090	1.00	55.94
ATOM	7907	CD1	ILE	B	615	45.945	39.638	0.132	1.00	55.92
ATOM	7911	CG2	ILE	B	615	47.381	39.430	-2.346	1.00	56.08
ATOM	7915	C	ILE	B	615	50.102	41.630	-0.750	1.00	57.62
ATOM	7916	O	ILE	B	615	50.722	41.605	0.320	1.00	58.10
ATOM	7918	N	PRO	B	616	49.928	42.769	-1.464	1.00	59.55
ATOM	7919	CA	PRO	B	616	50.155	44.137	-0.937	1.00	59.73
ATOM	7921	CB	PRO	B	616	49.267	44.987	-1.848	1.00	60.02
ATOM	7924	CG	PRO	B	616	49.400	44.301	-3.185	1.00	59.95
ATOM	7927	CD	PRO	B	616	49.551	42.810	-2.894	1.00	59.58
ATOM	7930	C	PRO	B	616	49.774	44.360	0.534	1.00	60.98
ATOM	7931	O	PRO	B	616	49.203	45.404	0.882	1.00	62.52
ATOM	7932	N	GLN	B	619	46.759	45.836	3.519	1.00	59.36
ATOM	7933	CA	GLN	B	619	45.968	44.608	3.459	1.00	59.16

ATOM	7935	CB	GLN	B	619	46.680	43.580	2.584	1.00	59.51
ATOM	7938	CG	GLN	B	619	46.478	43.815	1.102	1.00	61.41
ATOM	7941	CD	GLN	B	619	45.064	43.486	0.659	1.00	64.36
ATOM	7942	OE1	GLN	B	619	44.153	44.306	0.787	1.00	64.94
ATOM	7943	NE2	GLN	B	619	44.874	42.278	0.132	1.00	64.67
ATOM	7946	C	GLN	B	619	45.700	44.030	4.853	1.00	58.05
ATOM	7947	O	GLN	B	619	46.631	43.684	5.580	1.00	59.21
ATOM	7949	N	GLU	B	620	44.422	43.920	5.210	1.00	56.27
ATOM	7950	CA	GLU	B	620	44.009	43.576	6.582	1.00	54.77
ATOM	7952	CB	GLU	B	620	42.571	44.035	6.819	1.00	54.67
ATOM	7955	CG	GLU	B	620	42.125	43.916	8.275	1.00	57.90
ATOM	7958	CD	GLU	B	620	40.892	44.770	8.603	1.00	58.49
ATOM	7959	OE1	GLU	B	620	40.116	45.103	7.670	1.00	66.06
ATOM	7960	OE2	GLU	B	620	40.703	45.105	9.799	1.00	65.28
ATOM	7961	C	GLU	B	620	44.110	42.086	6.910	1.00	51.10
ATOM	7962	O	GLU	B	620	44.260	41.703	8.070	1.00	50.70
ATOM	7964	N	GLN	B	621	44.011	41.254	5.879	1.00	47.32
ATOM	7965	CA	GLN	B	621	43.913	39.825	6.063	1.00	43.49
ATOM	7967	CB	GLN	B	621	42.479	39.482	6.411	1.00	43.62
ATOM	7970	CG	GLN	B	621	42.119	38.037	6.374	1.00	43.19
ATOM	7973	CD	GLN	B	621	40.709	37.807	6.849	1.00	41.44
ATOM	7974	OE1	GLN	B	621	40.338	38.181	7.964	1.00	41.89
ATOM	7975	NE2	GLN	B	621	39.910	37.199	6.005	1.00	36.04
ATOM	7978	C	GLN	B	621	44.311	39.150	4.772	1.00	41.07
ATOM	7979	O	GLN	B	621	43.799	39.499	3.715	1.00	39.40
ATOM	7981	N	VAL	B	622	45.244	38.206	4.863	1.00	37.62
ATOM	7982	CA	VAL	B	622	45.574	37.362	3.731	1.00	35.15
ATOM	7984	CB	VAL	B	622	47.036	37.595	3.168	1.00	35.96
ATOM	7986	CG1	VAL	B	622	47.306	36.690	1.959	1.00	34.83
ATOM	7990	CG2	VAL	B	622	48.086	37.401	4.227	1.00	37.41
ATOM	7994	C	VAL	B	622	45.288	35.925	4.125	1.00	33.27
ATOM	7995	O	VAL	B	622	45.335	35.550	5.306	1.00	31.27
ATOM	7997	N	THR	B	623	44.974	35.133	3.111	1.00	30.95
ATOM	7998	CA	THR	B	623	44.277	33.892	3.289	1.00	29.83
ATOM	8000	CB	THR	B	623	42.792	34.229	3.105	1.00	31.63
ATOM	8002	OG1	THR	B	623	42.159	34.379	4.397	1.00	30.90
ATOM	8004	CG2	THR	B	623	42.077	33.248	2.231	1.00	24.31
ATOM	8008	C	THR	B	623	44.785	32.858	2.270	1.00	30.04
ATOM	8009	O	THR	B	623	45.012	33.173	1.104	1.00	30.15
ATOM	8011	N	VAL	B	624	44.998	31.635	2.731	1.00	28.31
ATOM	8012	CA	VAL	B	624	45.397	30.547	1.870	1.00	26.95
ATOM	8014	CB	VAL	B	624	46.937	30.489	1.674	1.00	28.01
ATOM	8016	CG1	VAL	B	624	47.295	29.592	0.442	1.00	24.90
ATOM	8020	CG2	VAL	B	624	47.661	30.042	2.927	1.00	27.12
ATOM	8024	C	VAL	B	624	44.831	29.251	2.423	1.00	26.88
ATOM	8025	O	VAL	B	624	44.958	28.973	3.637	1.00	26.95
ATOM	8027	N	ALA	B	625	44.180	28.496	1.535	1.00	24.89
ATOM	8028	CA	ALA	B	625	43.480	27.275	1.871	1.00	25.71
ATOM	8030	CB	ALA	B	625	42.046	27.343	1.356	1.00	26.60
ATOM	8034	C	ALA	B	625	44.169	26.033	1.317	1.00	26.80
ATOM	8035	O	ALA	B	625	44.684	26.020	0.177	1.00	25.90
ATOM	8037	N	CYS	B	626	44.169	24.987	2.129	1.00	25.95
ATOM	8038	CA	CYS	B	626	44.537	23.670	1.661	1.00	26.55
ATOM	8040	CB	CYS	B	626	44.576	22.665	2.804	1.00	26.39
ATOM	8043	SG	CYS	B	626	45.749	23.105	4.071	1.00	30.72
ATOM	8045	C	CYS	B	626	43.519	23.163	0.653	1.00	26.62
ATOM	8046	O	CYS	B	626	42.349	23.541	0.660	1.00	24.12
ATOM	8048	N	GLU	B	627	43.970	22.216	-0.148	1.00	28.08
ATOM	8049	CA	GLU	B	627	43.130	21.622	-1.156	1.00	29.55
ATOM	8051	CB	GLU	B	627	43.986	20.921	-2.230	1.00	30.48
ATOM	8054	CG	GLU	B	627	45.062	21.854	-2.861	1.00	30.20

ATOM	8057	CD	GLU	B	627	44.494	23.104	-3.511	1.00	31.55
ATOM	8058	OE1	GLU	B	627	43.273	23.168	-3.778	1.00	39.95
ATOM	8059	OE2	GLU	B	627	45.276	24.041	-3.762	1.00	34.28
ATOM	8060	C	GLU	B	627	42.209	20.666	-0.465	1.00	30.43
ATOM	8061	O	GLU	B	627	42.523	20.130	0.606	1.00	30.08
ATOM	8063	N	GLU	B	628	41.057	20.460	-1.087	1.00	31.59
ATOM	8064	CA	GLU	B	628	40.053	19.564	-0.573	1.00	32.57
ATOM	8066	CB	GLU	B	628	38.880	19.476	-1.552	1.00	34.01
ATOM	8069	CG	GLU	B	628	37.601	18.992	-0.940	1.00	40.30
ATOM	8072	CD	GLU	B	628	36.666	18.433	-1.992	1.00	53.20
ATOM	8073	OE1	GLU	B	628	36.018	19.234	-2.715	1.00	57.24
ATOM	8074	OE2	GLU	B	628	36.596	17.188	-2.105	1.00	60.26
ATOM	8075	C	GLU	B	628	40.689	18.212	-0.341	1.00	31.09
ATOM	8076	O	GLU	B	628	41.477	17.729	-1.160	1.00	31.61
ATOM	8078	N	GLY	B	629	40.387	17.621	0.811	1.00	30.24
ATOM	8079	CA	GLY	B	629	40.939	16.326	1.199	1.00	29.55
ATOM	8082	C	GLY	B	629	42.271	16.437	1.932	1.00	28.53
ATOM	8083	O	GLY	B	629	42.869	15.415	2.302	1.00	29.35
ATOM	8085	N	TRP	B	630	42.770	17.665	2.075	1.00	27.26
ATOM	8086	CA	TRP	B	630	43.980	17.926	2.850	1.00	26.32
ATOM	8088	CB	TRP	B	630	44.957	18.793	2.054	1.00	26.02
ATOM	8091	CG	TRP	B	630	45.543	18.114	0.874	1.00	27.15
ATOM	8092	CD1	TRP	B	630	44.933	17.898	-0.332	1.00	27.20
ATOM	8094	NE1	TRP	B	630	45.791	17.236	-1.186	1.00	29.67
ATOM	8096	CE2	TRP	B	630	46.979	17.019	-0.541	1.00	29.12
ATOM	8097	CD2	TRP	B	630	46.867	17.579	0.756	1.00	25.57
ATOM	8098	CE3	TRP	B	630	47.959	17.486	1.626	1.00	26.86
ATOM	8100	CZ3	TRP	B	630	49.101	16.894	1.190	1.00	24.94
ATOM	8102	CH2	TRP	B	630	49.192	16.354	-0.124	1.00	27.02
ATOM	8104	CZ2	TRP	B	630	48.148	16.424	-0.994	1.00	27.49
ATOM	8106	C	TRP	B	630	43.585	18.644	4.140	1.00	25.95
ATOM	8107	O	TRP	B	630	42.624	19.411	4.172	1.00	26.57
ATOM	8109	N	THR	B	631	44.343	18.411	5.200	1.00	23.50
ATOM	8110	CA	THR	B	631	44.029	19.004	6.491	1.00	22.17
ATOM	8112	CB	THR	B	631	43.963	17.935	7.560	1.00	21.42
ATOM	8114	OG1	THR	B	631	42.893	17.012	7.293	1.00	20.70
ATOM	8116	CG2	THR	B	631	43.728	18.589	8.930	1.00	20.16
ATOM	8120	C	THR	B	631	45.113	20.014	6.852	1.00	20.84
ATOM	8121	O	THR	B	631	46.296	19.657	6.908	1.00	20.87
ATOM	8123	N	LEU	B	632	44.730	21.270	7.078	1.00	19.52
ATOM	8124	CA	LEU	B	632	45.687	22.294	7.507	1.00	18.84
ATOM	8126	CB	LEU	B	632	45.013	23.674	7.607	1.00	19.86
ATOM	8129	CG	LEU	B	632	45.784	24.985	7.935	1.00	19.75
ATOM	8131	CD1	LEU	B	632	44.778	26.116	7.932	1.00	23.22
ATOM	8135	CD2	LEU	B	632	46.854	25.309	6.977	1.00	25.39
ATOM	8139	C	LEU	B	632	46.242	21.887	8.874	1.00	19.48
ATOM	8140	O	LEU	B	632	45.464	21.692	9.813	1.00	16.02
ATOM	8142	N	THR	B	633	47.566	21.747	8.964	1.00	17.88
ATOM	8143	CA	THR	B	633	48.229	21.467	10.245	1.00	18.73
ATOM	8145	CB	THR	B	633	49.268	20.341	10.118	1.00	19.92
ATOM	8147	OG1	THR	B	633	50.322	20.744	9.239	1.00	18.60
ATOM	8149	CG2	THR	B	633	48.613	18.962	9.629	1.00	17.87
ATOM	8153	C	THR	B	633	48.908	22.699	10.833	1.00	20.28
ATOM	8154	O	THR	B	633	49.041	22.811	12.062	1.00	21.92
ATOM	8156	N	GLY	B	634	49.385	23.594	9.976	1.00	21.30
ATOM	8157	CA	GLY	B	634	50.065	24.799	10.412	1.00	21.80
ATOM	8160	C	GLY	B	634	49.755	26.003	9.558	1.00	22.56
ATOM	8161	O	GLY	B	634	49.546	25.898	8.349	1.00	23.69
ATOM	8163	N	CYS	B	635	49.732	27.154	10.208	1.00	23.58
ATOM	8164	CA	CYS	B	635	49.392	28.418	9.583	1.00	24.55
ATOM	8166	CB	CYS	B	635	47.920	28.732	9.834	1.00	24.75

ATOM	8169	SG	CYS	B	635	47.431	30.378	9.385	1.00	25.58
ATOM	8171	C	CYS	B	635	50.271	29.502	10.181	1.00	25.27
ATOM	8172	O	CYS	B	635	50.355	29.635	11.391	1.00	24.55
ATOM	8174	N	SER	B	636	50.968	30.234	9.327	1.00	25.99
ATOM	8175	CA	SER	B	636	51.885	31.273	9.794	1.00	26.14
ATOM	8177	CB	SER	B	636	53.238	30.675	10.156	1.00	27.19
ATOM	8180	OG	SER	B	636	53.893	30.180	8.996	1.00	26.13
ATOM	8182	C	SER	B	636	52.061	32.320	8.723	1.00	28.25
ATOM	8183	O	SER	B	636	51.683	32.121	7.577	1.00	27.02
ATOM	8185	N	ALA	B	637	52.620	33.448	9.127	1.00	29.78
ATOM	8186	CA	ALA	B	637	52.949	34.522	8.219	1.00	31.83
ATOM	8188	CB	ALA	B	637	52.540	35.845	8.811	1.00	30.13
ATOM	8192	C	ALA	B	637	54.455	34.488	7.974	1.00	34.06
ATOM	8193	O	ALA	B	637	55.246	34.341	8.910	1.00	35.54
ATOM	8195	N	LEU	B	638	54.842	34.611	6.716	1.00	36.15
ATOM	8196	CA	LEU	B	638	56.256	34.820	6.360	1.00	37.92
ATOM	8198	CB	LEU	B	638	56.368	35.075	4.851	1.00	38.61
ATOM	8201	CG	LEU	B	638	57.262	34.183	3.974	1.00	41.25
ATOM	8203	CD1	LEU	B	638	56.884	34.380	2.496	1.00	43.68
ATOM	8207	CD2	LEU	B	638	57.169	32.717	4.352	1.00	40.87
ATOM	8211	C	LEU	B	638	56.751	36.031	7.162	1.00	39.19
ATOM	8212	O	LEU	B	638	56.009	36.985	7.327	1.00	39.42
ATOM	8214	N	PRO	B	639	57.981	35.980	7.704	1.00	39.96
ATOM	8215	CA	PRO	B	639	58.511	37.130	8.455	1.00	41.01
ATOM	8217	CB	PRO	B	639	59.689	36.535	9.233	1.00	41.54
ATOM	8220	CG	PRO	B	639	60.110	35.343	8.453	1.00	41.93
ATOM	8223	CD	PRO	B	639	58.934	34.859	7.647	1.00	40.69
ATOM	8226	C	PRO	B	639	58.984	38.267	7.544	1.00	41.21
ATOM	8227	O	PRO	B	639	58.993	38.100	6.310	1.00	40.75
ATOM	8228	N	SER	B	642	52.611	44.200	6.921	1.00	58.10
ATOM	8229	CA	SER	B	642	54.006	43.977	7.283	1.00	58.10
ATOM	8231	CB	SER	B	642	54.876	45.147	6.814	1.00	58.47
ATOM	8234	OG	SER	B	642	54.700	45.389	5.424	1.00	59.57
ATOM	8236	C	SER	B	642	54.139	43.794	8.791	1.00	57.37
ATOM	8237	O	SER	B	642	55.040	43.080	9.262	1.00	58.24
ATOM	8239	N	HIS	B	643	53.259	44.462	9.539	1.00	55.46
ATOM	8240	CA	HIS	B	643	53.085	44.188	10.960	1.00	53.93
ATOM	8242	CB	HIS	B	643	52.939	45.461	11.773	1.00	54.53
ATOM	8245	CG	HIS	B	643	52.635	45.188	13.207	1.00	57.17
ATOM	8246	ND1	HIS	B	643	53.467	44.424	13.999	1.00	61.01
ATOM	8248	CE1	HIS	B	643	52.942	44.318	15.206	1.00	60.56
ATOM	8250	NE2	HIS	B	643	51.795	44.977	15.222	1.00	61.48
ATOM	8252	CD2	HIS	B	643	51.575	45.523	13.981	1.00	59.00
ATOM	8254	C	HIS	B	643	51.843	43.324	11.178	1.00	51.17
ATOM	8255	O	HIS	B	643	50.701	43.802	11.081	1.00	51.80
ATOM	8257	N	VAL	B	644	52.073	42.054	11.490	1.00	47.48
ATOM	8258	CA	VAL	B	644	50.998	41.105	11.568	1.00	44.11
ATOM	8260	CB	VAL	B	644	51.397	39.684	11.032	1.00	43.90
ATOM	8262	CG1	VAL	B	644	51.743	38.728	12.144	1.00	43.28
ATOM	8266	CG2	VAL	B	644	52.517	39.783	10.011	1.00	43.94
ATOM	8270	C	VAL	B	644	50.498	41.074	12.998	1.00	40.94
ATOM	8271	O	VAL	B	644	51.283	41.109	13.935	1.00	42.16
ATOM	8273	N	LEU	B	645	49.179	41.054	13.133	1.00	36.98
ATOM	8274	CA	LEU	B	645	48.484	40.857	14.396	1.00	34.85
ATOM	8276	CB	LEU	B	645	47.013	41.239	14.247	1.00	35.20
ATOM	8279	CG	LEU	B	645	46.695	42.731	14.306	1.00	36.97
ATOM	8281	CD1	LEU	B	645	45.785	43.115	13.140	1.00	36.23
ATOM	8285	CD2	LEU	B	645	47.987	43.567	14.319	1.00	34.29
ATOM	8289	C	LEU	B	645	48.561	39.413	14.825	1.00	32.46
ATOM	8290	O	LEU	B	645	48.642	39.103	16.005	1.00	31.01
ATOM	8292	N	GLY	B	646	48.536	38.522	13.853	1.00	30.59

ATOM	8293	CA	GLY	B	646	48.636	37.110	14.158	1.00	28.53
ATOM	8296	C	GLY	B	646	48.178	36.298	12.993	1.00	26.23
ATOM	8297	O	GLY	B	646	47.887	36.814	11.932	1.00	27.08
ATOM	8299	N	ALA	B	647	48.139	35.000	13.216	1.00	25.44
ATOM	8300	CA	ALA	B	647	47.737	34.042	12.214	1.00	24.50
ATOM	8302	CB	ALA	B	647	48.955	33.448	11.560	1.00	23.36
ATOM	8306	C	ALA	B	647	46.942	32.971	12.911	1.00	24.33
ATOM	8307	O	ALA	B	647	47.166	32.669	14.077	1.00	25.31
ATOM	8309	N	TYR	B	648	46.008	32.382	12.190	1.00	24.27
ATOM	8310	CA	TYR	B	648	45.185	31.313	12.742	1.00	22.50
ATOM	8312	CB	TYR	B	648	44.114	31.875	13.680	1.00	22.25
ATOM	8315	CG	TYR	B	648	43.399	33.099	13.159	1.00	24.33
ATOM	8316	CD1	TYR	B	648	43.847	34.373	13.475	1.00	22.10
ATOM	8318	CE1	TYR	B	648	43.173	35.473	13.042	1.00	23.77
ATOM	8320	CZ	TYR	B	648	42.067	35.330	12.267	1.00	19.94
ATOM	8321	OH	TYR	B	648	41.441	36.441	11.801	1.00	28.08
ATOM	8323	CE2	TYR	B	648	41.608	34.096	11.911	1.00	25.95
ATOM	8325	CD2	TYR	B	648	42.264	32.979	12.380	1.00	23.54
ATOM	8327	C	TYR	B	648	44.551	30.514	11.621	1.00	21.27
ATOM	8328	O	TYR	B	648	44.263	31.044	10.556	1.00	20.08
ATOM	8330	N	ALA	B	649	44.403	29.222	11.869	1.00	20.69
ATOM	8331	CA	ALA	B	649	43.690	28.312	11.014	1.00	20.77
ATOM	8333	CB	ALA	B	649	44.088	26.874	11.355	1.00	19.65
ATOM	8337	C	ALA	B	649	42.194	28.467	11.261	1.00	21.75
ATOM	8338	O	ALA	B	649	41.752	28.497	12.421	1.00	25.01
ATOM	8340	N	VAL	B	650	41.429	28.597	10.189	1.00	19.38
ATOM	8341	CA	VAL	B	650	39.973	28.514	10.234	1.00	21.20
ATOM	8343	CB	VAL	B	650	39.333	29.759	9.648	1.00	20.20
ATOM	8345	CG1	VAL	B	650	37.841	29.595	9.616	1.00	25.10
ATOM	8349	CG2	VAL	B	650	39.742	30.979	10.443	1.00	24.74
ATOM	8353	C	VAL	B	650	39.618	27.320	9.375	1.00	21.77
ATOM	8354	O	VAL	B	650	39.723	27.385	8.159	1.00	20.44
ATOM	8356	N	ASP	B	651	39.231	26.218	10.010	1.00	22.62
ATOM	8357	CA	ASP	B	651	39.007	24.963	9.306	1.00	22.34
ATOM	8359	CB	ASP	B	651	37.791	25.033	8.400	1.00	23.00
ATOM	8362	CG	ASP	B	651	37.465	23.687	7.773	1.00	28.78
ATOM	8363	OD1	ASP	B	651	37.832	22.636	8.379	1.00	41.71
ATOM	8364	OD2	ASP	B	651	36.871	23.683	6.679	1.00	36.81
ATOM	8365	C	ASP	B	651	40.294	24.630	8.560	1.00	22.45
ATOM	8366	O	ASP	B	651	41.302	24.452	9.213	1.00	23.64
ATOM	8368	N	ASN	B	652	40.292	24.619	7.218	1.00	22.90
ATOM	8369	CA	ASN	B	652	41.501	24.332	6.424	1.00	21.73
ATOM	8371	CB	ASN	B	652	41.243	23.143	5.503	1.00	22.88
ATOM	8374	CG	ASN	B	652	41.060	21.861	6.291	1.00	23.68
ATOM	8375	OD1	ASN	B	652	41.870	21.549	7.178	1.00	25.46
ATOM	8376	ND2	ASN	B	652	39.990	21.124	6.003	1.00	25.61
ATOM	8379	C	ASN	B	652	42.050	25.526	5.656	1.00	22.15
ATOM	8380	O	ASN	B	652	42.803	25.359	4.700	1.00	22.18
ATOM	8382	N	THR	B	653	41.735	26.716	6.161	1.00	22.08
ATOM	8383	CA	THR	B	653	42.198	27.977	5.631	1.00	22.01
ATOM	8385	CB	THR	B	653	41.031	28.887	5.305	1.00	21.47
ATOM	8387	OG1	THR	B	653	40.238	28.260	4.295	1.00	27.20
ATOM	8389	CG2	THR	B	653	41.505	30.230	4.772	1.00	19.56
ATOM	8393	C	THR	B	653	43.074	28.672	6.656	1.00	22.04
ATOM	8394	O	THR	B	653	42.688	28.844	7.825	1.00	22.13
ATOM	8396	N	CYS	B	654	44.254	29.069	6.224	1.00	20.77
ATOM	8397	CA	CYS	B	654	45.189	29.792	7.074	1.00	21.91
ATOM	8399	CB	CYS	B	654	46.646	29.476	6.683	1.00	22.26
ATOM	8402	SG	CYS	B	654	47.810	30.526	7.370	1.00	23.53
ATOM	8404	C	CYS	B	654	44.925	31.266	6.900	1.00	22.16
ATOM	8405	O	CYS	B	654	44.869	31.757	5.779	1.00	21.75

ATOM	8407	N	VAL	B	655	44.679	31.961	8.005	1.00	22.64
ATOM	8408	CA	VAL	B	655	44.419	33.394	7.933	1.00	23.60
ATOM	8410	CB	VAL	B	655	43.099	33.811	8.646	1.00	24.98
ATOM	8412	CG1	VAL	B	655	42.956	35.358	8.607	1.00	25.10
ATOM	8416	CG2	VAL	B	655	41.889	33.124	8.054	1.00	24.82
ATOM	8420	C	VAL	B	655	45.542	34.145	8.598	1.00	23.89
ATOM	8421	O	VAL	B	655	45.905	33.861	9.741	1.00	23.94
ATOM	8423	N	VAL	B	656	46.089	35.127	7.894	1.00	26.07
ATOM	8424	CA	VAL	B	656	47.074	36.031	8.473	1.00	27.73
ATOM	8426	CB	VAL	B	656	48.365	36.075	7.634	1.00	28.30
ATOM	8428	CG1	VAL	B	656	49.213	37.281	8.023	1.00	27.81
ATOM	8432	CG2	VAL	B	656	49.160	34.746	7.816	1.00	27.89
ATOM	8436	C	VAL	B	656	46.459	37.420	8.569	1.00	30.58
ATOM	8437	O	VAL	B	656	45.896	37.916	7.592	1.00	29.39
ATOM	8439	N	ARG	B	657	46.571	38.020	9.754	1.00	33.66
ATOM	8440	CA	ARG	B	657	45.985	39.308	10.034	1.00	35.89
ATOM	8442	CB	ARG	B	657	45.117	39.225	11.292	1.00	35.83
ATOM	8445	CG	ARG	B	657	43.802	38.488	11.110	1.00	37.24
ATOM	8448	CD	ARG	B	657	42.719	39.363	10.461	1.00	41.61
ATOM	8451	NE	ARG	B	657	42.395	40.473	11.347	1.00	43.08
ATOM	8453	CZ	ARG	B	657	41.573	40.405	12.392	1.00	44.42
ATOM	8454	NH1	ARG	B	657	40.931	39.276	12.699	1.00	39.19
ATOM	8457	NH2	ARG	B	657	41.391	41.492	13.139	1.00	44.93
ATOM	8460	C	ARG	B	657	47.094	40.317	10.212	1.00	37.97
ATOM	8461	O	ARG	B	657	48.045	40.087	10.957	1.00	36.41
ATOM	8463	N	SER	B	658	46.971	41.437	9.517	1.00	42.22
ATOM	8464	CA	SER	B	658	47.902	42.546	9.684	1.00	45.93
ATOM	8466	CB	SER	B	658	48.834	42.613	8.486	1.00	46.24
ATOM	8469	OG	SER	B	658	48.087	42.916	7.330	1.00	49.26
ATOM	8471	C	SER	B	658	47.160	43.870	9.850	1.00	48.51
ATOM	8472	O	SER	B	658	45.935	43.930	9.690	1.00	48.84
ATOM	8474	N	ARG	B	659	47.917	44.919	10.181	1.00	52.24
ATOM	8475	CA	ARG	B	659	47.351	46.262	10.396	1.00	54.62
ATOM	8477	CB	ARG	B	659	48.179	47.048	11.431	1.00	55.31
ATOM	8480	CG	ARG	B	659	47.339	47.944	12.361	1.00	59.46
ATOM	8483	CD	ARG	B	659	47.921	47.988	13.778	1.00	66.97
ATOM	8486	NE	ARG	B	659	46.973	48.501	14.771	1.00	70.83
ATOM	8488	CZ	ARG	B	659	45.930	47.827	15.268	1.00	73.63
ATOM	8489	NH1	ARG	B	659	45.651	46.587	14.865	1.00	74.15
ATOM	8492	NH2	ARG	B	659	45.142	48.407	16.174	1.00	73.93
ATOM	8495	C	ARG	B	659	47.256	47.039	9.078	1.00	55.39
ATOM	8496	O	ARG	B	659	48.259	47.246	8.385	1.00	56.84
ATOM	8498	N	ALA	B	671	54.934	43.088	0.839	1.00	51.43
ATOM	8499	CA	ALA	B	671	53.818	42.169	0.665	1.00	51.11
ATOM	8501	CB	ALA	B	671	53.988	41.374	-0.616	1.00	51.11
ATOM	8505	C	ALA	B	671	53.735	41.220	1.854	1.00	50.59
ATOM	8506	O	ALA	B	671	54.754	40.655	2.265	1.00	52.10
ATOM	8508	N	VAL	B	672	52.535	41.043	2.403	1.00	48.41
ATOM	8509	CA	VAL	B	672	52.325	40.103	3.511	1.00	46.51
ATOM	8511	CB	VAL	B	672	51.238	40.609	4.466	1.00	46.81
ATOM	8513	CG1	VAL	B	672	51.672	41.939	5.074	1.00	48.84
ATOM	8517	CG2	VAL	B	672	50.961	39.585	5.561	1.00	47.15
ATOM	8521	C	VAL	B	672	51.931	38.737	2.950	1.00	44.14
ATOM	8522	O	VAL	B	672	51.198	38.659	1.960	1.00	43.15
ATOM	8524	N	THR	B	673	52.399	37.667	3.589	1.00	41.41
ATOM	8525	CA	THR	B	673	52.240	36.331	3.015	1.00	39.38
ATOM	8527	CB	THR	B	673	53.525	35.900	2.314	1.00	39.65
ATOM	8529	OG1	THR	B	673	53.714	36.731	1.163	1.00	42.77
ATOM	8531	CG2	THR	B	673	53.456	34.422	1.877	1.00	39.06
ATOM	8535	C	THR	B	673	51.825	35.249	4.008	1.00	36.39
ATOM	8536	O	THR	B	673	52.524	34.996	4.975	1.00	36.99

ATOM	8538	N	ALA B 674	50.693	34.609	3.716	1.00	33.03
ATOM	8539	CA	ALA B 674	50.186	33.484	4.477	1.00	30.54
ATOM	8541	CB	ALA B 674	48.650	33.406	4.367	1.00	28.77
ATOM	8545	C	ALA B 674	50.807	32.190	3.961	1.00	28.97
ATOM	8546	O	ALA B 674	50.941	31.989	2.751	1.00	28.38
ATOM	8548	N	VAL B 675	51.159	31.316	4.897	1.00	26.57
ATOM	8549	CA	VAL B 675	51.763	30.018	4.600	1.00	25.38
ATOM	8551	CB	VAL B 675	53.267	30.006	5.023	1.00	25.94
ATOM	8553	CG1	VAL B 675	53.896	28.647	4.736	1.00	25.66
ATOM	8557	CG2	VAL B 675	54.028	31.126	4.324	1.00	27.31
ATOM	8561	C	VAL B 675	51.031	28.915	5.351	1.00	23.56
ATOM	8562	O	VAL B 675	50.977	28.941	6.574	1.00	24.51
ATOM	8564	N	ALA B 676	50.453	27.970	4.617	1.00	20.87
ATOM	8565	CA	ALA B 676	49.720	26.831	5.165	1.00	20.74
ATOM	8567	CB	ALA B 676	48.361	26.657	4.480	1.00	20.56
ATOM	8571	C	ALA B 676	50.523	25.574	4.918	1.00	21.29
ATOM	8572	O	ALA B 676	51.033	25.382	3.821	1.00	21.36
ATOM	8574	N	ILE B 677	50.634	24.747	5.947	1.00	20.17
ATOM	8575	CA	ILE B 677	51.177	23.415	5.834	1.00	20.55
ATOM	8577	CB	ILE B 677	52.109	23.086	7.005	1.00	20.74
ATOM	8579	CG1	ILE B 677	53.284	24.085	7.005	1.00	23.32
ATOM	8582	CD1	ILE B 677	54.209	23.966	8.174	1.00	21.37
ATOM	8586	CG2	ILE B 677	52.581	21.650	6.901	1.00	19.02
ATOM	8590	C	ILE B 677	49.967	22.539	5.840	1.00	21.54
ATOM	8591	O	ILE B 677	49.173	22.598	6.763	1.00	22.01
ATOM	8593	N	CYS B 678	49.818	21.735	4.794	1.00	22.07
ATOM	8594	CA	CYS B 678	48.635	20.905	4.590	1.00	22.02
ATOM	8596	CB	CYS B 678	47.954	21.310	3.299	1.00	23.41
ATOM	8599	SG	CYS B 678	47.573	23.063	3.183	1.00	29.39
ATOM	8601	C	CYS B 678	49.073	19.468	4.491	1.00	22.63
ATOM	8602	O	CYS B 678	49.999	19.176	3.750	1.00	23.98
ATOM	8604	N	CYS B 679	48.403	18.577	5.207	1.00	22.12
ATOM	8605	CA	CYS B 679	48.777	17.168	5.248	1.00	25.20
ATOM	8607	CB	CYS B 679	49.374	16.813	6.615	1.00	24.84
ATOM	8610	SG	CYS B 679	50.802	17.869	7.114	1.00	29.63
ATOM	8612	C	CYS B 679	47.590	16.270	4.996	1.00	26.99
ATOM	8613	O	CYS B 679	46.442	16.667	5.172	1.00	25.86
ATOM	8615	N	ARG B 680	47.874	15.032	4.612	1.00	29.32
ATOM	8616	CA	ARG B 680	46.837	14.034	4.518	1.00	31.40
ATOM	8618	CB	ARG B 680	46.103	14.146	3.172	1.00	30.41
ATOM	8621	CG	ARG B 680	46.874	13.570	2.017	1.00	33.00
ATOM	8624	CD	ARG B 680	46.110	13.650	0.698	1.00	33.17
ATOM	8627	NE	ARG B 680	47.036	13.482	-0.414	1.00	36.42
ATOM	8629	CZ	ARG B 680	46.693	13.487	-1.700	1.00	36.62
ATOM	8630	NH1	ARG B 680	45.435	13.647	-2.062	1.00	29.02
ATOM	8633	NH2	ARG B 680	47.633	13.334	-2.620	1.00	38.68
ATOM	8636	C	ARG B 680	47.427	12.638	4.732	1.00	33.50
ATOM	8637	O	ARG B 680	48.632	12.444	4.689	1.00	33.52
ATOM	8639	N	SER B 681	46.543	11.692	5.000	1.00	38.39
ATOM	8640	CA	SER B 681	46.854	10.265	5.013	1.00	41.90
ATOM	8642	CB	SER B 681	45.584	9.497	5.350	1.00	42.26
ATOM	8645	OG	SER B 681	45.850	8.131	5.565	1.00	47.83
ATOM	8647	C	SER B 681	47.331	9.852	3.628	1.00	43.67
ATOM	8648	O	SER B 681	46.747	10.262	2.626	1.00	44.62
ATOM	8650	N	ARG B 682	48.381	9.046	3.564	1.00	45.51
ATOM	8651	CA	ARG B 682	49.017	8.711	2.291	1.00	47.73
ATOM	8653	CB	ARG B 682	50.529	8.650	2.493	1.00	47.66
ATOM	8656	CG	ARG B 682	51.358	8.394	1.255	1.00	51.20
ATOM	8659	CD	ARG B 682	52.846	8.320	1.637	1.00	51.70
ATOM	8662	NE	ARG B 682	53.528	9.617	1.551	1.00	56.05
ATOM	8664	CZ	ARG B 682	54.622	9.953	2.240	1.00	59.30

ATOM	8665	NH1	ARG	B	682	55.176	9.103	3.113	1.00	61.30
ATOM	8668	NH2	ARG	B	682	55.168	11.157	2.066	1.00	57.99
ATOM	8671	C	ARG	B	682	48.472	7.378	1.800	1.00	47.99
ATOM	8672	O	ARG	B	682	47.555	6.818	2.418	1.00	49.18
ATOM	8674	CA	CA	C	1	33.006	24.044	25.670	1.00	60.13
ATOM	8675	C1	NAG	D	504	57.410	6.066	17.249	1.00	61.39
ATOM	8678	C2	NAG	D	504	57.849	4.851	18.079	1.00	67.64
ATOM	8680	N2	NAG	D	504	58.843	5.273	19.063	1.00	70.03
ATOM	8682	C7	NAG	D	504	59.122	4.572	20.169	1.00	69.79
ATOM	8683	O7	NAG	D	504	60.275	4.239	20.459	1.00	67.77
ATOM	8684	C8	NAG	D	504	57.968	4.209	21.066	1.00	69.17
ATOM	8688	C3	NAG	D	504	58.370	3.647	17.287	1.00	69.10
ATOM	8690	O3	NAG	D	504	57.896	2.479	17.922	1.00	73.34
ATOM	8692	C4	NAG	D	504	57.967	3.629	15.813	1.00	68.84
ATOM	8694	O4	NAG	D	504	58.863	2.804	15.102	1.00	70.16
ATOM	8696	C5	NAG	D	504	57.960	5.055	15.257	1.00	69.60
ATOM	8698	C6	NAG	D	504	57.582	5.186	13.789	1.00	71.44
ATOM	8701	O6	NAG	D	504	57.007	6.460	13.578	1.00	72.09
ATOM	8703	O5	NAG	D	504	56.957	5.712	15.969	1.00	64.68
ATOM	8704	O	HOH	W	1	23.713	39.227	29.802	1.00	43.16
ATOM	8707	O	HOH	W	2	39.092	34.447	46.487	1.00	34.70
ATOM	8710	O	HOH	W	3	35.185	28.395	12.172	1.00	22.00
ATOM	8713	O	HOH	W	4	42.872	25.872	46.855	1.00	30.74
ATOM	8716	O	HOH	W	5	36.850	24.746	37.585	1.00	18.55
ATOM	8719	O	HOH	W	6	43.792	12.705	5.643	1.00	31.06
ATOM	8722	O	HOH	W	7	30.412	38.957	44.348	1.00	37.37
ATOM	8725	O	HOH	W	8	24.348	23.024	64.225	1.00	44.19
ATOM	8728	O	HOH	W	9	34.141	13.196	49.875	1.00	21.63
ATOM	8731	O	HOH	W	10	40.255	18.397	10.292	1.00	27.91
ATOM	8734	O	HOH	W	11	13.392	12.922	37.899	1.00	21.41
ATOM	8737	O	HOH	W	12	49.629	13.056	-5.046	1.00	44.84
ATOM	8740	O	HOH	W	13	33.258	30.301	40.846	1.00	20.51
ATOM	8743	O	HOH	W	14	11.128	22.327	13.705	1.00	15.23
ATOM	8746	O	HOH	W	15	43.571	36.537	0.622	1.00	38.22
ATOM	8749	O	HOH	W	16	20.846	26.682	47.671	1.00	24.42
ATOM	8752	O	HOH	W	17	54.340	12.273	19.574	1.00	35.00
ATOM	8755	O	HOH	W	18	35.234	11.835	45.400	1.00	37.01
ATOM	8758	O	HOH	W	19	35.564	26.190	26.907	1.00	30.06
ATOM	8761	O	HOH	W	20	38.769	23.689	14.322	1.00	14.55
ATOM	8764	O	HOH	W	21	28.134	37.179	56.279	1.00	24.88
ATOM	8767	O	HOH	W	22	26.143	41.665	39.125	1.00	20.70
ATOM	8770	O	HOH	W	23	36.025	8.692	48.894	1.00	26.09
ATOM	8773	O	HOH	W	24	18.836	22.542	40.860	1.00	20.83
ATOM	8776	O	HOH	W	25	10.791	28.922	22.921	1.00	25.58
ATOM	8779	O	HOH	W	26	11.998	32.126	18.518	1.00	56.89
ATOM	8782	O	HOH	W	27	33.098	6.138	23.868	1.00	34.23
ATOM	8785	O	HOH	W	28	10.095	22.811	9.731	1.00	34.56
ATOM	8788	O	HOH	W	29	41.753	18.203	-3.993	1.00	32.07
ATOM	8791	O	HOH	W	30	38.392	31.900	13.505	1.00	25.39
ATOM	8794	O	HOH	W	31	28.231	-0.128	16.791	1.00	23.61
ATOM	8797	O	HOH	W	32	52.889	26.839	11.032	1.00	18.19
ATOM	8800	O	HOH	W	33	42.676	19.547	44.642	1.00	31.06
ATOM	8803	O	HOH	W	34	30.750	7.789	27.599	1.00	28.83
ATOM	8806	O	HOH	W	35	22.045	4.053	8.954	1.00	48.50
ATOM	8809	O	HOH	W	36	10.044	14.225	35.563	1.00	23.73
ATOM	8812	O	HOH	W	37	22.875	30.447	63.601	1.00	35.80
ATOM	8815	O	HOH	W	38	28.298	3.457	31.230	1.00	30.26
ATOM	8818	O	HOH	W	39	28.453	17.648	13.659	1.00	20.87
ATOM	8821	O	HOH	W	40	25.796	26.368	29.984	1.00	18.67
ATOM	8824	O	HOH	W	41	24.825	29.926	60.500	1.00	25.90
ATOM	8827	O	HOH	W	42	34.666	20.787	24.107	1.00	33.02

ATOM	8830	O	HOH	W	43	14.347	28.958	12.025	1.00	29.72
ATOM	8833	O	HOH	W	44	24.177	21.236	9.248	1.00	27.41
ATOM	8836	O	HOH	W	45	10.478	14.732	40.511	1.00	37.92
ATOM	8839	O	HOH	W	46	34.823	23.942	17.461	1.00	18.56
ATOM	8842	O	HOH	W	47	27.217	32.701	44.241	1.00	19.04
ATOM	8845	O	HOH	W	48	26.870	-3.826	34.297	1.00	26.54
ATOM	8848	O	HOH	W	49	12.547	19.979	5.441	1.00	33.79
ATOM	8851	O	HOH	W	50	9.616	15.582	19.973	1.00	22.52
ATOM	8854	O	HOH	W	51	49.344	27.077	13.260	1.00	24.66
ATOM	8857	O	HOH	W	52	30.524	35.140	35.198	1.00	22.66
ATOM	8860	O	HOH	W	53	37.464	9.998	26.196	1.00	38.45
ATOM	8863	O	HOH	W	54	31.605	39.953	23.824	1.00	32.46
ATOM	8866	O	HOH	W	55	35.643	32.660	31.998	1.00	27.98
ATOM	8869	O	HOH	W	56	26.736	24.307	63.842	1.00	27.05
ATOM	8872	O	HOH	W	57	34.856	32.719	60.157	1.00	22.06
ATOM	8875	O	HOH	W	58	35.122	34.288	23.454	1.00	19.95
ATOM	8878	O	HOH	W	59	37.937	17.990	13.014	1.00	23.28
ATOM	8881	O	HOH	W	60	38.675	28.328	23.710	1.00	28.66
ATOM	8884	O	HOH	W	61	32.340	15.653	27.600	1.00	24.64
ATOM	8887	O	HOH	W	62	36.759	26.483	34.686	1.00	39.66
ATOM	8890	O	HOH	W	63	6.873	20.555	25.964	1.00	23.17
ATOM	8893	O	HOH	W	64	24.195	12.633	44.166	1.00	24.46
ATOM	8896	O	HOH	W	65	15.979	13.063	44.763	1.00	39.42
ATOM	8899	O	HOH	W	66	21.086	26.156	11.410	1.00	19.20
ATOM	8902	O	HOH	W	67	10.176	21.331	36.580	1.00	27.01
ATOM	8905	O	HOH	W	68	34.406	30.489	8.481	1.00	36.19
ATOM	8908	O	HOH	W	69	38.727	28.290	28.990	1.00	36.66
ATOM	8911	O	HOH	W	70	19.837	33.164	49.714	1.00	43.80
ATOM	8914	O	HOH	W	71	56.006	19.950	5.260	1.00	29.61
ATOM	8917	O	HOH	W	72	12.640	18.432	15.541	1.00	20.81
ATOM	8920	O	HOH	W	73	33.864	42.912	20.035	1.00	26.77
ATOM	8923	O	HOH	W	74	22.039	29.983	55.713	1.00	25.54
ATOM	8926	O	HOH	W	75	31.049	14.164	43.870	1.00	22.33
ATOM	8929	O	HOH	W	76	20.476	37.710	44.956	1.00	54.95
ATOM	8932	O	HOH	W	77	9.993	6.508	33.830	1.00	27.87
ATOM	8935	O	HOH	W	78	23.909	4.252	14.243	1.00	56.39
ATOM	8938	O	HOH	W	79	46.899	11.615	18.026	1.00	25.44
ATOM	8941	O	HOH	W	80	37.126	38.887	15.338	1.00	28.75
ATOM	8944	O	HOH	W	81	20.529	19.752	48.357	1.00	26.03
ATOM	8947	O	HOH	W	82	18.583	15.531	45.846	1.00	34.46
ATOM	8950	O	HOH	W	83	53.000	33.598	11.999	1.00	38.65
ATOM	8953	O	HOH	W	84	30.001	34.215	37.837	1.00	27.40
ATOM	8956	O	HOH	W	85	32.743	31.713	24.452	1.00	20.09
ATOM	8959	O	HOH	W	86	14.244	19.320	45.572	1.00	34.13
ATOM	8962	O	HOH	W	87	38.515	25.825	60.817	1.00	29.43
ATOM	8965	O	HOH	W	88	29.776	18.159	64.609	1.00	30.77
ATOM	8968	O	HOH	W	89	39.252	16.311	25.180	1.00	34.07
ATOM	8971	O	HOH	W	90	38.954	24.282	39.674	1.00	35.70
ATOM	8974	O	HOH	W	91	24.867	13.426	51.564	1.00	26.41
ATOM	8977	O	HOH	W	92	27.672	42.651	15.631	1.00	24.01
ATOM	8980	O	HOH	W	93	30.390	22.735	4.767	1.00	24.91
ATOM	8983	O	HOH	W	94	44.067	29.358	-1.228	1.00	31.61
ATOM	8986	O	HOH	W	95	8.292	14.232	9.524	1.00	47.16
ATOM	8989	O	HOH	W	96	12.625	14.078	35.559	1.00	24.97
ATOM	8992	O	HOH	W	97	12.016	28.220	10.985	1.00	30.83
ATOM	8995	O	HOH	W	98	57.645	28.629	5.505	1.00	66.98
ATOM	8998	O	HOH	W	99	18.349	23.010	44.243	1.00	22.97
ATOM	9001	O	HOH	W	100	36.490	35.439	27.874	1.00	34.57
ATOM	9004	O	HOH	W	101	39.905	12.569	24.546	1.00	28.31
ATOM	9007	O	HOH	W	102	14.990	30.346	32.098	1.00	28.59
ATOM	9010	O	HOH	W	103	64.381	37.208	20.853	1.00	22.54

ATOM	9013	O	HOH	W	104	20.944	21.623	46.547	1.00	24.57
ATOM	9016	O	HOH	W	105	38.878	17.024	20.176	1.00	21.47
ATOM	9019	O	HOH	W	106	23.008	28.494	5.039	1.00	43.79
ATOM	9022	O	HOH	W	107	37.182	28.668	18.742	1.00	27.90
ATOM	9025	O	HOH	W	108	14.348	26.788	25.075	1.00	26.81
ATOM	9028	O	HOH	W	109	52.048	16.800	20.748	1.00	33.65
ATOM	9031	O	HOH	W	110	16.639	34.330	15.056	1.00	21.53
ATOM	9034	O	HOH	W	111	12.461	12.614	10.437	1.00	42.35
ATOM	9037	O	HOH	W	112	40.070	14.411	57.974	1.00	47.85
ATOM	9040	O	HOH	W	113	28.082	15.698	7.741	1.00	27.90
ATOM	9043	O	HOH	W	114	11.599	17.107	18.748	1.00	27.21
ATOM	9046	O	HOH	W	115	39.165	22.041	23.985	1.00	32.98
ATOM	9049	O	HOH	W	116	38.258	28.042	14.632	1.00	27.92
ATOM	9052	O	HOH	W	117	24.842	3.056	27.208	1.00	28.78
ATOM	9055	O	HOH	W	118	27.573	38.818	62.152	1.00	39.88
ATOM	9058	O	HOH	W	119	39.379	35.825	10.260	1.00	36.30
ATOM	9061	O	HOH	W	120	17.924	29.265	41.708	1.00	25.93
ATOM	9064	O	HOH	W	121	16.417	31.263	28.582	1.00	41.37
ATOM	9067	O	HOH	W	122	39.524	34.842	27.271	1.00	37.68
ATOM	9070	O	HOH	W	123	39.316	19.960	44.449	1.00	31.36
ATOM	9073	O	HOH	W	124	47.817	39.044	32.484	1.00	37.85
ATOM	9076	O	HOH	W	125	43.228	24.030	52.785	1.00	25.92
ATOM	9079	O	HOH	W	126	59.955	35.515	13.508	1.00	30.65
ATOM	9082	O	HOH	W	127	35.037	27.888	66.671	1.00	43.50
ATOM	9085	O	HOH	W	128	36.302	22.995	33.003	1.00	42.30
ATOM	9088	O	HOH	W	129	39.142	22.181	12.208	1.00	25.63
ATOM	9091	O	HOH	W	130	44.714	25.837	45.894	1.00	51.50
ATOM	9094	O	HOH	W	131	33.549	32.352	62.608	1.00	35.43
ATOM	9097	O	HOH	W	132	33.842	8.429	40.493	1.00	37.57
ATOM	9100	O	HOH	W	133	16.594	6.231	39.350	1.00	34.73
ATOM	9103	O	HOH	W	134	22.274	3.976	41.623	1.00	45.59
ATOM	9106	O	HOH	W	135	50.394	17.474	22.590	1.00	32.96
ATOM	9109	O	HOH	W	136	15.795	36.774	25.809	1.00	35.87
ATOM	9112	O	HOH	W	137	20.610	6.900	36.789	1.00	39.69
ATOM	9115	O	HOH	W	138	57.086	10.735	8.327	1.00	36.34
ATOM	9118	O	HOH	W	139	56.487	32.040	12.539	1.00	34.49
ATOM	9121	O	HOH	W	140	34.563	46.083	20.131	1.00	36.83
ATOM	9124	O	HOH	W	141	22.956	4.780	33.186	1.00	30.06
ATOM	9127	O	HOH	W	142	37.817	4.987	18.208	1.00	46.21
ATOM	9130	O	HOH	W	143	64.931	30.181	22.174	1.00	42.51
ATOM	9133	O	HOH	W	144	10.265	31.037	34.048	1.00	47.90
ATOM	9136	O	HOH	W	145	39.574	40.010	15.422	1.00	47.92
ATOM	9139	O	HOH	W	146	39.830	8.961	15.242	1.00	51.33
ATOM	9142	O	HOH	W	147	35.369	27.055	20.108	1.00	24.39
ATOM	9145	O	HOH	W	148	27.814	28.529	42.714	1.00	26.63
ATOM	9148	O	HOH	W	149	59.996	13.684	15.917	1.00	39.47
ATOM	9151	O	HOH	W	150	32.670	6.477	32.531	1.00	34.80
ATOM	9154	O	HOH	W	151	42.246	8.784	16.652	1.00	30.86
ATOM	9157	O	HOH	W	152	42.936	15.986	51.321	1.00	35.68
ATOM	9160	O	HOH	W	153	30.550	7.780	14.587	1.00	24.35
ATOM	9163	O	HOH	W	154	27.369	43.798	12.590	1.00	38.15
ATOM	9166	O	HOH	W	155	38.493	31.402	34.921	1.00	43.79
ATOM	9169	O	HOH	W	156	48.595	20.062	24.737	1.00	31.55
ATOM	9172	O	HOH	W	157	17.830	32.340	30.453	1.00	33.12
ATOM	9175	O	HOH	W	158	52.955	27.432	8.453	1.00	28.80
ATOM	9178	O	HOH	W	159	43.668	29.122	28.023	1.00	33.87
ATOM	9181	O	HOH	W	160	37.729	27.973	37.527	1.00	36.83
ATOM	9184	O	HOH	W	161	51.433	33.530	14.889	1.00	29.85
ATOM	9187	O	HOH	W	162	14.908	39.638	25.996	1.00	52.69
ATOM	9190	O	HOH	W	163	23.942	23.933	7.766	1.00	41.78
ATOM	9193	O	HOH	W	164	46.765	28.367	14.005	1.00	25.11

ATOM	9196	O	HOH W 165	39.969	24.048	1.609	1.00	47.69
ATOM	9199	O	HOH W 166	41.878	21.054	24.293	1.00	32.10
ATOM	9202	O	HOH W 167	58.795	29.616	7.779	1.00	36.99
ATOM	9205	O	HOH W 168	33.357	9.910	23.776	1.00	36.68
ATOM	9208	O	HOH W 169	18.396	33.742	41.248	1.00	37.63
ATOM	9211	O	HOH W 170	17.434	24.315	46.287	1.00	30.17
ATOM	9214	O	HOH W 171	52.051	36.371	20.690	1.00	30.89
ATOM	9217	O	HOH W 172	43.902	28.415	-3.846	1.00	53.30
ATOM	9220	O	HOH W 173	9.737	6.909	37.571	1.00	46.49
ATOM	9223	O	HOH W 174	7.695	12.728	35.212	1.00	37.67
ATOM	9226	O	HOH W 175	32.167	34.521	63.073	1.00	35.86
ATOM	9229	O	HOH W 176	42.114	24.926	54.696	1.00	34.46
ATOM	9232	O	HOH W 177	44.523	17.547	-4.030	1.00	36.34
ATOM	9235	O	HOH W 178	23.629	2.741	34.786	1.00	42.76
ATOM	9238	O	HOH W 179	17.681	35.288	27.063	1.00	37.94
ATOM	9241	O	HOH W 180	14.107	28.805	28.165	1.00	36.67
ATOM	9244	O	HOH W 181	26.852	38.729	59.331	1.00	27.70
ATOM	9247	O	HOH W 182	21.284	29.784	49.517	1.00	37.58
ATOM	9250	O	HOH W 183	36.786	28.152	30.738	1.00	35.14
ATOM	9253	O	HOH W 184	35.094	32.047	10.476	1.00	43.69
ATOM	9256	O	HOH W 185	55.432	14.933	3.066	1.00	40.35
ATOM	9259	O	HOH W 186	51.675	28.066	13.262	1.00	29.68
ATOM	9262	O	HOH W 187	40.490	31.888	56.621	1.00	30.98
ATOM	9265	O	HOH W 188	5.441	22.929	26.283	1.00	45.01
ATOM	9268	O	HOH W 189	31.093	34.193	67.149	1.00	51.03
ATOM	9271	O	HOH W 190	55.798	10.513	5.967	1.00	47.55
ATOM	9274	O	HOH W 191	19.083	36.286	14.297	1.00	34.97
ATOM	9277	O	HOH W 192	42.266	8.595	20.516	1.00	35.36
ATOM	9280	O	HOH W 193	14.110	15.932	33.907	1.00	28.16
ATOM	9283	O	HOH W 194	48.603	42.567	22.846	1.00	38.89
ATOM	9286	O	HOH W 195	56.741	31.021	7.938	1.00	46.79
ATOM	9289	O	HOH W 196	9.015	21.523	7.759	1.00	43.99
ATOM	9292	O	HOH W 197	36.467	24.797	15.521	1.00	21.81
ATOM	9295	O	HOH W 198	45.443	5.074	6.696	1.00	48.61
ATOM	9298	O	HOH W 199	8.536	6.845	29.302	1.00	37.60
ATOM	9301	O	HOH W 200	18.417	34.847	10.000	1.00	33.08
ATOM	9304	O	HOH W 201	42.706	11.744	12.449	1.00	28.65
ATOM	9307	O	HOH W 202	34.603	10.121	26.192	1.00	35.71
ATOM	9310	O	HOH W 203	24.533	30.718	5.024	1.00	37.25
ATOM	9313	O	HOH W 204	44.534	41.209	22.240	1.00	36.00
ATOM	9316	O	HOH W 205	64.018	34.534	21.627	1.00	29.08
ATOM	9319	O	HOH W 206	21.354	30.668	4.833	1.00	50.26
ATOM	9322	O	HOH W 207	38.564	11.770	46.374	1.00	39.67
ATOM	9325	O	HOH W 208	54.933	34.552	16.142	1.00	38.17
ATOM	9328	O	HOH W 209	17.346	8.862	14.267	1.00	37.37
ATOM	9331	O	HOH W 210	40.975	22.986	42.265	1.00	34.73
ATOM	9334	O	HOH W 211	10.277	6.574	21.237	1.00	55.77
ATOM	9337	O	HOH W 212	20.610	2.679	36.832	1.00	43.95
ATOM	9340	O	HOH W 213	69.452	30.006	12.821	1.00	44.61
ATOM	9343	O	HOH W 214	34.439	32.546	13.532	1.00	29.13
ATOM	9346	O	HOH W 215	48.017	35.015	31.641	1.00	48.08
ATOM	9349	O	HOH W 216	24.277	36.477	10.997	1.00	38.01
ATOM	9352	O	HOH W 217	28.690	30.667	42.204	1.00	42.67
ATOM	9355	O	HOH W 218	54.844	38.033	5.531	1.00	42.64
ATOM	9358	O	HOH W 219	7.749	13.164	5.747	1.00	41.55
ATOM	9361	O	HOH W 220	8.852	25.363	10.761	1.00	49.97
ATOM	9364	O	HOH W 221	16.064	14.040	6.774	1.00	41.35
ATOM	9367	O	HOH W 222	55.328	18.580	17.328	1.00	39.52
ATOM	9370	O	HOH W 223	40.796	33.655	31.988	1.00	50.52
ATOM	9373	O	HOH W 224	44.651	32.692	-1.449	1.00	48.01
ATOM	9376	O	HOH W 225	22.316	4.067	16.120	1.00	37.24

ATOM	9379	O	HOH	W	226	34.934	4.299	9.420	1.00	45.99
ATOM	9382	O	HOH	W	227	53.783	31.115	13.830	1.00	44.34
ATOM	9385	O	HOH	W	228	18.867	12.304	9.509	1.00	44.89
ATOM	9388	O	HOH	W	229	41.576	20.016	61.921	1.00	50.55
ATOM	9391	O	HOH	W	230	37.318	18.652	8.063	1.00	50.84
ATOM	9394	O	HOH	W	231	35.968	5.843	39.929	1.00	36.79
ATOM	9397	O	HOH	W	232	38.500	9.643	30.268	1.00	36.42
ATOM	9400	O	HOH	W	233	5.451	6.382	32.785	1.00	52.35
ATOM	9403	O	HOH	W	234	48.698	11.780	0.341	1.00	59.48
ATOM	9406	O	HOH	W	235	35.132	15.792	62.823	1.00	44.32
ATOM	9409	O	HOH	W	236	41.980	27.415	45.170	1.00	26.86
ATOM	9412	O	HOH	W	237	39.543	33.836	48.894	1.00	30.81
ATOM	9415	O	HOH	W	238	23.728	38.099	31.951	1.00	44.47
ATOM	9418	O	HOH	W	239	35.667	11.633	48.285	1.00	33.56
ATOM	9421	O	HOH	W	240	34.662	27.004	10.246	1.00	32.50
ATOM	9424	O	HOH	W	241	28.646	39.335	42.603	1.00	28.12
ATOM	9427	O	HOH	W	242	37.596	23.004	35.855	1.00	27.04
ATOM	9430	O	HOH	W	243	51.382	14.720	-4.430	1.00	36.84
ATOM	9433	O	HOH	W	244	43.115	15.114	5.281	1.00	33.70
ATOM	9436	O	HOH	W	245	35.776	30.580	12.778	1.00	34.69
ATOM	9439	O	HOH	W	246	53.162	10.429	20.132	1.00	50.14
ATOM	9442	O	HOH	W	247	31.015	31.634	40.680	1.00	28.62
ATOM	9445	O	HOH	W	248	32.275	37.226	41.999	1.00	31.46
ATOM	9448	O	HOH	W	249	43.665	24.880	48.857	1.00	35.35
ATOM	9451	O	HOH	W	250	42.131	38.345	1.363	1.00	58.90
ATOM	9454	O	HOH	W	251	40.373	20.792	9.152	1.00	26.77
ATOM	9457	O	HOH	W	252	58.180	25.773	5.451	1.00	39.42
ATOM	9460	O	HOH	W	253	19.676	28.690	4.018	1.00	48.47
ATOM	9463	O	HOH	W	254	37.699	18.746	10.574	1.00	50.03
ATOM	9466	O	HOH	W	255	27.863	17.675	63.522	1.00	47.25
ATOM	9469	O	HOH	W	256	10.680	13.428	38.920	1.00	30.73
ATOM	9472	O	HOH	W	257	23.713	40.243	27.804	1.00	39.34
ATOM	9475	O	HOH	W	258	9.436	23.970	31.915	1.00	22.92
ATOM	9478	O	HOH	W	259	31.039	19.604	5.876	1.00	41.79
ATOM	9481	O	HOH	W	260	46.859	21.117	0.006	1.00	31.57
ATOM	9484	O	HOH	W	261	24.980	31.336	38.295	1.00	28.91
ATOM	9487	O	HOH	W	262	34.875	17.382	65.308	1.00	47.14
ATOM	9490	O	HOH	W	263	39.050	26.305	12.957	1.00	25.02
ATOM	9493	O	HOH	W	264	43.352	25.101	26.188	1.00	33.04
ATOM	9496	O	HOH	W	265	38.994	14.001	28.822	1.00	46.79
ATOM	9499	O	HOH	W	266	25.722	40.131	18.964	1.00	21.91
ATOM	9502	O	HOH	W	267	38.862	27.691	20.827	1.00	25.70
ATOM	9505	O	HOH	W	268	45.871	31.188	28.915	1.00	40.10
ATOM	9508	O	HOH	W	269	38.693	16.745	59.346	1.00	44.17
ATOM	9511	O	HOH	W	270	36.295	20.799	31.196	1.00	44.55
ATOM	9514	O	HOH	W	271	56.775	27.858	32.801	1.00	53.92
ATOM	9517	O	HOH	W	272	29.410	40.361	24.807	1.00	25.21
ATOM	9520	O	HOH	W	273	28.987	35.011	50.381	1.00	24.33
ATOM	9523	O	HOH	W	274	32.714	45.063	10.819	1.00	46.59
ATOM	9526	O	HOH	W	275	36.403	11.631	43.597	1.00	58.11
ATOM	9529	O	HOH	W	276	69.902	30.457	15.452	1.00	32.44
ATOM	9532	O	HOH	W	277	34.897	48.304	12.290	1.00	58.89
ATOM	9535	O	HOH	W	278	28.075	39.344	30.835	1.00	30.05
ATOM	9538	O	HOH	W	279	30.451	40.294	28.273	1.00	40.22
ATOM	9541	O	HOH	W	280	12.488	36.307	19.825	1.00	48.47
ATOM	9544	O	HOH	W	281	66.161	29.809	0.656	1.00	52.42
ATOM	9547	O	HOH	W	282	36.097	6.348	10.863	1.00	58.83
ATOM	9550	O	HOH	W	283	23.473	41.074	12.102	1.00	48.91
ATOM	9553	O	HOH	W	284	36.011	5.713	25.154	1.00	33.84
ATOM	9556	O	HOH	W	285	21.032	1.679	17.348	1.00	45.47
ATOM	9559	O	HOH	W	286	40.020	18.337	6.891	1.00	41.92

ATOM	9562	O	HOH W 287	0.882	22.072	21.999	1.00	43.08
ATOM	9565	O	HOH W 288	40.074	23.856	61.549	1.00	45.38
ATOM	9568	O	HOH W 289	10.793	13.789	11.027	1.00	37.69
ATOM	9571	O	HOH W 290	29.947	26.979	3.155	1.00	48.59
ATOM	9574	O	HOH W 291	22.747	32.911	55.879	1.00	44.16
ATOM	9577	O	HOH W 292	57.364	0.776	20.520	1.00	57.48
ATOM	9580	O	HOH W 293	43.713	46.201	10.366	1.00	53.05
ATOM	9583	O	HOH W 294	33.545	25.253	27.484	1.00	37.96
ATOM	9586	O	HOH W 295	23.471	9.078	9.606	1.00	47.67
ATOM	9589	O	HOH W 296	34.017	38.165	26.875	1.00	44.91
ATOM	9592	O	HOH W 297	40.237	8.370	11.266	1.00	43.87
ATOM	9595	O	HOH W 298	34.102	20.534	5.550	1.00	40.60
ATOM	9598	O	HOH W 299	31.764	7.796	25.125	1.00	34.39
ATOM	9601	O	HOH W 300	11.789	29.825	40.382	1.00	37.06
ATOM	9604	O	HOH W 301	30.233	44.827	11.200	1.00	49.80
ATOM	9607	O	HOH W 302	55.069	13.992	21.681	1.00	59.64
ATOM	9610	O	HOH W 303	41.717	44.487	12.136	1.00	57.39
ATOM	9613	O	HOH W 304	6.965	25.237	13.790	1.00	37.15
ATOM	9616	O	HOH W 305	24.424	-4.845	34.943	1.00	30.59
ATOM	9619	O	HOH W 306	37.706	20.419	70.354	1.00	56.88
ATOM	9622	O	HOH W 307	29.718	1.671	12.779	1.00	34.34
ATOM	9625	O	HOH W 308	17.831	3.205	17.264	1.00	50.98
ATOM	9628	O	HOH W 309	60.412	34.150	26.772	1.00	56.44
ATOM	9631	O	HOH W 310	31.802	3.624	4.729	1.00	59.01
ATOM	9634	O	HOH W 311	39.047	25.459	24.473	1.00	59.19
ATOM	9637	O	HOH W 312	39.009	26.005	4.703	1.00	41.41
ATOM	9640	O	HOH W 313	10.162	28.983	18.424	1.00	43.68
ATOM	9643	O	HOH W 314	39.814	5.145	3.412	1.00	58.17
ATOM	9646	O	HOH W 315	12.915	16.721	46.528	1.00	53.68
ATOM	9649	O	HOH W 316	41.617	26.712	25.289	1.00	41.08
ATOM	9652	O	HOH W 317	66.746	36.447	29.443	1.00	53.77
ATOM	9655	O	HOH W 318	30.613	35.474	8.019	1.00	42.66
ATOM	9658	O	HOH W 319	32.819	16.871	6.111	1.00	47.91
ATOM	9661	O	HOH W 320	27.743	32.666	38.604	1.00	29.67
ATOM	9664	O	HOH W 321	40.010	29.976	14.180	1.00	30.61
ATOM	9667	O	HOH W 322	29.210	44.736	15.791	1.00	24.53
ATOM	9670	O	HOH W 323	37.994	25.708	21.918	1.00	29.20
ATOM	9673	O	HOH W 324	38.189	26.898	16.899	1.00	27.26
ATOM	9676	O	HOH W 325	20.950	15.241	49.017	1.00	39.69
ATOM	9679	O	HOH W 326	38.406	7.893	36.254	1.00	34.04

Table 2

Table 2 details data collection and refinement statistics for a typical crystal of the present invention. The following definitions are used for the associated data statistics of table 2:

(†) $R_{\text{factor}} = \sum |I_i - \langle I_i \rangle| / \sum |I_i|$ where I_i is the scaled intensity of the i th measurement, and $\langle I_i \rangle$ is the mean intensity for that reflection.

(*) $R_{\text{free}} =$ as for R_{cryst} , but for 5.0% of the total reflections chosen at random and omitted from refinement.

Table 2

Protein	PCSK9
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Space Group	P2 ₁ 2 ₁ 2 ₁
Unit Cell Parameters (Å)	a=62.425 b=70.147 c=148.585
Wavelength (Å)	1.0
Resolution Range (Å)	50.0-1.9
No. Unique Refs (observed)	52284(208447)
Completeness (%) (Highest shell)	99.9(99.9)
Highest Resolution Shell (Å)	1.97-1.9
Mean I/σ(I)	22.5 (2.9)
Refinement	
No. of reflections (total)	49516
No of reflections (test)	2654
R _{cryst} (R _{free} *) †	0.19(0.24)
No. Protein atoms	8677
No. hetero atoms	341
rmsd bonds Å	0.016
rmsd angles °	1.52
Average isotropic B-value (Å ²)	25.447
ESU based on R _{free} (Å)§	0.143

[0080] The amino acid residues that are of particular interest to the invention for designing compounds that modulate PCSK9 activity are detailed in Table 3, *infra*.

Table 3

Table 3 lists sets of amino acid residues identified around key surface and active site areas across the three domains of PCSK9 where compounds or polypeptide could interact with and modulate the activity of PCSK9. These sites can be used for designing compounds or polypeptides to interact with PCSK9 using their associated 3-dimensional coordinates from table 1, *supra*.

Residue	Number	Region
PRO	75	Region of S127R mutation in Pro domain

GLY	76	Region of S127R mutation in Pro domain
THR	77	Region of S127R mutation in Pro domain
TYR	78	Region of S127R mutation in Pro domain
ALA	102	Region of S127R mutation in Pro domain
GLY	106	Region of S127R mutation in Pro domain
TYR	107	Region of S127R mutation in Pro domain
LEU	108	Region of S127R mutation in Pro domain
THR	109	Region of S127R mutation in Pro domain
LYS	110	Region of S127R mutation in Pro domain
VAL	124	Region of S127R mutation in Pro domain
LYS	125	Region of S127R mutation in Pro domain
MET	126	Region of S127R mutation in Pro domain
SER	127	Region of S127R mutation in Pro domain
GLY	128	Region of S127R mutation in Pro domain
ASP	129	Region of S127R mutation in Pro domain
LEU	130	Region of S127R mutation in Pro domain
LEU	131	Region of S127R mutation in Pro domain
ARG	73	Region around S4 Pocket
ASP	146	Region around S4 Pocket
SER	147	Region around S4 Pocket
SER	262	Region around S4 Pocket
GLY	263	Region around S4 Pocket
THR	264	Region around S4 Pocket
TYR	325	Region around S4 Pocket
SER	326	Region around S4 Pocket
PRO	327	Region around S4 Pocket
TRP	72	Region around S3 pocket
SER	148	Region around S3 pocket
THR	260	Region around S3 pocket
VAL	261	Region around S3 pocket
GLY	292	Region around S3 pocket
LEU	185	Region Around S2 pocket
THR	187	Region Around S2 pocket
GLY	227	Region Around S2 pocket
VAL	252	Region Around S2 pocket
LEU	253	Region Around S2 pocket
ASN	254	Region Around S2 pocket
GLN	256	Region Around S2 pocket
GLY	259	Region Around S2 pocket
VAL	149	P4 residue
PHE	150	P3 residue
ALA	151	P2 residue
GLN	152	P1 residue
ASP	186	Region around S1 pocket 152
HIS	226	Region around S1 pocket 152

GLY	257	Region around S1 pocket 152
LYS	258	Region around S1 pocket 152
LEU	287	Region around S1 pocket 152
PRO	288	Region around S1 pocket 152
LEU	289	Region around S1 pocket 152
ALA	290	Region around S1 pocket 152
GLY	291	Region around S1 pocket 152
THR	313	Region around S1 pocket 152
ALA	314	Region around S1 pocket 152
ALA	315	Region around S1 pocket 152
GLY	316	Region around S1 pocket 152
ASN	317	Region around S1 pocket 152
PHE	318	Region around S1 pocket 152
THR	353	Region around S1 pocket 152
SER	383	Region around S1 pocket 152
GLY	384	Region around S1 pocket 152
THR	385	Region around S1 pocket 152
SER	386	Region around S1 pocket 152
GLN	387	Region around S1 pocket 152
ALA	388	Region around S1 pocket 152
ALA	389	Region around S1 pocket 152
GLN	190	Region around gain of function mutation D374Y
HIS	193	Region around gain of function mutation D374Y
ALA	220	Region around gain of function mutation D374Y
SER	221	Region around gain of function mutation D374Y
LYS	222	Region around gain of function mutation D374Y
ASP	224	Region around gain of function mutation D374Y
SER	225	Region around gain of function mutation D374Y
THR	228	Region around gain of function mutation D374Y
ALA	371	Region around gain of function mutation D374Y
SER	372	Region around gain of function mutation D374Y
SER	373	Region around gain of function mutation D374Y
ASP	374	Region around gain of function mutation D374Y
CYS	375	Region around gain of function mutation D374Y
SER	376	Region around gain of function mutation D374Y
THR	377	Region around gain of function mutation D374Y
CYS	378	Region around gain of function mutation D374Y
PHE	379	Region around gain of function mutation D374Y
VAL	380	Region around gain of function mutation D374Y
gain of function mutation associated with mutation		
LEU	411	H417Q
gain of function mutation associated with mutation		
ARG	412	H417Q
gain of function mutation associated with mutation		
GLN	413	H417Q
gain of function mutation associated with mutation		
ARG	414	H417Q
LEU	415	gain of function mutation associated with mutation

		H417Q
		gain of function mutation associated with mutation
ILE	416	H417Q
		gain of function mutation associated with mutation
HIS	417	H417Q
		gain of function mutation associated with mutation
PHE	418	H417Q
		gain of function mutation associated with mutation
SER	419	H417Q
		gain of function mutation associated with mutation
ALA	420	H417Q
		gain of function mutation associated with mutation
LYS	421	H417Q
		gain of function mutation associated with mutation
LEU	440	H417Q
		gain of function mutation associated with mutation
ALA	442	H417Q
		gain of function mutation associated with mutation
ALA	443	H417Q
		gain of function mutation associated with mutation
PRO	445	H417Q
		gain of function mutation associated with mutation
PHE	456	H417Q
		gain of function mutation associated with mutation
ARG	458	H417Q
		gain of function mutation associated with mutation
ASP	651	H417Q
SER	462	Putative binding region of DRD associated with R469W mutation Resistin like domain
ALA	463	Putative binding region of DRD associated with R469W mutation Resistin like domain
HIS	464	Putative binding region of DRD associated with R469W mutation Resistin like domain
SER	465	Putative binding region of DRD associated with R469W mutation Resistin like domain
GLY	466	Putative binding region of DRD associated with R469W mutation Resistin like domain
PRO	467	Putative binding region of DRD associated with R469W mutation Resistin like domain
THR	468	Putative binding region of DRD associated with R469W mutation Resistin like domain
ARG	469	Putative binding region of DRD associated with R469W mutation Resistin like domain
MET	470	Putative binding region of DRD associated with R469W mutation Resistin like domain
ALA	471	Putative binding region of DRD associated with R469W mutation Resistin like domain
THR	472	Putative binding region of DRD associated with R469W mutation Resistin like domain

		Putative binding region of DRD associated with
HIS	512	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
ASN	513	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
ALA	514	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
PHE	515	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
GLY	516	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
GLY	517	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
GLU	518	R469W mutation Resistin like domain
		Putative binding region of DRD associated with
GLY	519	R469W mutation Resistin like domain
CYS	457	Region around gain-of-function mutation E482G
ARG	476	Region around gain-of-function mutation E482G
CYS	477	Region around gain-of-function mutation E482G
ALA	478	Region around gain-of-function mutation E482G
PRO	479	Region around gain-of-function mutation E482G
ASP	480	Region around gain-of-function mutation E482G
GLU	481	Region around gain-of-function mutation E482G
GLU	482	Region around gain-of-function mutation E482G
LEU	483	Region around gain-of-function mutation E482G
LEU	484	Region around gain-of-function mutation E482G
SER	485	Region around gain-of-function mutation E482G
ARG	491	Region around gain-of-function mutation E482G
SER	492	Region around gain-of-function mutation E482G
GLY	493	Region around gain-of-function mutation E482G
LYS	506	Region around gain-of-function mutation E482G
LEU	507	Region around gain-of-function mutation E482G
VAL	508	Region around gain-of-function mutation E482G
ALA	514	Region around gain-of-function mutation E482G
PHE	515	Region around gain-of-function mutation E482G
GLY	516	Region around gain-of-function mutation E482G
GLY	517	Region around gain-of-function mutation E482G
GLU	518	Region around gain-of-function mutation E482G
GLY	519	Region around gain-of-function mutation E482G
VAL	520	Region around gain-of-function mutation E482G
ALA	524	Region around gain-of-function mutation E482G
ARG	525	Region around gain-of-function mutation E482G
CYS	526	Region around gain-of-function mutation E482G
CYS	527	Region around gain-of-function mutation E482G
LEU	528	Region around gain-of-function mutation E482G
LEU	529	Region around gain-of-function mutation E482G
PRO	530	Region around gain-of-function mutation E482G
ALA	532	Region around gain-of-function mutation E482G
ASN	533	Region around gain-of-function mutation E482G

CYS	534	Region around gain-of-function mutation E482G
SER	535	Region around gain-of-function mutation E482G
CYS	601	Region around gain-of-function mutation E482G
		Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
LYS	494	Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
ARG	495	Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
GLU	567	Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
VAL	568	Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
GLU	569	Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
ASP	570	Region around resistin homologue binding region gain of function mutation F515L First lobe of resistin-like binding
HIS	537	Region around gain of function mutation H553R
PRO	540	Region around gain of function mutation H553R
PRO	541	Region around gain of function mutation H553R
ALA	542	Region around gain of function mutation H553R
GLU	543	Region around gain of function mutation H553R
ALA	544	Region around gain of function mutation H553R
SER	545	Region around gain of function mutation H553R
MET	546	Region around gain of function mutation H553R
GLY	547	Region around gain of function mutation H553R
VAL	550	Region around gain of function mutation H553R
HIS	551	Region around gain of function mutation H553R
CYS	552	Region around gain of function mutation H553R
HIS	553	Region around gain of function mutation H553R
GLN	554	Region around gain of function mutation H553R
GLN	555	Region around gain of function mutation H553R
GLY	556	Region around gain of function mutation H553R
HIS	557	Region around gain of function mutation H553R
VAL	558	Region around gain of function mutation H553R
LEU	559	Region around gain of function mutation H553R
GLU	567	Region around gain of function mutation H553R
VAL	568	Region around gain of function mutation H553R
GLU	569	Region around gain of function mutation H553R
ASP	570	Region around gain of function mutation H553R
LEU	571	Region around gain of function mutation H553R
GLY	572	Region around gain of function mutation H553R
PRO	585	Region around gain of function mutation H553R
ASN	586	Region around gain of function mutation H553R

GLN	587	Region around gain of function mutation H553R
HIS	591	Region around gain of function mutation H553R
ARG	592	Region around gain of function mutation H553R
GLU	593	Region around gain of function mutation H553R
ALA	594	Region around gain of function mutation H553R
CYS	600	Region around gain of function mutation H553R
PRO	616	Third lobe of resistin like domain
GLN	619	Third lobe of resistin like domain
GLU	620	Third lobe of resistin like domain
GLN	621	Third lobe of resistin like domain
LEU	638	Third lobe of resistin like domain
PRO	639	Third lobe of resistin like domain
SER	642	Third lobe of resistin like domain
HIS	643	Third lobe of resistin like domain
SER	658	Third lobe of resistin like domain
ARG	659	Third lobe of resistin like domain
ALA	671	Third lobe of resistin like domain
VAL	672	Third lobe of resistin like domain

We Claim:

1. A composition comprising a polypeptide in crystalline form, wherein the polypeptide is a PCSK9 polypeptide.
2. The composition according to claim 1, wherein the PCSK9 polypeptide is the expression product of a polynucleotide encoded by the amino acid residues of SEQ. ID 1.
3. The composition according to claim 1, further comprising a binding partner suitable for co-crystallization with the PCSK9 polypeptide.
4. The composition according to claim 1, wherein the PCSK9 crystal diffracts to 1.9 Angstroms.
5. The composition according to claim 4, wherein the crystal space group is $P2_12_12_1$.
6. The composition according to claim 5, wherein the unit cell of the crystal comprises 1 crystallographically independent PCSK9 molecules.
7. The composition according to claim 6, wherein the PCSK9 crystal has unit cell dimensions of $a=62.5\text{\AA}$, $b=70.1\text{\AA}$, $c=148.6\text{\AA}$ and $\alpha=\beta=\gamma=90.0$ degrees.
8. The composition according to claim 1, wherein the polypeptide is characterized by the structure coordinates according to Table 1, or a substantial part thereof.
9. A method for crystallizing a PCSK9 polypeptide, comprising: (A) mixing a solution comprising a PCSK9 polypeptide and an optional binding partner with a crystallization buffer; and (B) crystallizing the mixture of step (A) by drop vapor diffusion to form a crystalline precipitate.
10. The method of claim 9, wherein said crystallization buffer comprises 20% w/v PEG 8000 buffered with 0.1M CAPS, pH of greater than about 8.0.

11. The method of claim 9, wherein crystallization occurs at a temperature ranging from 4 to 20 degrees Celsius.

12. The method of claim 9, wherein the PCSK9 polypeptide is at a final concentration of about 10g/mL.

13. A method of identifying a compound that associates with PCSK9, comprising (A) designing a compound that associates with at least one of the sets of amino acid residues of Table 3, (B) synthesizing said compound, and (C) determining in vitro whether said compound modulates the activity of PCSK9.

Figure 1

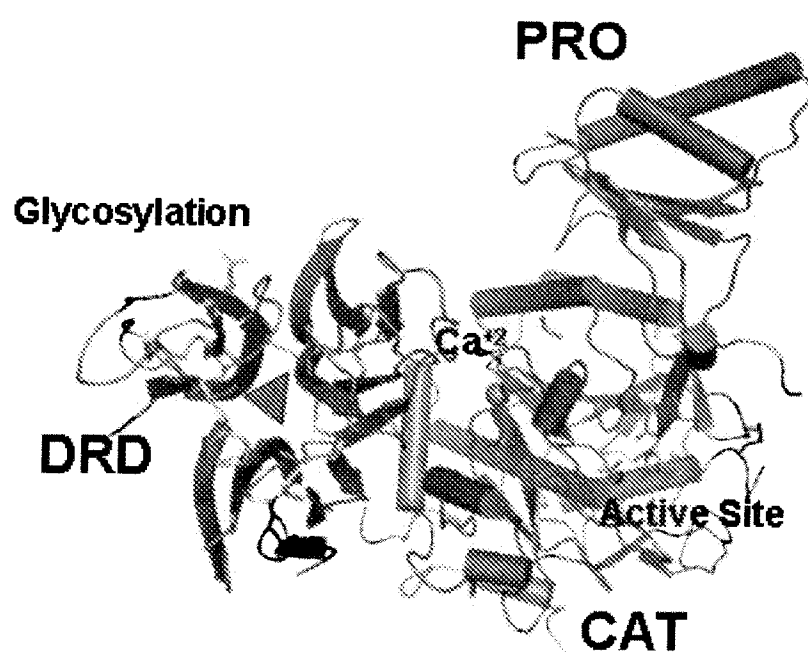


Figure 2

