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(54) Title: CRYSTAL

(57) Abstract: The present invention relates to a crystal. In particular the present invention relates to a crystal of the N-domain of ACE protein. The present invention also relates to methods, processes, domain, specific modulators, pharmaceutical compositions and uses of the N-domain crystal and the structure co-ordinates thereof.

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CRYSTAL

FIELD OF INVENTION

The present invention relates to a crystal. In particular the present invention relates to a crystal of the N-domain of ACE protein.

The present invention also relates to methods, processes, domain specific modulators, pharmaceutical compositions and uses of the N-domain crystal and the structure co-ordinates thereof.

BACKGROUND TO THE INVENTION

Angiotensin-converting enzyme (peptidyl dipeptidase A, EC 3.4.15.1, ACE) is a zinc-dependent dipeptidyl carboxypeptidase with diverse physiological functions, including that of blood pressure regulation *via* angiotensin II production and bradykinin inactivation.

Somatic ACE (sACE), a type I transmembrane protein, is composed of two homologous catalytic domains (N- and C- domains) arising from a gene duplication event (Soubrier et al., 1988). The germinal form of ACE (testis ACE, (tACE)) (Ehlers et al., 1989) originates from the same gene as sACE, but has a tissue-specific promoter located within intron 12. Testis-ACE plays a crucial role in reproduction (Hagaman et al., 1998)

Despite sharing ~ 60 % sequence identity with the C-domain, the N-domain has its own distinctive physicochemical and functional properties. It is thermally more stable than the C-domain (Voronov et al., 2002), more resistant to proteolysis under denaturing conditions and is less dependent on chloride activation relative to the C-domain (Wei et al., 1991; Jaspard et al., 1993). The N- and the C-domains are joined by a linker that is susceptible to proteolysis (Sturrock et al., (1997), *Biochem. Biophys. Res.* 236, 16-19). It has also been suggested that the N- and the C-domains have unique physiological roles and that they have negative effect on each other (Woodman et al., 2005).

Substrates such as the hemoregulatory peptide AcSDKP (Rousseau et al., 1995), angiotensin 1-7 (Deddish et al., 1998), and the enkephalin precursor Met^5-Enk-Arg^6-Phe^7 (Deddish et al., 1997) are specific for the N-domain, whereas the physiological substrates bradykinin and angiotensin I are hydrolysed with similar catalytic efficiency as compared with the C-domain.

It has been reported that the N-domain preferentially hydrolyses the A beta peptide of the amyloid precursor protein resulting in inhibition of A beta aggregation and cytotoxicity (Oba et al., 2005). The widely-used ACE inhibitor captopril shows modest selectivity for the N-domain (Wei et al., 1992); however, the phosphinic peptide inhibitor RXP-407 has a dissociation constant three orders of magnitude lower for the N-domain of the enzyme (Dive et al., 1999).

The N-domain has 10 *N*-linked sites of which 7 are unique to the N-domain. The different glycan profile of the N-domain is likely responsible for the carbohydrate-mediated dimerisation of sACE which has been described under certain conditions (Kost et al., 2003). Moreover, the difference in glycosylation could impact on the structural basis for epitope recognition and epitope mapping of the N-domain has revealed a region that might play a role in the relatively inefficient ectodomain shedding of sACE compared to its germinal isoform (Balyasnikova et al., 2005).

Both the N- and the C-domains of ACE protein are heavily glycosylated in nature, a feature that has hampered 3D structural determination of the protein and of each of the domains.

We previously described the 3D structure of the ACE protein (International Patent Application PCT/GB03/03966 (published as WO 04/024765). This 3D structure was that of the underglycosylated C-domain of ACE protein.

This underglycosylated 3D structure, however, provides limited information on the structure of the N-domain of ACE, nor is it ideal for screening or designing domain specific modulators suitable for pharmaceutical use nor indeed for studying the functional interaction between the N- and the C-domains of ACE protein.

Therefore there is a need to obtain a crystal of the N-domain of ACE protein with sufficient quality to allow crystallographic data to be obtained. Further, there is a need for such a crystal to allow the determination of the crystal structure of the N-domain of ACE. Finally there is a need for procedures for studying the interplay between the N- and the C-domains and screening for domain specific modulators using the 3D structural information of the N-domain of ACE protein.

SUMMARY OF THE INVENTION

The present inventors have now for the first time been able to describe the three-dimensional structure of the N-domain of sACE protein.

According to a first aspect of the present invention there is provided a crystal of the N-domain of ACE protein. Preferably the N-domain of ACE protein is minimally glycosylated.

Preferably, the N-domain of ACE protein is minimally glycosylated by incorporating one or more glycosylation sites and/or one or more partially glycosylated sites. More preferably, the minimally glycosylated N-domain of ACE protein is minimally glycosylated at amino acids 25, 45, 117, 289 and 480 of SEQ ID NO: 1.

Preferably the N-domain of ACE protein comprises an inter-domain linker region. This linker region joins the N- and the C-domains and has been reported to be susceptible to proteolysis (Sturrock et al., (1997), *Biochem. Biophys. Res.* 236, 16-19). No one has previously visualised this linker region in a 3D structure. No one has previously analysed the physiological role of this linker region and no one has previously studies the role of the linker in the functional interplay between the N- and the C-domains based on 3D structural data.

Preferably, the crystal of the N-domain of ACE protein comprises atoms arranged in a spatial relationship represented by at least a portion of the structural co-ordinates set forth in Table A or Table B.

Preferably, the crystal belongs to the space group $C222_1$.

Preferably, the crystal has the unit cell dimensions: a=101.12 Å, b=211.32 Å, c=171.27 Å.

Preferably, the crystal is a crystal of the N-domain of human ACE protein.

Preferably, the crystal of the N-domain of ACE protein comprises a ligand bound to the N-domain of ACE protein or a portion thereof. More preferably the ligand modulates the activity of the N-domain of ACE protein. More preferably the ligand is an inhibitor of the N-domain of ACE protein such as lisinopril or a derivative thereof. More preferably the crystal of the N-domain of the ACE protein comprising lisinopril comprises atoms arranged in a spatial relationship represented by at least a portion of the structural co-ordinates set forth in Table B.

Preferably the crystal of the N-domain of the ACE protein comprising the inhibitor lisinopril has the unit cell dimensions of: a=101.32 Å, b=211.90 Å, c=171.03 Å.

In a second aspect, the present invention relates to a method of preparing a crystal of the N-domain of ACE protein comprising the steps of: (a) culturing host cells expressing N-domain of ACE protein; (b) purifying the N-domain of ACE protein; and (c) crystallising the N-domain of ACE protein.

Preferably, the N-domain of ACE protein is crystallised using about 5 mM HEPES and about 0.1 mM PMSF with an equal volume of a reservoir solution containing about 0.2M lithium sulphate, about 15 % PEG 4000, about 100 mM $CH_3COONa.3H_2O$ pH 4.9 and about 10 µM $ZnSO_4.7H_2O$.

Preferably, the crystal that is prepared has a structure defined by at least a portion of the structural co-ordinates set forth in Table A or Table B.

Preferably, the crystal belongs to the space group $C222_1$.

Preferably, the crystal has the unit cell dimensions: a=101.12 Å, b=211.32 Å, c=171.27 Å.

Preferably, the N-domain of ACE protein is the N-domain of human ACE protein.

Preferably, the N-domain of ACE protein is crystallised in the presence of a ligand. More preferably the ligand is a modulator of the N-domain of ACE protein. More preferably the ligand is an inhibitor of the N-domain of ACE protein such as lisinopril or a derivative thereof. More preferably the crystal of the N-domain of the ACE protein comprising lisinopril comprises atoms arranged in a spatial relationship represented by at least a portion of the structural co-ordinates set forth in Table B.

Preferably the crystal of the N-domain of the ACE protein comprising the inhibitor lisinopril has the unit cell dimensions of: a=101.32 Å, b=211.90 Å, c=171.03 Å.

Preferably the crystal of the N-domain of ACE protein that is prepared in the presence of a ligand is crystallised using about 5 mM HEPES and about 0.1 mM PMSF with an equal volume of a reservoir solution containing about 0.2M lithium sulphate, 18 % PEG 4000, about 100 mM $CH_3COONa.3H_2O$ pH 4.9 and about 10 µM $ZnSO_4.7H_2O$.

In a third aspect, the present invention relates to a method of screening for a modulator of the N-domain of ACE protein wherein the method comprises the use of a crystal according to the present invention. Preferably, the screening method comprises the steps of: (a) providing at least a portion of the structural co-ordinates set forth in Table A or Table B; (b) employing at least a portion of the structural co-ordinates set forth in Table A or Table B to design or select or synthesise a putative modulator of the N-domain of ACE protein; (c) contacting the putative modulator of the N-domain with the N-domain or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and (d) screening the putative modulator of the N-domain of ACE protein in an assay for the potential to modulate the N-domain.

Comparisons of the 3D structures of the N-domain of ACE protein and C-domain of ACE protein show that the two domains are structurally very similar.

Therefore, according to a fourth aspect, the present invention relates to a method of screening for a modulator of the C-domain of ACE protein wherein the method comprises the use of a crystal according to the present invention. Preferably, the screening method comprises the steps of: (a) providing at least a portion of the structural co-ordinates set forth in Table A or Table B; (b) employing at least a portion of the structural co-ordinates set forth in Table A or Table B to design or select or synthesise a putative modulator of the C-domain of ACE protein; (c) contacting the putative modulator of the C-domain with the C-domain or a mutant, variant, homologue, derivative or fragment thereof; and (d) screening the putative modulator of the C-domain of ACE protein in an assay for the potential to modulate the C-domain.

Preferably, at least a portion of the structural co-ordinates set forth in Table A or Table B and/or the putative modulator of the N-domain of ACE protein or C-domain of ACE protein and/or the substrate are provided on a machine-readable data storage medium comprising a data storage material encoded with machine readable data.

Preferably, the putative N-domain of ACE protein modulator or C-domain of ACE protein modulator is selected from a library of compounds. More preferably, the putative N-domain of ACE protein modulator or C-domain of ACE protein modulator is selected from a database. More preferably, the putative N-domain of ACE protein modulator or C-domain of ACE protein modulator is designed *de novo*. More preferably, the putative N-domain of ACE protein modulator or C-domain of ACE protein modulator is designed from a known ACE modulator. More preferably, the design or selection of the putative N-domain of ACE protein modulator or C-domain of ACE protein modulator is performed in conjunction with computer modelling.

Preferably, the putative N-domain of ACE protein modulator or C-domain of ACE protein modulator is useful in the prevention and/or treatment of ACE related disorder. More preferably, the ACE related disorder is hypertension, myocardial infarction or congestive heart failure.

In a fifth aspect, the present invention relates to a process comprising the steps of: (a) performing the method according to the third aspect and/or the fourth aspect of the present invention; (b) identifying one or more modulators of the N-domain and/or C-domain; and (c) preparing a quantity of those one or more N-domain modulators and/or C-domain modulators.

In a sixth aspect, the present invention relates to a process comprising the steps of: (a) performing the method according to the third aspect and/or the fourth aspect of the present invention; (b) identifying one or more N-domain modulators and/or C-domain modulators; and (c) preparing a pharmaceutical composition comprising those one or more N-domain modulators and/or C-domain modulators.

In a seventh aspect, the present invention relates to a process comprising the steps of: (a) performing the method according to the third aspect and/or the fourth aspect of the present invention; (b) identifying one or more N-domain modulators and/or C-domain modulators; (c) modifying those one or more N-domain modulators and/or C-domain modulators; and (d) optionally preparing a pharmaceutical composition comprising those one or more N-domain modulators and/or C-domain modulators.

In an eighth aspect, the present invention relates to a method of obtaining structural information about a molecule or a molecular complex of unknown structure by using at least a portion of the structure co-ordinates of the N-domain of ACE protein, comprising the steps of: (a) generating X-ray diffraction data from a crystallised molecule or molecular complex; (b) applying at least a portion of the structure co-ordinates of the N-domain of ACE protein to said X-ray diffraction pattern to generate a three dimensional electron density map of at least a portion of the molecule or molecular complex; and (c) using all or a portion of the structure co-ordinates of the N-domain of ACE protein to generate homology models of the N-domain of ACE protein. Preferably the structural information of the structure co-ordinates of ACE protein are used for domain co-operativity studies.

In a ninth aspect, the present invention relates to a modulator of the N-domain of ACE protein and/or the C-domain of ACE protein identified by the method according to the

third aspect and/or the fourth aspect of the present invention. Preferably, the modulator inhibits the N-domain of ACE protein and/or the C-domain of ACE protein.

In a tenth aspect, the present invention relates to a pharmaceutical composition comprising an N-domain of ACE protein modulator and/or a C-domain of ACE protein modulator according to the ninth aspect of the present invention and a pharmaceutically acceptable carrier, diluent, excipient or adjuvant or any combination thereof.

In an eleventh aspect, the present invention relates to a method of preventing and/or treating an ACE related disorder comprising administering a modulator of the N-domain of ACE protein and/or the C-domain of ACE protein according to the ninth aspect of the present invention and/or a pharmaceutical composition according to the tenth aspect of the present invention, wherein said modulator of the N-domain of ACE protein and/or the C-domain of ACE protein and/or said pharmaceutical composition is capable of causing a beneficial preventative and/or therapeutic effect.

In a twelfth aspect, the present invention relates to a computer for producing a three-dimensional representation of the N-domain of ACE protein wherein said computer comprises: (a) a computer-readable data storage medium comprising a data storage material encoded with computer-readable data, wherein said data comprises the structure co-ordinates of the N-domain of ACE protein; (b) a working memory for storing instructions for processing said computer-readable data; (c) a central-processing unit coupled to said working memory and to said computer-readable data storage medium for processing said computer-machine readable data into said three-dimensional representation; and (d) a display coupled to said central-processing unit for displaying said three-dimensional representation.

In a thirteenth aspect, the present invention relates to a machine-readable data storage medium comprising a data storage material encoded with machine-readable data, wherein the data is defined by at least a portion of the structural co-ordinates of the N-domain of ACE protein set forth in Table A or Table B.

In a fourteenth aspect, the present invention relates to the use of an N-domain of ACE protein crystal in the preparation of a medicament to prevent and/or treat an ACE related disorder. Preferably, the ACE related disorder is hypertension, myocardial infarction or congestive heart failure.

In a fifteenth aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B to screen for modulators of the N-domain of ACE protein and/or C-domain of ACE protein.

In a sixteenth aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B to solve the structure of the crystalline form of any other domain with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein.

In a seventeenth aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B in molecular design techniques to design, select and synthesise modulators of the N-domain of ACE protein and/or C-domain of ACE protein.

In an eighteenth aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B in the development of compounds that can isomerise to reaction intermediates in the chemical reaction of a substrate or other compound that binds to the N-domain of ACE protein and/or the C-domain of ACE protein.

In a nineteenth aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B to screen small molecule databases for chemical entities or compounds that modulate the N-domain of ACE protein and/or C-domain of ACE protein.

In a twentieth aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B to solve the structure of the crystalline form of any other domain with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein. Preferably, the structure

of the crystalline form of any other domain with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein is solved using molecular replacement.

In a twenty first aspect, the present invention relates to the use of at least a portion of the structural co-ordinates set forth in Table A or Table B to identify the binding site of any modulator of the N-domain of ACE protein. Preferably the binding site is that of lisinopril or derivatives thereof.

DETAILED DESCRIPTION OF THE INVENTION

N-DOMAIN OF ACE PROTEIN

ACE (EC 3.4.15.1) is a membrane associated peptidyl dipeptidase.

There are two tissues specific isoforms of ACE protein differentially transcribed from the same gene.

Somatic ACE (sACE), a type I transmembrane protein, is composed of two homologous catalytic N- and C- domains, arising from a gene duplication event (Soubrier et al., 1988).

Germinal ACE (testis ACE, (tACE)) has a tissue-specific promoter located within intron 12 (Ehlers et al., 1989).

Despite sharing ~ 60 % sequence identity with the C-domain, the N-domain has its own distinctive physicochemical and functional properties. It has also been reported that the two domains display negative co-operativity effect on each other (Woodman et al., 2005). In the present invention, co-operativity studies between the N- and C-domains of ACE protein is based on studies carried out by Guy et al., 2003 (*Biochemistry*, 42:13185-13192) and Towler et al., 2004 (*The Journal of Biological Chemistry*, 17:17996-18007). In their studies, the authors compare ACE structures with those of the ACE2 homologue that more closely resembles the N-domain of the ACE protein. See Figure 4 below.

As used herein the term "negative co-operativity" refers to the capacity of the two domains of ACE protein to modulate the biochemical activities of each other. By way of example the N-domain may cause steric hindrance of the C-domain by preventing substrate from accessing the active site of the C-domain and vice versa the C-domain may cause steric hindrance of the N-domain by preventing substrate from accessing the active site of the N-domain.

The N- and the C-domains are heavily glycosylated, which has hampered the determination of the 3D structure of the ACE protein.

Previously we described the 3D structure of the C-domain of undeglycosylated ACE protein (see International Patent Application PCT/GB03/03966 (published as WO 04/024765)).

The present inventors have now been able to obtain a minimally glycosylated N-domain of ACE protein.

As used herein the term "minimally glycosylated" means that one or more oligosaccharide chains are linked to one or more amino acid residues in the N-domain of ACE protein. As used herein the term "oligosaccharide" refers to a carbohydrate molecule which comprises less than 10 sugar molecules where the sugar molecules can be any one or more of mono-saccharides, di-, tri-, and/or tetra-saccharides.

As used herein, the term "N-domain of ACE protein" includes all vertebrate and mammalian forms of the N-domain of ACE protein and is intended to cover mutants, variants, homologues, derivatives and fragments thereof. Preferably, the mutants, variants, homologues, derivatives and fragments thereof have the activity of the N-domain of ACE protein. Preferably the N-domain of the ACE protein is minimally glycozylated.

CRYSTAL

In one aspect of the present invention, there is provided a crystal structure of the N-domain of ACE protein in its minimally glycozylated form and its ligand-bound form.

As used herein, the term "crystal" means a structure (such as a three dimensional (3D) solid aggregate) in which the plane faces intersect at definite angles and in which there is a regular structure (such as internal structure) of the constituent chemical species. Thus, the term "crystal" can include any one of: a solid physical crystal form such as an experimentally prepared crystal, a 3D model based on the crystal structure, a representation thereof - such as a schematic representation thereof, a diagramatic representation thereof, or a data set thereof for a computer.

The crystals of the present invention may be prepared by purifying the N-domain of ACE protein and then crystallising the purified protein. The N-domain of ACE protein may also be prepared by expressing a nucleotide sequence encoding the N-domain of ACE protein in a suitable host cell.

In one preferred embodiment, the N-domain of ACE crystal comprises the inter-domain linker region.

The N-domain of ACE protein may be purified using various methods known to a person skilled in the art, for example, from conditioned media by affinity chromatography on a Sepharose-28-lisinopril affinity resin (Yu *et al.* 1997). The protein may be quantified by amino acid analysis and assayed for activity using the substrate hippuryl-L-histidyl-L-leucine, as described previously (Ehlers, MRE, Chen, Y –N, Riordan, JF (1991) *Proc. Natl. Acad. Sci.* USA 88, 1009-1013).

The purified N-domain of ACE proteins may be stored at –20 °C in 5 mM HEPES and 0.1 mM PMSF.

Concentration may be performed with the aid of a filtration system and the protein concentrate may be immediately used for crystallisation purposes. The protein

concentrate may be crystallised using, for example, the vapour diffusion hanging drop method at a temperature of from about 4 °C to about 30 °C, preferably from about 8 °C to about 20 °C, more preferably from about 12 °C to about 18 °C, most preferably at about 16 °C. The crystallisation temperature may be dependent on the additives present in the protein solution.

Typically, the best crystals for the N-domain of ACE proteins are grown at a temperature in the range of from 10 to 20°C, preferably from 12 to 18°C, most preferably at 16 °C by the vapour diffusion hanging drop method by mixing 1 µl of the protein solution at about 4 mg/ml. The solution comprising HEPES in the range of from 1 to 10 mM, preferably in the range of from 2 to 8 mM, more preferably in the range of from 4 to 6 mM, most preferably 5mM HEPES and PMSF in the range of from 0.025 to 0.2%, preferably from 0.05 to 0.15%, more preferably from 0.075 to 0.125, most preferably 0.1% PMSF with an equal volume of a reservoir solution. The reservoir solution comprising lithium sulphate in the range of from 0.025 to 0.4M, preferably in the range of from 0.05 to 0.35M, more preferably from 0.075 to 0.3M, most preferably containing 0.2M lithium sulphate, PEG 4000 in the range of from 5% to 25%, preferably from 10% to 20%, most preferably from 15% to 18% PEG 4000, $CH_3COONa.3H_2O$ in the range of from 50 to 150mM, preferably from 75 to 125 mM, more preferably from 90 to 110 mM, most preferably 100 mM $CH_3COONa.3H_2O$, wherein the $CH_3COONa.3H_2O$ has a pH in the range of from 3.9 to 5.9, preferably a pH from 4.5 to 5.5, more preferably a pH from 4.7 to 5.2, most preferably a pH of 4.9 and $ZnSO_4.7H_2O$ in the range of from 5 to 20µM, preferably from 7.5 to 12.5 µM, most preferably 10 µM $ZnSO_4.7H_2O$.

Crystals usually appear within 1 to 2 weeks and grow to their maximum size after about a month.

The present invention related to a crystal of the N-domain of ACE comprising atoms arranged in a spatial relationship represented by at least a portion of the structural co-ordinates set forth in Table A or Table B.

Preferably, the crystal belongs to the space group $C222_1$ and unit cell dimensions: a=101.12 Å, b=211.32 Å, c=171.27 Å.

Preferably, the N-domain of ACE protein is the N-domain of any vertebrate and mammalian.

Preferably the N-domain of ACE protein is the N-domain of human ACE protein.

Complexes may be obtained by growing the crystals in the presence of a ligand - such as a test compound. In these experiments the protein solution is mixed with the ligand and an equal volume of the reservoir solution before setting up the crystallisation. Single crystals suitable for diffraction work typically appear after about 1-2 weeks.

Typically, the protein comprising the N-domain of ACE protein is purified to homogeneity for crystallisation. Purity of the N-domain of ACE protein may be measured by typical techniques such as SDS-PAGE, mass spectrometry and hydrophobic HPLC.

The structure of the crystals of the invention may contain a portion – such as at least 25%, at least 50%, at least 75%, or preferably at least 90%, at least 95%, at least 98%, or at least 99% - of the co-ordinates set forth in Table A or Table B. Preferably, the crystal structure of the invention contains all of the co-ordinates set forth in Table A or Table B.

Preferably, the crystals are usable in X-ray crystallography techniques.

Preferably, the crystals used can withstand exposure to X-ray beams used to produce diffraction pattern data necessary to solve the X-ray crystallographic structure.

Preferably, prior to data collection, the crystals are flash-cooled at about 100 K in a cryoprotectant. The cryoprotectant comprising lithium sulphate in the range of from 0.025 to 0.4M, preferably in the range of from 0.05 to 0.35M, more preferably from 0.075 to 0.3M, most preferably containing 0.2M lithium sulphate, PEG 4000 in the range of from 5% to 25%, preferably from 10% to 20%, most preferably from 15% to

18% PEG 4000, $CH_3COONa.3H_2O$ in the range of from 50 to 150mM, preferably from 75 to 125 mM, more preferably from 90 to 110 mM, most preferably 100 mM $CH_3COONa.3H_2O$, wherein the $CH_3COONa.3H_2O$ has a pH in the range of from 3.9 to 5.9, preferably a pH from 4.5 to 5.5, more preferably a pH from 4.7 to 5.2, most preferably a pH of 4.9 and $ZnSO_4.7H_2O$ in the range of from 5 to 20μM, preferably from 7.5 to 12.5 μM, most preferably 10 μM $ZnSO_4.7H_2O$.

The X-ray data may be collected at a Synchrotron Radiation Source. Preferably, the X-ray data are collected at a Synchrotron Radiation Source at 100 °K.

Preferably, the crystal has a resolution determined by X-ray crystallography of about 3.5Å or less, more preferably a resolution of about 3.0 Å or less, more preferably a resolution of about 2.8Å or less, more preferably, a resolution of about 2 Å or less, more preferably, a resolution of about 1.5Å or less, most preferably, 1 Å or less.

GLYCOSYLATION OF THE N-DOMAIN OF ACE PROTEIN

Many proteins in eukaryotic cells are glycoproteins that contain oligosaccharide chains covalently linked to certain amino acids. Glycosylation is known to affect protein folding, interaction between protein domains, localisation and trafficking, protein solubility, antigenicity, biological activity and half-life, as well as cell-cell interactions.

Protein glycosylation can be divided into four main categories mainly depending on the linkage between the amino acid and the sugar molecule. These are *N*-linked glycosylation, O-linked glycosylation, C-mannosylation and GPI anchor attachments. *N*-glycosylation is characterised by the addition of a sugar to the amino group of an asparagine.

For *N*-glycosylation, the sequence motif Asn-Xaa-Ser/Thr (wherein Xaa is any amino acid other than Pro) has been defined as a prerequisite for glycosylation. Although rare, the sequence motif Asn-Xaa-Cys can also be an acceptor site. N-glycans can be subdivided into three distinct groups called 'high mannose type', 'hybrid type', and

'complex type', with the common pentasaccharide core - Manp(alpha1,6)-(Manp(alpha1,3))-Manp(beta1,4)-GlcpNAc(beta1,4) GlcpNAc(beta1,N)-Asn - occurring in all three groups. The relationship between all three types can be ascribed to the fact that they originate from one precursor oligosaccharide which contains the described common pentasaccharide core Man3-GlcNAc2, and some additional sugar residues and the non-reducing end, and is then processed enzymatically to yield these three types. Since the hydroxyl group of Ser/Thr is thought to be involved in hydrogen bonding during the enzymatic attachment of the oligosaccharide precursor molecule to yield a favourable conformation for the action of the oligosaccharyltransferase, it has been suggested for proline that the steric hindrance might be too large (Kornfeld (1985) *Ann. Rev. Biochem.* **54**: 631-64), preventing glycosylation at Pro containing sites. The negative influence of aspartic acid towards glycosylation can be ascribed to the negative charge on the side chain of this residue. In addition some cases have been reported where Ser/Thr is replaced by cysteine. While Ser replacement by Cys generally leads to decreased glycosylation, it has been shown (Kasturi 1995 *J. Biol. Chem.* 270: 14756-61) that substitution by Thr at a given potential glycosylation site can lead to increased glycosylation. This is in accordance with the model of hydrogen bonding being an important factor during the attachment of the precursor molecule to the protein. Although there are usually many potential glycosylation sites in a protein it has been estimated that glycosylation occurs only at one third of them. Mostly at those sites where the surrounding amino acids allow the formation of a beta turn.

Various glycoforms of ACE have been described. By way of example, Sadhukhan & Sen disrupted specific glycosylation sites in rabbit tACE to elucidate the glycosylation requirements for the expression and processing of active testis ACE. There are five potential *N*-linked glycosylation sites in the rabbit tACE sequence, with an additional six in the somatic form. A null mutant, where all five sites had been disrupted, behaved similarly to wild-type tACE expressed in the presence of the glycosylation-inhibitor, tunicamycin. It was degraded intracellularly and failed to be detected in culture medium, confirming previous findings that tACE requires *N*-linked glycosylation to be expressed in an active form. Expression of the remaining mutants showed a preference for *N*-linked glycosylation at the N-terminus and that the presence of sugars at a single N-terminal site was necessary and sufficient to produce enzymatically-active tACE that was solubilised. The presence of glycosylation is not

site-specific, as mutants that have either the first site or second site intact are expressed and active. However, glycosylation at the third site alone is not sufficient to produce active protein in HeLa cells, albeit this mutant was expressed in yeast, indicating that the requirements for glycosylation are cell-specific.

N-linked glycosylation of human tACE expressed in CHO cells at each site has been identified by MALDI-TOF mass spectrometry. There are seven potential *N*-linked sites in human tACE, five of which are complementary to the sites in rabbit tACE (7a). The unique sites lie within the ectodomain (the fourth site) and in the juxtamembrane stalk region, adjacent to the cleavage site (the seventh site). As with the rabbit form, there appears to be a preference for glycosylation at the N-terminus as evidenced by MALDI-TOF mass spectrometry of glycopeptides (Yu et al., 1997) and mutagenesis (Gordon et al., 2003) of glycosylation sites. Inhibition of complex oligosaccharide formation using a glucosidase I inhibitor *N*-butyldeoxynojirimycin (NB-DNJ) led to the production of an active glycoform that was electrophoretically homogeneous.

There are ten putative *N*-glycosylation sites on the human N-domain of ACE protein and Fourier difference density was observed at five of these sites according to the crystal of the present invention.

Suitably, the crystal of the N-domain of ACE protein may comprise minimally glycosylated N-domain of ACE protein or a fragment thereof. For example, the minimally glycosylated N-domain of ACE protein may comprise the sequence presented as SEQ ID No. 1.

To obtain a minimally glycosylated N-domain of ACE protein, various methods known to a person skilled in the art may be used. Both chemical and enzymatic methods may be used. Hydrazinolysis of glycoproteins (Kuraya, N & Hase (1992) J Biochem (Tokyo) 112:122-126), is capable of removing both N- and O-linked sugars, although this results in the complete destruction of the protein component and is therefore not suitable if recovery of the protein is desirable. More delicate chemical methods may be used such as trifluoromethanesulphonic acid (TFMS), however this method may also lead to a partial protein destruction. Alternatively, or in addition,

other methods – such as site directed mutagenesis of glycosylated amino acids may also be employed.

Enzymatic methods which provide for partial sugar removal with no protein degradation may also be used.

Use of the enzyme PNGase F is an effective method of removing most *N*-linked oligosaccharides from glycoproteins (Tarentino & Plummer (1994) *Methods in-Enzymology,* **230**: 44-57). The oligosaccharide is left intact and therefore suitable for further analysis (the asparagine residue from which the sugar is removed is deaminated to aspartic acid, the only modification to the protein).

Other commonly used endoglycosidases include Endoglycosidase H (Kobata (1979) *Anal Biochem* **100**:1-14) and Endoglycosidase F (Trimble & Tarentino (1991) *J. Biochem.* **266**:1646-1651). In a preferred method, the N-domain of ACE protein is digested with Endoglycosidase H (30 mU) in a suitable buffer – such as 100 mM sodium phosphate, 0.1 mM $ZnCl_2$ and 1% BSA, pH 6.0 for 16 h at 37°C. The endo H-treated protein is passed through a lectin affinity column consisting of equal parts of concanavalin A, wheat germ, and lentil lectin, after equilibration with 20 mM Tris-HCl, 0.5 M NaCl at pH 7.4. The minodeglycosylated ACE is collected in the flowthrough. Free oligosaccharides and any other impurities are removed from the flowthrough fraction by a final lisinopril-Sepharose affinity chromatography step. The homogeneity of the ACE protein after deglycosylation is confirmed by SDS-PAGE on a 4-20% acrylamide gel and MALDI-TOF mass spectrometry.

By way of example, a minimally glycosylated N-domain of ACE protein can be obtained by incubating suitable host cells such as CHO cells until confluent and then substituting the growth medium with medium comprising 1% FCS, 0.05% albumax I (Gibco BRL), 20μM MSX and 1.5mM of the glucosidase I inhibitor N-butyldeoxynojirimycin (NB-DNJ) (Toronto Research Chemicals Inc.B691000 Lot 14-EG-91-1 and B691000 12-Cf-146-2).

Preferably, the crystal of the N-domain of ACE protein comprises glycosylated N-domain of ACE protein or a fragment thereof. More preferably, the crystal of the N-domain of ACE protein comprises a minimally glycosylated N-domain of ACE protein or a fragment thereof. More preferably, the crystal of the N-domain of ACE protein comprises *N*-glycosylation of asparagine residues. More, preferably the asparagine residues are *N*-glycosylated with high mannose oligosaccharides.

Preferably, one or more of the asparagine residues of the N-domain of ACE protein can be *N*-glycosylated. More preferably, one or more of the asparagine residue of SEQ ID No: 1 are *N*-glycosylated. More, preferably one or more of the asparagine residues 25, 45, 117, 289 and 480 of SEQ ID No: 1 can be *N*-glycosylated.

PREPARING A CRYSTAL OF THE N-DOMAIN OF ACE PROTEIN

In another aspect, the present invention relates to a method of preparing a crystal of the N-domain of ACE protein, comprising the steps of (a) culturing host cells comprising N-domain of ACE protein; (b) purifying the N-domain of ACE protein; and (c) crystallising the N-domain of ACE protein.

Preferably, the N-domain of ACE protein comprises an inter-domain linker region.

The N-domain of ACE protein may be purified using the methods described herein.

Preferably, the N-domain of ACE protein is crystallised in the presence of a ligand, for example, a modulator of the N-domain of ACE protein.

MODULATORS

The role of ACE protein in the pathogenesis of hypertension has resulted in an intensive search for modulators (eg. inhibitors) of the enzyme that could act as antihypertensive drugs (eg. US 3,891,616, US 3,947,575, US 4,052,511 and US 4,053,651). Therapeutic vasodepressors - such as the compound captopril (D-2-methyl-3-mercaptopropanoyl-L-proline) - have been synthesised as ACE inhibitors. Numerous synthetic peptide derivatives have also been shown to be ACE inhibitors as disclosed in US 3,832,337.

Natural substances that inhibit ACE include snake venom and those derived from foodstuffs – such as ACE inhibiting peptides produced by enzymatic hydrolysis of proteins, such as casein or fish meat protein (by Hiroyuki Ukeda, Nippon Nogei Kagaku Kaishi (*Journal of Japan Society for Bioscience*, Biotechnology, and Agrochemistry, 66(1), 25-29 (1992)).

ACE inhibiting synthetic substances include captopril (D-2-methyl-3-mercaptopropanoyl-L-proline) which has already been put to practical application as an orally administered vasodepressor.

However, many currently used ACE inhibiting substances exhibit side effects in many cases and special attention needs to be exercised.

The present invention offers a novel concept in the field of ACE protein inhibitor design by providing conditions suitable for generating specific inhibitors to more precisely target and regulate the activity of the N- and/or C- domains of ACE protein. Preferably the modulators are N-domain of ACE protein specific and/or C-domain of ACE protein specific. These novel modulators can advantageously have reduced side effects.

The present invention provides the use of molecular design techniques to design, select and synthesise chemical entities and compounds, including ACE modulating compounds, capable of binding to the N-domain of ACE protein, in whole or in part.

Thus, in a further aspect, the present invention relates to a method of screening for a modulator of the N-domain of ACE protein wherein the method comprises the use of a crystal of the N-domain of ACE protein.

Preferably, the method comprises the steps of: (a) providing at least a portion of the structural co-ordinates set forth in Table A or Table B; (b) employing at least a portion of the structural co-ordinates set forth in Table A or Table B to design or select or synthesise a putative modulator of the N-domain of ACE protein; (c) contacting the putative modulator of the N-domain of ACE protein with the N-domain

of ACE protein or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and (d) screening the putative modulator of the N-domain of ACE protein in an assay for the potential to modulate the N-domain.

By way of example, the structure co-ordinates may be used to design compounds that bind to the N-domain of ACE enzyme and may alter the physical properties of the compounds (e.g. solubility) or the domain or the enzyme itself. This invention may be used to design compounds that act as modulators – such as competitive inhibitors - of the N-domain of ACE protein by binding to all or a portion of the active site of the N-domain of ACE protein. Compounds may also be designed that act as non-competitive inhibitors of the N-domain of ACE protein. These non-competitive inhibitors may bind to all or a portion of the N-domain of ACE protein already bound to its substrate and may be more potent and specific than known N-domain of ACE protein inhibitors that compete only for the N-domain of ACE protein active site. Similarly, non-competitive inhibitors that bind to and inhibit the N-domain of ACE protein whether or not it is bound to another chemical ligand may be designed using the structure co-ordinates of the N-domain of ACE protein as described herein.

By way of example, it may be found that the COOH-binding active site residue differs between the N- and C-domain of ACE protein active sites and/or that it may be amenable to the incorporation of a functionality that can covalently modify this residue to produce an irreversible domain specific inhibitor design.

Due to the significant structural similarity between the N-domain and the C-domain of ACE protein it is envisaged that the structural co-ordinates of the crystal of the N-domain can also be used to design modulators which are specific for the C-domain of ACE protein.

Accordingly, in a further aspect, the present invention relates to a method of screening for a modulator of the C-domain of ACE protein wherein the method comprises the use of a crystal of the N-domain of ACE protein. Preferably, the method comprises the steps of: (a) providing at least a portion of the structural co-ordinates set forth in Table A or Table B; (b) employing at least a portion of the structural co-ordinates set forth in Table A or Table B to design or select or synthesise a putative modulator of

the C-domain of ACE protein; (c) contacting the putative modulator of the C-domain of ACE protein with the C-domain of ACE protein or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and (d) screening the putative modulator of the C-domain of ACE protein in an assay for the potential to modulate the C-domain.

By way of example, the structure co-ordinates of the N-domain may be used to design compounds that bind to the C-domain of ACE enzyme and may alter the physical properties of the compounds (e.g. solubility) or the domains or the enzyme itself. This invention may be used to design compounds that act as modulators – such as competitive inhibitors - of the C-domain of ACE protein by binding to all or a portion of the active site of the C-domain of ACE protein. Compounds may also be designed that act as non-competitive inhibitors of the C-domain of ACE protein. These non-competitive inhibitors may bind to all or a portion of the C-domain of ACE protein already bound to its substrate and may be more potent and specific than known C-domain of ACE protein inhibitors that compete only for the C-domain of ACE protein active site. Similarly, non-competitive inhibitors that bind to and inhibit the C-domain of ACE protein whether or not it is bound to another chemical ligand may be designed using the structure co-ordinates of the N-domain of ACE protein as described herein. Advantageously, the specific modulators of the C-domain of ACE protein do not adversely affect the enzymatic activity of the N-domain of ACE protein. By way of example, such C-domain specific inhibitors can permit the N-domain to hydrolyse the vasodilator bradykinin and thus alleviate side effects such as persistent cough and angioedema. Accordingly, the C-domain specific modulators identified by the screening methods described herein may have the capacity to overcome certain side effects. By way of a further example, the C-domain specific inhibitors can also permit the hydrolysis of the N-domain specific hemoregulatory peptide AcSDKP.

In a preferred embodiment, at least a portion of the structural co-ordinates set forth in Table A or Table B and/or the putative modulator of the N-domain of ACE protein or C-domain of ACE protein and/or the substrate are provided on a machine-readable data storage medium comprising a data storage material encoded with machine readable data.

A crystal of the N-domain of ACE may be probed with a variety of different chemical entities or test compounds to determine optimal sites for interaction between modulators of the N-domain of ACE protein or the C-domain of ACE protein and the enzyme. For example, X-ray diffraction data collected from crystals grown in the presence of chemical entities or test compounds may allow the elucidation of how the chemical entities or test compounds interact with the N-domain of ACE protein or the C-domain of ACE protein. Molecules that bind to those sites can then be designed and synthesised and tested for their capacity to modulate the activity of the N-domain of ACE protein.

The present invention may also allow the development of compounds that can isomerise to reaction intermediates in the chemical reaction of a substrate or other compound that bind to the N-domain of ACE protein or the C-domain of ACE protein. Thus, the time-dependent analysis of structural changes in the N-domain of ACE protein during its interaction with other molecules may be performed. The reaction intermediates of the N-domain of ACE protein or the C-domain of ACE protein may also be deduced from the reaction product in complex with the N-domain of ACE protein. Such information is especially useful to design improved analogues of known N-domain or C-domain modulators or to design new N-domain or C-domain modulators based on the reaction intermediates and the modulator complex. This may provide a new route for designing N-domain or C-domain of ACE protein modulators with high domain specificity and stability. Preferably, this provides a new route for designing N-domain or C-domain of ACE protein modulators with high domain specificity, high stability and low toxicity.

Small molecule databases or test compounds may be screened for chemical entities or compounds that can bind in whole, or in part, to the N-domain or C-domain of ACE protein. Thus, in a preferred embodiment, the putative N-domain or C-domain modulator is selected from a library of compounds or a database. In this screening, the quality of fit of such entities or compounds to the binding site may be judged by various methods – such as shape complementarity or estimated interaction energy (Meng, E. C. *et al.*, *J. Comp. Chem.*, 13, pp. 505-524 (1992)).

Because the N-domain of ACE protein or a mutant, variant, homologue, derivative or fragment thereof may crystallise in more than one crystal form, the structure co-ordinates of the N-domain of ACE protein, or portions thereof, may be particularly useful to solve the structure of other crystal forms of the N-domain of ACE protein. They may also be used to solve the structure of the N-domain of ACE protein mutants, N-domain of ACE protein variants, N-domain of ACE protein homologues, N-domain of ACE protein derivatives, N-domain of ACE protein fragments and N-domain of ACE protein complexes.

Preferably, the structure co-ordinates of the N-domain of ACE protein are used to solve the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein. By way of example, molecular replacement may be used. In this method, the unknown crystal structure, whether it is another crystal form of the N-domain of ACE protein, N-domain of ACE protein mutant, N-domain of ACE protein variant, N-domain of ACE protein homologue (eg. another protein with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein), N-domain of ACE protein derivative, N-domain of ACE protein fragments or N-domain of ACE protein complex may be determined using the N-domain of ACE protein structure co-ordinates of the present invention. This method will provide a more accurate structural form for the unknown crystal more quickly and efficiently than attempting to determine such information *ab initio*.

Preferably, the structural co-ordinates of the N-domain of ACE protein are used for domain interplay or also referred to as domain co-operativity studies. By way of example, molecular replacement may be used. In this method, unknown domain co-operativity with N-domain of ACE protein, N-domain of ACE protein mutant, N-domain of ACE protein variant, N-domain of ACE protein homologue (e.g. another protein with significant amino acid sequence homology to the N-domain of ACE protein), N-domain of ACE protein derivative, N-domain of ACE protein fragments or N-domain of ACE protein complex may be determined using the N-domain of ACE protein structure co-ordinates of the present invention. This method will provide a more accurate structural form for the unknown crystal more quickly and efficiently than attempting to determine such information *ab initio*.

As used herein the term "domain co-operativity" refers to the capacity of each of the domains of ACE protein to modulate the biochemical activities of each other. As used herein the term "modulate" means to affect, to vary, to adjust, to increase, to decrease or generally to be able to regulate or modify the biochemical activity of the N- or C-domain of ACE ptoein.

Preferably the structural co-ordinates of N-domain of ACE protein are used to study co-operativity between the N-domain of ACE protein and the C-domain of ACE protein.

In a preferred embodiment of the present invention, the crystal of the N-domain of ACE protein further comprises a ligand bound to the ACE protein or a portion thereof. For example, the N-domain of ACE protein may be crystallised in a complex with a ligand that is an inhibitor of the N-domain of ACE protein e.g. lisinopril, captopril or RXP407.

By way of example the inhibitor is bound to the N-domain of ACE protein or a portion thereof by contacting one of more residues of the N-domain of ACE protein selected from: Gln259, Tyr369, Lys489 and Tyr498.

The crystal structures of a series of such complexes may then be solved by molecular replacement or in combination with MAD (Multiwavelength Anomalous Dispersion) and/or MIRAS (Multiple Isomorphous Replacement with Anomalous Scattering) procedures - and compared with that of minimally glycosylated N-domain of ACE protein. Potential sites for modification within the binding sites of the N-domain may thus be identified. This information provides an additional tool for determining the most efficient binding interactions, for example, increased hydrophobic interactions, between the N-domain of ACE protein and a ligand or a compound.

The information will also provide ideal conditions for designing domain specific inhibitors to more precisely regulate the biochemical functions of the N- and C-domains of ACE protein.

The structures and complexes of the N-domain of ACE protein may be refined using computer software - such as X-PLOR (*Meth. Enzymol.*, vol. 114 & 115, H. W. Wyckoff et al., eds., Academic Press (1985)), MLPHARE (Collaborative computational project Number 4. The CCP4 Suite: Programs for Protein Crystallography (1994) *Acta Crystallogr.* D 50, 760-763) and SHARP [De La Fortelle, E. & Bricogne, G. Maximum-likelihood heavy-atom parameters refinement in the MIR and MAD methods (1997) *Methods Enzymol.* 276, 472-494). Preferably, the complexes are refined using the program CNS (Brünger et al., (1998) *Acta Crystallogr.* D 54, 905-921). During the final stages of refinement water molecules, ions and inhibitor molecules may be inserted in the structure. This information may thus be used to optimise known classes of modulators of the N-domain of ACE protein, eg. inhibitors, and more importantly, to design and synthesise novel classes of domain specific modulators.

The overall figure of merit may be improved by iterative solvent flattening, phase combination and phase extension with the program SOLOMON (Abrahams, J. P. & Leslie, A. G. W. Methods used in structure determination of bovine mitochondrial F1 ATPase. (1996) *Acta Crystallogr.* D 52, 110-119).

The structure co-ordinates of the mutants of the N-domain of ACE provided in this invention also facilitate the identification of related domains or enzymes analogous to the N-domain of ACE protein in function, structure or both, thereby further leading to novel therapeutic modes for treating or preventing ACE related diseases.

The design of compounds that bind to or modulate the N-domain of ACE protein or the C-domain of ACE protein according to the present invention generally involves consideration of two factors.

First, the compound must be capable of physically and structurally associating with the N-domain or the C-domain of ACE protein. Non-covalent molecular interactions important in the association of the N-domain of ACE with its substrate may include hydrogen bonding, van der Waals and hydrophobic interactions.

Second, the compound must be able to assume a conformation that allows it to associate with the N-domain or C-domain of ACE protein. Although certain portions of the compound may not directly participate in the association with the N-domain or C-domain of ACE, those portions may still influence the overall conformation of the molecule. This may have a significant impact on potency of the compound. Such conformational requirements include the overall three-dimensional structure and orientation of the chemical ligand or compound in relation to all or a portion of a binding site of the N-domain or C-domain of ACE, or the spacing between functional groups of a compound comprising several chemical entities that directly interact with the N-domain or C-domain of ACE.

The potential modulating or binding effect of a chemical compound on the N-domain or the C-domain of ACE may be analysed prior to its actual synthesis and testing by the use of computer modelling techniques. If the theoretical structure of the given compound suggests insufficient interaction and association with the N-domain or the C-domain of ACE, then synthesis and testing of the compound may be obviated. However, if computer modelling indicates a strong interaction, the molecule may be synthesised and tested for its ability to bind to the N-domain or the C-domain of ACE and modulate (e.g. inhibit) using the fluorescent substrate assay of Thornberry et al., (2000) *Methods Enzymol.* 322, 100–110. In this manner, synthesis of inactive compounds may be avoided.

A modulating or other binding compound of the N-domain or the C-domain of ACE may be computationally evaluated and designed by means of a series of steps in which chemical entities or test compounds are screened and selected for their ability to associate with the N-domain or the C-domain of ACE.

A person skilled in the art may use one of several methods to screen chemical entities or test compounds for their ability to associate with the N-domain or the C-domain of ACE and more particularly with the individual binding sites of the N-domain or the C-domain of ACE. This process may begin by visual inspection of, for example, the active site on the computer screen based on the N-domain or the C-domain of ACE co-ordinates of the present invention. Selected chemical entities or test compounds may then be positioned in a variety of orientations, or docked, with the N-domain or

the C-domain of ACE. Docking may be accomplished using software such as Quanta and Sybyl, followed by energy minimisation and molecular dynamics with standard molecular mechanics force fields - such as CHARMM and AMBER.

Specialised computer programs may also assist in the process of selecting chemical entities or test compounds. These include but are not limited to MCSS (Miranker and Karplus (1991) *Proteins: Structure, Function and Genetics*, 11, 29-34); GRID (Goodford (1985) *J. Med. Chem.*, 28, 849-857) and AUTODOCK (Goodsell and Olsen (1990), *Proteins: Structure. Function, and Genetics*, 8, 195-202).

Once suitable chemical entities or test compounds have been selected, they may be assembled into a single compound capable of modulating the domains of the ACE protein e.g. the N-domain and/or the C-domain of the ACE protein. Assembly may proceed by visual inspection of the relationship of the chemical entities or test compounds in relation to the structure co-ordinates of the N-domain of ACE protein. This may be followed by manual model building using software - such as Quanta, Sybyl or O [Jones, T. A., Zou, J. Y., Cowan, S. W. & Kjeldgaard, M. Improved methods for building protein models in electron density maps and the location of errors in these models (1991) *Acta Crystallogr.* A 47, 110-119].

Refinement of the model may be carried out using the program CNS [Brünger, A. T. et al., Crystallography & NMR System: A new software suite for macromolecular structure determination. (1998) *Acta Crystallogr.* D 54, 905-921].

Various programs may be used by a skilled person to connect the individual chemical entities or test compounds – such as 3D Database systems (Martin (1992) *J. Med. Chem.*, 35, 2145-2154) and CAVEAT (Bartlett et al., (1989) *Royal Chem. Soc.* 78, 182-196).

Rather than build an inhibitor of the N-domain or the C-domain of ACE protein one chemical ligand at a time, modelling of other N-domain or C-domain binding compounds may be designed as a whole or *de novo* using either an empty binding site or optionally including some portion(s) of a known inhibitor(s). Such compounds may be designed using programs that may include but are not limited to LEGEND

(Nishibata and Itai (1991) Tetrahedron, 47, 8985) and LUDI (Bohm (1992) *J. Comp. Aid. Molec. Design*, 6, 61-78).

Other molecular modelling techniques may also be employed in accordance with this invention – such as those described by Cohen et al., *J. Med. Chem.*, 33, 883-894 (1990); Navia and Murcko (1992) *Current Opinions in Structural Biology*, 2, 202-210 (1992).

Once a compound has been designed or selected by the above methods, the efficiency with which that compound may bind to the N-domain or the C-domain of ACE protein may be computationally evaluated. Specific computer software may be used to evaluate the efficiency of binding (eg. to evaluate compound deformation energy and electrostatic interaction) – such as QUANTA/CHARMM (Accelrys Inc., USA) and Insight II/Discover (Biosym Technologies Inc., San Diego, Calif., USA). These programs may be implemented, for instance, using a suitable workstation. Other hardware systems and software packages will be known to those persons skilled in the art.

Once a modulating compound has been selected or designed, as described above, substitutions may be made (eg. in atoms or side groups) to improve or modify the binding properties. The substitutions may be conservative i.e. the replacement group may have approximately the same size, shape, hydrophobicity and charge as the original group. Such substituted chemical compounds may then be analysed for efficiency of binding to the N-domain or C-domain of ACE by the same computer methods described above.

Test compounds and modulators of the N-domain or C-domain of ACE protein which are identified using the crystal and the methods of the present invention may be screened in assays. Screening can be, for example *in vitro*, in cell culture, and/or *in vivo*. Biological screening assays preferably centre on activity-based response models, binding assays (which measure how well a compound binds), and bacterial, yeast and animal cell lines (which measure the biological effect of a compound in a cell). The assays can be automated for high capacity-high throughput screening

(HTS) in which large numbers of compounds can be tested to identify compounds with the desired activity.

Current screening technologies are described in Handbook of Drug Screening, edited by Ramakrishna Seethala, Prabhavathi B. Fernandes. New York, NY, Marcel Dekker, (2001).

DISORDERS

These include, but are not limited to, treatment of high blood pressure; treatment of heart failure; prolonging survival of patients who have had a heart attack; preventing death by heart attack and stroke in patients with vascular disease and in diabetics with other vascular risk factors; prolonging survival of patients with weak heart muscle; helping leaking heart valves; preserving kidney function in diabetics; and the treatment of new indications (e.g. polycythemia). Special groups of patients may also be treated with N-domain or C-domain of ACE inhibitors, including patients with chronic pulmonary disease, patients with schleroderma, patients with atheroschlerosis, and patients with hyperuricemia.

It is also envisaged that the modulators identified by the methods described herein may be used to treat Alzheimer's disease and other degenerative diseases, conditions or disorders of the CNS.

ACE CONSTRUCTS

The N-domain of ACE protein produced by a host recombinant cell may be secreted or may be contained intracellularly depending on the nucleotide sequence and/or the vector used.

The skilled person would understand that expression vectors containing the N-domain of ACE protein encoding nucleotide sequence or a mutant, variant, homologue, derivative or fragment thereof, may be designed with signal sequences which direct secretion of the N-domain of ACE protein coding sequences across a particular prokaryotic or eukaryotic cell membrane.

The N-domain encoding sequence may be fused (e.g. ligated) to nucleotide sequences encoding a polypeptide domain which will facilitate purification of soluble proteins (Kroll DJ et al., (1993) *DNA Cell Biol* 12:441-53). Preferably, the polypeptide domain which facilitates purification of soluble proteins is fused in frame with the N-domain of the ACE protein encoding sequence. Such purification facilitating domains include, but are not limited to, metal chelating peptides – such as histidine-tryptophan modules that allow purification on immobilised metals (Porath J (1992) *Protein Expr Purif* 3, 263-281), protein A domains that allow purification on immobilised immunoglobulin, and the domain utilised in the FLAGS extension/affinity purification system (Immunex Corp, Seattle, WA). The inclusion of a cleavable linker sequence such as Factor XA or enterokinase (Invitrogen, San Diego, CA) between the purification domain and ACE is useful to facilitate purification.

Preferably the N-domain of ACE protein sequence is fused with the glutathione synthetase (GS) signal.

Preferably, the N-domain of ACE protein is secreted in a soluble form host cells and can be harvested from the growth medium.

Preferably, the N-domain of ACE construct is pEE14 N-domain which encodes the N-domain of human tACE. This construct comprises the inter-domain linker region.

HOST CELL

As used herein, the term "host cell" refers to any cell that comprises nucleotide sequences that are of use in the present invention, for example, nucleotide sequences encoding the N-domain of ACE protein.

Host cells may be transformed or transfected with a nucleotide sequence contained in a vector e.g. a cloning vector. Preferably, said nucleotide sequence is carried in a vector for the replication and/or expression of the nucleotide sequence. The cells will be chosen to be compatible with the said vector and may for example be prokaryotic such as bacterial or eukaryotic such as fungal, yeast or plant cells.

The gram-negative bacterium *E. coli* is widely used as a host for cloning nucleotide sequences. This organism is also widely used for heterologous nucleotide sequence expression. However, large amounts of heterologous protein tend to accumulate inside the cell. Subsequent purification of the desired protein from the bulk of *E. coli* intracellular proteins can sometimes be difficult.

In contrast to *E. coli*, bacteria from the genus *Bacillus* are very suitable as heterologous hosts because of their capability to secrete proteins into the culture medium. Other bacteria suitable as hosts are those from the genera *Streptomyces* and *Pseudomonas*.

Depending on the nature of the polynucleotide and/or the desirability for further processing of the expressed protein, eukaryotic hosts including yeast or other fungi may be preferred. In general, yeast cells are preferred over fungal cells because yeast cells are easier to manipulate. However, some proteins are either poorly secreted from the yeast cell, or in some cases are not processed properly (e.g. hyperglycosylation). In these instances, a different fungal host organism should be selected.

Examples of expression hosts are fungi - such as *Aspergillus* species (such as those described in EP-A-0184438 and EP-A-0284603) and *Trichoderma* species; bacteria - such as *Bacillus* species (such as those described in EP-A-0134048 and EP-A-0253455), *Streptomyces* species and *Pseudomonas* species; yeast - such as *Kluyveromyces* species (such as those described in EP-A-0096430 and EP-A-0301670) and *Saccharomyces* species; mammalian cells – such as CHO-K1 cells.

The use of host cells may provide for post-translational modifications (e.g. glycosylation) as may be needed to confer optimal biological activity on recombinant expression products of the present invention.

Aspects of the present invention also relate to host cells comprising the N-domain of ACE protein constructs of the present invention. The N-domain of ACE protein constructs may comprise a nucleotide sequence for replication and expression of the

sequence. The cells will be chosen to be compatible with the vector and may for example be prokaryotic such as bacterial or eukaryotic such as fungal, yeast or plant cells.

In a preferred embodiment, the host cells are mammalian cells – such as CHO-K1 cells. CHO-K1 cells expressing the N-domain of ACE protein may be grown and maintained in accordance with Yu *et al.* (1997).

NUCLEOTIDE SEQUENCES

As used herein, the term "nucleotide sequence" refers to nucleotide sequences, oligonucleotide sequences, polynucleotide sequences and variants, homologues, fragments and derivatives thereof (such as portions thereof) which comprise the nucleotide sequences encoding the N-domain of ACE protein, for example, the N-domain of testis ACE protein or the N-domain of somatic ACE protein.

The nucleotide sequence may be DNA or RNA of genomic or synthetic or recombinant origin, which may be double-stranded or single-stranded whether representing the sense or antisense strand or combinations thereof.

Preferably, the term nucleotide sequence is prepared by use of recombinant DNA techniques (e.g. recombinant DNA). The nucleotide sequences may include within them synthetic or modified nucleotides. A number of different types of modification to oligonucleotides are known in the art. These include methylphosphonate and phosphorothioate backbones addition of acridine or polylysine chains at the 3' and/or 5' ends of the molecule. For the purposes of the present invention, it is to be understood that the nucleotide sequences described herein may be modified by any method available in the art.

It will be understood by a skilled person that numerous different nucleotide sequences can encode the same protein as a result of the degeneracy of the genetic code. In addition, it is to be understood that skilled persons may, using routine techniques, make nucleotide substitutions that do not substantially affect the activity encoded by the

nucleotide sequence of the present invention to reflect the codon usage of any particular host organism in which the target is to be expressed.

The terms "variant", "homologue" or "derivative" in relation to nucleotide sequences include any substitution of, variation of, modification of, replacement of, deletion of or addition of one (or more) nucleic acid from or to the sequence providing the resultant nucleotide sequence encodes a functional protein according to the present invention (or even a modulator of the N-domain of ACE protein according to the present invention if said modulator comprises a nucleotide sequence).

AMINO ACID SEQUENCES

As used herein, the term "amino acid sequence" is synonymous with the term "polypeptide" and/or the term "protein". In some instances, the term "amino acid sequence" is synonymous with the term "peptide".

Aspects of the present invention concern the use of amino acid sequences, which may be available in databases. These amino acid sequences may comprise N-domain of ACE proteins.

The amino acid sequence may be isolated from a suitable source, or it may be made synthetically or it may be prepared by use of recombinant DNA techniques.

The terms "variant", "homologue" or "derivative" in relation to amino acid sequences include any substitution of, variation of, modification of, replacement of, deletion of or addition of one (or more) amino acid from the functional protein according to the present invention (or even a modulator of the N-domain of ACE protein according to the present invention if said modulator comprises an amino acid sequence).

Preferably, the N-domain of ACE protein comprises SEQ ID No. 1 or a mutant, variant, homologue, derivative or a fragment thereof.

PURITY

Preferably the protein solution used for crystallisation is at least 95.5% pure. More preferably the protein solution used for crystallisation is at least 97.5% pure. More preferably, the protein solution used for crystallisation is at least 99.0% pure. Most preferably, the protein solution used for crystallisation is at least 99.5% pure.

MODEL

As used herein, the term "model" refers to a structural model such as a three dimensional (3D) structural model (or representation thereof) comprising the N-domain of ACE protein.

Test compounds can be modelled that bind spatially and preferentially to the N-domain of ACE protein – such as to bind spatially and preferentially to the N-domain of ACE protein – for example, the active site of the N-domain of ACE protein.

Preferably, the crystal model comprising the N-domain of ACE is built from all or a portion of the structural co-ordinates set forth in Table A or Table B.

MUTANT

As used herein, the term "mutant" refers to the N-domain of ACE protein comprising any one or more changes in the wild-type ACE sequence shown as SEQ ID No. 1.

The term "mutant" is not limited to any of the mutations described herein which are reflected in amino acid substitutions of the amino acid residues in the N-domain of ACE protein, but are not limited to, other deletions or insertions of nucleotides which may result in changes in the amino acid residues in the amino acid sequence of the N-domain of ACE protein.

The present invention also enables the solving of the crystal structure of mutants of the N-domain of ACE protein. More particularly, by virtue of the present invention, the location of the active site of the N-domain of ACE protein based on its crystal structure permits the identification of desirable sites for mutation. For example, one or more mutations may be directed to a particular site - such as the active site - or combination of

sites. Similarly, only a location on, at or near the inter-domain linker region may be replaced, resulting in an altered domain co-operativity by changing the charge of one or more charge units, as compared to the wild-type N-domain. Alternatively, an amino acid residue in the inter-domain linker region of the N-domain of ACE may be chosen for replacement based on its hydrophilic or hydrophobic characteristics.

Such mutants may be characterised by any one of several different properties as compared with wild-type N-domain of ACE protein. For example, such mutants may have altered surface charge of one or more charge units, or have an increased stability to subunit dissociation, or an altered substrate specificity in comparison with, or a higher specific activity than, wild-type of the N-domain of ACE protein.

The mutants may be prepared in a number of ways that are known by a person skilled in the art. For example, mutations may be introduced by means of oligonucleotide-directed mutagenesis or other conventional methods. Alternatively, mutants of the N-domain of ACE protein may be generated by site specific replacement of a particular amino acid with an unnaturally occurring amino acid. This may be achieved by growing a host organism capable of expressing either the wild-type or mutant polypeptide on a growth medium depleted of one or more natural amino acids but enriched in one or more corresponding unnaturally occurring amino acids.

The expression, activity (e.g. kinetic constants) and/or the crystallisation properties of the mutants may be determined using the methods described herein.

VARIANTS/HOMOLOGUES/DERIVATIVES/FRAGMENTS

The N-domain of ACE protein described herein is intended to include any polypeptide, which has the activity of the naturally occurring N-domain and includes all vertebrate and mammalian forms. Such terms also include polypeptides that differ from naturally occurring forms of the N-domain by having amino acid deletions, substitutions, and additions, but which retain the activity of the N-domain of ACE protein.

The term "variant" is used to mean a naturally occurring polypeptide or nucleotide sequences which differs from a wild-type or a native sequence.

The term "fragment" indicates that a polypeptide or nucleotide sequence comprises a fraction of a wild-type or a native sequence. It may comprise one or more large contiguous sections of sequence or a plurality of small sections. The sequence may also comprise other elements of sequence, for example, it may be a fusion protein with another protein. Preferably the sequence comprises at least 50%, more preferably at least 65%, more preferably at least 80%, most preferably at least 90% of the wild-type sequence.

The present invention also encompasses the use of variants, homologues and derivatives of nucleotide and amino acid sequences. Here, the term "homologue" means an entity having a certain homology with amino acid sequences or nucleotide sequences. Here, the term "homology" can be equated with "identity".

In the present context, a homologous sequence is taken to include an amino acid sequence which may be at least 75%, 85% or 90% identical, preferably at least 95% or 98% identical to the subject sequence. Although homology can also be considered in terms of similarity (i.e. amino acid residues having similar chemical properties/functions), it is preferred here to express homology in terms of sequence identity.

Homologous sequence is taken to include a nucleotide sequence which may be at least 75%, 85% or 90% identical, preferably at least 95% or 98% identical to the subject sequence.

Homology comparisons can be conducted by eye, or more usually, with the aid of readily available sequence comparison programs. These commercially available computer programs can calculate % homology between two or more sequences.

Homology when based on percentage (%) may be calculated over contiguous sequences, i.e. one sequence is aligned with the other sequence and each amino acid in one sequence is directly compared with the corresponding amino acid in the other

sequence, one residue at a time. This is usually referred to "ungapped" alignment. Typically, such ungapped alignments are performed only over a relatively short number of residues.

Although this is a very simple and consistent method, it fails to take into consideration that, for example, in an otherwise identical pair of sequences, one insertion or deletion will cause the following amino acid residues to be put out of alignment, thus potentially resulting in a large reduction in % homology when a global alignment is performed. Consequently, most sequence comparison methods are designed to produce optimal alignments that take into consideration possible insertions and deletions without penalising unduly the overall homology score. This is achieved by inserting "gaps" in the sequence alignment to try to maximise local homology.

However, these more complex methods assign "gap penalties" to each gap that occurs in the alignment so that, for the same number of identical amino acids, a sequence alignment with as few gaps as possible - reflecting higher relatedness between the two compared sequences - will achieve a higher score than one with many gaps. "Affine gap costs" are typically used that charge a relatively high cost for the existence of a gap and a smaller penalty for each subsequent residue in the gap. This is the most commonly used gap scoring system. High gap penalties will of course produce optimised alignments with fewer gaps. Most alignment programs allow the gap penalties to be modified. However, it is preferred to use the default values when using such software for sequence comparisons. For example when using the GCG Wisconsin Bestfit package the default gap penalty for amino acid sequences is -12 for a gap and -4 for each extension.

Calculation of maximum % homology therefore firstly requires the production of an optimal alignment, taking into consideration gap penalties. A suitable computer program for carrying out such an alignment is the GCG Wisconsin Bestfit package (University of Wisconsin, U.S.A.; Devereux et al., 1984, *Nucleic Acids Research* 12:387). Examples of other software than can perform sequence comparisons include, but are not limited to, the BLAST package (see Ausubel et al., 1999 *ibid* – Chapter 18), FASTA (Atschul et al., 1990, *J. Mol. Biol.*, 403-410) and the

GENEWORKS suite of comparison tools. Both BLAST and FASTA are available for offline and online searching (see Ausubel et al., 1999 *ibid*, pages 7-58 to 7-60). However, for some applications, it is preferred to use the GCG Bestfit program. A new tool, called BLAST 2 Sequences is also available for comparing protein and nucleotide sequence (see *FEMS Microbiol Lett* 1999 174(2): 247-50; *FEMS Microbiol Lett* 1999 177(1): 187-8)

Although the final % homology can be measured in terms of identity, the alignment process itself is typically not based on an all-or-nothing pair comparison. Instead, a scaled similarity score matrix is generally used that assigns scores to each pairwise comparison based on chemical similarity or evolutionary distance. An example of such a matrix commonly used is the BLOSUM62 matrix - the default matrix for the BLAST suite of programs. GCG Wisconsin programs generally use either the public default values or a custom symbol comparison table if supplied (see user manual for further details). For some applications, it is preferred to use the public default values for the GCG package, or in the case of other software, the default matrix, such as BLOSUM62.

Once the software has produced an optimal alignment, it is possible to calculate % homology, preferably % sequence identity. The software typically does this as part of the sequence comparison and generates a numerical result.

By way of example, homologous sequences of the N-domain of ACE protein include, but are not limited to human ACE_S somatic ACE (accession number: J04144), human ACE_T testis ACE (accession number: M26657), human ACEH/ACE2 (accession numbers: AAF78220; BAB40370; AAF99721), chimp ACE_T (accession number: AF193487_2), rabbit ACE_T mature protein (accession number: P22968), rabbit ACE_T full pre-protein (accession number: P22968), mouse ACE_T testis ACE (accession number: P22967), bovine Cdom ACE_S C-domain, rat Cdom ACE_S C-domain (derived from accession number P47820; starting D616), human Ndom ACE_S N-domain (derived from accession number P12821 (J04144)), chimp Ndom ACE_S N-domain (derived from accession number AF193487_1), rabbit Ndom ACE_S N-domain (derived from P12822), bovine Ndom (Bovine {*Bos taurus*} ACE_S N-domain), mouse Ndom ACE_S N-domain (derived from accession number P09470), rat Ndom ACE_S N-

domain (derived from accession number P47820), chick ACE (partial ACE accession number Q10751), dros AnCE (derived from accession number Q10714), dros ACEr (derived from accession number X96913), buffalo fly ACE (derived from accession number Q10715), and silkworm ACE (derived from accession number BAA97657), tick ACE (derived from accession number U62809).

The sequences may also have deletions, insertions or substitutions of amino acid residues, which produce a silent change and result in a functionally equivalent substance. Deliberate amino acid substitutions may be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity, and/or the amphipathic nature of the residues as long as the secondary binding activity of the substance is retained. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; and amino acids with uncharged polar head groups having similar hydrophilicity values include leucine, isoleucine, valine, glycine, alanine, asparagine, glutamine, serine, threonine, phenylalanine, and tyrosine.

Conservative substitutions may be made, for example according to the Table below. Amino acids in the same block in the second column and preferably in the same line in the third column may be substituted for each other:

ALIPHATIC	Non-polar	G A P
		I L V
	Polar - uncharged	C S T M
		N Q
	Polar - charged	D E
		K R
AROMATIC		H F W Y

Homologous substitution (substitution and replacement are both used herein to mean the interchange of an existing amino acid residue, with an alternative residue) may occur i.e. like-for-like substitution such as basic for basic, acidic for acidic, polar for polar etc.. Non-homologous substitution may also occur i.e. from one class of residue

to another or alternatively involving the inclusion of unnatural amino acids such as ornithine (hereinafter referred to as Z), diaminobutyric acid ornithine (hereinafter referred to as B), norleucine ornithine (hereinafter referred to as O), pyriylalanine, thienylalanine, naphthylalanine and phenylglycine.

Replacements may also be made by unnatural amino acids include; alpha* and alpha-disubstituted* amino acids, N-alkyl amino acids*, lactic acid*, halide derivatives of natural amino acids such as trifluorotyrosine*, p-Cl-phenylalanine*, p-Br-phenylalanine*, p-I-phenylalanine*, L-allyl-glycine*, ß-alanine*, L-α-amino butyric acid*, L-γ-amino butyric acid*, L-α-amino isobutyric acid*, L-ε-amino caproic acid#, 7-amino-heptanoic acid*, L-methionine sulfone#*, L-norleucine*, L-norvaline*, p-nitro-L-phenylalanine*, L-hydroxyproline#, L-thioproline*, methyl derivatives of phenylalanine (Phe) such as 4-methyl-Phe*, pentamethyl-Phe*, L-Phe (4-amino)#, L-Tyr (methyl)*, L-Phe (4-isopropyl)*, L-Tic (1,2,3,4-tetrahydroisoquinoline-3-carboxyl acid)*, L-diaminopropionic acid # and L-Phe (4-benzyl)*. The notation * has been utilised for the purpose of the discussion above (relating to homologous or non-homologous substitution), to indicate the hydrophobic nature of the derivative whereas # has been utilised to indicate the hydrophilic nature of the derivative, #* indicates amphipathic characteristics.

The term "derivative" or "derivatised" as used herein includes chemical modification of a ligand – such as test compound or a modulator of the N-domain of ACE protein. Illustrative of such chemical modifications would be replacement of hydrogen by a halo group, an alkyl group, an acyl group or an amino group.

Variant amino acid sequences may include suitable spacer groups that may be inserted between any two amino acid residues of the sequence including alkyl groups such as methyl, ethyl or propyl groups in addition to amino acid spacers such as glycine or β-alanine residues. A further form of variation, involves the presence of one or more amino acid residues in peptoid form, will be well understood by those skilled in the art. For the avoidance of doubt, "the peptoid form" is used to refer to variant amino acid residues wherein the α-carbon substituent group is on the residue's nitrogen atom rather than the α-carbon. Processes for preparing peptides in the peptoid form are

known in the art, for example Simon RJ et al., *PNAS* (1992) 89(20), 9367-9371 and Horwell DC, *Trends Biotechnol.* (1995) 13(4), 132-134.

TEST COMPOUND

As used herein, the term "test compound" includes, but is not limited to, a compound which may be obtainable from or produced by any suitable source, whether natural or not.

The test compound may be designed or obtained from a small molecule library of compounds, which may comprise peptides, as well as other compounds, such as small organic molecules and particularly new lead compounds. By way of example, the test compound may be a natural substance, a biological macromolecule, or an extract made from biological materials - such as bacteria, fungi, or animal (particularly mammalian) cells or tissues, an organic or an inorganic molecule, a synthetic test compound, a semi-synthetic test compound, a structural or functional mimetic, a peptide, a peptidomimetics, a derivatised test compound, a peptide cleaved from a whole protein, or a peptide synthesised synthetically (such as, by way of example, either using a peptide synthesiser or by recombinant techniques or combinations thereof, a recombinant test compound, a natural or a non-natural test compound, a fusion protein or equivalent thereof and mutants, derivatives or combinations thereof. The test compound may even be a compound that is a modulator of the N-domain or C-domain of ACE protein – such as a known inhibitor of the N-domain or C-domain of ACE protein- that has been modified in some way e.g. by recombinant DNA techniques or chemical synthesis techniques.

Typically, the test compound will be prepared by recombinant DNA techniques and/or chemical synthesis techniques.

Once a test compound capable of interacting with the N-domain or C-domain of ACE protein has been identified, further steps may be carried out to select and/or to modify the test compounds and/or to modify existing compounds, such that they are able to modulate the N-domain or C-domain of ACE protein.

The present invention also relates to a test compound which may be a domain specific compound such as a domain specific inhibitor capable of modulating the activity of the ACE protein in a domain specific manner. That is the compound is capable of modulating the N-domain and/or C-domain of ACE protein.

MODULATING THE ACTIVITY OF ACE

As herein, the term "modulating" refers to preventing, suppressing, inhibiting, alleviating, restoring, elevating, increasing or otherwise affecting the N-domain or C-domain of ACE protein.

The term "modulator of N-domain or C-domain of ACE" may refer to a single ligand or a combination of ligands.

The modulator of the N-domain or C-domain of ACE protein may be an antagonist or an agonist of the N-domain or the C-domain of ACE.

As used herein, the term "agonist" means any ligand, which is capable of interacting (e.g. binding) with N-domain or C-domain of ACE protein and which is capable of increasing a proportion of the N-domain or C-domain of ACE that is in an active form, resulting in an increased biological response.

As used herein, the term "antagonist" means any ligand, which is capable of interacting (e.g. binding) with N-domain or C-domain of ACE protein and which is capable of decreasing (eg. inhibiting) a proportion of the N-domain or C-domain of ACE that is in an active form, resulting in a decreased biological response.

Preferably, the modulators of the N-domain or C-domain of ACE protein of the present invention are antagonists of the N-domain or C-domain of ACE protein.

The modulator may be an organic compound or other chemical. The modulator may be a compound, which is obtainable from or produced by any suitable source, whether natural or artificial. The modulator may be an amino acid molecule, a polypeptide, or

a chemical derivative thereof, or a combination thereof. The modulator may even be a polynucleotide molecule - which may be a sense or an anti-sense molecule. The modulator may even be an antibody.

The modulator of the N-domain or C-domain of ACE protein may be designed or obtained from a small molecule library of compounds, which may comprise peptides, as well as other compounds or small organic molecules.

By way of example, the modulator of the N-domain or C-domain of ACE protein may be a natural substance, a biological macromolecule, or an extract made from biological materials such as bacteria, fungi, or animal (particularly mammalian) cells or tissues, an organic or an inorganic molecule, a synthetic agent, a semi-synthetic agent, a structural or functional mimetic, a peptide, a peptidomimetic, a derivatised agent, a peptide cleaved from a whole protein, or a peptide synthesised synthetically (such as, by way of example, either using a peptide synthesiser or by recombinant techniques or combinations thereof, a recombinant agent, an antibody, a natural or a non-natural agent, a fusion protein or equivalent thereof and mutants, derivatives or combinations thereof).

Typically, the modulator of the N-domain or C-domain of ACE protein will be an organic compound. Typically, the organic compounds will comprise two or more hydrocarbyl groups. Here, the term "hydrocarbyl group" means a group comprising at least C and H and may optionally comprise one or more other suitable substituents. Examples of such substituents may include halo-, alkoxy-, nitro-, an alkyl group, a cyclic group etc. In addition to the possibility of the substituents being a cyclic group, a combination of substituents may form a cyclic group. If the hydrocarbyl group comprises more than one C then those carbons need not necessarily be linked to each other. For example, at least two of the carbons may be linked *via* a suitable element or group. Thus, the hydrocarbyl group may contain hetero atoms. Suitable hetero atoms will be apparent to those skilled in the art and include, for instance, sulphur, nitrogen and oxygen. For some applications, preferably the modulator of the N-domain or C-domain of ACE protein comprises at least one cyclic group. The cyclic group may be a polycyclic group, such as a non-fused polycyclic group. For some applications, the modulator of the N-domain or C-domain of ACE protein comprises

at least the one of said cyclic groups linked to another hydrocarbyl group.

The modulator of the N-domain or C-domain of ACE protein may contain halo groups, for example, fluoro, chloro, bromo or iodo groups.

The modulator of the N-domain or C-domain of ACE protein may contain one or more of alkyl, alkoxy, alkenyl, alkylene and alkenylene groups – which may be unbranched- or branched-chain.

The modulator of the N-domain or C-domain of ACE protein may be in the form of a pharmaceutically acceptable salt – such as an acid addition salt or a base salt – or a solvate thereof, including a hydrate thereof. For a review on suitable salts see Berge et al., (1977) *J. Pharm. Sci.* 66, 1-19.

The modulator of the N-domain or C-domain of ACE protein may be a structurally novel modulator.

The modulators of the N-domain or C-domain of ACE protein may be analogues to other known modulators – such as known inhibitors of the N-domain of ACE protein (for example, snake venom, peptides produced by enzymatic hydrolysis of casein or fish meat protein, or Benazepril, Captopril, Cilazapril, Enalapril, Fosinopril, Lisinopril, Moexipril, Perindopril, Quinapril, Ramipril, Trandolapril and Enalaprilat).

Preferably the inhibitor of the N-domain or C-domain of ACE protein is Lisinopril (N2-[(S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline; also known as Prinivil or Zestril).

Preferably, the N-domain or C-domain of ACE protein modulators have improved properties over those previously available, for example, fewer side effects – such as cough (e.g. dry, persistent); fever and chills; hoarseness; swelling of face, mouth, hands, or feet; trouble in swallowing or breathing; itching of skin; yellow eyes or skin; dizziness, light-headedness, or fainting; skin rash, with or without itching; fever, or joint pain; abdominal pain, abdominal distention; nausea, or vomiting; chest pain, confusion; irregular heartbeat; nervousness; numbness or tingling in hands, feet, or lips; weakness

or heaviness of legs; headache, diarrhoea; loss of taste; nausea; unusual tiredness and angioedema.

The modulator of the N-domain or C-domain of ACE protein may be a mimetic.

The modulator of the N-domain or C-domain of ACE protein may also be chemically modified.

The modulator of the N-domain or C-domain of ACE protein may be capable of displaying other therapeutic properties.

The modulator of the N-domain or C-domain of ACE protein may be used in combination with one or more other pharmaceutically active agents.

If combinations of active agents are administered, then these may be administered simultaneously, separately or sequentially.

MIMETIC

As used herein, the term "mimetic" relates to any chemical including, but not limited to, peptide, polypeptide, antibody or other organic chemical with the same qualitative activity or effect as a known compound. That is, the mimetic is a functional equivalent of a known compound.

STEREO AND GEOMETRIC ISOMERS

Modulators of the N-domain or C-domain of ACE protein may exist as stereoisomers and/or geometric isomers – e.g. they may possess one or more asymmetric and/or geometric centres and so may exist in two or more stereoisomeric and/or geometric forms. The present invention contemplates the use of all of the individual stereoisomers and geometric isomers, and mixtures thereof.

PHARMACEUTICAL SALT

Modulators of the N-domain or C-domain of ACE protein may be administered in the form of a pharmaceutically acceptable salt.

Pharmaceutically-acceptable salts are well known to those skilled in the art, and for example include those mentioned by Berge et al., (1977) *J. Pharm. Sci.*, 66, 1-19. Suitable acid addition salts are formed from acids which form non-toxic salts and include the hydrochloride, hydrobromide, hydroiodide, nitrate, sulphate, bisulphate, phosphate, hydrogenphosphate, acetate, trifluoroacetate, gluconate, lactate, salicylate, citrate, tartrate, ascorbate, succinate, maleate, fumarate, gluconate, formate, benzoate, methanesulphonate, ethanesulphonate, benzenesulphonate and p-toluenesulphonate salts.

When one or more acidic moieties are present, suitable pharmaceutically acceptable base addition salts can be formed from bases which form non-toxic salts and include the aluminium, calcium, lithium, magnesium, potassium, sodium, zinc, and pharmaceutically-active amines such as diethanolamine, salts.

A pharmaceutically acceptable salt of a modulator of the N-domain or C-domain of ACE protein may be readily prepared by mixing together solutions of the modulator and the desired acid or base, as appropriate. The salt may precipitate from solution and be collected by filtration or may be recovered by evaporation of the solvent.

The modulator of the N-domain or C-domain of ACE protein may exist in polymorphic form.

The modulator of the N-domain or C-domain of ACE protein may contain one or more asymmetric carbon atoms and therefore exists in two or more stereoisomeric forms. Where a modulator of the N-domain or C-domain of ACE protein contains an alkenyl or alkenylene group, cis (E) and trans (Z) isomerism may also occur. The present invention includes the individual stereoisomers of the modulator of the N-domain or C-domain of ACE protein and, where appropriate, the individual tautomeric forms thereof, together with mixtures thereof.

Separation of diastereoisomers or *cis* and *trans* isomers may be achieved by conventional techniques, e.g. by fractional crystallisation, chromatography or H.P.L.C. of a stereoisomeric mixture of the modulator of the N-domain or C-domain of ACE protein or a suitable salt or derivative thereof. An individual enantiomer of the modulator of the N-domain or C-domain of ACE may also be prepared from a corresponding optically pure intermediate or by resolution, such as by H.P.L.C. of the corresponding racemate using a suitable chiral support or by fractional crystallisation of the diastereoisomeric salts formed by reaction of the corresponding racemate with a suitable optically active acid or base, as appropriate.

The modulator of the N-domain or C-domain of ACE may also include all suitable isotopic variations of the modulator or a pharmaceutically acceptable salt thereof. An isotopic variation of an modulator of the N-domain or C-domain of ACE or a pharmaceutically acceptable salt thereof is defined as one in which at least one atom is replaced by an atom having the same atomic number but an atomic mass different from the atomic mass usually found in nature. Examples of isotopes that can be incorporated into the modulator of ACE and pharmaceutically acceptable salts thereof include isotopes of hydrogen, carbon, nitrogen, oxygen, phosphorus, sulphur, fluorine and chlorine such as ^{2}H, ^{3}H, ^{13}C, ^{14}C, ^{15}N, ^{17}O, ^{18}O, ^{31}P, ^{32}P, ^{35}S, ^{18}F and ^{36}Cl, respectively. Certain isotopic variations of the modulator the N-domain or C-domain of ACE and pharmaceutically acceptable salts thereof, for example, those in which a radioactive isotope such as ^{3}H or ^{14}C is incorporated, are useful in drug and/or substrate tissue distribution studies. Tritiated, i.e., ^{3}H, and carbon-14, i.e., ^{14}C, isotopes are particularly preferred for their ease of preparation and detectability. Further, substitution with isotopes such as deuterium, i.e., ^{2}H, may afford certain therapeutic advantages resulting from greater metabolic stability, for example, increased *in vivo* half-life or reduced dosage requirements and hence may be preferred in some circumstances. Isotopic variations of the modulator of the N-domain or C-domain of ACE and pharmaceutically acceptable salts thereof of this invention can generally be prepared by conventional procedures using appropriate isotopic variations of suitable reagents.

It will be appreciated by those skilled in the art that the agent may be derived from a prodrug. Examples of prodrugs include entities that have certain protected group(s)

and which may not possess pharmacological activity as such, but may, in certain instances, be administered (such as orally or parenterally) and thereafter metabolised in the body to form the modulator of the N-domain or C-domain of ACE which is pharmacologically active.

It will be further appreciated that certain moieties known as "pro-moieties", for example as described in "Design of Prodrugs" by H. Bundgaard, Elsevier, 1985 (the disclosured of which is hereby incorporated by reference), may be placed on appropriate functionalities of the modulator of the N-domain or C-domain of ACE protein. Such prodrugs are also contemplated within the scope of the invention.

PHARMACEUTICALLY ACTIVE SALT

The modulator of the N-domain or C-domain of ACE protein may be administered as a pharmaceutically acceptable salt. Typically, a pharmaceutically acceptable salt may be readily prepared by using a desired acid or base, as appropriate. The salt may precipitate from solution and be collected by filtration or may be recovered by evaporation of the solvent.

CHEMICAL SYNTHESIS METHODS

The modulator of the N-domain or C-domain of ACE protein of the present invention may be prepared by chemical synthesis techniques.

It will be apparent to those skilled in the art that sensitive functional groups may need to be protected and deprotected during synthesis of a compound of the invention. This may be achieved by conventional techniques, for example as described in "Protective Groups in Organic Synthesis" by T W Greene and P G M Wuts, John Wiley and Sons Inc. (1991), and by P.J.Kocienski, in "Protecting Groups", Georg Thieme Verlag (1994).

It is possible during some of the reactions that any stereocentres present could, under certain conditions, be racemised, for example if a base is used in a reaction with a substrate having an having an optical centre comprising a base-sensitive group. This is possible during e.g. a guanylation step. It should be possible to circumvent potential

problems such as this by choice of reaction sequence, conditions, reagents, protection/deprotection regimes, etc. as is well-known in the art.

The compounds and salts may be separated and purified by conventional methods.

Separation of diastereomers may be achieved by conventional techniques, e.g. by fractional crystallisation, chromatography or H.P.L.C. of a stereoisomeric mixture of a compound of formula (I) or a suitable salt or derivative thereof. An individual enantiomer of a compound of formula (I) may also be prepared from a corresponding optically pure intermediate or by resolution, such as by H.P.L.C. of the corresponding racemate using a suitable chiral support or by fractional crystallisation of the diastereomeric salts formed by reaction of the corresponding racemate with a suitably optically active acid or base.

The N-domain or C-domain of ACE protein, modulators of the N-domain or C-domain of ACE protein or variants, homologues, derivatives, fragments or mimetics thereof may be produced using chemical methods to synthesise the N-domain or C-domain of ACE protein or the modulator of the N-domain or C-domain of ACE protein in whole or in part. For example, the N-domain or C-domain peptide or a modulator of the N-domain or C-domain of ACE protein that is a peptide can be synthesised by solid phase techniques, cleaved from the resin, and purified by preparative high performance liquid chromatography (e.g., Creighton (1983) Proteins Structures And Molecular Principles, WH Freeman and Co, New York NY). The composition of the synthetic peptides may be confirmed by amino acid analysis or sequencing (e.g., the Edman degradation procedure; Creighton, *supra*).

Synthesis of peptides (or variants, homologues, derivatives, fragments or mimetics thereof) may be performed using various solid-phase techniques (Roberge JY *et al* (1995) Science 269: 202-204) and automated synthesis may be achieved, for example, using the ABI 43 1 A Peptide Synthesizer (Perkin Elmer) in accordance with the instructions provided by the manufacturer. Additionally, the amino acid sequences comprising the modulator of the N-domain or C-domain of ACE protein, may be altered during direct synthesis and/or combined using chemical methods with a

sequence from other subunits, or any part thereof, to produce a variant modulator of the N-domain or C-domain of ACE protein.

CHEMICAL MODIFICATION

The modulator of the N-domain or C-domain of ACE protein may be a chemically modified modulator.

The chemical modification of a modulator of the N-domain or C-domain of ACE protein may either enhance or reduce interactions between the modulator of the N-domain or C-domain of ACE protein and the target – such as hydrogen bonding interactions, charge interactions, hydrophobic interactions, van der Waals interactions or dipole interactions.

In one aspect, the modulator of the N-domain or C-domain of ACE protein may act as a model (for example, a template) for the development of other compounds.

PHARMACEUTICAL COMPOSITIONS

The components may be administered alone but will generally be administered as a pharmaceutical composition – e.g. when the components are in a mixture with a suitable pharmaceutical excipient, diluent or carrier selected with regard to the intended route of administration and standard pharmaceutical practice.

For example, the components can be administered in the form of tablets, capsules, ovules, elixirs, solutions or suspensions, which may contain flavouring or colouring agents, for immediate-, delayed-, modified-, sustained-, pulsed- or controlled-release applications.

If the pharmaceutical is a tablet, then the tablet may contain excipients such as microcrystalline cellulose, lactose, sodium citrate, calcium carbonate, dibasic calcium phosphate and glycine, disintegrants such as starch (preferably corn, potato or tapioca starch), sodium starch glycollate, croscarmellose sodium and certain complex silicates, and granulation binders - such as polyvinylpyrrolidone,

hydroxypropylmethylcellulose (HPMC), hydroxypropylcellulose (HPC), sucrose, gelatin and acacia. Additionally, lubricating agents - such as magnesium stearate, stearic acid, glyceryl behenate and talc may be included.

Solid compositions of a similar type may also be employed as fillers in gelatin capsules. Preferred excipients in this regard include lactose, starch, a cellulose, milk sugar or high molecular weight polyethylene glycols. For aqueous suspensions and/or elixirs, the modulator of the N-domain or C-domain of ACE protein may be combined with various sweetening or flavouring agents, colouring matter or dyes, with emulsifying and/or suspending agents and with diluents such as water, ethanol, propylene glycol and glycerin, and combinations thereof.

The routes for administration (delivery) may include, but are not limited to, one or more of oral (e.g. as a tablet, capsule, or as an ingestable solution), topical, mucosal (e.g. as a nasal spray or aerosol for inhalation), nasal, parenteral (e.g. by an injectable form), gastrointestinal, intraspinal, intraperitoneal, intramuscular, intravenous, intraventricular, intrauterine, intraocular, intradermal, intracranial, intratracheal, intravaginal, intracerebroventricular, intracerebral, subcutaneous, ophthalmic (including intravitreal or intracameral), transdermal, rectal, buccal, vaginal, epidural, sublingual.

Pharmaceutical compositions of the present invention may comprise a therapeutically effective amount of the N-domain of ACE protein, one or more modulators of the N-domain of ACE protein, one or more modulators of the C-domain of ACE protein or combinations thereof.

The pharmaceutical compositions may be for human or animal usage in human and veterinary medicine and will typically comprise any one or more of a pharmaceutically acceptable diluent, carrier, or excipient. Acceptable carriers or diluents for therapeutic use are well known in the pharmaceutical art, and are described, for example, in Remington's Pharmaceutical Sciences, Mack Publishing Co. (A. R. Gennaro edit. 1985). The choice of pharmaceutical carrier, excipient or diluent can be selected with regard to the intended route of administration and standard pharmaceutical practice. The pharmaceutical compositions may comprise as

- or in addition to - the carrier, excipient or diluent any suitable binder(s), lubricant(s), suspending agent(s), coating agent(s), solubilising agent(s).

Preservatives, stabilisers, dyes and even flavouring agents may be provided in the pharmaceutical composition. Examples of preservatives include sodium benzoate, sorbic acid and esters of p-hydroxybenzoic acid. Antioxidants and suspending agents may be also used.

There may be different composition/formulation requirements dependent on the different delivery systems. By way of example, the pharmaceutical composition of the present invention may be formulated to be administered using a mini-pump or by a mucosal route, for example, as a nasal spray or aerosol for inhalation or ingestable solution, or parenterally in which the composition is formulated by an injectable form, for delivery, by, for example, an intravenous, intramuscular or subcutaneous route. Alternatively, the formulation may be designed to be administered by a number of routes.

If the modulator of the N-domain or C-domain of ACE protein is to be administered mucosally through the gastrointestinal mucosa, it should be able to remain stable during transit though the gastrointestinal tract; for example, it should be resistant to proteolytic degradation, stable at acid pH and resistant to the detergent effects of bile.

Where appropriate, the pharmaceutical compositions may be administered by inhalation, in the form of a suppository or pessary, topically in the form of a lotion, solution, cream, ointment or dusting powder, by use of a skin patch, orally in the form of tablets containing excipients such as starch or lactose, or in capsules or ovules either alone or in admixture with excipients, or in the form of elixirs, solutions or suspensions containing flavouring or colouring agents, or the pharmaceutical compositions can be injected parenterally, for example intravenously, intramuscularly or subcutaneously. For parenteral administration, the compositions may be best used in the form of a sterile aqueous solution which may contain other substances, for example enough salts or monosaccharides to make the solution isotonic with blood. For buccal or sublingual administration the compositions may be administered in the form of tablets or lozenges which can be formulated in a conventional manner.

The modulators of the N-domain or C-domain of ACE protein may be used in combination with a cyclodextrin. Cyclodextrin molecules are known to form inclusion and non-inclusion complexes with drug molecules. Formation of a drug-cyclodextrin complex may modify the solubility, dissolution rate, bioavailability and/or stability property of a drug molecule. Drug-cyclodextrin complexes are generally useful for most dosage forms and administration routes. As an alternative to direct complexation with the drug the cyclodextrin may be used as an auxiliary additive, e.g. as a carrier, diluent or solubiliser. Alpha-, beta- and gamma-cyclodextrins are most commonly used and suitable examples are described in WO-A-91/11172, WO-A-94/02518 and WO-A-98/55148.

If the modulator of the N-domain or C-domain of ACE is a protein, then said protein modulator may be prepared *in situ* in the subject being treated. In this respect, nucleotide sequences encoding said protein may be delivered by use of non-viral techniques (e.g. by use of liposomes) and/or viral techniques (e.g. by use of retroviral vectors) such that the said protein is expressed from said nucleotide sequence.

DOSE LEVELS

Typically, a physician will determine the actual dosage which will be most suitable for an individual subject. The specific dose level and frequency of dosage for any particular patient may be varied and will depend upon a variety of factors including the activity of the specific compound employed, the metabolic stability and length of action of that compound, the age, body weight, general health, sex, diet, mode and time of administration, rate of excretion, drug combination, the severity of the particular condition, and the individual undergoing therapy.

The modulators of the N-domain of ACE protein or the C-domain of ACE protein may be administered separately, concomitantly or sequentially.

FORMULATION

The component(s) may be formulated into a pharmaceutical composition, such as by mixing with one or more of a suitable carrier, diluent or excipient, by using techniques that are known in the art.

VECTOR

Aspects of the present invention relate to a vector comprising a nucleotide sequence – such as a nucleotide sequence encoding the N-domain or the C-domain of ACE protein or a modulator of the N-domain or the C-domain of ACE protein - administered to a subject.

Preferably, the N-domain or the C-domain of ACE and/or the modulator are prepared and/or delivered using a genetic vector.

It is well known in the art, that a vector is a tool that allows or facilitates the transfer of information from one environment to another. In accordance with the present invention, and by way of example, some vectors used in recombinant DNA techniques allow entities, such as a segment of DNA (such as a heterologous DNA segment, such as a heterologous cDNA segment), to be transferred into a host and/or a target cell for the purpose of replicating the vectors comprising nucleotide sequences and/or expressing the proteins encoded by the nucleotide sequences. Examples of vectors used in recombinant DNA techniques include, but are not limited to, plasmids, chromosomes, artificial chromosomes or viruses.

The term "vector" includes expression vectors such as transfection vectors, transduction vectors or transformation vectors.

The term "expression vector" means a construct capable of *in vivo* or *in vitro/ex vivo* expression.

The terms "transfection vectors", "transduction vectors" or "transformation vectors" describe different constructs capable of being transferred from one organism to another of from one species to another.

REGULATORY SEQUENCES

In some applications, nucleotide sequences are operably linked to a regulatory sequence which is capable of providing for the expression of the nucleotide sequence, such as by a chosen host cell. By way of example, a vector comprising the N-domain or the C-domain of ACE nucleotide sequence is operably linked to such a regulatory sequence i.e. the vector is an expression vector.

The term "operably linked" refers to a juxtaposition wherein the components described are in a relationship permitting them to function in their intended manner. A regulatory sequence "operably linked" to a coding sequence is ligated in such a way that expression of the coding sequence is achieved under conditions compatible with the control sequences.

The term "regulatory sequences" includes promoters and enhancers and other expression regulation signals.

The term "promoter" is used in the normal sense of the art, e.g. an RNA polymerase binding site.

Enhanced expression of a nucleotide sequence, for example, a nucleotide sequence encoding the N-domain or the C-domain of ACE protein - may also be achieved by the selection of heterologous regulatory regions, e.g. promoter, secretion leader and terminator regions, which serve to increase expression and, if desired, secretion levels of the protein of interest from the chosen expression host and/or to provide for the inducible control of the expression of the N-domain or the C-domain of ACE protein. In eukaryotes, polyadenylation sequences may be operably connected to the C-terminus of the nucleotide sequence of the N-domain or the C-domain of ACE protein.

Preferably, the N-domain or the C-domain of ACE protein nucleotide sequence is operably linked to at least a promoter.

Aside from the promoter native to the nucleotide sequence described herein, other promoters may be used to direct its expression. The promoter may be selected for its efficiency in directing the expression of the N-domain or the C-domain of ACE nucleotide sequence in the desired expression host.

In another embodiment, a constitutive promoter may be selected to direct the expression of the N-domain or the C-domain of ACE nucleotide sequence of the present invention. Such an expression construct may provide additional advantages since it circumvents the need to culture the expression hosts on a medium containing an inducing substrate.

Hybrid promoters may also be used to improve inducible regulation of the expression construct.

The promoter can additionally include features to ensure or to increase expression in a suitable host. For example, the features can be conserved regions such as a Pribnow-Box or a TATA box. The promoter may even contain other sequences to affect (such as to maintain, enhance, decrease) the levels of expression of the N-domain or C-domain of ACE nucleotide sequence. For example, suitable other sequences include the Sh1-intron or an ADH intron. Other sequences include inducible elements - such as temperature, chemical, light or stress inducible elements. Also, suitable elements to enhance transcription or translation may be present.

EXPRESSION VECTOR

Preferably, nucleotide sequences – such as nucleotide sequences encoding the N-domain or C-domain of ACE or modulators of the N-domain or C-domain of ACE - are inserted into a vector that is operably linked to a control sequence that is capable of providing for the expression of the coding sequence by the host cell.

Nucleotide sequences produced by a host recombinant cell may be secreted or may be contained intracellularly depending on the sequence and/or the vector used. As will be understood by those of skill in the art, expression vectors can be designed with

signal sequences, which direct secretion of the nucleotide sequence through a particular prokaryotic or eukaryotic cell membrane.

The expression vector may be pEE14 N-domain which encodes the N domain of human ACE and is truncated in the interdomain linker region.

Preferably, the expression vectors are stably expressed in CHO-K1 cells as described previously (Ehlers et al., (1996) *Biochemistry 35*, 9549-9559).

FUSION PROTEINS

The N-domain or C-domain of ACE protein or a modulator of the N-domain or C-domain of ACE protein may be expressed as a fusion protein to aid extraction and purification and/or delivery of the modulator of the N-domain or C-domain of ACE or the N-domain or C-domain of ACE protein to an individual and/or to facilitate the development of a screen for modulators of the N-domain or C-domain of ACE protein.

Examples of fusion protein partners include glutathione-S-transferase (GST), 6xHis, GAL4 (DNA binding and/or transcriptional activation domains) and β-galactosidase.

It may also be convenient to include a proteolytic cleavage site between the fusion protein partner and the protein sequence of interest to allow removal of fusion protein sequences. Preferably, the fusion protein will not hinder the activity of the protein of interest.

The fusion protein may comprise an antigen or an antigenic determinant fused to the substance of the present invention. In this embodiment, the fusion protein may be a non-naturally occurring fusion protein comprising a substance, which may act as an adjuvant in the sense of providing a generalised stimulation of the immune system. The antigen or antigenic determinant may be attached to either the amino or carboxy terminus of the substance.

ORGANISM

The term "organism" in relation to the present invention includes any organism that could comprise the N-domain or C-domain of ACE protein and/or modulators of the N-domain or C-domain of ACE protein. Examples of organisms may include mammals, fungi, yeast, plants or bacteria.

Preferably, the organism is as vertebrate or a mammal. More preferably, the organism is a human.

TRANSFORMATION

As indicated earlier, the host organism can be a prokaryotic or a eukaryotic organism. Examples of suitable prokaryotic hosts include *E. coli* and *Bacillus subtilis*. Teachings on the transformation of prokaryotic hosts are well documented in the art, for example see Sambrook et al., (Molecular Cloning: A Laboratory Manual, 2nd edition, 1989, Cold Spring Harbor Laboratory Press) and Ausubel *et al.*, Current Protocols in Molecular Biology (1995), John Wiley & Sons, Inc. Examples of suitable eukaryotic hosts include mammalian cells.

If a prokaryotic host is used then the nucleotide sequence – such as the N-domain of ACE nucleotide sequence - may need to be suitably modified before transformation - such as by removal of introns.

Thus, the present invention also relates to the transformation of a host cell with a nucleotide sequence – such as those coding for the N-domain or C-domain of ACE protein or a modulator of the N-domain or C-domain of ACE protein. Host cells transformed with the nucleotide sequence may be cultured under conditions suitable for the expression and recovery of the encoded protein from cell culture. The protein produced by a recombinant cell may be secreted or may be contained intracellularly depending on the sequence and/or the vector used. As will be understood by those of skill in the art, expression vectors containing coding sequences can be designed with signal sequences which direct secretion of the coding sequences through a particular prokaryotic or eukaryotic cell membrane. Other recombinant constructions may join

the coding sequence to nucleotide sequence encoding a polypeptide domain, which will facilitate purification of soluble proteins (Kroll DJ et al., (1993) *DNA Cell Biol* 12:441-53) e.g. 6-His or Glutathione-*S*-transferase.

TRANSFECTION

Vectors comprising for example, the nucleotide sequence coding for the N-domain or C-domain of ACE protein, may be introduced into host cells, for example, mammalian cells, using a variety of methods.

Typical transfection methods include electroporation, DNA biolistics, lipid-mediated transfection, compacted DNA-mediated transfection, liposomes, immunoliposomes, lipofectin, cationic agent-mediated, cationic facial amphiphiles (CFAs) (*Nature Biotech.* (1996) 14, 556), multivalent cations such as spermine, cationic lipids or polylysine, 1, 2,-bis (oleoyloxy)-3-(trimethylammonio) propane (DOTAP)-cholesterol complexes (Wolff and Trubetskoy (1998) *Nature Biotech.* 16, 421) and combinations thereof.

Uptake of nucleic acid constructs by mammalian cells is enhanced by several known transfection techniques for example those including the use of transfection agents. Example of these agents include cationic agents (for example calcium phosphate and DEAE-dextran) and lipofectants (for example lipofectam™ and transfectam™). Typically, nucleic acid constructs are mixed with the transfection agent to produce a composition.

Such methods are described in many standard laboratory manuals - such as Sambrook et al., Molecular Cloning: A Laboratory Manual, 2d ed. (1989) Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.

GENERAL RECOMBINANT DNA METHODOLOGY TECHNIQUES

The present invention employs, unless otherwise indicated, conventional techniques of chemistry, molecular biology, microbiology, recombinant DNA and immunology, which are within the capabilities of a person of ordinary skill in the art. Such techniques are

explained in the literature. See, for example, J. Sambrook, E. F. Fritsch, and T. Maniatis, 1989, *Molecular Cloning: A Laboratory Manual*, Second Edition, Books 1-3, Cold Spring Harbor Laboratory Press; Ausubel, F. M. et al., (1995 and periodic supplements; *Current Protocols in Molecular Biology*, ch. 9, 13, and 16, John Wiley & Sons, New York, N.Y.); B. Roe, J. Crabtree, and A. Kahn, 1996, *DNA Isolation and Sequencing: Essential Techniques*, John Wiley & Sons; J. M. Polak and James O'D. McGee, 1990, *In Situ Hybridization: Principles and Practice*; Oxford University Press; M. J. Gait (Editor), 1984, *Oligonucleotide Synthesis: A Practical Approach*, Irl Press; and, D. M. J. Lilley and J. E. Dahlberg, 1992, *Methods of Enzymology: DNA Structure Part A: Synthesis and Physical Analysis of DNA* Methods in Enzymology, Academic Press. Each of these general texts is herein incorporated by reference.

DESCRIPTION OF THE DRAWINGS

Figure 1. (A) Overall structure of the N-domain with the zinc ion in green, the chloride ion in red and the oligosaccharides in pink. (B) Superposition of the N domain (turquoise) and tACE (pink) with the zinc ion in green. (C) Backbone coloured according to thermal vibration (B factor) with blue for the lowest B factors and red for the highest. (D) Surface diagram showing the lid (dark blue), *N*-linked glycans (green) and the protruding surface patch (pink) comprising the linker and the flexible loop.

Figure 2. (A) Model of the possible domain orientation of ACE. The N-terminus and C-terminal linker of two N-domains (grey) were overlapped and tACE (pink) superimposed. Sugars moieties visible in the N-domain and tACE structures are shown in green, and N-glycosylation sequons where no sugar was observed have been marked by a hypothetical sugar in yellow. The zinc ion in each domain is in green. (B) Close up of the N domain linker and flexible loop (grey). (C) Pink domain lid showing the residues that might be involved in the inter-domain interaction. Charged residues on the C-terminal lid are shown in red (negative) and blue (positive) with the sugar linked asparagine shown in green. Charged and sugar linked residues are marked by the same colours on the N-domain ACE, but their side chains are not visible in the structure.

Figures 3. (A) Close up of the active site of the N-domain ACE (blue with white residues) and tACE (pink with purple residues) with the zinc ion in green and the conserved chloride ion in red. Lisinopril is shown in white/purple and the differing residues between the N- and C-domains shown in ball and stick at the top of the picture. (B) Close up of the minimally glycosylated N-domain active site (blue) with a model of RXP407 (yellow) overlapping the water molecule (grey) adjacent to Tyr 369. Residues differing between the N- and C-domains in the S_2 subsite are also shown in ball and stick along with the conserved residues of the S_1 subsite that interact with lisinopril. Residues conserved between the N- and C- domains are shown in white, N-domain residues shown in blue and C-domain residues shown in pink. The zinc ion is shown in green.

Figure 4. Sequence alignment of the sACE N domain with tACE and ACE2. Helices are highlighted in yellow and strands in blue. The linker region is shown in pink. Helices are numbered sequentially whether α or 3_{10}, and 3_{10} helices are shown with red letters. Chloride I coordinating residues are boxed in dark blue, chloride II in black, and the zinc binding motif in red.

Table 1. Crystallographic Data

Table 2. Active site residues that differ between the N and C domains-(C domain numbering is as for tACE).

Table A. Structure co-ordinates of N-domain of ACE protein.

Table B. Structure co-ordinates of N-domain of ACE protein complexed with lisinopril.

The invention will now be further described by way of Examples, which are meant to serve to assist one of ordinary skill in the art in carrying out the invention and are not intended in any way to limit the scope of the invention.

EXAMPLES

Example 1

Materials & Methods

Construction of Expression Vectors

An N-domain construct Leu 1-Asp 629 (D629) cloned into the vector pECE (a kind gift from Sergei Danilov) and encoding the first 629 residues of somatic ACE, was subcloned into pBlueScript using the restriction endonucleases *XbaI* and *EcoRI*. The fragment was then sequenced to verify that the correct fragment was cloned. D629 was then again subcloned into pcDNA3.1(+) using the same restriction enzymes. This N-domain construct was then introduced into the CHO cell glutamine synthetase (GS) expression vector pEE14 using the restriction endonucleases *HindIII* and *XbaI*. The identity of the construct and its correct orientation was confirmed via restriction enzyme digests and further sequencing. The new expression vector was termed pEE N-domain.

Cell Culture and Transfections

CHO-K1 cells were co-transfected with pEE14-N-domain and pSV2neo (10:1). Geneticin (G418) (Sigma) resistant clones expressing soluble N-domain were further selected for resistance to methionine sulfoximine (MSX) (Yu et al., 1997). Cells stably expressing the N-domain were grown in Glasgow Minimum Essential Medium (GMEM) supplemented with 10% dialysed foetal calf serum (Gibco BRL) and 20μM MSX. When confluent growth medium was changed to 1% dialysed FCS, 0.05% albumax I (Gibco BRL), 20μM MSX and 1.5mM N-butyldeoxynojirimycin (NB-DNJ) (Toronto Research Chemicals Inc.B691000 Lot 14-EG-91-1 and B691000 12-Cf-146-2).

Construct purification

Medium containing recombinantly expressed soluble N-domain (N-domain of ACE protein) was harvested and purified in tandem over a protein-G Agarose (Sigma) column followed by an N-domain specific monoclonal antibody (5C5) protein G Agarose column. N-domain was eluted with 50mM ethanolamine pH 11.5. The eluted solution was then dialysed against 5mM HEPES pH 7.5, 0.1mM PMSF and

concentrated in a 30kDa Amicon concentrator at 1000-2000 *g* and 4°C to a concentration of 10mg/ml, and stored at 4°C.

Western Blot Analysis

The N-domain of ACE protein was detected and its purity assessed by Western Blot analysis using 10% SDS-PAGE and transferred on nitrocellulose membrane (Hybond-C, Amersham). The membrane is probed with N-domain specific monoclonal antibody (5C5) and developed with using the ECP chemiluminescent kit (Amersham) and visualised on autoradiographic film according to the manufacturer's instructions.

Crystallisation and X-ray diffraction data collection

1µl of the purified N-domain of ACE protein at 4mg/ml was mixed with 1µl reservoir solution (0.2M lithium sulphate, 0.1M sodium acetate, pH 4.9, 10µM zinc sulphate, 15% polyethylene glycol 4000) and suspended above the reservoir as a hanging drop at 16°C. Crystals grew within 1-2 weeks.

A single crystal was cryocooled (100 K) using reservoir solution plus 25% glycerol as a cryoprotectant. Diffraction data to 3.0 Å were collected on station PX14.1 of the synchrotron radiation source (Daresbury, U.K.) using a Quantum 4 charge-coupled-device detector (Area Detection Systems, Poway, CA). The data were processed and scaled by using the HKL2000 software package (HKL Research, Charlottesville, VA) (Otwinowski, W. Oscillation data reduction program. in *Proceedings of the CCP4 weekend* 56-62 (Daresbury Laboratory, Warrington, UK, 1993). The symmetry and systematic absences were consistent with the $C222_1$ space group (unit cell dimensions, a = 101.12 Å; b = 211.32 Å; and c = 171.27 Å) with two proteins per asymmetric unit. The crystals contained ~54% solvent. Data reduction was carried out by using the CCP4 program TRUNCATE (CCP4. The CCP4 suite: Programs for protein crystallography. *Acta Crystallogr.* **D50**, 760-763 (1994)).

The structure of the N-domain was solved with the program MOLREP (Vagin, A. & Teplyakov, A. An approach to multi-copy search in molecular replacement. *Acta Crystallogr.* **D56**, 1622-1624 (2000)) using a homology model of the N-domain based on the tACE structure (protein data bank entry 1O8A) as a search model. Initial

refinement was performed using REFMAC Murshudov, G.N. Refinement of macromolecular structures by the maximum-likelihood method. *Acta Crystallogr.* **D53**, 240-255 (1997) through the CCP4i interface (CCP4. The CCP4 suite: Programs for protein crystallography. *Acta Crystallogr.* **D50**, 760-763 (1994)). 4% of reflections was kept aside for *R*free calculation (Brünger, A.T. Free *R* value: a novel statistical quantity for assessing the accuracy of crystal structures. *Nature* **355**, 472-475 (1992)). A large part of the C terminal region not present in the tACE structure could be built after the first round of refinement using the program Coot (Emsley, P. & Cowtan, K. Coot: Model building tools for molecular graphics. *Acta Crystallogr.* **60**, 2126-2132 (2004)). Further rounds of refinement and model building allowed the building of the N terminus and the addition of water, carbohydrate and glycerol molecules plus an acetate ion. Final refinement was done using the CNS suite (Brünger, A.T. *et al.* Crystallography & NMR system: A new software suite for macromolecular structure determination. *Acta Crystallogr.* **D54**, 905-921 (1998)).

Sequence alignment of the sACE N domain with tACE and ACE2 is shown in Figure 4.

The N-domain/lisinopril inhibitor complex - 4mg/ml of purified N-domain was incubated with 5mM lisinopril for 5 hours at 4°C. 1µl N-domain with lisinopril was mixed with 1µl reservoir solution (0.2M lithium sulphate, 0.1M sodium acetate, pH 4.9, 10µM zinc sulphate, 18% polyethylene glycol 4000) and suspended above the reservoir as a hanging drop at 16°C. Crystals grew within 1-2 weeks in the same form as the minimally glycosylated N-domain of ACE protein. Single crystal consistent with the $C222_1$ space group (unit cell dimensions, a = 101.32 Å; b = 211.90 Å; and c = 171.03 Å). Diffraction data to 2.8 Å were collected as for the minimally glycosylated N-domain data set. The data were processed with MOSFLM (Leslie, A.G.W. Recent changes to the MOSFLM package for processing film and image plate data. *Joint CCP4+ESF-EAMCB Newsletter on Protein Crystallography* **26**(1992)), scaled with SCALA (CCP4. The CCP4 suite: Programs for protein crystallography. *Acta Crystallogr.* **D50**, 760-763 (1994)) and data reduction carried out by TRUNCATE (CCP4. The CCP4 suite: Programs for protein crystallography. *Acta Crystallogr.* **D50**, 760-763 (1994)).

Refinement (with 2.3% of the reflection kept for the *R*free calculation) of the minimally glycosylated N-domain structure with the CNS suite (Brünger, A.T. *et al.* Crystallography & NMR system: A new software suite for macromolecular structure determination. *Acta Crystallogr.* **D54**, 905-921 (1998)) showed clear difference density for the lisinopril, which was modelled with the program Coot (Emsley, P. & Cowtan, K. Coot: Model building tools for molecular graphics. *Acta Crystallogr.* **60**, 2126-2132 (2004)), along with a few water, carbohydrate, glycerol molecules and an acetate ion.

The atomic coordinates have been deposited with the Protein Data Bank, www.rcsb.org, and the accession codes are 2C6F and 2C6N for the minimally glycosylated and lisinopril complexes for sACE N-domain respectively..

All crystals are isomorphous.

Example 2

Overall structure of the N-domain

The N-domain was crystallised with two molecules per asymmetric unit. The overall fold consists of a mainly helical secondary structure, with the same topology as tACE. The N-domain has the ellipsoid shape with a central groove dividing it into two subdomains, one containing the N-terminal lid that covers the central binding cavity. There are 27 helices, of which 18 of them are α helices, 5 are short 3-helices and 4 are mixed (Woodman, Z.L. et al., The N domain of somatic angiotensin-converting enzyme negatively regulates ectodomain shedding and catalytic activity. *Biochem J.* **389**, 739-744 (2005)). There are also 6 short β-strands. The structures of both molecules in the asymmetric are very similar with a root mean square deviation for the Cα atoms of 0.50Å. Analysis of the Ramachandran plot using the program PROCHECK shows that 94% of the residues lie in the most favoured region, with none in the disallowed region (Laskowski, R.A., MacArthur, M.W., Moss, D.S. & Thronton, J.M. PROCHECK -A program to check the stereochemical quality of protein structures. *J. Appl. Crystallogr.* **26**, 283-291 (1993)). Both termini are well

ordered with all the residues (1-612) being modelled for molecule A and only the N-terminal residue missing in molecule B.

The catalytic zinc ion was observed at the active site and one chloride, equivalent to chloride 2 of tACE, adjacent to Arg500. There are ten putative N-glycosylation sites on the human N-domain protein and Fourier difference density was observed at five of these sites in our structure (Figure 1(A)). Seven N-acetyl glucosamine residues were modelled on molecule A at asparagines 25, 45, 117, 289 and 480, and six on molecule B at residues 25, 45, 117 and 480. A mannose residue was also modelled on both molecules at the end of the disaccharide at Asn25. Although the B-factors for these sugars are high, they are modelled on the basis of clear difference density, at least for the ring portions. Twentyfive water molecules were modelled by visual inspection and a glycerol molecule was modelled on the surface of each molecule adjacent to Glu219. Three acetate molecules were also modelled, one on the surface next to the symmetry axis and one in each of the active sites adjacent to Lys489, where a carboxyalanine was modelled in the tACE structure (Natesh, R., Schwager, S.L.U., Sturrock, E.D. & Acharya, K.R. Crystal structure of the human angiotensin-converting enzyme-lisinopril complex. *Nature* **421**, 551-554 (2003)). We attempted to model N-carboxyalanine at this position however the density was smaller in the N domain structure.

The N-domain protein was also crystallised in the presence of 5mM lisinopril, for which clear difference density was observed upon refinement with the minimally glycosylated N-domain structure. The overall structure is as the minimally glycosylated N-domain, although the lack of completeness in the data results in poorly defined density for the first 30 residues of the N-terminus. The lisinopril is bound at the active site in the same position and conformation as observed for tACE (Natesh, R., Schwager, S.L.U., Sturrock, E.D. & Acharya, K.R. Crystal structure of the human angiotensin-converting enzyme-lisinopril complex. *Nature* **421**, 551-554 (2003)). Four N-acetyl glucosamine residues each were modelled on both molecules at asparagines 25, 117, and 480. Nineteen water molecules, two glycerols and one acetate ion were modelled. The acetate ion was modelled near the symmetry axis and the two the glycerols at equivalent surface positions on the two molecules, similar to as observed in the minimally glycosylated structure.

Comparison of the N and C domains

The N- and C- domains of somatic ACE have ~60% sequence identity and hence share the same overall topology as well as the highly conserved zinc binding motif at the active site (see figure x which will be a sequence alignment). The most easily observable difference between the N- and C- domains (based on tACE) when superimposed (Figure 1(B)) is the extra length of the N- domain at the N- terminus and the C terminus, which includes the inter-domain linker. The N-terminus of the N domain protein, whilst having higher than average B factors, is well defined and packs against helix 3. Also, the loop between helices 19 and 20 (residues 409-417) that was not visible in the tACE structure, is well defined. Three other flexible loops, between helices 3 and 4, strands 1 and 2 and strand 6 and helix 23, show small differences between the domains.

The N-domain has been observed to be activated at lower chloride concentrations and to a lesser extent than the C-domain (Wei, L., Clauser, E., Alhenc-Gelas, F. & Corvol, P. The two homologous domains of human angiotensin I-converting enzyme interact differently with competitive inhibitors. *J. Biol. Chem.* **267**, 13389-13405 (1992)). Consistent with this is the observation of only one chloride bound to the N domain, rather than the two observed for tACE. The chloride ion is observed at the identical site as chloride II in tACE, bound between Tyr 202 and Arg 500. At the equivalent position to the tACE chloride I site, a crucial arginine is substituted by a histidine in the N-domain. Interestingly, ACE2, which was also only observed to bind one chloride ion in the crystal structure, binds chloride in the equivalent position to chloride I in tACE.

The domain arrangement of sACE

The complex kinetics of the somatic ACE catalysis is partly due to the presence of an active site in both the N and C domains and also the potential for interaction between them. The N-and C-domains of sACE are joined by a linker that is susceptible to proteolysis and is assumed to be partly flexible (Sturrock, E.D., Danilov, S.M. & Riordan, J.F. Limited proteolysis of human kidney angiotensin-converting enzyme and generation of catalytically active N- and C-terminal domains. *Biochem. Biophys. Res. Com.* **236**, 16-19 (1997)). The inclusion of the linker in the N-domain construct

allowed us to visualise this region for the first time. The majority of the linker (residues 602-612) was well defined in the electron density map after the first couple of rounds of refinement and was built into the model without ambiguity. The first part of the linker appears to be rigid in our model and is held in place by a hydrogen bond between Tyr607 and Glu161. The last four residues are more flexible as they have high B factors and their side chains are not visible (Fig 1(C)). They form a prominent surface patch, away from the core of the N domain, with a very flexible loop that is anchored by the disulphide bond between Cys128 and Cys136 (Fig 1(C)-(D)). Although this flexible loop is on the symmetry axis, neither its nor the linker's conformation appear to be involved in any crystal packing interactions. Hence it is most likely that the N-terminus of the C-domain would interact with this patch, and that it could adapt its conformation to one or more arrangements.

There is some evidence that only one domain of sACE is capable of catalysis at one time and that the N-domain may be a negative regulator of the C domain Andújar-Sánchez, M., Cámara-Artigas, A. & Jara-Pérez, V. A calorimetric study of the binding of lisinopril, enalaprilat and captopril to angiotensin-converting enzyme. *Biophys. Chem.* **111**, 183-189 (2004); Binevski, P.V., Sizova, E.A., Pozdnev, V.F. & Kost, O.A. Evidence for the negative cooperativity of the two active sites within bovine somatic angiotensin-converting enzyme. *FEBS Lett.* **550**, 84-88 (2003); Woodman, Z.L. et al., The N domain of somatic angiotensin-converting enzyme negatively regulates ectodomain shedding and catalytic activity. *Biochem J.* **389**, 739-744 (2005)). As the flexible region of the linker appears to be short, then it suggests that the N- domain would interact with the N-terminal lid region of the C- domain. The lid region comprise the three (largest) N terminal α-helices in both the N- and C-domains that partly covers the substrate channel (Natesh, R., Schwager, S.L.U., Sturrock, E.D. & Acharya, K.R. Crystal structure of the human angiotensin-converting enzyme-lisinopril complex. *Nature* **421**, 551-554 (2003)). It is thought that a change in conformation of the lid may be necessary for entry of the substrate and might also contribute to the substrate specificity of the domains. The interaction of the N-domain with the C-domain lid might reduce the flexibility of this region to regulate the entry of substrate to the C-domain active site or even to form a surface that partially blocked the cavity opening. By contrast, the position of the linker ensures

that the C-domain is unlikely to interact with the lid region of the N-domain, although it could block the product channel.

The specific interactions between the domains are not obvious, however, particularly as the terminal three residues of the linker are not available in our structure. Furthermore, several side chains on the linker and the flexible loop, which one might assume to play a part in the interaction, are disordered and not visible. We know from the sequence, however, that the flexible loop contains a positively charged lysine, and the linker, three negatively charged residues. These may interact with some of the charged residues protruding from the C-domain lid. The N- and C-domain lids have a different shape, size (due to the extra N-terminal residues) and charge distribution. These differences have been suggested to have a link to the substrate specificity of the two domains, but it seems likely that the shape and charge of the C-domain lid will also influence its interaction with the N-domain linker.

Based on this analysis, and the conformation of the linker, we propose a tentative domain arrangement for sACE. We suggest that the inter-domain linker could pack against the lid of the C-domain, in a similar manner to how the extra N terminal residues of the N domain, pack against the N domain lid. To visualise this, two N domains were overlapped with the N-terminus of one overlaying the linker of the other (allowing for the missing 3 residues), and then the C-domain (using tACE) was superimposed (Fig 2(A)). The initial arrangement caused the C-domain to overlap the flexible loop, suggesting that this loop might mould to the C-domain. Allowing free rotation around the linker produced a model from which it was easier to observe the residues that could be involved in the interaction. Figure 2(B) shows the charged residues on the N- and C-domains which may help form interactions between them. To complicate matters further, though, there is an N-glycosylation sequon on the flexible loop of the N-domain and the top part of the C-domain lid (Fig 2(A)), suggesting that inter-domain interactions and movements may be mediated or aided by sugars.

Binding of Lisinopril and specificity

The lisinopril bound to the active site was clearly defined, despite the poor electron density map in some other regions of the structure. The binding followed the same

orientation as observed for tACE with the central carboxylate coordinating the zinc ion and the phenyl group pointing up towards the lid. The active site residues and the lisinopril molecules for the two structures superimpose well (r.m.s. deviation for Cα atoms, 0.31Å) with nearly all the lisinopril binding residues conserved in the N-domain. tACE Glu 162, which interacts electrostatically with the amine on the lysyl side chain, is replaced by Asp 140 in the N-domain away from the P1' group (Fig 3(A)). Asp 377 of tACE, which forms water mediated interactions with the lysyl group, is also not conserved in the N domain and is replaced by Gln355. Gln355 could potentially form a hydrogen bond with the lysyl group of lisinopril, although this does not appear to be the case in our structure as it is about 4Å away. However, it might form water mediated interactions, but water molecules were not visible due to limited resolution of our structure

A burgeoning area in the field of ACE inhibitor design is the generation of domain specific inhibitors to more precisely regulate the actions of the N- and C-domains of sACE. The structures of two new inhibitors have been published, RXP407 and RXPA380, which are highly specific for the N and C domains, respectively. The structural determinants of RXP470 are known to be the N-terminal aspartate and N-acetyl groups in the P_2 position and the C-terminal amide.

The difference in phosphinic peptides at the P_2 position utilises the differences in the N- and C-domain active site at the S_2 subsite (Table 2). RXPA380 has a large hydrophobic phenyl group at this position, whereas the N-domain specific RXP407 has a charged aspartate residue and an N-terminus acetyl group. This corresponds to the exchange of a phenylalanine residue in the C-domain to Tyr 369 in the N domain. It is probable that the RXPA380 phenyl residue would form a stacking interaction with the Phe391 of tACE, whereas the aspartate or carbonyl (if the aspartate group forms electrostatic interactions with Arg500) of RXP407 would interact with the hydroxyl group of Tyr369 in the N-domain. Interestingly, in both the minimally glycosylated and lisinopril-bound N-domain structure, a patch of difference density was observed adjacent to Tyr369. This was modelled as a water molecule in the minimally glycosylated structure and a cluster of 2-3 water molecules in the lisinopril-bound structure as it was not possible to tell if it was a larger ligand, e.g. from the

crystallisation solution, at this resolution. It is possible that these water molecules in some way mimic the interactions the N-domain would have with extended inhibitors such as RXP407. Indeed, RXP407 can be modelled to make a similar interaction with Tyr369 (Fig 3(B)).

In our structure of the N-domain protein, the triad of residues (Gln259, Lys489, Tyr498), which interact with the carboxyl group of lisinopril, are best placed to interact with the C terminal amide. However, this triad in conserved in the C-domain and the residues that differ between the N- and C-domains are all located further down the cavity. These include Ser357 and Thr358 (both valine in the C-domain) and a patch of acidic residues (Fig 3b). Although the C-domain also has a patch of 2, rather than 3 acidic residues, they are either different in length or position (Table 2). These residues adopt random conformations in our structure, which lack partner/s in the S_2 subsite for them to interact with, but could possibly extend towards the active site and interact in the presence of RXP407. Although the resolution of our structure hinders a more detailed analysis of the active site, the structural details presented here will aid future rational design of domain-specific ACE inhibitors.

In a further aspect, the present invention relates to a composition comprising the N-domain of ACE protein in a crystalline form.

In a further aspect, the present invention relates to a scalable 3D model of the N-domain of ACE protein having at least a portion of the structural co-ordinates set forth in Table A or Table B.

All publications mentioned in the above specification are herein incorporated by reference. Various modifications and variations of the described methods and system of the invention will be apparent to those skilled in the art without departing from the scope and spirit of the invention. Although the invention has been described in connection with specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiments. Indeed, various modifications of the described modes for carrying out the invention which are obvious to those skilled in molecular biology or related fields are intended to be within the scope of the following claims.

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TABLE 1.

Crystallographic Data

	Native	Lisinopril complex
Resolution range, Å	48.5-3.0	50-2.8
No. of reflections measured	70398	160032
No. of unique reflections	36858	40318
I/□(I) (outer shell*)	9.0 (2.2)	9.2 (1.3)
Completeness (outer shell*), %	99.8 (99.7)	89.0 (57.3)
Rsymm (outer shell*), %	14.1 (59.5)	12.6 (52.8)
Rcryst, %	22.5	29.8
Rfree, %	27.4	31.4
Average temperature factor Å^2		
Protein (mol A / mol B)	35.4 / 38.5	39.3 / 40.2
Carbohydrate (mol A / mol B)	71.8 / 74.6	71.8 / 69.8
Ligand		48.8 / 43.2
Solvent [no. of water molecules]	24.5 [25]	18.3 [16]
Zn^{2+} ion / Cl^{2-} ion	31.6 / 40.1	39.3/35.3
RMSD from ideal values		
Bond lengths, Å	0.02	0.017
Bond angles, °	1.7	2.4

RMSD, root-mean-square deviation.

Outer shell, 3.11-3.00 Å and 2.95-2.8 Å for the native data and lisinopril complex respectively.

*R*free calculation used 4% and 2.3% of the reflections for the native data and lisinopril complex respectively.

TABLE 2.

Active site residues that differ between the N and C domains (C domain numbering is as for tACE).

S_1	**tACE/Cdomain**	V518							
	N domain	T496							
S_2	**tACE/C domain**	N70	E143	S516	A63	Y62	F391	V81	Y69
	N domain	D43	S119	N494	V36	S35	Y369	N54	H42
S_1'	**tACE/C domain**	E162	N374	E376	D377	V380	N277	S284	
	N domain	D140	T352	D354	N355	T358	D255	E262	
S_2'	**tACE/C domain**	D453	S284	V380	V379	E376			
	N domain	E431	D262	T358	S357	D354			

Table A.

REMARK coordinates from restrained individual B-factor refinement
REMARK refinement resolution: 500.0 - 3 A
REMARK starting r= 0.2256 free_r= 0.2748
REMARK final r= 0.2249 free_r= 0.2737
REMARK B rmsd for bonded mainchain atoms= 1.061 target= 1.5
REMARK B rmsd for bonded sidechain atoms= 1.449 target= 2.0
REMARK B rmsd for angle mainchain atoms= 1.846 target= 2.0
REMARK B rmsd for angle sidechain atoms= 2.327 target= 2.5
REMARK rweight= 0.1000 (with wa= 4.39844)
REMARK target= mlf steps= 30
REMARK sg= C222(1) a= 101.12 b= 211.32 c= 171.27 alpha= 90 beta= 90 gamma= 90
REMARK parameter file 1 : CNS_TOPPAR:protein_rep.param
REMARK parameter file 2 : CNS_TOPPAR:ion.param
REMARK parameter file 3 : ../../../nlis/cns/both.par
REMARK parameter file 4 : CNS_TOPPAR:water_rep.param
REMARK parameter file 5 : ../carb.par
REMARK molecular structure file: gen.mtf
REMARK input coordinates: rig.pdb
REMARK reflection file= ../sftools_rf.cv
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 3
REMARK B-factor correction applied to coordinate array B: -0.004
REMARK bulk solvent: density level= 0.337337 e/A^3, B-factor= 25.5172 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range: 37102 (100.0 %)
REMARK number of unobserved reflections (no entry or |F|=0): 1459 (3.9 %)
REMARK number of reflections rejected: 0 (0.0 %)
REMARK total number of reflections used: 35643 (96.1 %)
REMARK number of reflections in working set: 34202 (92.2 %)
REMARK number of reflections in test set: 1441 (3.9 %)

```
CRYST1  101.120  211.320  171.270  90.00  90.00  90.00 C 2 2 21
REMARK FILENAME="rbind.pdb"
REMARK DATE:01-Sep-2005  10:51:14      created by user: hazel
REMARK VERSION:1.1
ATOM      1  CB  ALA A   1     -23.864 -35.275  -7.565  1.00 59.70      A
ATOM      2  C   ALA A   1     -24.294 -37.717  -7.148  1.00 60.38      A
ATOM      3  O   ALA A   1     -23.961 -38.780  -6.618  1.00 59.62      A
ATOM      4  N   ALA A   1     -22.652 -37.006  -8.857  1.00 60.75      A
ATOM      5  CA  ALA A   1     -23.242 -36.679  -7.533  1.00 60.39      A
ATOM      6  N   ASP A   2     -25.560 -37.406  -7.422  1.00 60.30      A
ATOM      7  CA  ASP A   2     -26.661 -38.306  -7.091  1.00 60.51      A
ATOM      8  CB  ASP A   2     -27.942 -37.862  -7.809  1.00 61.34      A
ATOM      9  CG  ASP A   2     -29.144 -38.732  -7.456  1.00 62.14      A
ATOM     10  OD1 ASP A   2     -29.480 -38.824  -6.256  1.00 62.49      A
ATOM     11  OD2 ASP A   2     -29.752 -39.323  -8.377  1.00 62.26      A
ATOM     12  C   ASP A   2     -26.318 -39.742  -7.476  1.00 59.93      A
ATOM     13  O   ASP A   2     -25.833 -40.000  -8.576  1.00 61.20      A
ATOM     14  N   PRO A   3     -26.562 -40.699  -6.568  1.00 58.59      A
ATOM     15  CD  PRO A   3     -27.098 -40.534  -5.206  1.00 58.27      A
ATOM     16  CA  PRO A   3     -26.266 -42.110  -6.842  1.00 57.14      A
ATOM     17  CB  PRO A   3     -26.435 -42.763  -5.473  1.00 57.38      A
ATOM     18  CG  PRO A   3     -27.521 -41.944  -4.857  1.00 57.46      A
ATOM     19  C   PRO A   3     -27.165 -42.740  -7.914  1.00 55.49      A
ATOM     20  O   PRO A   3     -26.738 -43.633  -8.651  1.00 54.12      A
ATOM     21  N   GLY A   4     -28.404 -42.266  -7.993  1.00 54.53      A
ATOM     22  CA  GLY A   4     -29.338 -42.792  -8.972  1.00 53.91      A
ATOM     23  C   GLY A   4     -28.945 -42.517 -10.413  1.00 53.28      A
ATOM     24  O   GLY A   4     -29.479 -43.141 -11.327  1.00 53.35      A
ATOM     25  N   LEU A   5     -28.014 -41.586 -10.617  1.00 52.87      A
ATOM     26  CA  LEU A   5     -27.549 -41.228 -11.955  1.00 51.15      A
ATOM     27  CB  LEU A   5     -27.476 -39.706 -12.108  1.00 48.94      A
ATOM     28  CG  LEU A   5     -28.805 -38.944 -12.068  1.00 47.11      A
ATOM     29  CD1 LEU A   5     -28.548 -37.466 -11.943  1.00 44.60      A
ATOM     30  CD2 LEU A   5     -29.602 -39.232 -13.317  1.00 45.99      A
```

ATOM 31 C LEU A 5 -26.188 -41.837 -12.250 1.00 51.49 A
ATOM 32 O LEU A 5 -25.695 -41.731 -13.367 1.00 51.18 A
ATOM 33 N GLN A 6 -25.640 -42.563 -11.327 1.00 52.94 A
ATOM 34 CA GLN A 6 -24.384 -43.191 -11.556 1.00 55.39 A
ATOM 35 CB GLN A 6 -23.816 -43.588 -10.244 1.00 55.97 A
ATOM 36 CG GLN A 6 -22.367 -43.717 -10.213 1.00 58.03 A
ATOM 37 CD GLN A 6 -21.757 -42.560 -9.541 1.00 60.50 A
ATOM 38 OE1 GLN A 6 -20.540 -42.472 -9.411 1.00 61.49 A
ATOM 39 NE2 GLN A 6 -22.588 -41.634 -9.128 1.00 61.55 A
ATOM 40 C GLN A 6 -24.552 -44.384 -12.408 1.00 56.59 A
ATOM 41 O GLN A 6 -25.617 -44.840 -12.561 1.00 57.06 A
ATOM 42 N PRO A 7 -23.486 -44.903 -12.966 1.00 57.69 A
ATOM 43 CD PRO A 7 -22.106 -44.441 -12.730 1.00 59.02 A
ATOM 44 CA PRO A 7 -23.568 -45.839 -14.090 1.00 58.62 A
ATOM 45 CB PRO A 7 -22.112 -46.258 -14.295 1.00 58.58 A
ATOM 46 CG PRO A 7 -21.323 -45.076 -13.848 1.00 58.80 A
ATOM 47 C PRO A 7 -24.422 -47.058 -13.755 1.00 59.55 A
ATOM 48 O PRO A 7 -25.532 -47.191 -14.271 1.00 61.74 A
ATOM 49 N GLY A 8 -23.904 -47.933 -12.900 1.00 58.50 A
ATOM 50 CA GLY A 8 -24.431 -49.279 -12.775 1.00 58.31 A
ATOM 51 C GLY A 8 -23.347 -50.336 -12.851 1.00 58.41 A
ATOM 52 O GLY A 8 -22.330 -50.246 -12.164 1.00 60.78 A
ATOM 53 N ASN A 9 -23.566 -51.343 -13.691 1.00 56.71 A
ATOM 54 CA ASN A 9 -22.550 -52.354 -13.957 1.00 54.49 A
ATOM 55 CB ASN A 9 -22.144 -53.058 -12.661 1.00 56.78 A
ATOM 56 CG ASN A 9 -20.641 -53.085 -12.459 1.00 59.68 A
ATOM 57 OD1 ASN A 9 -19.884 -53.385 -13.383 1.00 60.14 A
ATOM 58 ND2 ASN A 9 -20.202 -52.770 -11.246 1.00 60.77 A
ATOM 59 C ASN A 9 -23.011 -53.379 -14.988 1.00 52.08 A
ATOM 60 O ASN A 9 -24.188 -53.735 -15.040 1.00 51.49 A
ATOM 61 N PHE A 10 -22.075 -53.848 -15.808 1.00 48.84 A
ATOM 62 CA PHE A 10 -22.390 -54.279 -17.163 1.00 46.09 A
ATOM 63 CB PHE A 10 -22.552 -53.069 -18.086 1.00 40.73 A
ATOM 64 CG PHE A 10 -23.805 -52.278 -17.837 1.00 36.00 A

ATOM 65 CD1 PHE A 10 -23.749 -51.046 -17.208 1.00 34.11 A
ATOM 66 CD2 PHE A 10 -25.039 -52.766 -18.233 1.00 34.82 A
ATOM 67 CE1 PHE A 10 -24.899 -50.314 -16.978 1.00 33.62 A
ATOM 68 CE2 PHE A 10 -26.193 -52.040 -18.005 1.00 33.24 A
ATOM 69 CZ PHE A 10 -26.123 -50.813 -17.377 1.00 32.41 A
ATOM 70 C PHE A 10 -21.299 -55.200 -17.700 1.00 47.33 A
ATOM 71 O PHE A 10 -20.140 -55.102 -17.298 1.00 47.54 A
ATOM 72 N SER A 11 -21.694 -55.981 -18.685 1.00 49.09 A
ATOM 73 CA SER A 11 -20.944 -57.050 -19.260 1.00 51.16 A
ATOM 74 CB SER A 11 -21.914 -57.969 -19.948 1.00 52.18 A
ATOM 75 OG SER A 11 -23.230 -57.711 -19.528 1.00 55.83 A
ATOM 76 C SER A 11 -20.010 -56.527 -20.270 1.00 51.37 A
ATOM 77 O SER A 11 -20.347 -55.675 -20.997 1.00 51.24 A
ATOM 78 N ALA A 12 -18.805 -57.001 -20.317 1.00 52.26 A
ATOM 79 CA ALA A 12 -17.885 -56.442 -21.234 1.00 53.18 A
ATOM 80 CB ALA A 12 -16.590 -56.722 -20.875 1.00 51.57 A
ATOM 81 C ALA A 12 -18.135 -56.963 -22.575 1.00 54.43 A
ATOM 82 O ALA A 12 -17.211 -57.231 -23.312 1.00 54.12 A
ATOM 83 N ASP A 13 -19.420 -57.091 -22.875 1.00 55.79 A
ATOM 84 CA ASP A 13 -19.948 -57.734 -24.060 1.00 56.36 A
ATOM 85 CB ASP A 13 -21.115 -58.589 -23.693 1.00 59.30 A
ATOM 86 CG ASP A 13 -20.718 -59.905 -23.260 1.00 62.75 A
ATOM 87 OD1 ASP A 13 -19.530 -60.209 -23.368 1.00 63.30 A
ATOM 88 OD2 ASP A 13 -21.523 -60.720 -22.798 1.00 65.19 A
ATOM 89 C ASP A 13 -20.579 -56.691 -24.885 1.00 55.46 A
ATOM 90 O ASP A 13 -20.817 -55.628 -24.438 1.00 55.52 A
ATOM 91 N GLU A 14 -20.926 -57.029 -26.093 1.00 54.03 A
ATOM 92 CA GLU A 14 -21.653 -56.087 -26.934 1.00 51.76 A
ATOM 93 CB GLU A 14 -21.555 -56.497 -28.407 1.00 52.19 A
ATOM 94 CG GLU A 14 -22.396 -55.627 -29.349 1.00 51.31 A
ATOM 95 CD GLU A 14 -22.124 -55.902 -30.814 1.00 49.65 A
ATOM 96 OE1 GLU A 14 -22.807 -55.278 -31.657 1.00 47.71 A
ATOM 97 OE2 GLU A 14 -21.228 -56.730 -31.110 1.00 48.97 A
ATOM 98 C GLU A 14 -23.114 -56.059 -26.496 1.00 50.39 A

ATOM 99 O GLU A 14 -23.824 -55.074 -26.723 1.00 48.36 A
ATOM 100 N ALA A 15 -23.557 -57.152 -25.875 1.00 49.54 A
ATOM 101 CA ALA A 15 -24.931 -57.249 -25.392 1.00 48.17 A
ATOM 102 CB ALA A 15 -25.307 -58.697 -25.151 1.00 48.26 A
ATOM 103 C ALA A 15 -24.995 -56.456 -24.099 1.00 47.03 A
ATOM 104 O ALA A 15 -26.058 -55.989 -23.694 1.00 46.94 A
ATOM 105 N GLY A 16 -23.839 -56.312 -23.458 1.00 45.43 A
ATOM 106 CA GLY A 16 -23.769 -55.537 -22.240 1.00 44.21 A
ATOM 107 C GLY A 16 -23.904 -54.083 -22.638 1.00 44.56 A
ATOM 108 O GLY A 16 -24.717 -53.343 -22.087 1.00 44.15 A
ATOM 109 N ALA A 17 -23.113 -53.686 -23.630 1.00 44.88 A
ATOM 110 CA ALA A 17 -23.111 -52.321 -24.144 1.00 43.99 A
ATOM 111 CB ALA A 17 -22.103 -52.205 -25.277 1.00 42.98 A
ATOM 112 C ALA A 17 -24.490 -51.863 -24.613 1.00 43.79 A
ATOM 113 O ALA A 17 -24.898 -50.734 -24.351 1.00 43.30 A
ATOM 114 N GLN A 18 -25.206 -52.729 -25.319 1.00 44.14 A
ATOM 115 CA GLN A 18 -26.542 -52.377 -25.787 1.00 44.90 A
ATOM 116 CB GLN A 18 -27.218 -53.578 -26.452 1.00 45.72 A
ATOM 117 CG GLN A 18 -27.143 -53.613 -27.976 1.00 47.20 A
ATOM 118 CD GLN A 18 -27.934 -52.490 -28.639 1.00 47.56 A
ATOM 119 OE1 GLN A 18 -28.877 -51.943 -28.056 1.00 46.17 A
ATOM 120 NE2 GLN A 18 -27.563 -52.156 -29.872 1.00 47.95 A
ATOM 121 C GLN A 18 -27.352 -51.948 -24.574 1.00 45.56 A
ATOM 122 O GLN A 18 -28.210 -51.067 -24.658 1.00 46.30 A
ATOM 123 N LEU A 19 -27.073 -52.588 -23.442 1.00 45.38 A
ATOM 124 CA LEU A 19 -27.764 -52.284 -22.189 1.00 44.17 A
ATOM 125 CB LEU A 19 -27.632 -53.475 -21.232 1.00 42.95 A
ATOM 126 CG LEU A 19 -28.423 -54.697 -21.695 1.00 41.27 A
ATOM 127 CD1 LEU A 19 -28.083 -55.910 -20.851 1.00 40.33 A
ATOM 128 CD2 LEU A 19 -29.908 -54.373 -21.616 1.00 41.16 A
ATOM 129 C LEU A 19 -27.190 -51.009 -21.562 1.00 43.72 A
ATOM 130 O LEU A 19 -27.941 -50.121 -21.143 1.00 43.82 A
ATOM 131 N PHE A 20 -25.859 -50.935 -21.517 1.00 42.38 A
ATOM 132 CA PHE A 20 -25.142 -49.783 -20.980 1.00 41.22 A

ATOM 133 CB PHE A 20 -23.656 -49.891 -21.328 1.00 41.22 A
ATOM 134 CG PHE A 20 -22.865 -48.666 -20.991 1.00 42.77 A
ATOM 135 CD1 PHE A 20 -22.194 -48.565 -19.778 1.00 44.56 A
ATOM 136 CD2 PHE A 20 -22.816 -47.592 -21.872 1.00 43.78 A
ATOM 137 CE1 PHE A 20 -21.480 -47.407 -19.437 1.00 44.75 A
ATOM 138 CE2 PHE A 20 -22.109 -46.428 -21.547 1.00 45.36 A
ATOM 139 CZ PHE A 20 -21.438 -46.336 -20.323 1.00 45.39 A
ATOM 140 C PHE A 20 -25.712 -48.507 -21.593 1.00 41.34 A
ATOM 141 O PHE A 20 -26.030 -47.551 -20.884 1.00 41.48 A
ATOM 142 N ALA A 21 -25.839 -48.506 -22.918 1.00 40.47 A
ATOM 143 CA ALA A 21 -26.358 -47.360 -23.644 1.00 39.24 A
ATOM 144 CB ALA A 21 -26.173 -47.572 -25.126 1.00 38.89 A
ATOM 145 C ALA A 21 -27.821 -47.098 -23.337 1.00 39.35 A
ATOM 146 O ALA A 21 -28.235 -45.950 -23.207 1.00 39.42 A
ATOM 147 N ALA A 22 -28.603 -48.164 -23.226 1.00 39.34 A
ATOM 148 CA ALA A 22 -30.025 -48.031 -22.943 1.00 40.16 A
ATOM 149 CB ALA A 22 -30.678 -49.416 -22.866 1.00 39.74 A
ATOM 150 C ALA A 22 -30.212 -47.280 -21.631 1.00 41.24 A
ATOM 151 O ALA A 22 -31.111 -46.444 -21.499 1.00 40.59 A
ATOM 152 N SER A 23 -29.338 -47.575 -20.670 1.00 43.22 A
ATOM 153 CA SER A 23 -29.375 -46.962 -19.342 1.00 45.22 A
ATOM 154 CB SER A 23 -28.454 -47.745 -18.395 1.00 45.73 A
ATOM 155 OG SER A 23 -28.820 -47.579 -17.036 1.00 46.34 A
ATOM 156 C SER A 23 -28.949 -45.489 -19.405 1.00 45.96 A
ATOM 157 O SER A 23 -29.725 -44.587 -19.057 1.00 45.92 A
ATOM 158 N TYR A 24 -27.712 -45.268 -19.851 1.00 45.86 A
ATOM 159 CA TYR A 24 -27.130 -43.933 -20.005 1.00 45.14 A
ATOM 160 CB TYR A 24 -25.937 -44.005 -20.960 1.00 46.13 A
ATOM 161 CG TYR A 24 -25.428 -42.656 -21.418 1.00 48.06 A
ATOM 162 CD1 TYR A 24 -24.937 -41.724 -20.502 1.00 48.24 A
ATOM 163 CE1 TYR A 24 -24.447 -40.487 -20.924 1.00 48.03 A
ATOM 164 CD2 TYR A 24 -25.418 -42.312 -22.773 1.00 48.40 A
ATOM 165 CE2 TYR A 24 -24.926 -41.075 -23.203 1.00 47.52 A
ATOM 166 CZ TYR A 24 -24.441 -40.171 -22.272 1.00 47.46 A

ATOM 167 OH TYR A 24 -23.926 -38.965 -22.681 1.00 46.28 A
ATOM 168 C TYR A 24 -28.135 -42.932 -20.556 1.00 43.62 A
ATOM 169 O TYR A 24 -28.262 -41.813 -20.073 1.00 43.13 A
ATOM 170 N ASN A 25 -28.929 -43.346 -21.524 1.00 42.36 A
ATOM 171 CA ASN A 25 -29.938 -42.520 -22.209 1.00 41.72 A
ATOM 172 CB ASN A 25 -30.661 -43.333 -23.317 1.00 40.46 A
ATOM 173 CG ASN A 25 -31.894 -42.671 -23.871 1.00 40.43 A
ATOM 174 OD1 ASN A 25 -31.786 -41.746 -24.557 1.00 40.06 A
ATOM 175 ND2 ASN A 25 -33.046 -43.226 -23.662 1.00 41.17 A
ATOM 176 C ASN A 25 -30.945 -42.002 -21.299 1.00 42.17 A
ATOM 177 O ASN A 25 -31.347 -40.879 -21.364 1.00 41.04 A
ATOM 178 N ALA A 26 -31.448 -42.883 -20.485 1.00 42.92 A
ATOM 179 CA ALA A 26 -32.520 -42.491 -19.574 1.00 43.29 A
ATOM 180 CB ALA A 26 -33.096 -43.719 -18.906 1.00 43.39 A
ATOM 181 C ALA A 26 -32.033 -41.505 -18.519 1.00 43.47 A
ATOM 182 O ALA A 26 -32.735 -40.546 -18.170 1.00 42.67 A
ATOM 183 N SER A 27 -30.828 -41.756 -18.015 1.00 42.93 A
ATOM 184 CA SER A 27 -30.213 -40.914 -17.000 1.00 42.95 A
ATOM 185 CB SER A 27 -29.057 -41.665 -16.349 1.00 42.26 A
ATOM 186 OG SER A 27 -29.430 -42.996 -16.056 1.00 43.10 A
ATOM 187 C SER A 27 -29.696 -39.602 -17.601 1.00 43.34 A
ATOM 188 O SER A 27 -29.921 -38.519 -17.054 1.00 44.12 A
ATOM 189 N ALA A 28 -28.994 -39.709 -18.725 1.00 43.11 A
ATOM 190 CA ALA A 28 -28.439 -38.551 -19.406 1.00 41.81 A
ATOM 191 CB ALA A 28 -27.744 -38.990 -20.684 1.00 41.60 A
ATOM 192 C ALA A 28 -29.509 -37.522 -19.716 1.00 41.28 A
ATOM 193 O ALA A 28 -29.259 -36.333 -19.638 1.00 40.80 A
ATOM 194 N GLU A 29 -30.705 -37.973 -20.065 1.00 42.45 A
ATOM 195 CA GLU A 29 -31.787 -37.047 -20.383 1.00 44.68 A
ATOM 196 CB GLU A 29 -33.071 -37.805 -20.716 1.00 46.96 A
ATOM 197 CG GLU A 29 -33.234 -38.182 -22.169 1.00 50.48 A
ATOM 198 CD GLU A 29 -34.695 -38.358 -22.535 1.00 53.39 A
ATOM 199 OE1 GLU A 29 -34.996 -38.538 -23.732 1.00 55.17 A
ATOM 200 OE2 GLU A 29 -35.546 -38.313 -21.618 1.00 54.90 A

ATOM 201 C GLU A 29 -32.074 -36.099 -19.235 1.00 44.97 A
ATOM 202 O GLU A 29 -32.508 -34.967 -19.438 1.00 43.63 A
ATOM 203 N GLN A 30 -31.835 -36.582 -18.022 1.00 47.08 A
ATOM 204 CA GLN A 30 -32.075 -35.800 -16.814 1.00 47.50 A
ATOM 205 CB GLN A 30 -32.197 -36.734 -15.603 1.00 48.02 A
ATOM 206 CG GLN A 30 -33.439 -37.630 -15.659 1.00 50.84 A
ATOM 207 CD GLN A 30 -33.578 -38.549 -14.453 1.00 52.87 A
ATOM 208 OE1 GLN A 30 -33.549 -38.090 -13.306 1.00 53.65 A
ATOM 209 NE2 GLN A 30 -33.738 -39.854 -14.704 1.00 52.00 A
ATOM 210 C GLN A 30 -30.961 -34.789 -16.605 1.00 46.87 A
ATOM 211 O GLN A 30 -31.215 -33.586 -16.540 1.00 46.42 A
ATOM 212 N VAL A 31 -29.767 -35.290 -16.426 1.00 45.83 A
ATOM 213 CA VAL A 31 -28.581 -34.501 -16.438 1.00 45.79 A
ATOM 214 CB VAL A 31 -27.435 -35.328 -16.380 1.00 44.91 A
ATOM 215 CG1 VAL A 31 -26.531 -34.815 -17.217 1.00 45.05 A
ATOM 216 CG2 VAL A 31 -26.928 -35.265 -15.128 1.00 44.72 A
ATOM 217 C VAL A 31 -28.393 -33.447 -17.506 1.00 45.62 A
ATOM 218 O VAL A 31 -27.843 -32.406 -17.291 1.00 45.78 A
ATOM 219 N LEU A 32 -28.879 -33.719 -18.668 1.00 44.73 A
ATOM 220 CA LEU A 32 -28.826 -32.778 -19.770 1.00 44.36 A
ATOM 221 CB LEU A 32 -28.927 -33.505 -21.116 1.00 42.88 A
ATOM 222 CG LEU A 32 -27.618 -34.185 -21.522 1.00 40.77 A
ATOM 223 CD1 LEU A 32 -27.789 -34.967 -22.795 1.00 41.40 A
ATOM 224 CD2 LEU A 32 -26.552 -33.126 -21.693 1.00 41.02 A
ATOM 225 C LEU A 32 -29.932 -31.752 -19.628 1.00 44.37 A
ATOM 226 O LEU A 32 -29.697 -30.559 -19.803 1.00 44.83 A
ATOM 227 N PHE A 33 -31.136 -32.206 -19.300 1.00 44.42 A
ATOM 228 CA PHE A 33 -32.247 -31.274 -19.129 1.00 45.58 A
ATOM 229 CB PHE A 33 -33.503 -31.977 -18.615 1.00 41.98 A
ATOM 230 CG PHE A 33 -34.632 -31.034 -18.314 1.00 37.18 A
ATOM 231 CD1 PHE A 33 -35.524 -30.658 -19.304 1.00 36.69 A
ATOM 232 CD2 PHE A 33 -34.776 -30.491 -17.049 1.00 34.63 A
ATOM 233 CE1 PHE A 33 -36.547 -29.752 -19.032 1.00 35.20 A
ATOM 234 CE2 PHE A 33 -35.792 -29.586 -16.771 1.00 33.33 A

ATOM 235 CZ PHE A 33 -36.677 -29.216 -17.761 1.00 33.23 A
ATOM 236 C PHE A 33 -31.884 -30.182 -18.129 1.00 48.29 A
ATOM 237 O PHE A 33 -32.073 -28.994 -18.399 1.00 49.21 A
ATOM 238 N GLN A 34 -31.366 -30.590 -16.972 1.00 50.83 A
ATOM 239 CA GLN A 34 -31.003 -29.637 -15.933 1.00 52.45 A
ATOM 240 CB GLN A 34 -30.497 -30.372 -14.684 1.00 53.44 A
ATOM 241 CG GLN A 34 -29.232 -31.184 -14.853 1.00 56.33 A
ATOM 242 CD GLN A 34 -28.044 -30.587 -14.095 1.00 59.76 A
ATOM 243 OE1 GLN A 34 -28.219 -29.928 -13.058 1.00 60.10 A
ATOM 244 NE2 GLN A 34 -26.827 -30.832 -14.600 1.00 61.38 A
ATOM 245 C GLN A 34 -29.987 -28.598 -16.397 1.00 52.59 A
ATOM 246 O GLN A 34 -30.253 -27.396 -16.298 1.00 53.04 A
ATOM 247 N SER A 35 -28.876 -29.058 -16.928 1.00 51.15 A
ATOM 248 CA SER A 35 -27.868 -28.192 -17.423 1.00 49.99 A
ATOM 249 CB SER A 35 -26.757 -28.984 -17.960 1.00 49.90 A
ATOM 250 OG SER A 35 -26.782 -28.826 -19.334 1.00 53.34 A
ATOM 251 C SER A 35 -28.293 -27.267 -18.482 1.00 48.72 A
ATOM 252 O SER A 35 -27.766 -26.195 -18.545 1.00 48.49 A
ATOM 253 N VAL A 36 -29.193 -27.697 -19.348 1.00 46.52 A
ATOM 254 CA VAL A 36 -29.766 -26.919 -20.440 1.00 44.76 A
ATOM 255 CB VAL A 36 -30.485 -27.832 -21.462 1.00 44.34 A
ATOM 256 CG1 VAL A 36 -31.303 -26.995 -22.437 1.00 41.86 A
ATOM 257 CG2 VAL A 36 -29.460 -28.670 -22.212 1.00 43.46 A
ATOM 258 C VAL A 36 -30.762 -25.888 -19.925 1.00 44.06 A
ATOM 259 O VAL A 36 -30.761 -24.740 -20.372 1.00 43.33 A
ATOM 260 N ALA A 37 -31.610 -26.302 -18.986 1.00 43.05 A
ATOM 261 CA ALA A 37 -32.617 -25.409 -18.420 1.00 42.33 A
ATOM 262 CB ALA A 37 -33.578 -26.191 -17.560 1.00 41.35 A
ATOM 263 C ALA A 37 -31.948 -24.312 -17.602 1.00 41.62 A
ATOM 264 O ALA A 37 -32.443 -23.187 -17.524 1.00 39.76 A
ATOM 265 N ALA A 38 -30.811 -24.658 -17.003 1.00 41.33 A
ATOM 266 CA ALA A 38 -30.037 -23.727 -16.190 1.00 41.12 A
ATOM 267 CB ALA A 38 -28.853 -24.454 -15.540 1.00 40.21 A
ATOM 268 C ALA A 38 -29.532 -22.600 -17.081 1.00 41.12 A

ATOM 269 O ALA A 38 -29.656 -21.416 -16.758 1.00 41.30 A
ATOM 270 N SER A 39 -28.946 -22.985 -18.205 1.00 40.59 A
ATOM 271 CA SER A 39 -28.434 -22.022 -19.148 1.00 38.72 A
ATOM 272 CB SER A 39 -27.790 -22.745 -20.320 1.00 36.81 A
ATOM 273 OG SER A 39 -26.773 -23.617 -19.864 1.00 35.22 A
ATOM 274 C SER A 39 -29.594 -21.169 -19.631 1.00 39.25 A
ATOM 275 O SER A 39 -29.499 -19.944 -19.647 1.00 39.58 A
ATOM 276 N TRP A 40 -30.700 -21.809 -20.005 1.00 39.54 A
ATOM 277 CA TRP A 40 -31.856 -21.064 -20.498 1.00 39.85 A
ATOM 278 CB TRP A 40 -33.053 -21.989 -20.756 1.00 38.38 A
ATOM 279 CG TRP A 40 -34.290 -21.235 -21.204 1.00 37.06 A
ATOM 280 CD2 TRP A 40 -34.594 -20.783 -22.532 1.00 37.49 A
ATOM 281 CE2 TRP A 40 -35.814 -20.076 -22.464 1.00 36.99 A
ATOM 282 CE3 TRP A 40 -33.955 -20.906 -23.771 1.00 37.44 A
ATOM 283 CD1 TRP A 40 -35.311 -20.794 -20.415 1.00 37.37 A
ATOM 284 NE1 TRP A 40 -36.230 -20.098 -21.161 1.00 36.56 A
ATOM 285 CZ2 TRP A 40 -36.406 -19.495 -23.583 1.00 36.70 A
ATOM 286 CZ3 TRP A 40 -34.547 -20.328 -24.882 1.00 37.03 A
ATOM 287 CH2 TRP A 40 -35.761 -19.632 -24.778 1.00 37.26 A
ATOM 288 C TRP A 40 -32.278 -19.940 -19.568 1.00 40.95 A
ATOM 289 O TRP A 40 -32.894 -18.976 -20.017 1.00 41.96 A
ATOM 290 N ALA A 41 -31.955 -20.059 -18.281 1.00 42.31 A
ATOM 291 CA ALA A 41 -32.305 -19.022 -17.304 1.00 42.16 A
ATOM 292 CB ALA A 41 -32.400 -19.623 -15.906 1.00 40.87 A
ATOM 293 C ALA A 41 -31.259 -17.909 -17.331 1.00 42.14 A
ATOM 294 O ALA A 41 -31.583 -16.734 -17.170 1.00 42.22 A
ATOM 295 N HIS A 42 -30.006 -18.296 -17.552 1.00 42.74 A
ATOM 296 CA HIS A 42 -28.895 -17.359 -17.610 1.00 44.17 A
ATOM 297 CB HIS A 42 -27.576 -18.132 -17.510 1.00 47.34 A
ATOM 298 CG HIS A 42 -26.350 -17.288 -17.699 1.00 50.69 A
ATOM 299 CD2 HIS A 42 -25.534 -16.686 -16.801 1.00 51.45 A
ATOM 300 ND1 HIS A 42 -25.828 -16.997 -18.943 1.00 52.32 A
ATOM 301 CE1 HIS A 42 -24.744 -16.255 -18.801 1.00 52.42 A
ATOM 302 NE2 HIS A 42 -24.543 -16.052 -17.511 1.00 52.35 A

ATOM 303 C HIS A 42 -28.904 -16.500 -18.874 1.00 44.50 A
ATOM 304 O HIS A 42 -28.657 -15.297 -18.816 1.00 45.04 A
ATOM 305 N ASP A 43 -29.190 -17.127 -20.010 1.00 44.95 A
ATOM 306 CA ASP A 43 -29.220 -16.424 -21.287 1.00 44.34 A
ATOM 307 CB ASP A 43 -29.186 -17.420 -22.448 1.00 46.25 A
ATOM 308 CG ASP A 43 -27.848 -18.121 -22.575 1.00 48.09 A
ATOM 309 OD1 ASP A 43 -27.624 -18.794 -23.603 1.00 50.16 A
ATOM 310 OD2 ASP A 43 -26.961 -18.057 -21.699 1.00 47.76 A
ATOM 311 C ASP A 43 -30.453 -15.533 -21.397 1.00 43.59 A
ATOM 312 O ASP A 43 -30.359 -14.375 -21.805 1.00 43.18 A
ATOM 313 N THR A 44 -31.608 -16.083 -21.037 1.00 43.46 A
ATOM 314 CA THR A 44 -32.847 -15.315 -21.014 1.00 43.63 A
ATOM 315 CB THR A 44 -34.065 -16.258 -20.972 1.00 43.18 A
ATOM 316 OG1 THR A 44 -34.084 -16.963 -19.724 1.00 44.45 A
ATOM 317 CG2 THR A 44 -33.914 -17.369 -22.000 1.00 42.99 A
ATOM 318 C THR A 44 -32.876 -14.368 -19.821 1.00 43.83 A
ATOM 319 O THR A 44 -33.845 -13.637 -19.618 1.00 42.40 A
ATOM 320 N ASN A 45 -31.805 -14.387 -19.034 1.00 45.28 A
ATOM 321 CA ASN A 45 -31.644 -13.445 -17.934 1.00 45.80 A
ATOM 322 CB ASN A 45 -32.710 -13.684 -16.864 1.00 46.99 A
ATOM 323 CG ASN A 45 -32.704 -12.617 -15.787 1.00 47.94 A
ATOM 324 OD1 ASN A 45 -32.045 -11.586 -15.922 1.00 50.43 A
ATOM 325 ND2 ASN A 45 -33.441 -12.860 -14.709 1.00 47.52 A
ATOM 326 C ASN A 45 -30.214 -13.564 -17.417 1.00 45.21 A
ATOM 327 O ASN A 45 -29.796 -14.627 -16.959 1.00 47.02 A
ATOM 328 N ILE A 46 -29.469 -12.466 -17.496 1.00 42.84 A
ATOM 329 CA ILE A 46 -28.080 -12.457 -17.051 1.00 40.74 A
ATOM 330 CB ILE A 46 -27.199 -11.682 -18.048 1.00 40.63 A
ATOM 331 CG2 ILE A 46 -25.731 -12.016 -17.832 1.00 38.48 A
ATOM 332 CG1 ILE A 46 -27.619 -11.995 -19.486 1.00 40.60 A
ATOM 333 CD1 ILE A 46 -26.617 -11.546 -20.526 1.00 41.08 A
ATOM 334 C ILE A 46 -27.951 -11.852 -15.657 1.00 39.88 A
ATOM 335 O ILE A 46 -27.851 -10.634 -15.506 1.00 40.28 A
ATOM 336 N THR A 47 -27.956 -12.709 -14.642 1.00 39.44 A

ATOM 337 CA THR A 47 -27.669 -12.283 -13.278 1.00 38.92 A
ATOM 338 CB THR A 47 -28.941 -12.349 -12.413 1.00 39.07 A
ATOM 339 OG1 THR A 47 -29.273 -13.718 -12.150 1.00 38.85 A
ATOM 340 CG2 THR A 47 -30.143 -11.840 -13.192 1.00 39.31 A
ATOM 341 C THR A 47 -26.566 -13.131 -12.654 1.00 38.66 A
ATOM 342 O THR A 47 -26.272 -14.230 -13.124 1.00 38.32 A
ATOM 343 N ALA A 48 -25.958 -12.613 -11.592 1.00 38.05 A
ATOM 344 CA ALA A 48 -24.918 -13.336 -10.875 1.00 38.04 A
ATOM 345 CB ALA A 48 -24.364 -12.473 -9.764 1.00 37.51 A
ATOM 346 C ALA A 48 -25.461 -14.651 -10.312 1.00 38.98 A
ATOM 347 O ALA A 48 -24.764 -15.670 -10.306 1.00 37.62 A
ATOM 348 N GLU A 49 -26.709 -14.620 -9.847 1.00 40.23 A
ATOM 349 CA GLU A 49 -27.357 -15.805 -9.290 1.00 41.74 A
ATOM 350 CB GLU A 49 -28.744 -15.457 -8.743 1.00 43.66 A
ATOM 351 CG GLU A 49 -29.516 -16.653 -8.179 1.00 46.92 A
ATOM 352 CD GLU A 49 -28.783 -17.357 -7.036 1.00 49.42 A
ATOM 353 OE1 GLU A 49 -28.329 -16.665 -6.097 1.00 51.14 A
ATOM 354 OE2 GLU A 49 -28.669 -18.604 -7.062 1.00 49.82 A
ATOM 355 C GLU A 49 -27.497 -16.912 -10.332 1.00 41.77 A
ATOM 356 O GLU A 49 -27.112 -18.055 -10.071 1.00 42.26 A
ATOM 357 N ASN A 50 -28.043 -16.575 -11.505 1.00 40.90 A
ATOM 358 CA ASN A 50 -28.234 -17.540 -12.593 1.00 39.66 A
ATOM 359 CB ASN A 50 -29.016 -16.893 -13.744 1.00 40.03 A
ATOM 360 CG ASN A 50 -30.395 -16.405 -13.325 1.00 40.57 A
ATOM 361 OD1 ASN A 50 -31.167 -17.137 -12.716 1.00 39.95 A
ATOM 362 ND2 ASN A 50 -30.713 -15.169 -13.670 1.00 41.49 A
ATOM 363 C ASN A 50 -26.904 -18.102 -13.118 1.00 39.05 A
ATOM 364 O ASN A 50 -26.799 -19.285 -13.453 1.00 38.23 A
ATOM 365 N ALA A 51 -25.891 -17.246 -13.185 1.00 38.53 A
ATOM 366 CA ALA A 51 -24.579 -17.652 -13.653 1.00 38.51 A
ATOM 367 CB ALA A 51 -23.676 -16.454 -13.731 1.00 39.07 A
ATOM 368 C ALA A 51 -24.006 -18.663 -12.694 1.00 38.93 A
ATOM 369 O ALA A 51 -23.490 -19.694 -13.101 1.00 37.64 A
ATOM 370 N ARG A 52 -23.969 -18.359 -11.443 1.00 41.76 A

ATOM 371 CA ARG A 52 -23.634 -19.321 -10.415 1.00 44.00 A
ATOM 372 CB ARG A 52 -24.103 -18.752 -9.118 1.00 45.30 A
ATOM 373 CG ARG A 52 -23.052 -18.588 -8.061 1.00 47.98 A
ATOM 374 CD ARG A 52 -23.670 -18.595 -6.709 1.00 50.52 A
ATOM 375 NE ARG A 52 -24.739 -19.556 -6.775 1.00 52.84 A
ATOM 376 CZ ARG A 52 -25.529 -19.877 -5.820 1.00 53.09 A
ATOM 377 NH1 ARG A 52 -25.406 -19.327 -4.653 1.00 54.58 A
ATOM 378 NH2 ARG A 52 -26.441 -20.773 -6.037 1.00 52.84 A
ATOM 379 C ARG A 52 -24.319 -20.601 -10.557 1.00 44.20 A
ATOM 380 O ARG A 52 -23.738 -21.633 -10.513 1.00 43.62 A
ATOM 381 N ARG A 53 -25.601 -20.519 -10.680 1.00 44.03 A
ATOM 382 CA ARG A 53 -26.411 -21.719 -10.855 1.00 44.62 A
ATOM 383 CB ARG A 53 -27.860 -21.345 -11.130 1.00 45.23 A
ATOM 384 CG ARG A 53 -28.606 -20.787 -9.948 1.00 46.11 A
ATOM 385 CD ARG A 53 -29.942 -20.238 -10.399 1.00 47.87 A
ATOM 386 NE ARG A 53 -30.649 -19.622 -9.288 1.00 48.96 A
ATOM 387 CZ ARG A 53 -31.289 -20.302 -8.346 1.00 49.51 A
ATOM 388 NH1 ARG A 53 -31.317 -21.629 -8.387 1.00 48.90 A
ATOM 389 NH2 ARG A 53 -31.891 -19.648 -7.358 1.00 50.12 A
ATOM 390 C ARG A 53 -25.895 -22.535 -12.026 1.00 44.63 A
ATOM 391 O ARG A 53 -25.558 -23.712 -11.874 1.00 45.30 A
ATOM 392 N GLN A 54 -25.869 -21.901 -13.197 1.00 43.53 A
ATOM 393 CA GLN A 54 -25.387 -22.534 -14.416 1.00 42.03 A
ATOM 394 CB GLN A 54 -25.198 -21.462 -15.497 1.00 42.88 A
ATOM 395 CG GLN A 54 -23.949 -21.610 -16.371 1.00 43.26 A
ATOM 396 CD GLN A 54 -24.194 -22.444 -17.609 1.00 43.52 A
ATOM 397 OE1 GLN A 54 -25.045 -22.099 -18.440 1.00 45.48 A
ATOM 398 NE2 GLN A 54 -23.450 -23.542 -17.747 1.00 41.34 A
ATOM 399 C GLN A 54 -24.066 -23.226 -14.118 1.00 41.21 A
ATOM 400 O GLN A 54 -23.930 -24.432 -14.296 1.00 40.40 A
ATOM 401 N GLU A 55 -23.100 -22.452 -13.644 1.00 40.67 A
ATOM 402 CA GLU A 55 -21.785 -22.985 -13.338 1.00 40.13 A
ATOM 403 CB GLU A 55 -20.938 -21.918 -12.646 1.00 40.90 A
ATOM 404 CG GLU A 55 -20.719 -20.676 -13.496 1.00 41.83 A

ATOM 405 CD GLU A 55 -19.552 -19.827 -13.015 1.00 44.05 A
ATOM 406 OE1 GLU A 55 -18.456 -20.385 -12.787 1.00 44.78 A
ATOM 407 OE2 GLU A 55 -19.719 -18.598 -12.873 1.00 45.51 A
ATOM 408 C GLU A 55 -21.876 -24.232 -12.477 1.00 39.53 A
ATOM 409 O GLU A 55 -20.993 -25.088 -12.511 1.00 39.05 A
ATOM 410 N ALA A 56 -22.953 -24.337 -11.708 1.00 39.28 A
ATOM 411 CA ALA A 56 -23.158 -25.496 -10.845 1.00 38.19 A
ATOM 412 CB ALA A 56 -24.161 -25.159 -9.749 1.00 37.41 A
ATOM 413 C ALA A 56 -23.658 -26.671 -11.682 1.00 36.65 A
ATOM 414 O ALA A 56 -23.057 -27.748 -11.691 1.00 35.00 A
ATOM 415 N ALA A 57 -24.756 -26.441 -12.393 1.00 35.68 A
ATOM 416 CA ALA A 57 -25.364 -27.446 -13.257 1.00 35.13 A
ATOM 417 CB ALA A 57 -26.478 -26.805 -14.064 1.00 35.01 A
ATOM 418 C ALA A 57 -24.332 -28.082 -14.193 1.00 35.36 A
ATOM 419 O ALA A 57 -24.415 -29.272 -14.514 1.00 34.72 A
ATOM 420 N ALA A 58 -23.370 -27.272 -14.631 1.00 35.10 A
ATOM 421 CA ALA A 58 -22.299 -27.717 -15.517 1.00 34.51 A
ATOM 422 CB ALA A 58 -21.453 -26.525 -15.927 1.00 33.24 A
ATOM 423 C ALA A 58 -21.433 -28.747 -14.794 1.00 35.27 A
ATOM 424 O ALA A 58 -21.034 -29.763 -15.366 1.00 35.05 A
ATOM 425 N LEU A 59 -21.155 -28.467 -13.524 1.00 35.58 A
ATOM 426 CA LEU A 59 -20.342 -29.337 -12.683 1.00 34.70 A
ATOM 427 CB LEU A 59 -20.160 -28.694 -11.314 1.00 33.09 A
ATOM 428 CG LEU A 59 -18.727 -28.279 -11.031 1.00 31.07 A
ATOM 429 CD1 LEU A 59 -18.688 -27.478 -9.756 1.00 28.84 A
ATOM 430 CD2 LEU A 59 -17.849 -29.523 -10.958 1.00 29.60 A
ATOM 431 C LEU A 59 -20.954 -30.724 -12.531 1.00 34.78 A
ATOM 432 O LEU A 59 -20.235 -31.723 -12.423 1.00 34.04 A
ATOM 433 N LEU A 60 -22.282 -30.778 -12.510 1.00 34.41 A
ATOM 434 CA LEU A 60 -22.969 -32.053 -12.408 1.00 35.26 A
ATOM 435 CB LEU A 60 -24.475 -31.859 -12.187 1.00 37.35 A
ATOM 436 CG LEU A 60 -24.900 -31.464 -10.766 1.00 39.66 A
ATOM 437 CD1 LEU A 60 -26.401 -31.236 -10.727 1.00 39.89 A
ATOM 438 CD2 LEU A 60 -24.482 -32.551 -9.772 1.00 39.75 A

ATOM 439 C LEU A 60 -22.732 -32.800 -13.708 1.00 34.24 A
ATOM 440 O LEU A 60 -22.224 -33.920 -13.707 1.00 33.75 A
ATOM 441 N SER A 61 -23.093 -32.170 -14.820 1.00 32.82 A
ATOM 442 CA SER A 61 -22.909 -32.780 -16.128 1.00 30.82 A
ATOM 443 CB SER A 61 -23.237 -31.771 -17.221 1.00 30.79 A
ATOM 444 OG SER A 61 -24.610 -31.414 -17.168 1.00 33.24 A
ATOM 445 C SER A 61 -21.484 -33.276 -16.267 1.00 28.63 A
ATOM 446 O SER A 61 -21.248 -34.423 -16.614 1.00 27.43 A
ATOM 447 N GLN A 62 -20.523 -32.416 -15.985 1.00 28.28 A
ATOM 448 CA GLN A 62 -19.138 -32.834 -16.079 1.00 30.22 A
ATOM 449 CB GLN A 62 -18.216 -31.693 -15.640 1.00 29.71 A
ATOM 450 CG GLN A 62 -18.228 -30.511 -16.590 1.00 28.80 A
ATOM 451 CD GLN A 62 -17.735 -29.236 -15.946 1.00 31.00 A
ATOM 452 OE1 GLN A 62 -18.280 -28.794 -14.935 1.00 32.00 A
ATOM 453 NE2 GLN A 62 -16.705 -28.631 -16.528 1.00 31.71 A
ATOM 454 C GLN A 62 -18.958 -34.063 -15.191 1.00 31.66 A
ATOM 455 O GLN A 62 -18.220 -34.985 -15.530 1.00 31.56 A
ATOM 456 N GLU A 63 -19.655 -34.064 -14.057 1.00 33.93 A
ATOM 457 CA GLU A 63 -19.617 -35.176 -13.104 1.00 35.67 A
ATOM 458 CB GLU A 63 -20.452 -34.816 -11.877 1.00 37.75 A
ATOM 459 CG GLU A 63 -19.712 -34.849 -10.559 1.00 43.26 A
ATOM 460 CD GLU A 63 -20.454 -34.079 -9.478 1.00 46.89 A
ATOM 461 OE1 GLU A 63 -21.647 -34.377 -9.253 1.00 47.77 A
ATOM 462 OE2 GLU A 63 -19.846 -33.174 -8.860 1.00 49.33 A
ATOM 463 C GLU A 63 -20.195 -36.429 -13.778 1.00 35.57 A
ATOM 464 O GLU A 63 -19.549 -37.480 -13.840 1.00 35.34 A
ATOM 465 N PHE A 64 -21.418 -36.289 -14.285 1.00 35.16 A
ATOM 466 CA PHE A 64 -22.135 -37.349 -14.985 1.00 35.53 A
ATOM 467 CB PHE A 64 -23.429 -36.774 -15.560 1.00 35.15 A
ATOM 468 CG PHE A 64 -24.342 -37.800 -16.153 1.00 36.52 A
ATOM 469 CD1 PHE A 64 -25.563 -38.084 -15.556 1.00 37.98 A
ATOM 470 CD2 PHE A 64 -24.001 -38.475 -17.314 1.00 37.90 A
ATOM 471 CE1 PHE A 64 -26.437 -39.029 -16.112 1.00 39.80 A
ATOM 472 CE2 PHE A 64 -24.867 -39.419 -17.875 1.00 39.47 A

ATOM 473 CZ PHE A 64 -26.085 -39.695 -17.272 1.00 39.94 A
ATOM 474 C PHE A 64 -21.286 -37.906 -16.125 1.00 36.53 A
ATOM 475 O PHE A 64 -21.051 -39.110 -16.226 1.00 35.88 A
ATOM 476 N ALA A 65 -20.838 -36.999 -16.985 1.00 37.75 A
ATOM 477 CA ALA A 65 -20.032 -37.330 -18.147 1.00 38.12 A
ATOM 478 CB ALA A 65 -19.673 -36.058 -18.887 1.00 38.07 A
ATOM 479 C ALA A 65 -18.769 -38.088 -17.793 1.00 38.81 A
ATOM 480 O ALA A 65 -18.317 -38.955 -18.539 1.00 38.19 A
ATOM 481 N GLU A 66 -18.225 -37.876 -16.643 1.00 40.33 A
ATOM 482 CA GLU A 66 -17.034 -38.578 -16.365 1.00 42.55 A
ATOM 483 CB GLU A 66 -16.340 -38.029 -15.226 1.00 44.34 A
ATOM 484 CG GLU A 66 -15.550 -39.157 -14.711 1.00 48.57 A
ATOM 485 CD GLU A 66 -14.563 -38.725 -13.741 1.00 51.41 A
ATOM 486 OE1 GLU A 66 -14.973 -38.086 -12.771 1.00 53.26 A
ATOM 487 OE2 GLU A 66 -13.393 -39.019 -13.977 1.00 53.13 A
ATOM 488 C GLU A 66 -17.340 -39.915 -15.921 1.00 42.56 A
ATOM 489 O GLU A 66 -16.620 -40.820 -16.190 1.00 42.91 A
ATOM 490 N ALA A 67 -18.383 -40.046 -15.152 1.00 41.53 A
ATOM 491 CA ALA A 67 -18.726 -41.375 -14.651 1.00 41.26 A
ATOM 492 CB ALA A 67 -19.953 -41.297 -13.773 1.00 40.81 A
ATOM 493 C ALA A 67 -18.950 -42.396 -15.759 1.00 41.67 A
ATOM 494 O ALA A 67 -18.253 -43.412 -15.827 1.00 41.02 A
ATOM 495 N TRP A 68 -19.933 -42.137 -16.615 1.00 42.00 A
ATOM 496 CA TRP A 68 -20.219 -43.050 -17.707 1.00 42.69 A
ATOM 497 CB TRP A 68 -21.500 -42.655 -18.428 1.00 43.26 A
ATOM 498 CG TRP A 68 -22.696 -42.663 -17.557 1.00 44.43 A
ATOM 499 CD2 TRP A 68 -23.699 -43.686 -17.485 1.00 44.08 A
ATOM 500 CE2 TRP A 68 -24.651 -43.270 -16.527 1.00 44.43 A
ATOM 501 CE3 TRP A 68 -23.887 -44.914 -18.138 1.00 42.52 A
ATOM 502 CD1 TRP A 68 -23.064 -41.700 -16.667 1.00 45.09 A
ATOM 503 NE1 TRP A 68 -24.239 -42.056 -16.044 1.00 44.76 A
ATOM 504 CZ2 TRP A 68 -25.780 -44.043 -16.206 1.00 44.22 A
ATOM 505 CZ3 TRP A 68 -25.010 -45.679 -17.816 1.00 41.97 A
ATOM 506 CH2 TRP A 68 -25.939 -45.238 -16.860 1.00 42.62 A

ATOM 507 C TRP A 68 -19.069 -43.012 -18.684 1.00 43.00 A
ATOM 508 O TRP A 68 -18.815 -43.979 -19.395 1.00 43.88 A
ATOM 509 N GLY A 69 -18.375 -41.882 -18.718 1.00 42.52 A
ATOM 510 CA GLY A 69 -17.258 -41.754 -19.623 1.00 42.00 A
ATOM 511 C GLY A 69 -16.209 -42.806 -19.339 1.00 42.08 A
ATOM 512 O GLY A 69 -15.985 -43.709 -20.147 1.00 40.81 A
ATOM 513 N ALA A 70 -15.596 -42.719 -18.172 1.00 42.69 A
ATOM 514 CA ALA A 70 -14.524 -43.631 -17.789 1.00 42.80 A
ATOM 515 CB ALA A 70 -13.849 -43.150 -16.514 1.00 41.47 A
ATOM 516 C ALA A 70 -15.047 -45.052 -17.612 1.00 42.51 A
ATOM 517 O ALA A 70 -14.230 -45.992 -17.585 1.00 41.80 A
ATOM 518 N LYS A 71 -16.333 -45.213 -17.470 1.00 43.36 A
ATOM 519 CA LYS A 71 -16.913 -46.542 -17.320 1.00 44.93 A
ATOM 520 CB LYS A 71 -18.306 -46.461 -16.691 1.00 44.65 A
ATOM 521 CG LYS A 71 -19.104 -47.771 -16.748 1.00 44.40 A
ATOM 522 CD LYS A 71 -18.435 -48.919 -15.990 1.00 45.18 A
ATOM 523 CE LYS A 71 -18.565 -48.788 -14.474 1.00 44.52 A
ATOM 524 NZ LYS A 71 -17.937 -49.942 -13.759 1.00 42.88 A
ATOM 525 C LYS A 71 -17.008 -47.162 -18.706 1.00 46.60 A
ATOM 526 O LYS A 71 -16.451 -48.234 -18.953 1.00 48.14 A
ATOM 527 N ALA A 72 -17.703 -46.468 -19.607 1.00 47.30 A
ATOM 528 CA ALA A 72 -17.875 -46.921 -20.983 1.00 46.89 A
ATOM 529 CB ALA A 72 -18.421 -45.792 -21.829 1.00 45.99 A
ATOM 530 C ALA A 72 -16.545 -47.406 -21.549 1.00 47.34 A
ATOM 531 O ALA A 72 -16.506 -48.326 -22.364 1.00 45.93 A
ATOM 532 N LYS A 73 -15.454 -46.787 -21.111 1.00 48.09 A
ATOM 533 CA LYS A 73 -14.137 -47.187 -21.576 1.00 49.46 A
ATOM 534 CB LYS A 73 -13.289 -45.950 -21.927 1.00 50.52 A
ATOM 535 CG LYS A 73 -13.115 -44.913 -20.832 1.00 50.70 A
ATOM 536 CD LYS A 73 -12.898 -43.507 -21.418 1.00 50.52 A
ATOM 537 CE LYS A 73 -11.442 -43.215 -21.738 1.00 49.77 A
ATOM 538 NZ LYS A 73 -11.271 -41.787 -22.118 1.00 50.08 A
ATOM 539 C LYS A 73 -13.413 -48.084 -20.576 1.00 50.62 A
ATOM 540 O LYS A 73 -12.423 -48.731 -20.927 1.00 51.65 A

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ATOM  541 N   ALA A 74   -13.907 -48.120 -19.343 1.00 51.63   A
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ATOM  543 CB  ALA A 74   -14.553 -49.277 -17.287 1.00 52.93   A
ATOM  544 C   ALA A 74   -13.296 -50.491 -19.078 1.00 53.75   A
ATOM  545 O   ALA A 74   -12.309 -51.181 -18.817 1.00 54.95   A
ATOM  546 N   LEU A 75   -14.222 -50.857 -19.958 1.00 54.15   A
ATOM  547 CA  LEU A 75   -14.418 -52.253 -20.326 1.00 54.82   A
ATOM  548 CB  LEU A 75   -15.417 -52.923 -19.381 1.00 54.44   A
ATOM  549 CG  LEU A 75   -16.848 -52.385 -19.414 1.00 52.75   A
ATOM  550 CD1 LEU A 75   -17.819 -53.405 -18.840 1.00 52.44   A
ATOM  551 CD2 LEU A 75   -16.944 -51.066 -18.662 1.00 50.85   A
ATOM  552 C   LEU A 75   -14.891 -52.387 -21.770 1.00 55.25   A
ATOM  553 O   LEU A 75   -15.002 -53.494 -22.297 1.00 55.96   A
ATOM  554 N   TYR A 76   -15.153 -51.254 -22.413 1.00 55.39   A
ATOM  555 CA  TYR A 76   -15.791 -51.251 -23.725 1.00 55.20   A
ATOM  556 CB  TYR A 76   -17.093 -50.448 -23.686 1.00 52.59   A
ATOM  557 CG  TYR A 76   -18.267 -51.215 -23.122 1.00 49.91   A
ATOM  558 CD1 TYR A 76   -19.457 -50.571 -22.812 1.00 49.81   A
ATOM  559 CE1 TYR A 76   -20.533 -51.268 -22.296 1.00 49.70   A
ATOM  560 CD2 TYR A 76   -18.185 -52.583 -22.899 1.00 48.38   A
ATOM  561 CE2 TYR A 76   -19.256 -53.288 -22.383 1.00 49.58   A
ATOM  562 CZ  TYR A 76   -20.427 -52.626 -22.083 1.00 50.30   A
ATOM  563 OH  TYR A 76   -21.496 -53.323 -21.570 1.00 50.04   A
ATOM  564 C   TYR A 76   -14.868 -50.705 -24.812 1.00 56.57   A
ATOM  565 O   TYR A 76   -15.324 -50.335 -25.894 1.00 57.04   A
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ATOM  567 CA  GLU A 77   -12.680 -49.703 -25.172 1.00 59.73   A
ATOM  568 CB  GLU A 77   -12.097 -48.725 -24.149 1.00 59.93   A
ATOM  569 CG  GLU A 77   -12.093 -47.276 -24.610 1.00 61.42   A
ATOM  570 CD  GLU A 77   -10.766 -46.858 -25.210 1.00 62.11   A
ATOM  571 OE1 GLU A 77   -10.164 -45.886 -24.708 1.00 63.00   A
ATOM  572 OE2 GLU A 77   -10.323 -47.502 -26.185 1.00 62.74   A
ATOM  573 C   GLU A 77   -11.556 -50.398 -25.935 1.00 60.64   A
ATOM  574 O   GLU A 77   -10.852 -49.772 -26.726 1.00 61.52   A
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ATOM 575 N PRO A 78 -11.393 -51.695 -25.695 1.00 61.01 A
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ATOM 577 CA PRO A 78 -10.520 -52.528 -26.528 1.00 60.53 A
ATOM 578 CB PRO A 78 -9.875 -53.475 -25.514 1.00 59.65 A
ATOM 579 CG PRO A 78 -10.862 -53.563 -24.407 1.00 60.73 A
ATOM 580 C PRO A 78 -11.312 -53.325 -27.560 1.00 59.82 A
ATOM 581 O PRO A 78 -10.735 -54.110 -28.313 1.00 60.64 A
ATOM 582 N ILE A 79 -12.624 -53.118 -27.587 1.00 57.90 A
ATOM 583 CA ILE A 79 -13.522 -53.929 -28.417 1.00 55.78 A
ATOM 584 CB ILE A 79 -14.293 -54.952 -27.534 1.00 54.00 A
ATOM 585 CG2 ILE A 79 -13.297 -55.791 -26.734 1.00 52.40 A
ATOM 586 CG1 ILE A 79 -15.250 -54.213 -26.583 1.00 53.15 A
ATOM 587 CD1 ILE A 79 -16.078 -55.128 -25.688 1.00 52.14 A
ATOM 588 C ILE A 79 -14.538 -53.172 -29.267 1.00 55.56 A
ATOM 589 O ILE A 79 -14.854 -53.606 -30.380 1.00 56.00 A
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ATOM 591 CA TRP A 80 -16.033 -51.285 -29.528 1.00 55.10 A
ATOM 592 CB TRP A 80 -16.476 -50.014 -28.769 1.00 53.44 A
ATOM 593 CG TRP A 80 -15.518 -48.878 -28.890 1.00 52.46 A
ATOM 594 CD2 TRP A 80 -15.667 -47.715 -29.722 1.00 52.02 A
ATOM 595 CE2 TRP A 80 -14.492 -46.925 -29.567 1.00 51.92 A
ATOM 596 CE3 TRP A 80 -16.676 -47.262 -30.587 1.00 50.25 A
ATOM 597 CD1 TRP A 80 -14.298 -48.756 -28.276 1.00 52.46 A
ATOM 598 NE1 TRP A 80 -13.669 -47.581 -28.682 1.00 52.56 A
ATOM 599 CZ2 TRP A 80 -14.302 -45.709 -30.244 1.00 51.11 A
ATOM 600 CZ3 TRP A 80 -16.485 -46.048 -31.262 1.00 49.92 A
ATOM 601 CH2 TRP A 80 -15.306 -45.287 -31.083 1.00 49.97 A
ATOM 602 C TRP A 80 -15.229 -50.939 -30.789 1.00 56.29 A
ATOM 603 O TRP A 80 -13.996 -51.086 -30.799 1.00 57.19 A
ATOM 604 N GLN A 81 -15.910 -50.478 -31.838 1.00 56.41 A
ATOM 605 CA GLN A 81 -15.247 -50.173 -33.120 1.00 56.79 A
ATOM 606 CB GLN A 81 -13.815 -49.648 -32.952 1.00 56.42 A
ATOM 607 CG GLN A 81 -13.674 -48.181 -32.610 1.00 57.42 A
ATOM 608 CD GLN A 81 -12.196 -47.785 -32.424 1.00 58.57 A

ATOM 609 OE1 GLN A 81 -11.810 -46.612 -32.663 1.00 60.36 A
ATOM 610 NE2 GLN A 81 -11.362 -48.755 -31.999 1.00 57.53 A
ATOM 611 C GLN A 81 -15.159 -51.506 -33.848 1.00 57.17 A
ATOM 612 O GLN A 81 -14.639 -51.588 -34.964 1.00 58.27 A
ATOM 613 N ASN A 82 -15.646 -52.552 -33.196 1.00 56.91 A
ATOM 614 CA ASN A 82 -15.749 -53.890 -33.774 1.00 55.27 A
ATOM 615 CB ASN A 82 -14.704 -54.815 -33.217 1.00 55.80 A
ATOM 616 CG ASN A 82 -13.791 -55.376 -34.269 1.00 57.41 A
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ATOM 618 ND2 ASN A 82 -12.739 -54.665 -34.570 1.00 57.16 A
ATOM 619 C ASN A 82 -17.072 -54.449 -33.470 1.00 54.15 A
ATOM 620 O ASN A 82 -17.333 -55.573 -33.678 1.00 54.13 A
ATOM 621 N PHE A 83 -17.914 -53.615 -32.966 1.00 53.32 A
ATOM 622 CA PHE A 83 -19.298 -53.993 -32.682 1.00 52.75 A
ATOM 623 CB PHE A 83 -19.961 -52.974 -31.744 1.00 52.99 A
ATOM 624 CG PHE A 83 -19.451 -53.012 -30.320 1.00 53.49 A
ATOM 625 CD1 PHE A 83 -18.467 -53.921 -29.926 1.00 53.30 A
ATOM 626 CD2 PHE A 83 -19.966 -52.126 -29.365 1.00 53.02 A
ATOM 627 CE1 PHE A 83 -18.005 -53.947 -28.602 1.00 52.91 A
ATOM 628 CE2 PHE A 83 -19.513 -52.141 -28.041 1.00 51.24 A
ATOM 629 CZ PHE A 83 -18.531 -53.051 -27.659 1.00 52.10 A
ATOM 630 C PHE A 83 -20.079 -54.046 -33.995 1.00 51.90 A
ATOM 631 O PHE A 83 -19.843 -53.241 -34.897 1.00 52.34 A
ATOM 632 N THR A 84 -21.009 -54.990 -34.093 1.00 50.65 A
ATOM 633 CA THR A 84 -21.821 -55.154 -35.294 1.00 49.65 A
ATOM 634 CB THR A 84 -22.723 -56.391 -35.196 1.00 50.02 A
ATOM 635 OG1 THR A 84 -21.929 -57.544 -34.897 1.00 50.23 A
ATOM 636 CG2 THR A 84 -23.459 -56.604 -36.508 1.00 50.80 A
ATOM 637 C THR A 84 -22.725 -53.957 -35.556 1.00 48.61 A
ATOM 638 O THR A 84 -22.694 -53.376 -36.638 1.00 47.86 A
ATOM 639 N ASP A 85 -23.529 -53.605 -34.557 1.00 48.44 A
ATOM 640 CA ASP A 85 -24.467 -52.493 -34.659 1.00 48.10 A
ATOM 641 CB ASP A 85 -25.390 -52.482 -33.444 1.00 47.03 A
ATOM 642 CG ASP A 85 -26.481 -51.455 -33.566 1.00 48.01 A

ATOM 643 OD1 ASP A 85 -27.418 -51.465 -32.736 1.00 48.68 A
ATOM 644 OD2 ASP A 85 -26.399 -50.630 -34.496 1.00 48.69 A
ATOM 645 C ASP A 85 -23.752 -51.153 -34.773 1.00 48.42 A
ATOM 646 O ASP A 85 -23.115 -50.702 -33.829 1.00 48.21 A
ATOM 647 N PRO A 86 -23.856 -50.493 -35.936 1.00 49.03 A
ATOM 648 CD PRO A 86 -24.578 -50.853 -37.167 1.00 49.00 A
ATOM 649 CA PRO A 86 -23.184 -49.203 -36.093 1.00 49.13 A
ATOM 650 CB PRO A 86 -23.457 -48.841 -37.553 1.00 48.95 A
ATOM 651 CG PRO A 86 -23.747 -50.169 -38.207 1.00 48.99 A
ATOM 652 C PRO A 86 -23.770 -48.187 -35.124 1.00 49.61 A
ATOM 653 O PRO A 86 -23.040 -47.430 -34.491 1.00 49.97 A
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ATOM 655 CA GLN A 87 -25.498 -47.134 -34.133 1.00 51.27 A
ATOM 656 CB GLN A 87 -26.977 -47.077 -34.155 1.00 51.50 A
ATOM 657 CG GLN A 87 -27.490 -46.342 -35.342 1.00 54.67 A
ATOM 658 CD GLN A 87 -28.250 -47.170 -36.303 1.00 57.26 A
ATOM 659 OE1 GLN A 87 -29.052 -47.962 -35.905 1.00 60.25 A
ATOM 660 NE2 GLN A 87 -28.015 -46.992 -37.574 1.00 57.43 A
ATOM 661 C GLN A 87 -24.872 -47.349 -32.794 1.00 52.10 A
ATOM 662 O GLN A 87 -24.246 -46.491 -32.313 1.00 53.35 A
ATOM 663 N LEU A 88 -24.924 -48.523 -32.196 1.00 51.21 A
ATOM 664 CA LEU A 88 -24.330 -48.714 -30.874 1.00 49.23 A
ATOM 665 CB LEU A 88 -24.393 -50.193 -30.471 1.00 49.24 A
ATOM 666 CG LEU A 88 -23.777 -50.669 -29.141 1.00 49.77 A
ATOM 667 CD1 LEU A 88 -24.507 -50.073 -27.951 1.00 48.62 A
ATOM 668 CD2 LEU A 88 -23.847 -52.195 -29.081 1.00 50.00 A
ATOM 669 C LEU A 88 -22.896 -48.209 -30.749 1.00 48.48 A
ATOM 670 O LEU A 88 -22.607 -47.400 -29.870 1.00 49.03 A
ATOM 671 N ARG A 89 -21.994 -48.665 -31.616 1.00 47.79 A
ATOM 672 CA ARG A 89 -20.612 -48.215 -31.500 1.00 47.24 A
ATOM 673 CB ARG A 89 -19.652 -49.076 -32.349 1.00 47.26 A
ATOM 674 CG ARG A 89 -19.785 -49.008 -33.844 1.00 48.24 A
ATOM 675 CD ARG A 89 -18.722 -49.918 -34.476 1.00 50.14 A
ATOM 676 NE ARG A 89 -18.695 -49.851 -35.941 1.00 51.64 A

ATOM 677 CZ ARG A 89 -19.684 -50.255 -36.741 1.00 51.94 A
ATOM 678 NH1 ARG A 89 -20.800 -50.766 -36.231 1.00 52.24 A
ATOM 679 NH2 ARG A 89 -19.559 -50.143 -38.058 1.00 51.57 A
ATOM 680 C ARG A 89 -20.412 -46.727 -31.769 1.00 45.67 A
ATOM 681 O ARG A 89 -19.369 -46.173 -31.426 1.00 45.43 A
ATOM 682 N ARG A 90 -21.408 -46.071 -32.361 1.00 44.45 A
ATOM 683 CA ARG A 90 -21.299 -44.631 -32.595 1.00 44.51 A
ATOM 684 CB ARG A 90 -22.147 -44.196 -33.814 1.00 46.30 A
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ATOM 686 CD ARG A 90 -22.317 -44.118 -36.414 1.00 49.75 A
ATOM 687 NE ARG A 90 -22.788 -42.744 -36.631 1.00 50.61 A
ATOM 688 CZ ARG A 90 -22.255 -41.885 -37.502 1.00 49.63 A
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ATOM 690 NH2 ARG A 90 -22.759 -40.661 -37.627 1.00 48.54 A
ATOM 691 C ARG A 90 -21.738 -43.898 -31.317 1.00 42.92 A
ATOM 692 O ARG A 90 -21.363 -42.750 -31.083 1.00 42.67 A
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ATOM 694 CA ILE A 91 -23.009 -44.047 -29.222 1.00 38.47 A
ATOM 695 CB ILE A 91 -24.278 -44.777 -28.714 1.00 35.72 A
ATOM 696 CG2 ILE A 91 -24.553 -44.395 -27.281 1.00 34.23 A
ATOM 697 CG1 ILE A 91 -25.479 -44.405 -29.572 1.00 34.21 A
ATOM 698 CD1 ILE A 91 -26.770 -44.960 -29.067 1.00 32.27 A
ATOM 699 C ILE A 91 -21.921 -44.234 -28.184 1.00 38.12 A
ATOM 700 O ILE A 91 -21.547 -43.295 -27.491 1.00 38.43 A
ATOM 701 N ILE A 92 -21.445 -45.486 -28.059 1.00 37.74 A
ATOM 702 CA ILE A 92 -20.373 -45.747 -27.107 1.00 38.22 A
ATOM 703 CB ILE A 92 -19.958 -47.230 -27.155 1.00 36.72 A
ATOM 704 CG2 ILE A 92 -18.625 -47.433 -26.451 1.00 35.58 A
ATOM 705 CG1 ILE A 92 -21.041 -48.108 -26.525 1.00 35.09 A
ATOM 706 CD1 ILE A 92 -20.615 -49.542 -26.308 0.00 35.60 A
ATOM 707 C ILE A 92 -19.164 -44.857 -27.377 1.00 38.61 A
ATOM 708 O ILE A 92 -18.522 -44.341 -26.498 1.00 38.70 A
ATOM 709 N GLY A 93 -18.944 -44.609 -28.696 1.00 38.89 A
ATOM 710 CA GLY A 93 -17.838 -43.758 -29.095 1.00 40.10 A

ATOM 711 C GLY A 93 -18.049 -42.301 -28.726 1.00 40.28 A
ATOM 712 O GLY A 93 -17.098 -41.529 -28.633 1.00 39.96 A
ATOM 713 N ALA A 94 -19.304 -41.920 -28.521 1.00 40.47 A
ATOM 714 CA ALA A 94 -19.642 -40.553 -28.149 1.00 40.27 A
ATOM 715 CB ALA A 94 -21.064 -40.230 -28.583 1.00 40.56 A
ATOM 716 C ALA A 94 -19.520 -40.418 -26.643 1.00 40.83 A
ATOM 717 O ALA A 94 -19.254 -39.340 -26.110 1.00 41.36 A
ATOM 718 N VAL A 95 -19.720 -41.530 -25.954 1.00 41.07 A
ATOM 719 CA VAL A 95 -19.639 -41.534 -24.512 1.00 41.37 A
ATOM 720 CB VAL A 95 -20.485 -42.688 -23.934 1.00 42.10 A
ATOM 721 CG1 VAL A 95 -20.365 -42.728 -22.409 1.00 42.19 A
ATOM 722 CG2 VAL A 95 -21.949 -42.497 -24.346 1.00 41.38 A
ATOM 723 C VAL A 95 -18.194 -41.630 -24.036 1.00 41.51 A
ATOM 724 O VAL A 95 -17.828 -41.007 -23.041 1.00 40.85 A
ATOM 725 N ARG A 96 -17.362 -42.381 -24.751 1.00 41.72 A
ATOM 726 CA ARG A 96 -15.973 -42.510 -24.335 1.00 42.44 A
ATOM 727 CB ARG A 96 -15.273 -43.630 -25.124 1.00 43.77 A
ATOM 728 CG ARG A 96 -14.501 -43.215 -26.360 1.00 47.25 A
ATOM 729 CD ARG A 96 -13.413 -44.257 -26.653 1.00 50.07 A
ATOM 730 NE ARG A 96 -12.300 -43.739 -27.451 1.00 52.85 A
ATOM 731 CZ ARG A 96 -11.661 -42.591 -27.214 1.00 54.59 A
ATOM 732 NH1 ARG A 96 -10.657 -42.216 -27.998 1.00 55.63 A
ATOM 733 NH2 ARG A 96 -12.028 -41.800 -26.211 1.00 55.31 A
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ATOM 735 O ARG A 96 -14.075 -41.060 -23.943 1.00 42.27 A
ATOM 736 N THR A 97 -15.822 -40.175 -25.043 1.00 41.50 A
ATOM 737 CA THR A 97 -15.187 -38.867 -25.152 1.00 41.17 A
ATOM 738 CB THR A 97 -15.441 -38.200 -26.516 1.00 41.06 A
ATOM 739 OG1 THR A 97 -14.725 -38.910 -27.531 1.00 41.49 A
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ATOM 741 C THR A 97 -15.735 -37.972 -24.055 1.00 40.87 A
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ATOM 746 CG LEU A 98 -14.339 -38.715 -20.157 1.00 41.19 A
ATOM 747 CD1 LEU A 98 -13.132 -39.035 -19.263 1.00 40.57 A
ATOM 748 CD2 LEU A 98 -15.642 -38.821 -19.379 1.00 40.31 A
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ATOM 750 O LEU A 98 -16.164 -34.812 -21.495 1.00 40.27 A
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ATOM 752 CA GLY A 99 -14.417 -33.548 -23.117 1.00 40.31 A
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ATOM 754 O GLY A 99 -12.667 -33.200 -21.537 1.00 40.81 A
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ATOM 756 CA SER A 100 -14.090 -31.107 -20.208 1.00 42.37 A
ATOM 757 CB SER A 100 -15.121 -30.066 -19.965 1.00 41.64 A
ATOM 758 OG SER A 100 -16.066 -30.166 -20.977 1.00 43.45 A
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ATOM 760 O SER A 100 -13.487 -31.483 -18.009 1.00 43.42 A
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ATOM 762 CA ALA A 101 -14.911 -33.774 -17.761 1.00 40.33 A
ATOM 763 CB ALA A 101 -16.007 -34.786 -17.974 1.00 41.06 A
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ATOM 765 O ALA A 101 -13.655 -34.903 -16.077 1.00 39.24 A
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ATOM 768 CB ASN A 102 -10.537 -35.245 -18.958 1.00 39.91 A
ATOM 769 CG ASN A 102 -11.015 -36.205 -19.819 1.00 40.76 A
ATOM 770 OD1 ASN A 102 -10.811 -37.351 -19.651 1.00 42.53 A
ATOM 771 ND2 ASN A 102 -11.504 -35.749 -20.872 1.00 40.72 A
ATOM 772 C ASN A 102 -10.442 -34.164 -17.024 1.00 36.74 A
ATOM 773 O ASN A 102 -9.287 -34.442 -16.937 1.00 36.79 A
ATOM 774 N LEU A 103 -10.939 -33.058 -16.583 1.00 34.65 A
ATOM 775 CA LEU A 103 -10.129 -31.997 -16.005 1.00 32.93 A
ATOM 776 CB LEU A 103 -10.595 -30.632 -16.509 1.00 34.08 A
ATOM 777 CG LEU A 103 -10.469 -30.233 -17.978 1.00 35.00 A
ATOM 778 CD1 LEU A 103 -11.447 -29.100 -18.270 1.00 36.49 A

ATOM 779 CD2 LEU A 103 -9.043 -29.800 -18.287 1.00 34.67 A
ATOM 780 C LEU A 103 -10.361 -32.049 -14.502 1.00 31.83 A
ATOM 781 O LEU A 103 -11.482 -32.272 -14.053 1.00 32.44 A
ATOM 782 N PRO A 104 -9.310 -31.861 -13.699 1.00 30.30 A
ATOM 783 CD PRO A 104 -7.882 -31.725 -14.023 1.00 30.09 A
ATOM 784 CA PRO A 104 -9.527 -31.895 -12.249 1.00 28.80 A
ATOM 785 CB PRO A 104 -8.133 -31.632 -11.685 1.00 29.17 A
ATOM 786 CG PRO A 104 -7.381 -30.985 -12.831 1.00 30.47 A
ATOM 787 C PRO A 104 -10.570 -30.848 -11.824 1.00 28.11 A
ATOM 788 O PRO A 104 -10.755 -29.839 -12.509 1.00 26.88 A
ATOM 789 N LEU A 105 -11.248 -31.095 -10.702 1.00 28.53 A
ATOM 790 CA LEU A 105 -12.303 -30.205 -10.196 1.00 29.32 A
ATOM 791 CB LEU A 105 -12.632 -30.530 -8.741 1.00 29.17 A
ATOM 792 CG LEU A 105 -14.035 -30.194 -8.208 1.00 28.47 A
ATOM 793 CD1 LEU A 105 -13.925 -30.027 -6.708 1.00 29.08 A
ATOM 794 CD2 LEU A 105 -14.601 -28.939 -8.811 1.00 26.46 A
ATOM 795 C LEU A 105 -12.005 -28.713 -10.285 1.00 29.64 A
ATOM 796 O LEU A 105 -12.817 -27.950 -10.807 1.00 28.80 A
ATOM 797 N ALA A 106 -10.862 -28.291 -9.748 1.00 29.79 A
ATOM 798 CA ALA A 106 -10.490 -26.876 -9.779 1.00 28.52 A
ATOM 799 CB ALA A 106 -9.076 -26.691 -9.245 1.00 27.87 A
ATOM 800 C ALA A 106 -10.578 -26.340 -11.201 1.00 28.31 A
ATOM 801 O ALA A 106 -11.208 -25.309 -11.450 1.00 27.60 A
ATOM 802 N LYS A 107 -9.945 -27.062 -12.124 1.00 27.85 A
ATOM 803 CA LYS A 107 -9.911 -26.698 -13.534 1.00 25.63 A
ATOM 804 CB LYS A 107 -8.931 -27.609 -14.261 1.00 23.73 A
ATOM 805 CG LYS A 107 -7.494 -27.150 -14.105 1.00 20.29 A
ATOM 806 CD LYS A 107 -6.514 -28.187 -14.598 1.00 18.99 A
ATOM 807 CE LYS A 107 -5.150 -27.580 -14.745 1.00 17.99 A
ATOM 808 NZ LYS A 107 -4.152 -28.574 -15.176 1.00 19.62 A
ATOM 809 C LYS A 107 -11.266 -26.688 -14.237 1.00 26.12 A
ATOM 810 O LYS A 107 -11.481 -25.884 -15.139 1.00 26.42 A
ATOM 811 N ARG A 108 -12.180 -27.569 -13.848 1.00 26.37 A
ATOM 812 CA ARG A 108 -13.497 -27.555 -14.470 1.00 27.13 A

ATOM 813 CB ARG A 108 -14.385 -28.674 -13.945 1.00 27.68 A
ATOM 814 CG ARG A 108 -13.895 -30.063 -14.241 1.00 30.61 A
ATOM 815 CD ARG A 108 -14.904 -31.058 -13.729 1.00 33.36 A
ATOM 816 NE ARG A 108 -14.448 -32.434 -13.829 1.00 34.98 A
ATOM 817 CZ ARG A 108 -15.071 -33.447 -13.243 1.00 37.21 A
ATOM 818 NH1 ARG A 108 -16.168 -33.215 -12.522 1.00 37.85 A
ATOM 819 NH2 ARG A 108 -14.608 -34.687 -13.371 1.00 37.76 A
ATOM 820 C ARG A 108 -14.144 -26.247 -14.094 1.00 26.77 A
ATOM 821 O ARG A 108 -14.752 -25.573 -14.920 1.00 25.96 A
ATOM 822 N GLN A 109 -14.003 -25.899 -12.822 1.00 28.19 A
ATOM 823 CA GLN A 109 -14.586 -24.683 -12.285 1.00 30.11 A
ATOM 824 CB GLN A 109 -14.324 -24.599 -10.781 1.00 31.86 A
ATOM 825 CG GLN A 109 -15.095 -25.639 -9.991 1.00 34.48 A
ATOM 826 CD GLN A 109 -14.697 -25.698 -8.523 1.00 37.17 A
ATOM 827 OE1 GLN A 109 -13.516 -25.824 -8.181 1.00 37.80 A
ATOM 828 NE2 GLN A 109 -15.689 -25.627 -7.645 1.00 38.86 A
ATOM 829 C GLN A 109 -14.055 -23.460 -12.993 1.00 29.95 A
ATOM 830 O GLN A 109 -14.819 -22.557 -13.327 1.00 30.00 A
ATOM 831 N GLN A 110 -12.747 -23.428 -13.218 1.00 29.25 A
ATOM 832 CA GLN A 110 -12.140 -22.304 -13.925 1.00 28.38 A
ATOM 833 CB GLN A 110 -10.632 -22.501 -14.066 1.00 27.82 A
ATOM 834 CG GLN A 110 -9.895 -22.419 -12.755 1.00 28.73 A
ATOM 835 CD GLN A 110 -8.477 -22.899 -12.872 1.00 29.68 A
ATOM 836 OE1 GLN A 110 -7.863 -22.803 -13.939 1.00 30.04 A
ATOM 837 NE2 GLN A 110 -7.931 -23.406 -11.769 1.00 29.66 A
ATOM 838 C GLN A 110 -12.785 -22.295 -15.293 1.00 28.27 A
ATOM 839 O GLN A 110 -13.296 -21.276 -15.750 1.00 28.29 A
ATOM 840 N TYR A 111 -12.773 -23.454 -15.933 1.00 28.45 A
ATOM 841 CA TYR A 111 -13.370 -23.597 -17.242 1.00 29.11 A
ATOM 842 CB TYR A 111 -13.489 -25.078 -17.601 1.00 29.47 A
ATOM 843 CG TYR A 111 -13.825 -25.354 -19.049 1.00 31.04 A
ATOM 844 CD1 TYR A 111 -12.908 -25.086 -20.069 1.00 31.34 A
ATOM 845 CE1 TYR A 111 -13.218 -25.355 -21.407 1.00 31.78 A
ATOM 846 CD2 TYR A 111 -15.061 -25.893 -19.401 1.00 32.35 A

ATOM 847 CE2 TYR A 111 -15.381 -26.158 -20.727 1.00 32.85 A
ATOM 848 CZ TYR A 111 -14.461 -25.889 -21.727 1.00 32.48 A
ATOM 849 OH TYR A 111 -14.807 -26.147 -23.038 1.00 32.34 A
ATOM 850 C TYR A 111 -14.751 -22.940 -17.217 1.00 29.25 A
ATOM 851 O TYR A 111 -14.931 -21.846 -17.757 1.00 30.77 A
ATOM 852 N ASN A 112 -15.715 -23.581 -16.565 1.00 27.39 A
ATOM 853 CA ASN A 112 -17.072 -23.046 -16.512 1.00 25.95 A
ATOM 854 CB ASN A 112 -17.905 -23.848 -15.520 1.00 27.89 A
ATOM 855 CG ASN A 112 -17.699 -25.340 -15.666 1.00 29.65 A
ATOM 856 OD1 ASN A 112 -17.919 -25.911 -16.733 1.00 31.17 A
ATOM 857 ND2 ASN A 112 -17.270 -25.982 -14.590 1.00 31.16 A
ATOM 858 C ASN A 112 -17.166 -21.552 -16.183 1.00 25.27 A
ATOM 859 O ASN A 112 -18.080 -20.871 -16.646 1.00 23.98 A
ATOM 860 N ALA A 113 -16.234 -21.035 -15.386 1.00 24.99 A
ATOM 861 CA ALA A 113 -16.255 -19.613 -15.032 1.00 24.81 A
ATOM 862 CB ALA A 113 -15.208 -19.319 -13.987 1.00 23.79 A
ATOM 863 C ALA A 113 -15.979 -18.790 -16.290 1.00 25.80 A
ATOM 864 O ALA A 113 -16.733 -17.870 -16.641 1.00 24.90 A
ATOM 865 N LEU A 114 -14.885 -19.130 -16.966 1.00 25.59 A
ATOM 866 CA LEU A 114 -14.504 -18.451 -18.190 1.00 24.87 A
ATOM 867 CB LEU A 114 -13.347 -19.199 -18.844 1.00 20.71 A
ATOM 868 CG LEU A 114 -12.061 -19.135 -18.019 1.00 19.30 A
ATOM 869 CD1 LEU A 114 -11.064 -20.134 -18.530 1.00 19.65 A
ATOM 870 CD2 LEU A 114 -11.475 -17.739 -18.080 1.00 19.14 A
ATOM 871 C LEU A 114 -15.717 -18.393 -19.123 1.00 26.88 A
ATOM 872 O LEU A 114 -16.132 -17.315 -19.553 1.00 27.99 A
ATOM 873 N LEU A 115 -16.307 -19.548 -19.412 1.00 27.38 A
ATOM 874 CA LEU A 115 -17.456 -19.584 -20.288 1.00 27.82 A
ATOM 875 CB LEU A 115 -17.996 -21.012 -20.371 1.00 27.65 A
ATOM 876 CG LEU A 115 -17.137 -21.958 -21.228 1.00 27.67 A
ATOM 877 CD1 LEU A 115 -17.620 -23.379 -21.104 1.00 27.70 A
ATOM 878 CD2 LEU A 115 -17.198 -21.517 -22.675 1.00 28.16 A
ATOM 879 C LEU A 115 -18.567 -18.595 -19.930 1.00 29.10 A
ATOM 880 O LEU A 115 -18.958 -17.787 -20.769 1.00 30.86 A

ATOM 881 N SER A 116 -19.077 -18.617 -18.703 1.00 29.96 A
ATOM 882 CA SER A 116 -20.155 -17.676 -18.380 1.00 30.94 A
ATOM 883 CB SER A 116 -20.885 -18.051 -17.073 1.00 30.73 A
ATOM 884 OG SER A 116 -19.988 -18.277 -16.015 1.00 32.17 A
ATOM 885 C SER A 116 -19.672 -16.238 -18.332 1.00 31.08 A
ATOM 886 O SER A 116 -20.460 -15.317 -18.512 1.00 31.95 A
ATOM 887 N ASN A 117 -18.428 -16.043 -18.085 1.00 31.34 A
ATOM 888 CA ASN A 117 -17.908 -14.730 -18.078 1.00 33.07 A
ATOM 889 CB ASN A 117 -16.606 -14.739 -17.336 1.00 34.95 A
ATOM 890 CG ASN A 117 -16.774 -14.639 -15.883 1.00 36.53 A
ATOM 891 OD1 ASN A 117 -17.845 -14.748 -15.375 1.00 38.73 A
ATOM 892 ND2 ASN A 117 -15.716 -14.374 -15.203 1.00 38.26 A
ATOM 893 C ASN A 117 -17.782 -14.126 -19.460 1.00 32.72 A
ATOM 894 O ASN A 117 -18.392 -13.142 -19.725 1.00 33.47 A
ATOM 895 N MET A 118 -17.063 -14.767 -20.380 1.00 30.95 A
ATOM 896 CA MET A 118 -16.898 -14.336 -21.757 1.00 27.90 A
ATOM 897 CB MET A 118 -16.178 -15.411 -22.561 1.00 25.75 A
ATOM 898 CG MET A 118 -14.756 -15.652 -22.116 1.00 25.90 A
ATOM 899 SD MET A 118 -13.750 -16.503 -23.346 1.00 26.59 A
ATOM 900 CE MET A 118 -14.410 -18.166 -23.235 1.00 26.36 A
ATOM 901 C MET A 118 -18.244 -14.021 -22.389 1.00 27.71 A
ATOM 902 O MET A 118 -18.427 -12.963 -22.978 1.00 27.53 A
ATOM 903 N SER A 119 -19.197 -14.930 -22.255 1.00 28.05 A
ATOM 904 CA SER A 119 -20.510 -14.690 -22.835 1.00 29.94 A
ATOM 905 CB SER A 119 -21.421 -15.900 -22.628 1.00 30.86 A
ATOM 906 OG SER A 119 -21.835 -15.985 -21.276 1.00 32.58 A
ATOM 907 C SER A 119 -21.154 -13.468 -22.192 1.00 29.70 A
ATOM 908 O SER A 119 -21.998 -12.810 -22.801 1.00 31.63 A
ATOM 909 N ARG A 120 -20.752 -13.177 -20.959 1.00 28.16 A
ATOM 910 CA ARG A 120 -21.290 -12.042 -20.222 1.00 26.54 A
ATOM 911 CB ARG A 120 -21.063 -12.224 -18.716 1.00 25.66 A
ATOM 912 CG ARG A 120 -21.868 -11.263 -17.834 1.00 25.14 A
ATOM 913 CD ARG A 120 -20.965 -10.299 -17.103 1.00 24.89 A
ATOM 914 NE ARG A 120 -19.960 -11.029 -16.347 1.00 26.61 A

ATOM 915 CZ ARG A 120 -18.762 -10.545 -16.051 1.00 27.77 A
ATOM 916 NH1 ARG A 120 -18.438 -9.325 -16.452 1.00 27.49 A
ATOM 917 NH2 ARG A 120 -17.886 -11.286 -15.377 1.00 28.41 A
ATOM 918 C ARG A 120 -20.614 -10.774 -20.697 1.00 26.24 A
ATOM 919 O ARG A 120 -21.269 -9.767 -20.967 1.00 26.86 A
ATOM 920 N ILE A 121 -19.294 -10.822 -20.799 1.00 25.93 A
ATOM 921 CA ILE A 121 -18.548 -9.670 -21.256 1.00 26.42 A
ATOM 922 CB ILE A 121 -17.045 -9.957 -21.270 1.00 24.74 A
ATOM 923 CG2 ILE A 121 -16.309 -8.848 -22.000 1.00 23.96 A
ATOM 924 CG1 ILE A 121 -16.546 -10.110 -19.834 1.00 23.30 A
ATOM 925 CD1 ILE A 121 -15.076 -10.422 -19.721 1.00 23.70 A
ATOM 926 C ILE A 121 -19.010 -9.356 -22.662 1.00 28.33 A
ATOM 927 O ILE A 121 -19.175 -8.195 -23.031 1.00 28.63 A
ATOM 928 N TYR A 122 -19.249 -10.403 -23.439 1.00 30.14 A
ATOM 929 CA TYR A 122 -19.674 -10.215 -24.807 1.00 32.14 A
ATOM 930 CB TYR A 122 -19.659 -11.536 -25.571 1.00 32.05 A
ATOM 931 CG TYR A 122 -20.037 -11.324 -27.012 1.00 32.77 A
ATOM 932 CD1 TYR A 122 -19.105 -10.862 -27.936 1.00 32.36 A
ATOM 933 CE1 TYR A 122 -19.489 -10.514 -29.228 1.00 32.09 A
ATOM 934 CD2 TYR A 122 -21.361 -11.446 -27.423 1.00 33.54 A
ATOM 935 CE2 TYR A 122 -21.750 -11.098 -28.714 1.00 33.15 A
ATOM 936 CZ TYR A 122 -20.814 -10.630 -29.602 1.00 31.88 A
ATOM 937 OH TYR A 122 -21.223 -10.244 -30.846 1.00 31.70 A
ATOM 938 C TYR A 122 -21.053 -9.589 -24.955 1.00 33.94 A
ATOM 939 O TYR A 122 -21.253 -8.721 -25.806 1.00 33.72 A
ATOM 940 N SER A 123 -22.004 -10.020 -24.134 1.00 35.50 A
ATOM 941 CA SER A 123 -23.361 -9.501 -24.237 1.00 37.50 A
ATOM 942 CB SER A 123 -24.360 -10.644 -24.036 1.00 38.28 A
ATOM 943 OG SER A 123 -24.221 -11.631 -25.054 1.00 41.46 A
ATOM 944 C SER A 123 -23.716 -8.324 -23.326 1.00 38.31 A
ATOM 945 O SER A 123 -24.865 -7.880 -23.289 1.00 39.61 A
ATOM 946 N THR A 124 -22.736 -7.804 -22.602 1.00 38.42 A
ATOM 947 CA THR A 124 -22.983 -6.677 -21.720 1.00 38.79 A
ATOM 948 CB THR A 124 -22.378 -6.907 -20.330 1.00 39.60 A

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ATOM  949 OG1 THR A 124   -22.860  -8.140 -19.801  1.00 39.76      A
ATOM  950 CG2 THR A 124   -22.765  -5.778 -19.382  1.00 41.57      A
ATOM  951 C   THR A 124   -22.320  -5.452 -22.312  1.00 39.15      A
ATOM  952 O   THR A 124   -22.689  -4.327 -22.000  1.00 40.07      A
ATOM  953 N   ALA A 125   -21.332  -5.685 -23.167  1.00 39.32      A
ATOM  954 CA  ALA A 125   -20.577  -4.606 -23.803  1.00 39.33      A
ATOM  955 CB  ALA A 125   -19.678  -5.177 -24.893  1.00 40.00      A
ATOM  956 C   ALA A 125   -21.448  -3.500 -24.382  1.00 38.70      A
ATOM  957 O   ALA A 125   -22.508  -3.761 -24.953  1.00 38.85      A
ATOM  958 N   LYS A 126   -20.989  -2.272 -24.234  1.00 37.41      A
ATOM  959 CA  LYS A 126   -21.712  -1.113 -24.743  1.00 37.86      A
ATOM  960 CB  LYS A 126   -22.572  -0.492 -23.641  1.00 35.30      A
ATOM  961 CG  LYS A 126   -23.724  -1.372 -23.182  1.00 34.52      A
ATOM  962 CD  LYS A 126   -24.544  -0.689 -22.100  0.00 34.72      A
ATOM  963 CE  LYS A 126   -25.686  -1.574 -21.631  0.00 34.81      A
ATOM  964 NZ  LYS A 126   -26.490  -0.922 -20.560  0.00 34.68      A
ATOM  965 C   LYS A 126   -20.753  -0.071 -25.309  1.00 39.65      A
ATOM  966 O   LYS A 126   -19.561  -0.101 -24.992  1.00 39.71      A
ATOM  967 N   VAL A 127   -21.274   0.811 -26.136  1.00 41.52      A
ATOM  968 CA  VAL A 127   -20.477   1.874 -26.731  1.00 44.12      A
ATOM  969 CB  VAL A 127   -20.497   1.806 -28.280  1.00 42.32      A
ATOM  970 CG1 VAL A 127   -19.818   3.030 -28.861  1.00 41.94      A
ATOM  971 CG2 VAL A 127   -19.787   0.556 -28.755  1.00 41.10      A
ATOM  972 C   VAL A 127   -21.052   3.213 -26.275  1.00 47.43      A
ATOM  973 O   VAL A 127   -22.235   3.494 -26.480  1.00 48.37      A
ATOM  974 N   CYS A 128   -20.210   4.035 -25.657  1.00 51.05      A
ATOM  975 CA  CYS A 128   -20.649   5.314 -25.111  1.00 55.34      A
ATOM  976 C   CYS A 128   -20.054   6.481 -25.891  1.00 58.26      A
ATOM  977 O   CYS A 128   -18.947   6.386 -26.420  1.00 58.85      A
ATOM  978 CB  CYS A 128   -20.272   5.423 -23.632  1.00 56.55      A
ATOM  979 SG  CYS A 128   -20.762   4.000 -22.630  1.00 60.34      A
ATOM  980 N   LEU A 129   -20.796   7.581 -25.957  1.00 61.34      A
ATOM  981 CA  LEU A 129   -20.387   8.735 -26.749  1.00 65.49      A
ATOM  982 CB  LEU A 129   -21.611   9.471 -27.298  1.00 66.04      A
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ATOM 983 CG LEU A 129 -22.545 8.657 -28.195 1.00 67.33 A
ATOM 984 CD1 LEU A 129 -23.193 7.525 -27.412 1.00 67.31 A
ATOM 985 CD2 LEU A 129 -23.602 9.552 -28.825 1.00 67.76 A
ATOM 986 C LEU A 129 -19.526 9.689 -25.930 1.00 68.48 A
ATOM 987 O LEU A 129 -19.660 9.768 -24.708 1.00 69.09 A
ATOM 988 N PRO A 130 -18.642 10.413 -26.609 1.00 71.24 A
ATOM 989 CD PRO A 130 -18.625 10.614 -28.069 1.00 71.65 A
ATOM 990 CA PRO A 130 -17.480 11.022 -25.955 1.00 73.58 A
ATOM 991 CB PRO A 130 -16.869 11.879 -27.065 1.00 73.09 A
ATOM 992 CG PRO A 130 -17.261 11.189 -28.323 1.00 72.62 A
ATOM 993 C PRO A 130 -17.888 11.902 -24.778 1.00 75.45 A
ATOM 994 O PRO A 130 -17.423 11.689 -23.658 1.00 76.25 A
ATOM 995 N ALA A 131 -18.750 12.880 -25.035 1.00 76.95 A
ATOM 996 CA ALA A 131 -18.915 14.014 -24.133 1.00 78.20 A
ATOM 997 CB ALA A 131 -18.756 15.323 -24.892 1.00 78.57 A
ATOM 998 C ALA A 131 -20.266 13.966 -23.428 1.00 78.97 A
ATOM 999 O ALA A 131 -20.350 14.155 -22.214 1.00 79.61 A
ATOM 1000 N ALA A 132 -21.320 13.711 -24.196 1.00 79.44 A
ATOM 1001 CA ALA A 132 -22.523 13.084 -23.662 1.00 79.92 A
ATOM 1002 CB ALA A 132 -23.549 12.881 -24.766 1.00 79.50 A
ATOM 1003 C ALA A 132 -22.047 11.805 -22.979 1.00 80.51 A
ATOM 1004 O ALA A 132 -21.729 10.817 -23.642 1.00 81.45 A
ATOM 1005 N ALA A 133 -22.000 11.831 -21.652 1.00 80.60 A
ATOM 1006 CA ALA A 133 -21.816 10.616 -20.867 1.00 80.71 A
ATOM 1007 CB ALA A 133 -21.190 10.939 -19.519 1.00 80.73 A
ATOM 1008 C ALA A 133 -23.192 9.987 -20.679 1.00 80.64 A
ATOM 1009 O ALA A 133 -23.499 9.446 -19.616 1.00 81.87 A
ATOM 1010 N ALA A 134 -24.018 10.061 -21.718 1.00 79.37 A
ATOM 1011 CA ALA A 134 -25.338 9.442 -21.692 1.00 77.64 A
ATOM 1012 CB ALA A 134 -26.260 10.199 -20.748 1.00 77.18 A
ATOM 1013 C ALA A 134 -25.943 9.376 -23.091 1.00 76.11 A
ATOM 1014 O ALA A 134 -25.924 10.358 -23.833 1.00 75.64 A
ATOM 1015 N ALA A 135 -26.479 8.213 -23.443 1.00 73.99 A
ATOM 1016 CA ALA A 135 -26.035 6.955 -22.855 1.00 71.71 A

ATOM 1017 CB ALA A 135 -26.716 6.725 -21.515 1.00 71.45 A
ATOM 1018 C ALA A 135 -26.298 5.783 -23.796 1.00 69.72 A
ATOM 1019 O ALA A 135 -26.801 5.965 -24.904 1.00 69.55 A
ATOM 1020 N CYS A 136 -25.954 4.581 -23.347 1.00 66.91 A
ATOM 1021 CA CYS A 136 -25.192 3.661 -24.152 1.00 63.04 A
ATOM 1022 C CYS A 136 -25.757 3.166 -25.465 1.00 60.52 A
ATOM 1023 O CYS A 136 -26.933 2.952 -25.496 1.00 61.18 A
ATOM 1024 CB CYS A 136 -23.777 4.038 -24.137 1.00 63.64 A
ATOM 1025 SG CYS A 136 -23.037 3.962 -22.504 1.00 63.19 A
ATOM 1026 N TRP A 137 -24.998 2.925 -26.540 1.00 56.74 A
ATOM 1027 CA TRP A 137 -25.496 2.011 -27.562 1.00 53.00 A
ATOM 1028 CB TRP A 137 -24.915 2.372 -28.930 1.00 53.22 A
ATOM 1029 CG TRP A 137 -25.453 3.652 -29.491 1.00 52.74 A
ATOM 1030 CD2 TRP A 137 -24.817 4.505 -30.450 1.00 53.34 A
ATOM 1031 CE2 TRP A 137 -25.681 5.593 -30.685 1.00 53.26 A
ATOM 1032 CE3 TRP A 137 -23.598 4.460 -31.137 1.00 53.76 A
ATOM 1033 CD1 TRP A 137 -26.647 4.242 -29.190 1.00 52.29 A
ATOM 1034 NE1 TRP A 137 -26.792 5.408 -29.903 1.00 52.49 A
ATOM 1035 CZ2 TRP A 137 -25.368 6.620 -31.573 1.00 54.51 A
ATOM 1036 CZ3 TRP A 137 -23.290 5.481 -32.017 1.00 54.60 A
ATOM 1037 CH2 TRP A 137 -24.171 6.546 -32.228 1.00 55.17 A
ATOM 1038 C TRP A 137 -25.159 0.564 -27.215 1.00 50.69 A
ATOM 1039 O TRP A 137 -24.154 0.291 -26.559 1.00 50.68 A
ATOM 1040 N SER A 138 -26.005 -0.359 -27.661 1.00 48.30 A
ATOM 1041 CA SER A 138 -25.738 -1.781 -27.496 1.00 47.22 A
ATOM 1042 CB SER A 138 -26.810 -2.427 -26.629 1.00 47.36 A
ATOM 1043 OG SER A 138 -28.039 -2.497 -27.338 1.00 49.91 A
ATOM 1044 C SER A 138 -25.736 -2.476 -28.855 1.00 46.23 A
ATOM 1045 O SER A 138 -26.389 -2.026 -29.802 1.00 46.74 A
ATOM 1046 N LEU A 139 -25.000 -3.579 -28.948 1.00 44.33 A
ATOM 1047 CA LEU A 139 -25.027 -4.415 -30.142 1.00 43.44 A
ATOM 1048 CB LEU A 139 -24.104 -5.623 -29.974 1.00 42.26 A
ATOM 1049 CG LEU A 139 -23.668 -6.320 -31.265 1.00 41.48 A
ATOM 1050 CD1 LEU A 139 -22.912 -5.357 -32.168 1.00 40.20 A

ATOM 1051 CD2 LEU A 139 -22.823 -7.546 -30.956 1.00 41.40 A
ATOM 1052 C LEU A 139 -26.445 -4.877 -30.461 1.00 44.09 A
ATOM 1053 O LEU A 139 -26.767 -5.175 -31.610 1.00 44.26 A
ATOM 1054 N ALA A 140 -27.288 -4.934 -29.434 1.00 44.75 A
ATOM 1055 CA ALA A 140 -28.554 -5.652 -29.522 1.00 44.45 A
ATOM 1056 CB ALA A 140 -29.328 -5.523 -28.218 1.00 45.62 A
ATOM 1057 C ALA A 140 -29.392 -5.152 -30.692 1.00 44.51 A
ATOM 1058 O ALA A 140 -29.687 -5.903 -31.622 1.00 46.05 A
ATOM 1059 N PRO A 141 -29.774 -3.880 -30.640 1.00 43.55 A
ATOM 1060 CD PRO A 141 -30.362 -3.576 -29.324 1.00 42.16 A
ATOM 1061 CA PRO A 141 -30.522 -3.255 -31.736 1.00 42.50 A
ATOM 1062 CB PRO A 141 -31.819 -2.813 -31.058 1.00 40.78 A
ATOM 1063 CG PRO A 141 -31.431 -2.567 -29.642 1.00 41.73 A
ATOM 1064 C PRO A 141 -29.788 -2.044 -32.301 1.00 42.45 A
ATOM 1065 O PRO A 141 -29.740 -1.863 -33.517 1.00 42.34 A
ATOM 1066 N ASP A 142 -29.223 -1.225 -31.419 1.00 42.51 A
ATOM 1067 CA ASP A 142 -28.560 0.015 -31.832 1.00 41.53 A
ATOM 1068 CB ASP A 142 -28.075 0.769 -30.589 1.00 43.54 A
ATOM 1069 CG ASP A 142 -29.108 0.776 -29.469 1.00 45.42 A
ATOM 1070 OD1 ASP A 142 -30.251 1.219 -29.728 1.00 46.75 A
ATOM 1071 OD2 ASP A 142 -28.774 0.338 -28.337 1.00 46.53 A
ATOM 1072 C ASP A 142 -27.403 -0.089 -32.829 1.00 40.21 A
ATOM 1073 O ASP A 142 -27.522 0.357 -33.974 1.00 40.40 A
ATOM 1074 N LEU A 143 -26.278 -0.649 -32.389 1.00 37.85 A
ATOM 1075 CA LEU A 143 -25.116 -0.779 -33.255 1.00 33.85 A
ATOM 1076 CB LEU A 143 -23.990 -1.524 -32.535 1.00 32.00 A
ATOM 1077 CG LEU A 143 -23.373 -0.899 -31.282 1.00 29.79 A
ATOM 1078 CD1 LEU A 143 -22.148 -1.706 -30.893 1.00 29.29 A
ATOM 1079 CD2 LEU A 143 -22.981 0.540 -31.534 1.00 28.65 A
ATOM 1080 C LEU A 143 -25.457 -1.493 -34.561 1.00 32.65 A
ATOM 1081 O LEU A 143 -25.023 -1.069 -35.627 1.00 31.77 A
ATOM 1082 N THR A 144 -26.238 -2.565 -34.489 1.00 31.41 A
ATOM 1083 CA THR A 144 -26.595 -3.289 -35.706 1.00 30.58 A
ATOM 1084 CB THR A 144 -27.569 -4.463 -35.448 1.00 29.30 A

ATOM 1085 OG1 THR A 144 -26.921 -5.482 -34.683 1.00 26.22 A
ATOM 1086 CG2 THR A 144 -28.013 -5.060 -36.766 1.00 29.15 A
ATOM 1087 C THR A 144 -27.256 -2.378 -36.724 1.00 31.46 A
ATOM 1088 O THR A 144 -26.841 -2.330 -37.882 1.00 33.05 A
ATOM 1089 N ASN A 145 -28.289 -1.662 -36.294 1.00 31.21 A
ATOM 1090 CA ASN A 145 -29.002 -0.773 -37.195 1.00 30.28 A
ATOM 1091 CB ASN A 145 -30.184 -0.109 -36.479 1.00 30.00 A
ATOM 1092 CG ASN A 145 -31.226 -1.127 -36.007 1.00 31.64 A
ATOM 1093 OD1 ASN A 145 -31.334 -2.224 -36.569 1.00 30.95 A
ATOM 1094 ND2 ASN A 145 -32.002 -0.765 -34.977 1.00 30.66 A
ATOM 1095 C ASN A 145 -28.084 0.277 -37.794 1.00 29.79 A
ATOM 1096 O ASN A 145 -28.160 0.561 -38.989 1.00 30.68 A
ATOM 1097 N ILE A 146 -27.203 0.845 -36.978 1.00 28.91 A
ATOM 1098 CA ILE A 146 -26.282 1.863 -37.476 1.00 27.87 A
ATOM 1099 CB ILE A 146 -25.392 2.424 -36.341 1.00 26.57 A
ATOM 1100 CG2 ILE A 146 -24.606 3.626 -36.847 1.00 25.00 A
ATOM 1101 CG1 ILE A 146 -26.262 2.854 -35.158 1.00 25.04 A
ATOM 1102 CD1 ILE A 146 -25.485 3.403 -33.998 1.00 22.52 A
ATOM 1103 C ILE A 146 -25.394 1.304 -38.589 1.00 27.70 A
ATOM 1104 O ILE A 146 -25.043 2.017 -39.522 1.00 28.17 A
ATOM 1105 N LEU A 147 -25.030 0.032 -38.498 1.00 26.79 A
ATOM 1106 CA LEU A 147 -24.206 -0.565 -39.534 1.00 26.74 A
ATOM 1107 CB LEU A 147 -23.448 -1.780 -39.010 1.00 25.85 A
ATOM 1108 CG LEU A 147 -22.169 -1.367 -38.299 1.00 26.60 A
ATOM 1109 CD1 LEU A 147 -22.387 -1.440 -36.800 1.00 27.70 A
ATOM 1110 CD2 LEU A 147 -21.026 -2.264 -38.726 1.00 25.46 A
ATOM 1111 C LEU A 147 -25.071 -0.982 -40.694 1.00 27.42 A
ATOM 1112 O LEU A 147 -24.642 -0.957 -41.838 1.00 28.47 A
ATOM 1113 N ALA A 148 -26.303 -1.356 -40.391 1.00 28.57 A
ATOM 1114 CA ALA A 148 -27.230 -1.797 -41.419 1.00 28.61 A
ATOM 1115 CB ALA A 148 -28.420 -2.515 -40.779 1.00 27.26 A
ATOM 1116 C ALA A 148 -27.738 -0.679 -42.315 1.00 28.77 A
ATOM 1117 O ALA A 148 -27.989 -0.916 -43.490 1.00 30.51 A
ATOM 1118 N SER A 149 -27.877 0.538 -41.794 1.00 28.61 A

ATOM 1119 CA SER A 149 -28.427 1.598 -42.625 1.00 29.83 A
ATOM 1120 CB SER A 149 -29.940 1.638 -42.433 1.00 32.08 A
ATOM 1121 OG SER A 149 -30.264 1.661 -41.054 1.00 35.97 A
ATOM 1122 C SER A 149 -27.890 3.014 -42.527 1.00 30.09 A
ATOM 1123 O SER A 149 -28.455 3.928 -43.134 1.00 30.41 A
ATOM 1124 N SER A 150 -26.816 3.213 -41.776 1.00 30.03 A
ATOM 1125 CA SER A 150 -26.235 4.544 -41.664 1.00 29.89 A
ATOM 1126 CB SER A 150 -25.566 4.738 -40.309 1.00 28.85 A
ATOM 1127 OG SER A 150 -24.658 5.826 -40.363 1.00 29.04 A
ATOM 1128 C SER A 150 -25.190 4.700 -42.745 1.00 30.56 A
ATOM 1129 O SER A 150 -24.345 3.820 -42.895 1.00 32.30 A
ATOM 1130 N ARG A 151 -25.238 5.808 -43.487 1.00 30.10 A
ATOM 1131 CA ARG A 151 -24.265 6.062 -44.556 1.00 29.48 A
ATOM 1132 CB ARG A 151 -24.973 6.433 -45.857 1.00 29.10 A
ATOM 1133 CG ARG A 151 -25.201 5.261 -46.784 1.00 27.67 A
ATOM 1134 CD ARG A 151 -25.751 4.058 -46.057 1.00 26.00 A
ATOM 1135 NE ARG A 151 -26.422 3.157 -46.984 1.00 27.68 A
ATOM 1136 CZ ARG A 151 -26.752 1.901 -46.702 1.00 29.23 A
ATOM 1137 NH1 ARG A 151 -27.368 1.159 -47.613 1.00 29.67 A
ATOM 1138 NH2 ARG A 151 -26.450 1.384 -45.520 1.00 29.14 A
ATOM 1139 C ARG A 151 -23.234 7.127 -44.233 1.00 29.24 A
ATOM 1140 O ARG A 151 -22.654 7.735 -45.133 1.00 28.27 A
ATOM 1141 N SER A 152 -23.011 7.340 -42.943 1.00 29.98 A
ATOM 1142 CA SER A 152 -22.030 8.314 -42.479 1.00 31.53 A
ATOM 1143 CB SER A 152 -22.532 9.029 -41.235 1.00 31.24 A
ATOM 1144 OG SER A 152 -21.428 9.450 -40.454 1.00 32.43 A
ATOM 1145 C SER A 152 -20.754 7.575 -42.125 1.00 31.98 A
ATOM 1146 O SER A 152 -20.731 6.812 -41.161 1.00 33.79 A
ATOM 1147 N TYR A 153 -19.693 7.812 -42.886 1.00 32.16 A
ATOM 1148 CA TYR A 153 -18.427 7.125 -42.638 1.00 32.05 A
ATOM 1149 CB TYR A 153 -17.330 7.661 -43.567 1.00 30.78 A
ATOM 1150 CG TYR A 153 -16.021 6.906 -43.493 1.00 30.24 A
ATOM 1151 CD1 TYR A 153 -15.767 5.809 -44.319 1.00 28.08 A
ATOM 1152 CE1 TYR A 153 -14.540 5.136 -44.261 1.00 28.12 A

ATOM 1153 CD2 TYR A 153 -15.020 7.305 -42.604 1.00 30.77 A
ATOM 1154 CE2 TYR A 153 -13.796 6.637 -42.541 1.00 29.39 A
ATOM 1155 CZ TYR A 153 -13.564 5.565 -43.369 1.00 28.84 A
ATOM 1156 OH TYR A 153 -12.340 4.956 -43.306 1.00 30.48 A
ATOM 1157 C TYR A 153 -17.989 7.256 -41.182 1.00 32.22 A
ATOM 1158 O TYR A 153 -17.770 6.250 -40.502 1.00 31.46 A
ATOM 1159 N ALA A 154 -17.877 8.487 -40.697 1.00 32.75 A
ATOM 1160 CA ALA A 154 -17.461 8.704 -39.319 1.00 33.09 A
ATOM 1161 CB ALA A 154 -17.472 10.183 -38.984 1.00 33.13 A
ATOM 1162 C ALA A 154 -18.357 7.949 -38.347 1.00 33.88 A
ATOM 1163 O ALA A 154 -17.863 7.276 -37.436 1.00 34.69 A
ATOM 1164 N MET A 155 -19.670 8.044 -38.537 1.00 34.13 A
ATOM 1165 CA MET A 155 -20.580 7.366 -37.629 1.00 34.65 A
ATOM 1166 CB MET A 155 -22.023 7.650 -38.001 1.00 36.37 A
ATOM 1167 CG MET A 155 -22.961 7.246 -36.896 1.00 39.93 A
ATOM 1168 SD MET A 155 -24.408 8.288 -36.875 1.00 46.60 A
ATOM 1169 CE MET A 155 -25.720 7.070 -37.147 1.00 45.28 A
ATOM 1170 C MET A 155 -20.338 5.863 -37.597 1.00 34.24 A
ATOM 1171 O MET A 155 -20.213 5.261 -36.521 1.00 35.09 A
ATOM 1172 N LEU A 156 -20.272 5.249 -38.773 1.00 32.59 A
ATOM 1173 CA LEU A 156 -20.018 3.818 -38.842 1.00 31.17 A
ATOM 1174 CB LEU A 156 -19.966 3.371 -40.305 1.00 30.51 A
ATOM 1175 CG LEU A 156 -21.242 3.682 -41.094 1.00 30.45 A
ATOM 1176 CD1 LEU A 156 -20.962 3.623 -42.579 1.00 30.10 A
ATOM 1177 CD2 LEU A 156 -22.341 2.711 -40.704 1.00 30.97 A
ATOM 1178 C LEU A 156 -18.679 3.545 -38.143 1.00 30.43 A
ATOM 1179 O LEU A 156 -18.551 2.595 -37.372 1.00 30.53 A
ATOM 1180 N LEU A 157 -17.691 4.399 -38.394 1.00 28.38 A
ATOM 1181 CA LEU A 157 -16.375 4.226 -37.791 1.00 25.45 A
ATOM 1182 CB LEU A 157 -15.427 5.322 -38.273 1.00 22.41 A
ATOM 1183 CG LEU A 157 -14.046 5.256 -37.625 1.00 21.22 A
ATOM 1184 CD1 LEU A 157 -13.459 3.881 -37.885 1.00 19.32 A
ATOM 1185 CD2 LEU A 157 -13.143 6.368 -38.162 1.00 17.85 A
ATOM 1186 C LEU A 157 -16.430 4.235 -36.267 1.00 25.60 A

ATOM 1187 O LEU A 157 -15.715 3.483 -35.602 1.00 24.45 A
ATOM 1188 N PHE A 158 -17.281 5.088 -35.710 1.00 25.96 A
ATOM 1189 CA PHE A 158 -17.394 5.175 -34.265 1.00 26.41 A
ATOM 1190 CB PHE A 158 -18.243 6.381 -33.863 1.00 26.80 A
ATOM 1191 CG PHE A 158 -18.208 6.669 -32.390 1.00 28.55 A
ATOM 1192 CD1 PHE A 158 -17.053 7.170 -31.794 1.00 28.95 A
ATOM 1193 CD2 PHE A 158 -19.310 6.391 -31.582 1.00 29.43 A
ATOM 1194 CE1 PHE A 158 -16.995 7.383 -30.418 1.00 29.17 A
ATOM 1195 CE2 PHE A 158 -19.261 6.605 -30.197 1.00 29.54 A
ATOM 1196 CZ PHE A 158 -18.100 7.099 -29.618 1.00 29.43 A
ATOM 1197 C PHE A 158 -17.980 3.895 -33.671 1.00 25.38 A
ATOM 1198 O PHE A 158 -17.543 3.424 -32.623 1.00 25.67 A
ATOM 1199 N ALA A 159 -18.964 3.326 -34.346 1.00 22.91 A
ATOM 1200 CA ALA A 159 -19.569 2.108 -33.857 1.00 21.66 A
ATOM 1201 CB ALA A 159 -20.922 1.924 -34.491 1.00 20.98 A
ATOM 1202 C ALA A 159 -18.689 0.896 -34.138 1.00 22.12 A
ATOM 1203 O ALA A 159 -18.649 -0.039 -33.349 1.00 23.01 A
ATOM 1204 N TRP A 160 -17.987 0.894 -35.267 1.00 21.57 A
ATOM 1205 CA TRP A 160 -17.134 -0.236 -35.602 1.00 19.02 A
ATOM 1206 CB TRP A 160 -16.546 -0.084 -37.008 1.00 16.65 A
ATOM 1207 CG TRP A 160 -15.862 -1.334 -37.464 1.00 14.59 A
ATOM 1208 CD2 TRP A 160 -14.509 -1.717 -37.193 1.00 12.86 A
ATOM 1209 CE2 TRP A 160 -14.330 -3.011 -37.713 1.00 12.44 A
ATOM 1210 CE3 TRP A 160 -13.430 -1.091 -36.556 1.00 12.60 A
ATOM 1211 CD1 TRP A 160 -16.430 -2.378 -38.120 1.00 14.53 A
ATOM 1212 NE1 TRP A 160 -15.520 -3.393 -38.273 1.00 13.78 A
ATOM 1213 CZ2 TRP A 160 -13.117 -3.696 -37.621 1.00 11.68 A
ATOM 1214 CZ3 TRP A 160 -12.222 -1.773 -36.462 1.00 13.49 A
ATOM 1215 CH2 TRP A 160 -12.078 -3.063 -36.996 1.00 13.10 A
ATOM 1216 C TRP A 160 -16.001 -0.330 -34.588 1.00 18.73 A
ATOM 1217 O TRP A 160 -15.690 -1.407 -34.080 1.00 17.22 A
ATOM 1218 N GLU A 161 -15.391 0.818 -34.311 1.00 18.89 A
ATOM 1219 CA GLU A 161 -14.293 0.917 -33.350 1.00 20.59 A
ATOM 1220 CB GLU A 161 -13.631 2.285 -33.466 1.00 20.57 A

ATOM 1221 CG GLU A 161 -12.363 2.478 -32.679 1.00 19.67 A
ATOM 1222 CD GLU A 161 -11.864 3.906 -32.811 1.00 23.41 A
ATOM 1223 OE1 GLU A 161 -10.711 4.192 -32.432 1.00 24.99 A
ATOM 1224 OE2 GLU A 161 -12.632 4.764 -33.297 1.00 25.21 A
ATOM 1225 C GLU A 161 -14.838 0.735 -31.933 1.00 20.85 A
ATOM 1226 O GLU A 161 -14.281 -0.016 -31.128 1.00 21.38 A
ATOM 1227 N GLY A 162 -15.928 1.431 -31.635 1.00 19.77 A
ATOM 1228 CA GLY A 162 -16.525 1.299 -30.329 1.00 19.18 A
ATOM 1229 C GLY A 162 -16.738 -0.154 -29.950 1.00 18.38 A
ATOM 1230 O GLY A 162 -16.212 -0.625 -28.941 1.00 18.23 A
ATOM 1231 N TRP A 163 -17.499 -0.871 -30.768 1.00 17.70 A
ATOM 1232 CA TRP A 163 -17.788 -2.275 -30.513 1.00 18.49 A
ATOM 1233 CB TRP A 163 -18.734 -2.830 -31.578 1.00 18.18 A
ATOM 1234 CG TRP A 163 -18.950 -4.281 -31.392 1.00 18.34 A
ATOM 1235 CD2 TRP A 163 -19.613 -4.909 -30.290 1.00 20.41 A
ATOM 1236 CE2 TRP A 163 -19.505 -6.311 -30.479 1.00 20.44 A
ATOM 1237 CE3 TRP A 163 -20.288 -4.425 -29.158 1.00 19.02 A
ATOM 1238 CD1 TRP A 163 -18.484 -5.287 -32.181 1.00 19.93 A
ATOM 1239 NE1 TRP A 163 -18.811 -6.516 -31.641 1.00 20.04 A
ATOM 1240 CZ2 TRP A 163 -20.044 -7.227 -29.583 1.00 20.00 A
ATOM 1241 CZ3 TRP A 163 -20.820 -5.335 -28.274 1.00 20.37 A
ATOM 1242 CH2 TRP A 163 -20.697 -6.725 -28.490 1.00 21.38 A
ATOM 1243 C TRP A 163 -16.578 -3.199 -30.418 1.00 17.96 A
ATOM 1244 O TRP A 163 -16.540 -4.087 -29.581 1.00 17.36 A
ATOM 1245 N HIS A 164 -15.598 -2.994 -31.284 1.00 18.34 A
ATOM 1246 CA HIS A 164 -14.413 -3.839 -31.295 1.00 17.82 A
ATOM 1247 CB HIS A 164 -13.650 -3.660 -32.604 1.00 16.85 A
ATOM 1248 CG HIS A 164 -14.261 -4.400 -33.744 1.00 16.73 A
ATOM 1249 CD2 HIS A 164 -13.885 -5.541 -34.365 1.00 17.16 A
ATOM 1250 ND1 HIS A 164 -15.445 -4.012 -34.334 1.00 17.12 A
ATOM 1251 CE1 HIS A 164 -15.771 -4.883 -35.271 1.00 17.19 A
ATOM 1252 NE2 HIS A 164 -14.840 -5.821 -35.308 1.00 18.43 A
ATOM 1253 C HIS A 164 -13.475 -3.659 -30.124 1.00 18.06 A
ATOM 1254 O HIS A 164 -12.782 -4.602 -29.739 1.00 19.00 A

ATOM 1255 N ASN A 165 -13.417 -2.453 -29.575 1.00 17.86 A
ATOM 1256 CA ASN A 165 -12.571 -2.230 -28.421 1.00 18.54 A
ATOM 1257 CB ASN A 165 -12.261 -0.743 -28.243 1.00 19.00 A
ATOM 1258 CG ASN A 165 -11.290 -0.213 -29.280 1.00 19.84 A
ATOM 1259 OD1 ASN A 165 -10.396 -0.928 -29.748 1.00 20.57 A
ATOM 1260 ND2 ASN A 165 -11.438 1.061 -29.622 1.00 18.82 A
ATOM 1261 C ASN A 165 -13.377 -2.740 -27.232 1.00 18.66 A
ATOM 1262 O ASN A 165 -12.934 -3.595 -26.470 1.00 18.73 A
ATOM 1263 N ALA A 166 -14.590 -2.229 -27.113 1.00 18.96 A
ATOM 1264 CA ALA A 166 -15.482 -2.596 -26.032 1.00 19.93 A
ATOM 1265 CB ALA A 166 -16.831 -1.950 -26.266 1.00 20.24 A
ATOM 1266 C ALA A 166 -15.664 -4.100 -25.792 1.00 21.43 A
ATOM 1267 O ALA A 166 -15.717 -4.541 -24.648 1.00 22.01 A
ATOM 1268 N ALA A 167 -15.752 -4.893 -26.855 1.00 22.58 A
ATOM 1269 CA ALA A 167 -15.977 -6.329 -26.700 1.00 22.94 A
ATOM 1270 CB ALA A 167 -16.909 -6.844 -27.822 1.00 21.51 A
ATOM 1271 C ALA A 167 -14.708 -7.152 -26.684 1.00 22.80 A
ATOM 1272 O ALA A 167 -14.594 -8.140 -25.948 1.00 23.45 A
ATOM 1273 N GLY A 168 -13.746 -6.738 -27.492 1.00 22.08 A
ATOM 1274 CA GLY A 168 -12.523 -7.501 -27.598 1.00 21.25 A
ATOM 1275 C GLY A 168 -11.498 -7.414 -26.495 1.00 20.15 A
ATOM 1276 O GLY A 168 -11.168 -8.419 -25.867 1.00 19.24 A
ATOM 1277 N ILE A 169 -10.985 -6.211 -26.274 1.00 18.66 A
ATOM 1278 CA ILE A 169 -9.949 -5.993 -25.287 1.00 16.77 A
ATOM 1279 CB ILE A 169 -9.762 -4.490 -25.046 1.00 14.93 A
ATOM 1280 CG2 ILE A 169 -8.839 -4.271 -23.867 1.00 16.10 A
ATOM 1281 CG1 ILE A 169 -9.199 -3.837 -26.313 1.00 12.45 A
ATOM 1282 CD1 ILE A 169 -9.185 -2.328 -26.308 1.00 8.11 A
ATOM 1283 C ILE A 169 -10.120 -6.735 -23.954 1.00 17.46 A
ATOM 1284 O ILE A 169 -9.190 -7.415 -23.493 1.00 16.93 A
ATOM 1285 N PRO A 170 -11.304 -6.638 -23.322 1.00 17.31 A
ATOM 1286 CD PRO A 170 -12.531 -5.922 -23.709 1.00 17.07 A
ATOM 1287 CA PRO A 170 -11.490 -7.336 -22.043 1.00 17.22 A
ATOM 1288 CB PRO A 170 -12.798 -6.761 -21.527 1.00 15.27 A

ATOM 1289 CG PRO A 170 -13.555 -6.538 -22.772 1.00 17.40 A
ATOM 1290 C PRO A 170 -11.539 -8.853 -22.167 1.00 17.28 A
ATOM 1291 O PRO A 170 -11.133 -9.580 -21.263 1.00 20.22 A
ATOM 1292 N LEU A 171 -12.028 -9.323 -23.302 1.00 16.32 A
ATOM 1293 CA LEU A 171 -12.170 -10.744 -23.555 1.00 15.46 A
ATOM 1294 CB LEU A 171 -13.045 -10.900 -24.799 1.00 16.04 A
ATOM 1295 CG LEU A 171 -14.142 -11.951 -24.892 1.00 17.35 A
ATOM 1296 CD1 LEU A 171 -14.453 -12.499 -23.513 1.00 18.46 A
ATOM 1297 CD2 LEU A 171 -15.372 -11.311 -25.540 1.00 16.09 A
ATOM 1298 C LEU A 171 -10.851 -11.513 -23.726 1.00 14.92 A
ATOM 1299 O LEU A 171 -10.716 -12.638 -23.283 1.00 14.35 A
ATOM 1300 N LYS A 172 -9.871 -10.887 -24.352 1.00 15.48 A
ATOM 1301 CA LYS A 172 -8.589 -11.527 -24.638 1.00 15.25 A
ATOM 1302 CB LYS A 172 -7.578 -10.479 -25.114 1.00 15.19 A
ATOM 1303 CG LYS A 172 -6.358 -11.052 -25.799 1.00 13.13 A
ATOM 1304 CD LYS A 172 -5.506 -9.950 -26.373 1.00 13.80 A
ATOM 1305 CE LYS A 172 -4.215 -10.505 -26.932 1.00 17.48 A
ATOM 1306 NZ LYS A 172 -3.317 -9.409 -27.409 1.00 22.33 A
ATOM 1307 C LYS A 172 -7.941 -12.403 -23.576 1.00 16.09 A
ATOM 1308 O LYS A 172 -7.716 -13.585 -23.815 1.00 16.40 A
ATOM 1309 N PRO A 173 -7.606 -11.842 -22.397 1.00 17.54 A
ATOM 1310 CD PRO A 173 -7.938 -10.515 -21.852 1.00 17.58 A
ATOM 1311 CA PRO A 173 -6.977 -12.676 -21.361 1.00 16.61 A
ATOM 1312 CB PRO A 173 -6.850 -11.713 -20.182 1.00 14.04 A
ATOM 1313 CG PRO A 173 -7.994 -10.802 -20.374 1.00 14.81 A
ATOM 1314 C PRO A 173 -7.782 -13.946 -21.027 1.00 16.99 A
ATOM 1315 O PRO A 173 -7.212 -15.030 -20.866 1.00 15.72 A
ATOM 1316 N LEU A 174 -9.103 -13.814 -20.940 1.00 16.94 A
ATOM 1317 CA LEU A 174 -9.934 -14.968 -20.653 1.00 18.28 A
ATOM 1318 CB LEU A 174 -11.390 -14.568 -20.436 1.00 17.54 A
ATOM 1319 CG LEU A 174 -11.760 -13.499 -19.422 1.00 16.03 A
ATOM 1320 CD1 LEU A 174 -13.263 -13.575 -19.190 1.00 14.81 A
ATOM 1321 CD2 LEU A 174 -11.007 -13.725 -18.133 1.00 19.24 A
ATOM 1322 C LEU A 174 -9.885 -15.981 -21.797 1.00 20.50 A

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ATOM  1323  O   LEU A 174    -9.888 -17.193 -21.543  1.00 22.07      A
ATOM  1324  N   TYR A 175    -9.835 -15.505 -23.049  1.00 20.40      A
ATOM  1325  CA  TYR A 175    -9.811 -16.430 -24.172  1.00 19.86      A
ATOM  1326  CB  TYR A 175    -9.903 -15.716 -25.526  1.00 19.84      A
ATOM  1327  CG  TYR A 175   -10.312 -16.689 -26.626  1.00 22.29      A
ATOM  1328  CD1 TYR A 175   -11.632 -17.146 -26.718  1.00 21.79      A
ATOM  1329  CE1 TYR A 175   -11.999 -18.124 -27.639  1.00 20.79      A
ATOM  1330  CD2 TYR A 175    -9.366 -17.245 -27.504  1.00 21.75      A
ATOM  1331  CE2 TYR A 175    -9.733 -18.232 -28.433  1.00 21.02      A
ATOM  1332  CZ  TYR A 175   -11.053 -18.663 -28.489  1.00 20.85      A
ATOM  1333  OH  TYR A 175   -11.449 -19.625 -29.391  1.00 20.12      A
ATOM  1334  C   TYR A 175    -8.563 -17.298 -24.144  1.00 19.71      A
ATOM  1335  O   TYR A 175    -8.637 -18.514 -24.330  1.00 18.68      A
ATOM  1336  N   GLU A 176    -7.421 -16.673 -23.899  1.00 20.37      A
ATOM  1337  CA  GLU A 176    -6.157 -17.397 -23.847  1.00 22.98      A
ATOM  1338  CB  GLU A 176    -5.021 -16.446 -23.492  1.00 21.56      A
ATOM  1339  CG  GLU A 176    -4.980 -15.194 -24.331  1.00 24.69      A
ATOM  1340  CD  GLU A 176    -3.896 -14.264 -23.857  1.00 27.39      A
ATOM  1341  OE1 GLU A 176    -3.195 -14.658 -22.895  1.00 27.62      A
ATOM  1342  OE2 GLU A 176    -3.739 -13.159 -24.430  1.00 29.89      A
ATOM  1343  C   GLU A 176    -6.206 -18.517 -22.807  1.00 24.35      A
ATOM  1344  O   GLU A 176    -5.634 -19.603 -23.016  1.00 23.59      A
ATOM  1345  N   ASP A 177    -6.877 -18.242 -21.684  1.00 25.65      A
ATOM  1346  CA  ASP A 177    -6.994 -19.214 -20.604  1.00 26.37      A
ATOM  1347  CB  ASP A 177    -7.384 -18.523 -19.300  1.00 27.89      A
ATOM  1348  CG  ASP A 177    -6.198 -17.844 -18.621  1.00 29.60      A
ATOM  1349  OD1 ASP A 177    -5.039 -18.151 -18.992  1.00 30.03      A
ATOM  1350  OD2 ASP A 177    -6.428 -17.018 -17.707  1.00 29.64      A
ATOM  1351  C   ASP A 177    -7.989 -20.311 -20.934  1.00 26.19      A
ATOM  1352  O   ASP A 177    -7.763 -21.480 -20.591  1.00 26.80      A
ATOM  1353  N   PHE A 178    -9.085 -19.942 -21.594  1.00 25.24      A
ATOM  1354  CA  PHE A 178   -10.088 -20.923 -21.990  1.00 24.34      A
ATOM  1355  CB  PHE A 178   -11.247 -20.260 -22.734  1.00 23.81      A
ATOM  1356  CG  PHE A 178   -12.017 -21.214 -23.602  1.00 24.94      A
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ATOM 1357 CD1 PHE A 178 -12.892 -22.135 -23.037 1.00 25.82 A
ATOM 1358 CD2 PHE A 178 -11.811 -21.240 -24.987 1.00 26.05 A
ATOM 1359 CE1 PHE A 178 -13.548 -23.073 -23.829 1.00 26.52 A
ATOM 1360 CE2 PHE A 178 -12.458 -22.173 -25.796 1.00 25.55 A
ATOM 1361 CZ PHE A 178 -13.328 -23.094 -25.215 1.00 27.71 A
ATOM 1362 C PHE A 178 -9.428 -21.928 -22.924 1.00 23.93 A
ATOM 1363 O PHE A 178 -9.625 -23.133 -22.807 1.00 24.07 A
ATOM 1364 N THR A 179 -8.644 -21.408 -23.859 1.00 23.29 A
ATOM 1365 CA THR A 179 -7.967 -22.234 -24.831 1.00 21.77 A
ATOM 1366 CB THR A 179 -7.227 -21.358 -25.843 1.00 22.07 A
ATOM 1367 OG1 THR A 179 -8.190 -20.655 -26.634 1.00 23.35 A
ATOM 1368 CG2 THR A 179 -6.350 -22.195 -26.743 1.00 22.80 A
ATOM 1369 C THR A 179 -7.013 -23.224 -24.186 1.00 21.05 A
ATOM 1370 O THR A 179 -7.020 -24.400 -24.523 1.00 21.08 A
ATOM 1371 N ALA A 180 -6.200 -22.771 -23.245 1.00 20.85 A
ATOM 1372 CA ALA A 180 -5.267 -23.683 -22.609 1.00 20.51 A
ATOM 1373 CB ALA A 180 -4.475 -22.965 -21.549 1.00 19.20 A
ATOM 1374 C ALA A 180 -6.041 -24.837 -21.994 1.00 21.84 A
ATOM 1375 O ALA A 180 -5.694 -26.003 -22.185 1.00 22.70 A
ATOM 1376 N LEU A 181 -7.102 -24.513 -21.263 1.00 22.15 A
ATOM 1377 CA LEU A 181 -7.896 -25.552 -20.625 1.00 23.71 A
ATOM 1378 CB LEU A 181 -8.925 -24.927 -19.677 1.00 22.43 A
ATOM 1379 CG LEU A 181 -8.309 -24.446 -18.355 1.00 23.09 A
ATOM 1380 CD1 LEU A 181 -9.353 -23.716 -17.510 1.00 24.25 A
ATOM 1381 CD2 LEU A 181 -7.733 -25.644 -17.602 1.00 19.40 A
ATOM 1382 C LEU A 181 -8.578 -26.484 -21.623 1.00 24.68 A
ATOM 1383 O LEU A 181 -8.405 -27.708 -21.559 1.00 24.19 A
ATOM 1384 N SER A 182 -9.340 -25.905 -22.550 1.00 26.24 A
ATOM 1385 CA SER A 182 -10.046 -26.692 -23.562 1.00 27.19 A
ATOM 1386 CB SER A 182 -10.627 -25.785 -24.653 1.00 26.85 A
ATOM 1387 OG SER A 182 -11.620 -26.471 -25.399 1.00 25.48 A
ATOM 1388 C SER A 182 -9.120 -27.723 -24.188 1.00 27.63 A
ATOM 1389 O SER A 182 -9.501 -28.880 -24.351 1.00 28.48 A
ATOM 1390 N ASN A 183 -7.905 -27.308 -24.535 1.00 27.62 A

ATOM 1391 CA ASN A 183 -6.951 -28.239 -25.122 1.00 28.51 A
ATOM 1392 CB ASN A 183 -5.653 -27.538 -25.519 1.00 27.48 A
ATOM 1393 CG ASN A 183 -5.714 -26.947 -26.903 1.00 26.22 A
ATOM 1394 OD1 ASN A 183 -6.687 -27.147 -27.626 1.00 26.51 A
ATOM 1395 ND2 ASN A 183 -4.670 -26.220 -27.286 1.00 25.36 A
ATOM 1396 C ASN A 183 -6.629 -29.326 -24.125 1.00 29.14 A
ATOM 1397 O ASN A 183 -6.794 -30.510 -24.408 1.00 31.09 A
ATOM 1398 N GLU A 184 -6.179 -28.919 -22.946 1.00 29.46 A
ATOM 1399 CA GLU A 184 -5.824 -29.880 -21.918 1.00 29.59 A
ATOM 1400 CB GLU A 184 -5.642 -29.191 -20.574 1.00 28.57 A
ATOM 1401 CG GLU A 184 -5.186 -30.160 -19.518 1.00 30.32 A
ATOM 1402 CD GLU A 184 -5.170 -29.544 -18.151 1.00 32.53 A
ATOM 1403 OE1 GLU A 184 -6.159 -28.862 -17.825 1.00 36.27 A
ATOM 1404 OE2 GLU A 184 -4.186 -29.744 -17.405 1.00 33.30 A
ATOM 1405 C GLU A 184 -6.866 -30.972 -21.778 1.00 29.07 A
ATOM 1406 O GLU A 184 -6.530 -32.145 -21.623 1.00 29.26 A
ATOM 1407 N ALA A 185 -8.133 -30.586 -21.842 1.00 27.98 A
ATOM 1408 CA ALA A 185 -9.205 -31.553 -21.702 1.00 28.32 A
ATOM 1409 CB ALA A 185 -10.555 -30.836 -21.660 1.00 27.02 A
ATOM 1410 C ALA A 185 -9.195 -32.607 -22.809 1.00 28.74 A
ATOM 1411 O ALA A 185 -9.037 -33.802 -22.539 1.00 28.55 A
ATOM 1412 N TYR A 186 -9.344 -32.162 -24.054 1.00 28.92 A
ATOM 1413 CA TYR A 186 -9.388 -33.076 -25.199 1.00 28.19 A
ATOM 1414 CB TYR A 186 -9.866 -32.343 -26.443 1.00 23.52 A
ATOM 1415 CG TYR A 186 -11.304 -31.941 -26.342 1.00 21.10 A
ATOM 1416 CD1 TYR A 186 -11.671 -30.613 -26.173 1.00 20.03 A
ATOM 1417 CE1 TYR A 186 -12.994 -30.252 -26.059 1.00 20.85 A
ATOM 1418 CD2 TYR A 186 -12.301 -32.897 -26.390 1.00 21.19 A
ATOM 1419 CE2 TYR A 186 -13.623 -32.549 -26.271 1.00 21.88 A
ATOM 1420 CZ TYR A 186 -13.968 -31.229 -26.108 1.00 21.84 A
ATOM 1421 OH TYR A 186 -15.299 -30.904 -26.001 1.00 25.30 A
ATOM 1422 C TYR A 186 -8.083 -33.767 -25.494 1.00 29.57 A
ATOM 1423 O TYR A 186 -8.042 -34.749 -26.241 1.00 29.52 A
ATOM 1424 N LYS A 187 -7.016 -33.248 -24.908 1.00 30.88 A

ATOM 1425 CA LYS A 187 -5.712 -33.831 -25.107 1.00 32.68 A
ATOM 1426 CB LYS A 187 -4.672 -33.018 -24.357 1.00 31.40 A
ATOM 1427 CG LYS A 187 -3.481 -32.631 -25.194 1.00 31.79 A
ATOM 1428 CD LYS A 187 -2.576 -33.815 -25.416 1.00 33.70 A
ATOM 1429 CE LYS A 187 -1.212 -33.363 -25.913 1.00 36.69 A
ATOM 1430 NZ LYS A 187 -0.573 -32.366 -25.003 1.00 36.36 A
ATOM 1431 C LYS A 187 -5.813 -35.239 -24.547 1.00 33.95 A
ATOM 1432 O LYS A 187 -5.274 -36.186 -25.128 1.00 35.18 A
ATOM 1433 N ALA A 188 -6.564 -35.373 -23.453 1.00 34.52 A
ATOM 1434 CA ALA A 188 -6.755 -36.641 -22.759 1.00 35.58 A
ATOM 1435 CB ALA A 188 -7.217 -36.399 -21.330 1.00 35.35 A
ATOM 1436 C ALA A 188 -7.750 -37.530 -23.498 1.00 35.94 A
ATOM 1437 O ALA A 188 -7.810 -38.735 -23.201 1.00 36.53 A
ATOM 1438 N ASP A 189 -8.521 -36.969 -24.384 1.00 35.63 A
ATOM 1439 CA ASP A 189 -9.460 -37.773 -25.145 1.00 34.84 A
ATOM 1440 CB ASP A 189 -10.725 -36.977 -25.456 1.00 35.18 A
ATOM 1441 CG ASP A 189 -11.688 -36.959 -24.291 1.00 37.17 A
ATOM 1442 OD1 ASP A 189 -12.012 -38.062 -23.794 1.00 39.05 A
ATOM 1443 OD2 ASP A 189 -12.120 -35.860 -23.868 1.00 37.85 A
ATOM 1444 C ASP A 189 -8.779 -38.246 -26.428 1.00 34.33 A
ATOM 1445 O ASP A 189 -9.419 -38.830 -27.307 1.00 34.30 A
ATOM 1446 N GLY A 190 -7.476 -37.986 -26.529 1.00 33.17 A
ATOM 1447 CA GLY A 190 -6.729 -38.425 -27.691 1.00 33.93 A
ATOM 1448 C GLY A 190 -6.499 -37.466 -28.852 1.00 34.38 A
ATOM 1449 O GLY A 190 -5.748 -37.798 -29.768 1.00 35.03 A
ATOM 1450 N PHE A 191 -7.127 -36.297 -28.857 1.00 33.48 A
ATOM 1451 CA PHE A 191 -6.895 -35.372 -29.956 1.00 33.46 A
ATOM 1452 CB PHE A 191 -8.163 -34.587 -30.251 1.00 34.42 A
ATOM 1453 CG PHE A 191 -9.387 -35.452 -30.467 1.00 36.71 A
ATOM 1454 CD1 PHE A 191 -10.078 -35.996 -29.382 1.00 37.61 A
ATOM 1455 CD2 PHE A 191 -9.887 -35.673 -31.751 1.00 36.64 A
ATOM 1456 CE1 PHE A 191 -11.251 -36.737 -29.570 1.00 36.78 A
ATOM 1457 CE2 PHE A 191 -11.058 -36.413 -31.949 1.00 36.92 A
ATOM 1458 CZ PHE A 191 -11.741 -36.944 -30.852 1.00 37.59 A

ATOM 1459 C PHE A 191 -5.745 -34.434 -29.577 1.00 33.90 A
ATOM 1460 O PHE A 191 -5.426 -34.301 -28.401 1.00 34.85 A
ATOM 1461 N THR A 192 -5.111 -33.790 -30.553 1.00 33.56 A
ATOM 1462 CA THR A 192 -3.982 -32.906 -30.250 1.00 32.85 A
ATOM 1463 CB THR A 192 -3.248 -32.468 -31.526 1.00 33.17 A
ATOM 1464 OG1 THR A 192 -2.710 -33.616 -32.179 1.00 32.51 A
ATOM 1465 CG2 THR A 192 -2.107 -31.499 -31.193 1.00 34.09 A
ATOM 1466 C THR A 192 -4.406 -31.639 -29.534 1.00 32.64 A
ATOM 1467 O THR A 192 -3.763 -31.193 -28.574 1.00 33.35 A
ATOM 1468 N ASP A 193 -5.486 -31.055 -30.034 1.00 31.01 A
ATOM 1469 CA ASP A 193 -6.028 -29.822 -29.497 1.00 29.62 A
ATOM 1470 CB ASP A 193 -5.354 -28.622 -30.169 1.00 31.85 A
ATOM 1471 CG ASP A 193 -5.295 -28.750 -31.683 1.00 34.55 A
ATOM 1472 OD1 ASP A 193 -6.364 -28.647 -32.336 1.00 36.69 A
ATOM 1473 OD2 ASP A 193 -4.174 -28.959 -32.217 1.00 33.64 A
ATOM 1474 C ASP A 193 -7.507 -29.849 -29.810 1.00 28.55 A
ATOM 1475 O ASP A 193 -7.971 -30.759 -30.492 1.00 28.38 A
ATOM 1476 N THR A 194 -8.254 -28.873 -29.312 1.00 26.56 A
ATOM 1477 CA THR A 194 -9.680 -28.856 -29.564 1.00 25.02 A
ATOM 1478 CB THR A 194 -10.355 -27.722 -28.804 1.00 22.89 A
ATOM 1479 OG1 THR A 194 -9.754 -27.607 -27.515 1.00 21.60 A
ATOM 1480 CG2 THR A 194 -11.834 -28.010 -28.625 1.00 22.30 A
ATOM 1481 C THR A 194 -9.947 -28.707 -31.056 1.00 25.03 A
ATOM 1482 O THR A 194 -11.006 -29.081 -31.542 1.00 25.44 A
ATOM 1483 N GLY A 195 -8.977 -28.173 -31.784 1.00 24.71 A
ATOM 1484 CA GLY A 195 -9.154 -27.995 -33.213 1.00 24.87 A
ATOM 1485 C GLY A 195 -9.409 -29.326 -33.882 1.00 24.39 A
ATOM 1486 O GLY A 195 -10.394 -29.503 -34.612 1.00 23.80 A
ATOM 1487 N ALA A 196 -8.514 -30.272 -33.623 1.00 23.14 A
ATOM 1488 CA ALA A 196 -8.631 -31.604 -34.195 1.00 22.46 A
ATOM 1489 CB ALA A 196 -7.446 -32.451 -33.783 1.00 21.22 A
ATOM 1490 C ALA A 196 -9.928 -32.275 -33.766 1.00 23.07 A
ATOM 1491 O ALA A 196 -10.559 -32.968 -34.557 1.00 23.22 A
ATOM 1492 N TYR A 197 -10.321 -32.074 -32.512 1.00 23.57 A

ATOM 1493 CA TYR A 197 -11.548 -32.667 -32.007 1.00 23.71 A
ATOM 1494 CB TYR A 197 -11.723 -32.374 -30.506 1.00 21.55 A
ATOM 1495 CG TYR A 197 -13.102 -32.745 -29.987 1.00 19.57 A
ATOM 1496 CD1 TYR A 197 -13.552 -34.064 -30.037 1.00 17.58 A
ATOM 1497 CE1 TYR A 197 -14.841 -34.395 -29.663 1.00 17.81 A
ATOM 1498 CD2 TYR A 197 -13.988 -31.764 -29.533 1.00 17.97 A
ATOM 1499 CE2 TYR A 197 -15.287 -32.088 -29.156 1.00 17.52 A
ATOM 1500 CZ TYR A 197 -15.702 -33.406 -29.226 1.00 19.36 A
ATOM 1501 OH TYR A 197 -16.979 -33.745 -28.860 1.00 21.39 A
ATOM 1502 C TYR A 197 -12.738 -32.111 -32.783 1.00 25.29 A
ATOM 1503 O TYR A 197 -13.667 -32.839 -33.131 1.00 26.51 A
ATOM 1504 N TRP A 198 -12.704 -30.812 -33.046 1.00 26.31 A
ATOM 1505 CA TRP A 198 -13.768 -30.143 -33.777 1.00 28.39 A
ATOM 1506 CB TRP A 198 -13.504 -28.643 -33.798 1.00 29.93 A
ATOM 1507 CG TRP A 198 -13.851 -27.944 -32.541 1.00 29.91 A
ATOM 1508 CD2 TRP A 198 -13.854 -26.531 -32.331 1.00 30.12 A
ATOM 1509 CE2 TRP A 198 -14.257 -26.308 -30.996 1.00 29.70 A
ATOM 1510 CE3 TRP A 198 -13.556 -25.429 -33.142 1.00 29.59 A
ATOM 1511 CD1 TRP A 198 -14.238 -28.511 -31.364 1.00 29.26 A
ATOM 1512 NE1 TRP A 198 -14.485 -27.533 -30.428 1.00 29.22 A
ATOM 1513 CZ2 TRP A 198 -14.371 -25.026 -30.454 1.00 29.64 A
ATOM 1514 CZ3 TRP A 198 -13.669 -24.156 -32.603 1.00 28.69 A
ATOM 1515 CH2 TRP A 198 -14.073 -23.965 -31.272 1.00 29.30 A
ATOM 1516 C TRP A 198 -13.917 -30.643 -35.221 1.00 29.07 A
ATOM 1517 O TRP A 198 -15.039 -30.779 -35.728 1.00 29.99 A
ATOM 1518 N ARG A 199 -12.790 -30.899 -35.882 1.00 27.49 A
ATOM 1519 CA ARG A 199 -12.819 -31.380 -37.260 1.00 27.87 A
ATOM 1520 CB ARG A 199 -11.476 -31.086 -37.945 1.00 27.08 A
ATOM 1521 CG ARG A 199 -11.105 -29.607 -37.977 1.00 26.10 A
ATOM 1522 CD ARG A 199 -9.832 -29.354 -38.760 1.00 24.86 A
ATOM 1523 NE ARG A 199 -8.694 -30.096 -38.231 1.00 24.73 A
ATOM 1524 CZ ARG A 199 -7.889 -29.663 -37.268 1.00 25.61 A
ATOM 1525 NH1 ARG A 199 -6.878 -30.424 -36.865 1.00 24.88 A
ATOM 1526 NH2 ARG A 199 -8.083 -28.467 -36.717 1.00 27.52 A

ATOM 1527 C ARG A 199 -13.149 -32.882 -37.375 1.00 28.57 A
ATOM 1528 O ARG A 199 -13.650 -33.348 -38.412 1.00 28.45 A
ATOM 1529 N SER A 200 -12.883 -33.640 -36.313 1.00 28.56 A
ATOM 1530 CA SER A 200 -13.150 -35.071 -36.334 1.00 28.62 A
ATOM 1531 CB SER A 200 -12.630 -35.758 -35.049 1.00 27.96 A
ATOM 1532 OG SER A 200 -13.445 -35.526 -33.909 1.00 25.96 A
ATOM 1533 C SER A 200 -14.634 -35.351 -36.520 1.00 29.44 A
ATOM 1534 O SER A 200 -15.020 -36.480 -36.825 1.00 30.91 A
ATOM 1535 N TRP A 201 -15.463 -34.325 -36.362 1.00 29.47 A
ATOM 1536 CA TRP A 201 -16.902 -34.497 -36.502 1.00 31.15 A
ATOM 1537 CB TRP A 201 -17.655 -33.293 -35.969 1.00 32.45 A
ATOM 1538 CG TRP A 201 -17.537 -33.076 -34.515 1.00 34.41 A
ATOM 1539 CD2 TRP A 201 -17.717 -31.835 -33.832 1.00 36.18 A
ATOM 1540 CE2 TRP A 201 -17.598 -32.097 -32.452 1.00 36.64 A
ATOM 1541 CE3 TRP A 201 -17.969 -30.521 -34.255 1.00 37.31 A
ATOM 1542 CD1 TRP A 201 -17.320 -34.018 -33.555 1.00 35.12 A
ATOM 1543 NE1 TRP A 201 -17.357 -33.439 -32.308 1.00 35.59 A
ATOM 1544 CZ2 TRP A 201 -17.726 -31.096 -31.490 1.00 38.14 A
ATOM 1545 CZ3 TRP A 201 -18.097 -29.525 -33.300 1.00 38.49 A
ATOM 1546 CH2 TRP A 201 -17.974 -29.819 -31.932 1.00 39.40 A
ATOM 1547 C TRP A 201 -17.377 -34.731 -37.918 1.00 32.29 A
ATOM 1548 O TRP A 201 -18.514 -35.131 -38.122 1.00 33.48 A
ATOM 1549 N TYR A 202 -16.531 -34.464 -38.902 1.00 34.08 A
ATOM 1550 CA TYR A 202 -16.945 -34.671 -40.285 1.00 35.38 A
ATOM 1551 CB TYR A 202 -16.472 -33.503 -41.152 1.00 33.78 A
ATOM 1552 CG TYR A 202 -17.084 -32.188 -40.717 1.00 32.32 A
ATOM 1553 CD1 TYR A 202 -16.549 -31.466 -39.647 1.00 29.78 A
ATOM 1554 CE1 TYR A 202 -17.145 -30.287 -39.201 1.00 28.18 A
ATOM 1555 CD2 TYR A 202 -18.238 -31.697 -41.335 1.00 32.06 A
ATOM 1556 CE2 TYR A 202 -18.846 -30.519 -40.893 1.00 30.70 A
ATOM 1557 CZ TYR A 202 -18.290 -29.823 -39.829 1.00 29.44 A
ATOM 1558 OH TYR A 202 -18.876 -28.656 -39.404 1.00 29.12 A
ATOM 1559 C TYR A 202 -16.463 -36.009 -40.827 1.00 36.33 A
ATOM 1560 O TYR A 202 -16.789 -36.396 -41.945 1.00 36.92 A

ATOM 1561 N ASN A 203 -15.635 -36.685 -40.113 1.00 37.74 A
ATOM 1562 CA ASN A 203 -15.179 -37.941 -40.552 1.00 39.33 A
ATOM 1563 CB ASN A 203 -16.231 -38.969 -40.431 1.00 43.18 A
ATOM 1564 CG ASN A 203 -15.786 -40.134 -39.658 1.00 45.83 A
ATOM 1565 OD1 ASN A 203 -14.873 -40.835 -40.015 1.00 47.58 A
ATOM 1566 ND2 ASN A 203 -16.408 -40.331 -38.566 1.00 47.49 A
ATOM 1567 C ASN A 203 -14.805 -37.915 -41.902 1.00 38.72 A
ATOM 1568 O ASN A 203 -15.382 -38.509 -42.717 1.00 38.77 A
ATOM 1569 N SER A 204 -13.722 -37.285 -42.132 1.00 37.19 A
ATOM 1570 CA SER A 204 -13.150 -37.261 -43.466 1.00 35.18 A
ATOM 1571 CB SER A 204 -13.762 -36.129 -44.303 1.00 36.26 A
ATOM 1572 OG SER A 204 -13.164 -36.048 -45.593 1.00 37.84 A
ATOM 1573 C SER A 204 -11.675 -37.012 -43.269 1.00 33.37 A
ATOM 1574 O SER A 204 -11.274 -35.949 -42.815 1.00 32.63 A
ATOM 1575 N PRO A 205 -10.840 -37.996 -43.590 1.00 32.65 A
ATOM 1576 CD PRO A 205 -11.074 -39.290 -44.248 1.00 32.73 A
ATOM 1577 CA PRO A 205 -9.412 -37.751 -43.397 1.00 32.64 A
ATOM 1578 CB PRO A 205 -8.782 -39.088 -43.767 1.00 32.64 A
ATOM 1579 CG PRO A 205 -9.711 -39.588 -44.831 1.00 33.78 A
ATOM 1580 C PRO A 205 -8.948 -36.626 -44.301 1.00 32.05 A
ATOM 1581 O PRO A 205 -7.885 -36.040 -44.104 1.00 32.56 A
ATOM 1582 N THR A 206 -9.731 -36.243 -45.280 1.00 31.92 A
ATOM 1583 CA THR A 206 -9.378 -35.135 -46.187 1.00 32.25 A
ATOM 1584 CB THR A 206 -9.539 -35.537 -47.596 1.00 33.66 A
ATOM 1585 OG1 THR A 206 -8.686 -36.634 -47.879 1.00 37.55 A
ATOM 1586 CG2 THR A 206 -10.841 -36.058 -47.836 1.00 31.82 A
ATOM 1587 C THR A 206 -10.167 -33.869 -46.025 1.00 30.64 A
ATOM 1588 O THR A 206 -10.056 -32.996 -46.758 1.00 30.14 A
ATOM 1589 N PHE A 207 -10.986 -33.797 -45.050 1.00 29.01 A
ATOM 1590 CA PHE A 207 -11.760 -32.580 -44.738 1.00 27.83 A
ATOM 1591 CB PHE A 207 -12.092 -32.559 -43.231 1.00 23.61 A
ATOM 1592 CG PHE A 207 -13.055 -31.469 -42.814 1.00 20.03 A
ATOM 1593 CD1 PHE A 207 -14.247 -31.263 -43.502 1.00 19.48 A
ATOM 1594 CD2 PHE A 207 -12.788 -30.676 -41.707 1.00 19.62 A

ATOM 1595 CE1 PHE A 207 -15.157 -30.286 -43.095 1.00 19.21 A
ATOM 1596 CE2 PHE A 207 -13.701 -29.692 -41.294 1.00 20.24 A
ATOM 1597 CZ PHE A 207 -14.884 -29.503 -41.993 1.00 19.86 A
ATOM 1598 C PHE A 207 -11.152 -31.220 -45.134 1.00 29.12 A
ATOM 1599 O PHE A 207 -11.700 -30.509 -45.975 1.00 29.17 A
ATOM 1600 N GLU A 208 -10.035 -30.851 -44.513 1.00 30.63 A
ATOM 1601 CA GLU A 208 -9.385 -29.570 -44.791 1.00 31.48 A
ATOM 1602 CB GLU A 208 -8.122 -29.412 -43.932 1.00 32.82 A
ATOM 1603 CG GLU A 208 -8.389 -29.079 -42.469 1.00 34.96 A
ATOM 1604 CD GLU A 208 -7.112 -28.814 -41.685 1.00 37.11 A
ATOM 1605 OE1 GLU A 208 -6.452 -27.781 -41.936 1.00 39.09 A
ATOM 1606 OE2 GLU A 208 -6.764 -29.644 -40.817 1.00 37.55 A
ATOM 1607 C GLU A 208 -9.029 -29.344 -46.254 1.00 31.27 A
ATOM 1608 O GLU A 208 -9.201 -28.242 -46.772 1.00 30.68 A
ATOM 1609 N ASP A 209 -8.518 -30.377 -46.912 1.00 31.49 A
ATOM 1610 CA ASP A 209 -8.151 -30.267 -48.319 1.00 31.77 A
ATOM 1611 CB ASP A 209 -7.342 -31.494 -48.761 1.00 33.73 A
ATOM 1612 CG ASP A 209 -6.050 -31.660 -47.965 1.00 35.68 A
ATOM 1613 OD1 ASP A 209 -5.141 -30.811 -48.114 1.00 35.82 A
ATOM 1614 OD2 ASP A 209 -5.953 -32.637 -47.180 1.00 37.43 A
ATOM 1615 C ASP A 209 -9.414 -30.134 -49.166 1.00 31.09 A
ATOM 1616 O ASP A 209 -9.453 -29.348 -50.120 1.00 30.79 A
ATOM 1617 N ASP A 210 -10.446 -30.897 -48.817 1.00 30.27 A
ATOM 1618 CA ASP A 210 -11.709 -30.821 -49.537 1.00 30.96 A
ATOM 1619 CB ASP A 210 -12.710 -31.822 -48.977 1.00 32.23 A
ATOM 1620 CG ASP A 210 -12.234 -33.251 -49.106 1.00 36.73 A
ATOM 1621 OD1 ASP A 210 -11.490 -33.545 -50.069 1.00 38.00 A
ATOM 1622 OD2 ASP A 210 -12.618 -34.085 -48.251 1.00 39.18 A
ATOM 1623 C ASP A 210 -12.295 -29.410 -49.433 1.00 31.77 A
ATOM 1624 O ASP A 210 -12.963 -28.937 -50.353 1.00 32.47 A
ATOM 1625 N LEU A 211 -12.038 -28.739 -48.312 1.00 31.59 A
ATOM 1626 CA LEU A 211 -12.532 -27.389 -48.088 1.00 29.86 A
ATOM 1627 CB LEU A 211 -12.525 -27.059 -46.598 1.00 30.57 A
ATOM 1628 CG LEU A 211 -13.491 -27.794 -45.666 1.00 30.22 A

ATOM 1629 CD1 LEU A 211 -13.291 -27.280 -44.237 1.00 30.65 A
ATOM 1630 CD2 LEU A 211 -14.925 -27.563 -46.115 1.00 30.10 A
ATOM 1631 C LEU A 211 -11.688 -26.375 -48.819 1.00 29.78 A
ATOM 1632 O LEU A 211 -12.210 -25.413 -49.357 1.00 29.06 A
ATOM 1633 N GLU A 212 -10.378 -26.581 -48.828 1.00 30.65 A
ATOM 1634 CA GLU A 212 -9.494 -25.651 -49.514 1.00 32.04 A
ATOM 1635 CB GLU A 212 -8.021 -25.971 -49.250 1.00 31.48 A
ATOM 1636 CG GLU A 212 -7.097 -24.862 -49.738 1.00 34.76 A
ATOM 1637 CD GLU A 212 -5.613 -25.156 -49.524 1.00 37.96 A
ATOM 1638 OE1 GLU A 212 -4.779 -24.226 -49.665 1.00 38.12 A
ATOM 1639 OE2 GLU A 212 -5.273 -26.319 -49.225 1.00 40.56 A
ATOM 1640 C GLU A 212 -9.773 -25.716 -51.011 1.00 32.66 A
ATOM 1641 O GLU A 212 -9.800 -24.691 -51.700 1.00 31.82 A
ATOM 1642 N HIS A 213 -9.980 -26.933 -51.508 1.00 34.42 A
ATOM 1643 CA HIS A 213 -10.286 -27.140 -52.918 1.00 35.64 A
ATOM 1644 CB HIS A 213 -10.339 -28.643 -53.235 1.00 38.66 A
ATOM 1645 CG HIS A 213 -10.629 -28.953 -54.677 1.00 44.15 A
ATOM 1646 CD2 HIS A 213 -11.760 -29.395 -55.286 1.00 45.39 A
ATOM 1647 ND1 HIS A 213 -9.684 -28.825 -55.677 1.00 46.46 A
ATOM 1648 CE1 HIS A 213 -10.218 -29.179 -56.836 1.00 45.63 A
ATOM 1649 NE2 HIS A 213 -11.476 -29.528 -56.625 1.00 45.48 A
ATOM 1650 C HIS A 213 -11.651 -26.497 -53.183 1.00 34.67 A
ATOM 1651 O HIS A 213 -11.813 -25.721 -54.112 1.00 35.37 A
ATOM 1652 N LEU A 214 -12.629 -26.811 -52.347 1.00 33.40 A
ATOM 1653 CA LEU A 214 -13.966 -26.265 -52.504 1.00 32.39 A
ATOM 1654 CB LEU A 214 -14.865 -26.777 -51.378 1.00 33.01 A
ATOM 1655 CG LEU A 214 -16.033 -27.684 -51.763 1.00 33.48 A
ATOM 1656 CD1 LEU A 214 -16.700 -28.245 -50.512 1.00 33.80 A
ATOM 1657 CD2 LEU A 214 -17.019 -26.884 -52.584 1.00 33.84 A
ATOM 1658 C LEU A 214 -13.994 -24.743 -52.522 1.00 32.41 A
ATOM 1659 O LEU A 214 -14.870 -24.152 -53.148 1.00 32.47 A
ATOM 1660 N TYR A 215 -13.047 -24.103 -51.836 1.00 31.93 A
ATOM 1661 CA TYR A 215 -13.018 -22.639 -51.802 1.00 31.13 A
ATOM 1662 CB TYR A 215 -12.162 -22.117 -50.639 1.00 29.43 A

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ATOM  1663  CG  TYR A 215    -12.300 -20.625 -50.445  1.00 26.75      A
ATOM  1664  CD1 TYR A 215    -13.501 -20.070 -50.010  1.00 26.25      A
ATOM  1665  CE1 TYR A 215    -13.674 -18.693 -49.936  1.00 25.59      A
ATOM  1666  CD2 TYR A 215    -11.269 -19.763 -50.791  1.00 26.05      A
ATOM  1667  CE2 TYR A 215    -11.430 -18.387 -50.723  1.00 24.66      A
ATOM  1668  CZ  TYR A 215    -12.635 -17.856 -50.299  1.00 24.65      A
ATOM  1669  OH  TYR A 215    -12.814 -16.489 -50.267  1.00 22.67      A
ATOM  1670  C   TYR A 215    -12.509 -22.028 -53.108  1.00 32.06      A
ATOM  1671  O   TYR A 215    -13.078 -21.037 -53.581  1.00 33.33      A
ATOM  1672  N   GLN A 216    -11.442 -22.603 -53.678  1.00 31.48      A
ATOM  1673  CA  GLN A 216    -10.875 -22.123 -54.946  1.00 30.38      A
ATOM  1674  CB  GLN A 216     -9.804 -23.069 -55.466  1.00 32.17      A
ATOM  1675  CG  GLN A 216     -8.593 -23.241 -54.590  1.00 36.67      A
ATOM  1676  CD  GLN A 216     -7.585 -24.185 -55.227  1.00 39.16      A
ATOM  1677  OE1 GLN A 216     -7.008 -23.871 -56.273  1.00 42.34      A
ATOM  1678  NE2 GLN A 216     -7.373 -25.350 -54.608  1.00 39.00      A
ATOM  1679  C   GLN A 216    -11.957 -22.030 -56.013  1.00 28.68      A
ATOM  1680  O   GLN A 216    -12.018 -21.062 -56.770  1.00 28.67      A
ATOM  1681  N   GLN A 217    -12.790 -23.060 -56.089  1.00 26.10      A
ATOM  1682  CA  GLN A 217    -13.877 -23.092 -57.048  1.00 24.85      A
ATOM  1683  CB  GLN A 217    -14.706 -24.354 -56.852  1.00 26.43      A
ATOM  1684  CG  GLN A 217    -14.118 -25.587 -57.496  1.00 30.91      A
ATOM  1685  CD  GLN A 217    -14.968 -26.834 -57.274  1.00 34.33      A
ATOM  1686  OE1 GLN A 217    -16.190 -26.814 -57.447  1.00 34.46      A
ATOM  1687  NE2 GLN A 217    -14.314 -27.935 -56.897  1.00 37.13      A
ATOM  1688  C   GLN A 217    -14.788 -21.890 -56.909  1.00 23.15      A
ATOM  1689  O   GLN A 217    -15.319 -21.393 -57.894  1.00 23.64      A
ATOM  1690  N   LEU A 218    -14.968 -21.427 -55.678  1.00 21.40      A
ATOM  1691  CA  LEU A 218    -15.850 -20.299 -55.406  1.00 19.68      A
ATOM  1692  CB  LEU A 218    -16.653 -20.571 -54.126  1.00 19.60      A
ATOM  1693  CG  LEU A 218    -17.485 -21.860 -54.007  1.00 19.16      A
ATOM  1694  CD1 LEU A 218    -17.764 -22.162 -52.554  1.00 20.40      A
ATOM  1695  CD2 LEU A 218    -18.781 -21.717 -54.749  1.00 19.39      A
ATOM  1696  C   LEU A 218    -15.160 -18.941 -55.290  1.00 19.45      A
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ATOM 1697 O LEU A 218 -15.796 -17.915 -55.516 1.00 20.36 A
ATOM 1698 N GLU A 219 -13.872 -18.912 -54.959 1.00 17.63 A
ATOM 1699 CA GLU A 219 -13.195 -17.624 -54.810 1.00 17.26 A
ATOM 1700 CB GLU A 219 -11.667 -17.769 -54.692 1.00 18.09 A
ATOM 1701 CG GLU A 219 -10.997 -16.407 -54.393 1.00 20.56 A
ATOM 1702 CD GLU A 219 -9.559 -16.501 -53.863 1.00 24.38 A
ATOM 1703 OE1 GLU A 219 -9.140 -15.580 -53.111 1.00 25.10 A
ATOM 1704 OE2 GLU A 219 -8.844 -17.474 -54.204 1.00 26.01 A
ATOM 1705 C GLU A 219 -13.498 -16.609 -55.902 1.00 16.81 A
ATOM 1706 O GLU A 219 -13.770 -15.450 -55.603 1.00 15.63 A
ATOM 1707 N PRO A 220 -13.456 -17.026 -57.183 1.00 17.05 A
ATOM 1708 CD PRO A 220 -13.126 -18.365 -57.701 1.00 16.40 A
ATOM 1709 CA PRO A 220 -13.730 -16.114 -58.298 1.00 15.17 A
ATOM 1710 CB PRO A 220 -13.701 -17.032 -59.506 1.00 14.61 A
ATOM 1711 CG PRO A 220 -12.723 -18.053 -59.109 1.00 15.77 A
ATOM 1712 C PRO A 220 -15.077 -15.443 -58.128 1.00 14.32 A
ATOM 1713 O PRO A 220 -15.251 -14.274 -58.475 1.00 12.98 A
ATOM 1714 N LEU A 221 -16.025 -16.196 -57.582 1.00 12.90 A
ATOM 1715 CA LEU A 221 -17.362 -15.678 -57.363 1.00 13.21 A
ATOM 1716 CB LEU A 221 -18.258 -16.755 -56.756 1.00 12.43 A
ATOM 1717 CG LEU A 221 -19.442 -17.271 -57.568 1.00 10.59 A
ATOM 1718 CD1 LEU A 221 -18.936 -18.069 -58.742 1.00 11.21 A
ATOM 1719 CD2 LEU A 221 -20.320 -18.133 -56.695 1.00 10.88 A
ATOM 1720 C LEU A 221 -17.300 -14.486 -56.435 1.00 14.12 A
ATOM 1721 O LEU A 221 -17.850 -13.429 -56.746 1.00 15.39 A
ATOM 1722 N TYR A 222 -16.623 -14.656 -55.299 1.00 14.17 A
ATOM 1723 CA TYR A 222 -16.493 -13.587 -54.312 1.00 14.92 A
ATOM 1724 CB TYR A 222 -15.769 -14.077 -53.049 1.00 14.94 A
ATOM 1725 CG TYR A 222 -15.613 -12.997 -51.996 1.00 15.02 A
ATOM 1726 CD1 TYR A 222 -16.726 -12.406 -51.420 1.00 14.51 A
ATOM 1727 CE1 TYR A 222 -16.595 -11.392 -50.497 1.00 14.97 A
ATOM 1728 CD2 TYR A 222 -14.357 -12.540 -51.612 1.00 14.88 A
ATOM 1729 CE2 TYR A 222 -14.214 -11.519 -50.681 1.00 13.42 A
ATOM 1730 CZ TYR A 222 -15.338 -10.952 -50.128 1.00 14.66 A

ATOM 1731 OH TYR A 222 -15.222 -9.957 -49.185 1.00 14.60 A
ATOM 1732 C TYR A 222 -15.742 -12.397 -54.877 1.00 15.63 A
ATOM 1733 O TYR A 222 -16.262 -11.291 -54.884 1.00 15.35 A
ATOM 1734 N LEU A 223 -14.516 -12.631 -55.336 1.00 16.33 A
ATOM 1735 CA LEU A 223 -13.681 -11.582 -55.911 1.00 17.18 A
ATOM 1736 CB LEU A 223 -12.520 -12.199 -56.681 1.00 17.93 A
ATOM 1737 CG LEU A 223 -11.505 -12.977 -55.853 1.00 19.84 A
ATOM 1738 CD1 LEU A 223 -10.408 -13.506 -56.780 1.00 21.41 A
ATOM 1739 CD2 LEU A 223 -10.909 -12.079 -54.776 1.00 20.01 A
ATOM 1740 C LEU A 223 -14.452 -10.647 -56.841 1.00 17.64 A
ATOM 1741 O LEU A 223 -14.187 -9.440 -56.872 1.00 16.48 A
ATOM 1742 N ASN A 224 -15.397 -11.198 -57.600 1.00 18.65 A
ATOM 1743 CA ASN A 224 -16.176 -10.374 -58.503 1.00 20.39 A
ATOM 1744 CB ASN A 224 -16.752 -11.199 -59.648 1.00 21.74 A
ATOM 1745 CG ASN A 224 -15.840 -11.199 -60.864 1.00 24.90 A
ATOM 1746 OD1 ASN A 224 -15.636 -10.161 -61.521 1.00 25.95 A
ATOM 1747 ND2 ASN A 224 -15.264 -12.358 -61.160 1.00 26.25 A
ATOM 1748 C ASN A 224 -17.268 -9.613 -57.791 1.00 20.79 A
ATOM 1749 O ASN A 224 -17.481 -8.429 -58.081 1.00 22.75 A
ATOM 1750 N LEU A 225 -17.967 -10.261 -56.863 1.00 19.82 A
ATOM 1751 CA LEU A 225 -18.994 -9.537 -56.118 1.00 18.61 A
ATOM 1752 CB LEU A 225 -19.674 -10.452 -55.098 1.00 16.99 A
ATOM 1753 CG LEU A 225 -20.771 -9.750 -54.293 1.00 17.82 A
ATOM 1754 CD1 LEU A 225 -21.827 -9.178 -55.243 1.00 15.88 A
ATOM 1755 CD2 LEU A 225 -21.385 -10.727 -53.300 1.00 17.09 A
ATOM 1756 C LEU A 225 -18.277 -8.385 -55.390 1.00 17.52 A
ATOM 1757 O LEU A 225 -18.796 -7.282 -55.253 1.00 16.16 A
ATOM 1758 N HIS A 226 -17.061 -8.679 -54.950 1.00 17.71 A
ATOM 1759 CA HIS A 226 -16.215 -7.747 -54.236 1.00 18.86 A
ATOM 1760 CB HIS A 226 -14.933 -8.466 -53.801 1.00 19.59 A
ATOM 1761 CG HIS A 226 -13.997 -7.618 -52.999 1.00 20.50 A
ATOM 1762 CD2 HIS A 226 -13.465 -7.801 -51.770 1.00 20.55 A
ATOM 1763 ND1 HIS A 226 -13.449 -6.449 -53.481 1.00 21.68 A
ATOM 1764 CE1 HIS A 226 -12.617 -5.952 -52.585 1.00 21.11 A

ATOM 1765 NE2 HIS A 226 -12.608 -6.753 -51.538 1.00 20.14 A
ATOM 1766 C HIS A 226 -15.885 -6.503 -55.058 1.00 19.34 A
ATOM 1767 O HIS A 226 -16.320 -5.410 -54.705 1.00 20.11 A
ATOM 1768 N ALA A 227 -15.122 -6.649 -56.143 1.00 19.62 A
ATOM 1769 CA ALA A 227 -14.765 -5.490 -56.974 1.00 19.73 A
ATOM 1770 CB ALA A 227 -13.999 -5.950 -58.203 1.00 17.75 A
ATOM 1771 C ALA A 227 -15.980 -4.635 -57.391 1.00 19.72 A
ATOM 1772 O ALA A 227 -15.884 -3.405 -57.465 1.00 18.83 A
ATOM 1773 N PHE A 228 -17.114 -5.295 -57.639 1.00 18.98 A
ATOM 1774 CA PHE A 228 -18.360 -4.641 -58.049 1.00 19.35 A
ATOM 1775 CB PHE A 228 -19.403 -5.707 -58.409 1.00 20.24 A
ATOM 1776 CG PHE A 228 -20.707 -5.148 -58.931 1.00 22.58 A
ATOM 1777 CD1 PHE A 228 -20.804 -4.640 -60.224 1.00 22.95 A
ATOM 1778 CD2 PHE A 228 -21.853 -5.159 -58.137 1.00 23.62 A
ATOM 1779 CE1 PHE A 228 -22.029 -4.155 -60.721 1.00 22.86 A
ATOM 1780 CE2 PHE A 228 -23.074 -4.680 -58.622 1.00 23.72 A
ATOM 1781 CZ PHE A 228 -23.161 -4.178 -59.917 1.00 23.32 A
ATOM 1782 C PHE A 228 -18.914 -3.740 -56.957 1.00 19.51 A
ATOM 1783 O PHE A 228 -19.348 -2.624 -57.218 1.00 20.82 A
ATOM 1784 N VAL A 229 -18.914 -4.244 -55.729 1.00 18.14 A
ATOM 1785 CA VAL A 229 -19.407 -3.489 -54.592 1.00 16.73 A
ATOM 1786 CB VAL A 229 -19.636 -4.403 -53.377 1.00 17.01 A
ATOM 1787 CG1 VAL A 229 -19.956 -3.567 -52.146 1.00 16.68 A
ATOM 1788 CG2 VAL A 229 -20.773 -5.373 -53.675 1.00 15.78 A
ATOM 1789 C VAL A 229 -18.393 -2.427 -54.229 1.00 16.22 A
ATOM 1790 O VAL A 229 -18.746 -1.301 -53.924 1.00 15.22 A
ATOM 1791 N ARG A 230 -17.124 -2.795 -54.267 1.00 16.84 A
ATOM 1792 CA ARG A 230 -16.073 -1.850 -53.948 1.00 18.28 A
ATOM 1793 CB ARG A 230 -14.692 -2.486 -54.117 1.00 16.72 A
ATOM 1794 CG ARG A 230 -13.549 -1.565 -53.704 1.00 17.78 A
ATOM 1795 CD ARG A 230 -12.196 -2.240 -53.844 1.00 20.55 A
ATOM 1796 NE ARG A 230 -11.911 -2.616 -55.224 1.00 22.59 A
ATOM 1797 CZ ARG A 230 -10.983 -3.499 -55.572 1.00 22.87 A
ATOM 1798 NH1 ARG A 230 -10.253 -4.099 -54.649 1.00 22.74 A

ATOM 1799 NH2 ARG A 230 -10.791 -3.791 -56.845 1.00 26.21 A
ATOM 1800 C ARG A 230 -16.206 -0.652 -54.878 1.00 19.38 A
ATOM 1801 O ARG A 230 -15.901 0.480 -54.496 1.00 20.34 A
ATOM 1802 N ARG A 231 -16.658 -0.897 -56.104 1.00 19.18 A
ATOM 1803 CA ARG A 231 -16.833 0.196 -57.048 1.00 19.52 A
ATOM 1804 CB ARG A 231 -17.038 -0.341 -58.473 1.00 22.02 A
ATOM 1805 CG ARG A 231 -17.794 0.599 -59.424 1.00 23.90 A
ATOM 1806 CD ARG A 231 -16.992 1.814 -59.835 1.00 24.71 A
ATOM 1807 NE ARG A 231 -16.221 1.551 -61.040 1.00 28.82 A
ATOM 1808 CZ ARG A 231 -15.664 2.489 -61.802 1.00 30.31 A
ATOM 1809 NH1 ARG A 231 -14.979 2.142 -62.886 1.00 30.51 A
ATOM 1810 NH2 ARG A 231 -15.798 3.772 -61.484 1.00 30.50 A
ATOM 1811 C ARG A 231 -18.043 1.000 -56.594 1.00 18.41 A
ATOM 1812 O ARG A 231 -17.957 2.207 -56.414 1.00 16.85 A
ATOM 1813 N ALA A 232 -19.169 0.327 -56.395 1.00 18.30 A
ATOM 1814 CA ALA A 232 -20.367 1.016 -55.950 1.00 19.22 A
ATOM 1815 CB ALA A 232 -21.460 0.021 -55.647 1.00 18.29 A
ATOM 1816 C ALA A 232 -20.071 1.854 -54.707 1.00 20.02 A
ATOM 1817 O ALA A 232 -20.560 2.974 -54.581 1.00 20.83 A
ATOM 1818 N LEU A 233 -19.273 1.318 -53.785 1.00 20.27 A
ATOM 1819 CA LEU A 233 -18.948 2.055 -52.568 1.00 20.99 A
ATOM 1820 CB LEU A 233 -18.268 1.148 -51.530 1.00 21.27 A
ATOM 1821 CG LEU A 233 -19.198 0.240 -50.709 1.00 21.28 A
ATOM 1822 CD1 LEU A 233 -18.391 -0.572 -49.722 1.00 21.97 A
ATOM 1823 CD2 LEU A 233 -20.232 1.074 -49.972 1.00 20.87 A
ATOM 1824 C LEU A 233 -18.084 3.272 -52.853 1.00 21.85 A
ATOM 1825 O LEU A 233 -18.303 4.338 -52.280 1.00 22.22 A
ATOM 1826 N HIS A 234 -17.104 3.120 -53.734 1.00 23.04 A
ATOM 1827 CA HIS A 234 -16.240 4.242 -54.094 1.00 24.21 A
ATOM 1828 CB HIS A 234 -15.310 3.831 -55.241 1.00 23.12 A
ATOM 1829 CG HIS A 234 -14.398 4.919 -55.715 1.00 24.28 A
ATOM 1830 CD2 HIS A 234 -13.137 5.253 -55.345 1.00 25.28 A
ATOM 1831 ND1 HIS A 234 -14.749 5.807 -56.708 1.00 25.58 A
ATOM 1832 CE1 HIS A 234 -13.745 6.639 -56.931 1.00 25.62 A

ATOM 1833 NE2 HIS A 234 -12.754 6.324 -56.118 1.00 24.61 A
ATOM 1834 C HIS A 234 -17.145 5.394 -54.525 1.00 26.31 A
ATOM 1835 O HIS A 234 -17.010 6.536 -54.066 1.00 26.73 A
ATOM 1836 N ARG A 235 -18.095 5.061 -55.391 1.00 28.34 A
ATOM 1837 CA ARG A 235 -19.063 6.010 -55.925 1.00 29.79 A
ATOM 1838 CB ARG A 235 -20.129 5.247 -56.710 1.00 30.15 A
ATOM 1839 CG ARG A 235 -20.588 5.924 -57.981 1.00 35.12 A
ATOM 1840 CD ARG A 235 -20.542 4.948 -59.173 1.00 38.02 A
ATOM 1841 NE ARG A 235 -21.241 3.693 -58.880 1.00 42.20 A
ATOM 1842 CZ ARG A 235 -21.171 2.592 -59.632 1.00 43.47 A
ATOM 1843 NH1 ARG A 235 -20.430 2.580 -60.742 1.00 42.94 A
ATOM 1844 NH2 ARG A 235 -21.827 1.491 -59.258 1.00 44.85 A
ATOM 1845 C ARG A 235 -19.738 6.869 -54.858 1.00 30.19 A
ATOM 1846 O ARG A 235 -20.067 8.023 -55.115 1.00 31.22 A
ATOM 1847 N ARG A 236 -19.933 6.313 -53.662 1.00 30.20 A
ATOM 1848 CA ARG A 236 -20.617 7.031 -52.582 1.00 29.55 A
ATOM 1849 CB ARG A 236 -21.591 6.076 -51.879 1.00 28.72 A
ATOM 1850 CG ARG A 236 -21.603 6.173 -50.363 1.00 29.76 A
ATOM 1851 CD ARG A 236 -22.687 7.107 -49.824 1.00 30.73 A
ATOM 1852 NE ARG A 236 -24.047 6.662 -50.144 1.00 30.46 A
ATOM 1853 CZ ARG A 236 -25.147 7.105 -49.533 1.00 29.88 A
ATOM 1854 NH1 ARG A 236 -25.057 8.006 -48.559 1.00 29.80 A
ATOM 1855 NH2 ARG A 236 -26.338 6.657 -49.902 1.00 28.85 A
ATOM 1856 C ARG A 236 -19.747 7.738 -51.545 1.00 28.16 A
ATOM 1857 O ARG A 236 -20.078 8.834 -51.112 1.00 27.16 A
ATOM 1858 N TYR A 237 -18.645 7.118 -51.144 1.00 27.62 A
ATOM 1859 CA TYR A 237 -17.778 7.727 -50.140 1.00 27.49 A
ATOM 1860 CB TYR A 237 -17.281 6.681 -49.146 1.00 25.75 A
ATOM 1861 CG TYR A 237 -18.401 5.983 -48.419 1.00 24.79 A
ATOM 1862 CD1 TYR A 237 -18.678 4.641 -48.667 1.00 24.20 A
ATOM 1863 CE1 TYR A 237 -19.705 3.993 -48.023 1.00 23.82 A
ATOM 1864 CD2 TYR A 237 -19.195 6.665 -47.497 1.00 23.05 A
ATOM 1865 CE2 TYR A 237 -20.236 6.022 -46.845 1.00 23.34 A
ATOM 1866 CZ TYR A 237 -20.482 4.679 -47.114 1.00 24.38 A

ATOM 1867 OH TYR A 237 -21.485 3.994 -46.465 1.00 25.67 A
ATOM 1868 C TYR A 237 -16.597 8.445 -50.745 1.00 27.96 A
ATOM 1869 O TYR A 237 -15.905 9.201 -50.067 1.00 27.80 A
ATOM 1870 N GLY A 238 -16.347 8.194 -52.022 1.00 28.93 A
ATOM 1871 CA GLY A 238 -15.254 8.884 -52.670 1.00 30.62 A
ATOM 1872 C GLY A 238 -13.929 8.180 -52.823 1.00 31.40 A
ATOM 1873 O GLY A 238 -13.807 6.981 -52.630 1.00 31.57 A
ATOM 1874 N ASP A 239 -12.920 8.972 -53.157 1.00 32.87 A
ATOM 1875 CA ASP A 239 -11.583 8.472 -53.407 1.00 34.23 A
ATOM 1876 CB ASP A 239 -10.965 9.289 -54.533 1.00 35.99 A
ATOM 1877 CG ASP A 239 -9.996 8.482 -55.350 1.00 39.51 A
ATOM 1878 OD1 ASP A 239 -10.449 7.482 -55.970 1.00 40.93 A
ATOM 1879 OD2 ASP A 239 -8.790 8.842 -55.358 1.00 41.81 A
ATOM 1880 C ASP A 239 -10.639 8.456 -52.210 1.00 34.21 A
ATOM 1881 O ASP A 239 -9.596 7.795 -52.249 1.00 33.86 A
ATOM 1882 N ALA A 240 -10.997 9.187 -51.157 1.00 34.02 A
ATOM 1883 CA ALA A 240 -10.175 9.238 -49.954 1.00 32.33 A
ATOM 1884 CB ALA A 240 -10.491 10.490 -49.146 1.00 32.59 A
ATOM 1885 C ALA A 240 -10.410 8.003 -49.095 1.00 31.67 A
ATOM 1886 O ALA A 240 -9.465 7.442 -48.547 1.00 31.77 A
ATOM 1887 N TYR A 241 -11.664 7.568 -49.000 1.00 30.56 A
ATOM 1888 CA TYR A 241 -11.996 6.430 -48.167 1.00 30.16 A
ATOM 1889 CB TYR A 241 -13.308 6.700 -47.447 1.00 33.72 A
ATOM 1890 CG TYR A 241 -13.199 7.863 -46.493 1.00 38.47 A
ATOM 1891 CD1 TYR A 241 -14.240 8.778 -46.348 1.00 39.86 A
ATOM 1892 CE1 TYR A 241 -14.105 9.906 -45.534 1.00 42.05 A
ATOM 1893 CD2 TYR A 241 -12.014 8.097 -45.788 1.00 40.76 A
ATOM 1894 CE2 TYR A 241 -11.867 9.224 -44.976 1.00 42.77 A
ATOM 1895 CZ TYR A 241 -12.913 10.127 -44.855 1.00 43.05 A
ATOM 1896 OH TYR A 241 -12.755 11.264 -44.084 1.00 44.78 A
ATOM 1897 C TYR A 241 -12.036 5.075 -48.833 1.00 29.36 A
ATOM 1898 O TYR A 241 -11.894 4.060 -48.151 1.00 29.97 A
ATOM 1899 N ILE A 242 -12.243 5.023 -50.145 1.00 27.23 A
ATOM 1900 CA ILE A 242 -12.247 3.728 -50.822 1.00 24.93 A

ATOM 1901 CB ILE A 242 -13.614 3.416 -51.468 1.00 23.59 A
ATOM 1902 CG2 ILE A 242 -13.531 2.112 -52.246 1.00 22.19 A
ATOM 1903 CG1 ILE A 242 -14.701 3.283 -50.395 1.00 23.82 A
ATOM 1904 CD1 ILE A 242 -14.634 1.996 -49.572 1.00 23.69 A
ATOM 1905 C ILE A 242 -11.158 3.664 -51.890 1.00 24.88 A
ATOM 1906 O ILE A 242 -11.046 4.554 -52.726 1.00 25.34 A
ATOM 1907 N ASN A 243 -10.343 2.614 -51.839 1.00 25.53 A
ATOM 1908 CA ASN A 243 -9.262 2.420 -52.800 1.00 24.99 A
ATOM 1909 CB ASN A 243 -7.993 1.968 -52.093 1.00 23.45 A
ATOM 1910 CG ASN A 243 -6.866 1.702 -53.048 1.00 22.10 A
ATOM 1911 OD1 ASN A 243 -7.079 1.242 -54.164 1.00 24.32 A
ATOM 1912 ND2 ASN A 243 -5.650 1.972 -52.613 1.00 20.21 A
ATOM 1913 C ASN A 243 -9.690 1.345 -53.789 1.00 25.06 A
ATOM 1914 O ASN A 243 -9.888 0.184 -53.408 1.00 24.68 A
ATOM 1915 N LEU A 244 -9.819 1.744 -55.054 1.00 23.94 A
ATOM 1916 CA LEU A 244 -10.248 0.848 -56.125 1.00 24.23 A
ATOM 1917 CB LEU A 244 -10.497 1.669 -57.394 1.00 24.31 A
ATOM 1918 CG LEU A 244 -11.687 2.621 -57.325 1.00 23.51 A
ATOM 1919 CD1 LEU A 244 -11.731 3.523 -58.545 1.00 23.41 A
ATOM 1920 CD2 LEU A 244 -12.962 1.805 -57.209 1.00 23.41 A
ATOM 1921 C LEU A 244 -9.281 -0.305 -56.420 1.00 24.46 A
ATOM 1922 O LEU A 244 -9.556 -1.169 -57.255 1.00 25.01 A
ATOM 1923 N ARG A 245 -8.158 -0.308 -55.756 1.00 24.99 A
ATOM 1924 CA ARG A 245 -7.172 -1.326 -55.891 1.00 26.08 A
ATOM 1925 CB ARG A 245 -5.990 -0.689 -56.467 1.00 29.72 A
ATOM 1926 CG ARG A 245 -5.726 -0.908 -57.869 1.00 33.61 A
ATOM 1927 CD ARG A 245 -5.639 0.310 -58.543 1.00 37.88 A
ATOM 1928 NE ARG A 245 -4.312 0.632 -58.987 1.00 41.48 A
ATOM 1929 CZ ARG A 245 -3.651 1.666 -58.567 1.00 43.64 A
ATOM 1930 NH1 ARG A 245 -4.188 2.451 -57.661 1.00 45.14 A
ATOM 1931 NH2 ARG A 245 -2.462 1.921 -59.032 1.00 42.67 A
ATOM 1932 C ARG A 245 -6.697 -1.827 -54.575 1.00 25.61 A
ATOM 1933 O ARG A 245 -5.640 -2.313 -54.516 1.00 25.99 A
ATOM 1934 N GLY A 246 -7.462 -1.622 -53.508 1.00 23.55 A

ATOM 1935 CA GLY A 246 -7.100 -2.060 -52.176 1.00 21.78 A
ATOM 1936 C GLY A 246 -8.263 -2.749 -51.506 1.00 20.67 A
ATOM 1937 O GLY A 246 -9.354 -2.775 -52.073 1.00 22.09 A
ATOM 1938 N PRO A 247 -8.077 -3.305 -50.296 1.00 18.33 A
ATOM 1939 CD PRO A 247 -6.892 -3.206 -49.426 1.00 16.92 A
ATOM 1940 CA PRO A 247 -9.162 -3.989 -49.602 1.00 17.28 A
ATOM 1941 CB PRO A 247 -8.452 -4.638 -48.436 1.00 15.74 A
ATOM 1942 CG PRO A 247 -7.435 -3.639 -48.094 1.00 16.89 A
ATOM 1943 C PRO A 247 -10.170 -2.961 -49.167 1.00 18.49 A
ATOM 1944 O PRO A 247 -9.819 -1.797 -48.985 1.00 19.02 A
ATOM 1945 N ILE A 248 -11.424 -3.377 -49.021 1.00 19.95 A
ATOM 1946 CA ILE A 248 -12.486 -2.462 -48.597 1.00 20.23 A
ATOM 1947 CB ILE A 248 -13.865 -3.024 -48.934 1.00 17.37 A
ATOM 1948 CG2 ILE A 248 -14.922 -2.037 -48.542 1.00 16.91 A
ATOM 1949 CG1 ILE A 248 -13.936 -3.378 -50.414 1.00 16.65 A
ATOM 1950 CD1 ILE A 248 -15.157 -4.196 -50.794 1.00 15.12 A
ATOM 1951 C ILE A 248 -12.429 -2.288 -47.085 1.00 21.54 A
ATOM 1952 O ILE A 248 -12.104 -3.230 -46.369 1.00 23.11 A
ATOM 1953 N PRO A 249 -12.727 -1.081 -46.580 1.00 22.23 A
ATOM 1954 CD PRO A 249 -12.834 0.173 -47.347 1.00 22.95 A
ATOM 1955 CA PRO A 249 -12.713 -0.808 -45.134 1.00 22.55 A
ATOM 1956 CB PRO A 249 -12.881 0.710 -45.069 1.00 24.10 A
ATOM 1957 CG PRO A 249 -12.273 1.179 -46.377 1.00 23.02 A
ATOM 1958 C PRO A 249 -13.871 -1.562 -44.451 1.00 21.70 A
ATOM 1959 O PRO A 249 -15.035 -1.330 -44.755 1.00 21.66 A
ATOM 1960 N ALA A 250 -13.525 -2.442 -43.517 1.00 21.79 A
ATOM 1961 CA ALA A 250 -14.469 -3.315 -42.803 1.00 22.32 A
ATOM 1962 CB ALA A 250 -13.716 -4.054 -41.708 1.00 21.30 A
ATOM 1963 C ALA A 250 -15.801 -2.807 -42.234 1.00 22.16 A
ATOM 1964 O ALA A 250 -16.661 -3.622 -41.882 1.00 22.88 A
ATOM 1965 N HIS A 251 -16.002 -1.496 -42.149 1.00 21.29 A
ATOM 1966 CA HIS A 251 -17.241 -0.976 -41.582 1.00 20.38 A
ATOM 1967 CB HIS A 251 -16.922 0.130 -40.588 1.00 17.81 A
ATOM 1968 CG HIS A 251 -16.249 1.320 -41.199 1.00 15.99 A

ATOM 1969 CD2 HIS A 251 -16.609 2.625 -41.239 1.00 14.54 A
ATOM 1970 ND1 HIS A 251 -15.032 1.238 -41.842 1.00 15.78 A
ATOM 1971 CE1 HIS A 251 -14.672 2.441 -42.249 1.00 15.30 A
ATOM 1972 NE2 HIS A 251 -15.610 3.300 -41.895 1.00 14.34 A
ATOM 1973 C HIS A 251 -18.265 -0.444 -42.573 1.00 22.18 A
ATOM 1974 O HIS A 251 -19.306 0.084 -42.167 1.00 23.18 A
ATOM 1975 N LEU A 252 -17.991 -0.587 -43.867 1.00 23.49 A
ATOM 1976 CA LEU A 252 -18.893 -0.066 -44.890 1.00 24.01 A
ATOM 1977 CB LEU A 252 -18.080 0.665 -45.944 1.00 23.45 A
ATOM 1978 CG LEU A 252 -17.175 1.707 -45.295 1.00 24.28 A
ATOM 1979 CD1 LEU A 252 -16.230 2.280 -46.328 1.00 25.33 A
ATOM 1980 CD2 LEU A 252 -18.019 2.796 -44.658 1.00 23.14 A
ATOM 1981 C LEU A 252 -19.800 -1.083 -45.566 1.00 23.89 A
ATOM 1982 O LEU A 252 -20.723 -0.694 -46.283 1.00 23.72 A
ATOM 1983 N LEU A 253 -19.551 -2.373 -45.340 1.00 23.56 A
ATOM 1984 CA LEU A 253 -20.369 -3.413 -45.967 1.00 23.63 A
ATOM 1985 CB LEU A 253 -19.592 -4.736 -46.036 1.00 22.61 A
ATOM 1986 CG LEU A 253 -18.524 -4.854 -47.136 1.00 21.86 A
ATOM 1987 CD1 LEU A 253 -19.040 -4.201 -48.397 1.00 19.44 A
ATOM 1988 CD2 LEU A 253 -17.244 -4.190 -46.726 1.00 22.98 A
ATOM 1989 C LEU A 253 -21.744 -3.634 -45.328 1.00 24.62 A
ATOM 1990 O LEU A 253 -22.450 -4.594 -45.655 1.00 23.77 A
ATOM 1991 N GLY A 254 -22.111 -2.737 -44.412 1.00 25.84 A
ATOM 1992 CA GLY A 254 -23.413 -2.806 -43.757 1.00 26.23 A
ATOM 1993 C GLY A 254 -23.642 -3.820 -42.649 1.00 26.43 A
ATOM 1994 O GLY A 254 -24.792 -4.077 -42.278 1.00 26.24 A
ATOM 1995 N ASP A 255 -22.562 -4.387 -42.118 1.00 25.95 A
ATOM 1996 CA ASP A 255 -22.645 -5.378 -41.053 1.00 25.40 A
ATOM 1997 CB ASP A 255 -22.907 -6.753 -41.661 1.00 25.91 A
ATOM 1998 CG ASP A 255 -22.713 -7.864 -40.667 1.00 27.96 A
ATOM 1999 OD1 ASP A 255 -21.542 -8.137 -40.322 1.00 27.24 A
ATOM 2000 OD2 ASP A 255 -23.723 -8.457 -40.224 1.00 30.03 A
ATOM 2001 C ASP A 255 -21.344 -5.369 -40.248 1.00 25.58 A
ATOM 2002 O ASP A 255 -20.259 -5.402 -40.816 1.00 26.44 A

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ATOM  2003  N   MET A 256    -21.466  -5.320 -38.925  1.00 25.26      A
ATOM  2004  CA  MET A 256    -20.324  -5.256 -38.011  1.00 24.59      A
ATOM  2005  CB  MET A 256    -20.807  -5.577 -36.582  1.00 24.40      A
ATOM  2006  CG  MET A 256    -19.795  -5.338 -35.466  1.00 24.15      A
ATOM  2007  SD  MET A 256    -19.032  -3.673 -35.411  1.00 28.25      A
ATOM  2008  CE  MET A 256    -20.276  -2.681 -34.581  1.00 26.00      A
ATOM  2009  C   MET A 256    -19.088  -6.100 -38.363  1.00 24.12      A
ATOM  2010  O   MET A 256    -17.957  -5.700 -38.088  1.00 22.54      A
ATOM  2011  N   TRP A 257    -19.288  -7.250 -38.992  1.00 24.84      A
ATOM  2012  CA  TRP A 257    -18.160  -8.110 -39.332  1.00 25.64      A
ATOM  2013  CB  TRP A 257    -18.387  -9.506 -38.748  1.00 26.31      A
ATOM  2014  CG  TRP A 257    -18.674  -9.427 -37.286  1.00 27.74      A
ATOM  2015  CD2 TRP A 257    -19.966  -9.393 -36.665  1.00 27.64      A
ATOM  2016  CE2 TRP A 257    -19.766  -9.124 -35.294  1.00 28.34      A
ATOM  2017  CE3 TRP A 257    -21.276  -9.555 -37.138  1.00 26.67      A
ATOM  2018  CD1 TRP A 257    -17.765  -9.197 -36.287  1.00 28.15      A
ATOM  2019  NE1 TRP A 257    -18.415  -9.009 -35.091  1.00 28.29      A
ATOM  2020  CZ2 TRP A 257    -20.828  -9.011 -34.391  1.00 27.86      A
ATOM  2021  CZ3 TRP A 257    -22.324  -9.442 -36.243  1.00 26.13      A
ATOM  2022  CH2 TRP A 257    -22.096  -9.172 -34.884  1.00 27.49      A
ATOM  2023  C   TRP A 257    -17.935  -8.194 -40.822  1.00 25.79      A
ATOM  2024  O   TRP A 257    -16.976  -8.812 -41.269  1.00 26.17      A
ATOM  2025  N   ALA A 258    -18.826  -7.561 -41.577  1.00 26.43      A
ATOM  2026  CA  ALA A 258    -18.757  -7.544 -43.033  1.00 27.30      A
ATOM  2027  CB  ALA A 258    -17.386  -7.044 -43.491  1.00 26.85      A
ATOM  2028  C   ALA A 258    -19.000  -8.944 -43.568  1.00 28.20      A
ATOM  2029  O   ALA A 258    -18.509  -9.297 -44.636  1.00 29.54      A
ATOM  2030  N   GLN A 259    -19.765  -9.740 -42.830  1.00 28.07      A
ATOM  2031  CA  GLN A 259    -20.029 -11.109 -43.235  1.00 28.16      A
ATOM  2032  CB  GLN A 259    -20.311 -11.981 -42.003  1.00 29.12      A
ATOM  2033  CG  GLN A 259    -21.475 -11.527 -41.126  1.00 29.26      A
ATOM  2034  CD  GLN A 259    -21.774 -12.515 -40.018  1.00 29.00      A
ATOM  2035  OE1 GLN A 259    -20.900 -12.839 -39.221  1.00 30.26      A
ATOM  2036  NE2 GLN A 259    -23.010 -13.004 -39.965  1.00 29.36      A
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ATOM 2037 C GLN A 259 -21.152 -11.264 -44.257 1.00 28.46 A
ATOM 2038 O GLN A 259 -21.252 -12.305 -44.908 1.00 28.34 A
ATOM 2039 N SER A 260 -22.007 -10.255 -44.387 1.00 27.96 A
ATOM 2040 CA SER A 260 -23.087 -10.296 -45.373 1.00 28.23 A
ATOM 2041 CB SER A 260 -24.305 -11.049 -44.834 1.00 27.92 A
ATOM 2042 OG SER A 260 -24.716 -10.530 -43.589 1.00 30.62 A
ATOM 2043 C SER A 260 -23.438 -8.856 -45.741 1.00 27.80 A
ATOM 2044 O SER A 260 -23.689 -8.023 -44.864 1.00 29.05 A
ATOM 2045 N TRP A 261 -23.457 -8.570 -47.041 1.00 26.57 A
ATOM 2046 CA TRP A 261 -23.698 -7.220 -47.525 1.00 25.94 A
ATOM 2047 CB TRP A 261 -22.712 -6.927 -48.665 1.00 26.22 A
ATOM 2048 CG TRP A 261 -21.312 -7.449 -48.398 1.00 25.14 A
ATOM 2049 CD2 TRP A 261 -20.223 -7.512 -49.325 1.00 24.03 A
ATOM 2050 CE2 TRP A 261 -19.115 -8.053 -48.632 1.00 24.07 A
ATOM 2051 CE3 TRP A 261 -20.072 -7.163 -50.673 1.00 23.98 A
ATOM 2052 CD1 TRP A 261 -20.829 -7.940 -47.216 1.00 25.00 A
ATOM 2053 NE1 TRP A 261 -19.518 -8.304 -47.347 1.00 23.79 A
ATOM 2054 CZ2 TRP A 261 -17.868 -8.254 -49.242 1.00 23.28 A
ATOM 2055 CZ3 TRP A 261 -18.834 -7.363 -51.280 1.00 24.44 A
ATOM 2056 CH2 TRP A 261 -17.747 -7.905 -50.561 1.00 23.12 A
ATOM 2057 C TRP A 261 -25.117 -6.871 -47.959 1.00 25.26 A
ATOM 2058 O TRP A 261 -25.355 -5.766 -48.433 1.00 25.24 A
ATOM 2059 N GLU A 262 -26.057 -7.795 -47.782 1.00 25.04 A
ATOM 2060 CA GLU A 262 -27.453 -7.567 -48.169 1.00 24.87 A
ATOM 2061 CB GLU A 262 -28.317 -8.775 -47.777 1.00 26.29 A
ATOM 2062 CG GLU A 262 -27.844 -9.486 -46.538 1.00 31.88 A
ATOM 2063 CD GLU A 262 -28.950 -9.659 -45.519 1.00 36.83 A
ATOM 2064 OE1 GLU A 262 -29.555 -8.630 -45.120 1.00 39.12 A
ATOM 2065 OE2 GLU A 262 -29.215 -10.819 -45.110 1.00 39.09 A
ATOM 2066 C GLU A 262 -28.093 -6.292 -47.630 1.00 23.59 A
ATOM 2067 O GLU A 262 -29.167 -5.907 -48.080 1.00 22.95 A
ATOM 2068 N ASN A 263 -27.447 -5.637 -46.670 1.00 23.44 A
ATOM 2069 CA ASN A 263 -27.990 -4.402 -46.113 1.00 23.32 A
ATOM 2070 CB ASN A 263 -27.619 -4.245 -44.630 1.00 24.10 A

ATOM 2071 CG ASN A 263 -28.667 -4.823 -43.695 1.00 25.41 A
ATOM 2072 OD1 ASN A 263 -29.834 -4.441 -43.741 1.00 25.12 A
ATOM 2073 ND2 ASN A 263 -28.254 -5.745 -42.840 1.00 26.98 A
ATOM 2074 C ASN A 263 -27.528 -3.173 -46.885 1.00 23.36 A
ATOM 2075 O ASN A 263 -27.873 -2.061 -46.527 1.00 23.63 A
ATOM 2076 N ILE A 264 -26.729 -3.355 -47.927 1.00 23.51 A
ATOM 2077 CA ILE A 264 -26.312 -2.208 -48.717 1.00 23.66 A
ATOM 2078 CB ILE A 264 -24.767 -2.033 -48.722 1.00 21.36 A
ATOM 2079 CG2 ILE A 264 -24.289 -1.678 -47.347 1.00 19.65 A
ATOM 2080 CG1 ILE A 264 -24.073 -3.304 -49.180 1.00 21.03 A
ATOM 2081 CD1 ILE A 264 -22.579 -3.131 -49.319 1.00 22.40 A
ATOM 2082 C ILE A 264 -26.855 -2.346 -50.151 1.00 25.45 A
ATOM 2083 O ILE A 264 -26.478 -1.599 -51.052 1.00 25.94 A
ATOM 2084 N TYR A 265 -27.767 -3.301 -50.327 1.00 26.29 A
ATOM 2085 CA TYR A 265 -28.405 -3.594 -51.607 1.00 27.39 A
ATOM 2086 CB TYR A 265 -29.619 -4.492 -51.372 1.00 26.33 A
ATOM 2087 CG TYR A 265 -30.450 -4.781 -52.602 1.00 25.96 A
ATOM 2088 CD1 TYR A 265 -29.920 -5.498 -53.684 1.00 26.77 A
ATOM 2089 CE1 TYR A 265 -30.699 -5.778 -54.821 1.00 25.68 A
ATOM 2090 CD2 TYR A 265 -31.771 -4.352 -52.685 1.00 25.38 A
ATOM 2091 CE2 TYR A 265 -32.553 -4.625 -53.812 1.00 24.95 A
ATOM 2092 CZ TYR A 265 -32.011 -5.336 -54.869 1.00 24.52 A
ATOM 2093 OH TYR A 265 -32.784 -5.603 -55.960 1.00 21.97 A
ATOM 2094 C TYR A 265 -28.845 -2.341 -52.356 1.00 29.31 A
ATOM 2095 O TYR A 265 -28.706 -2.243 -53.580 1.00 29.95 A
ATOM 2096 N ASP A 266 -29.382 -1.381 -51.615 1.00 31.14 A
ATOM 2097 CA ASP A 266 -29.858 -0.140 -52.210 1.00 32.38 A
ATOM 2098 CB ASP A 266 -30.668 0.669 -51.182 1.00 34.67 A
ATOM 2099 CG ASP A 266 -29.895 0.918 -49.891 1.00 37.51 A
ATOM 2100 OD1 ASP A 266 -29.605 -0.070 -49.182 1.00 39.06 A
ATOM 2101 OD2 ASP A 266 -29.570 2.092 -49.584 1.00 38.58 A
ATOM 2102 C ASP A 266 -28.730 0.717 -52.772 1.00 31.88 A
ATOM 2103 O ASP A 266 -28.990 1.704 -53.442 1.00 32.84 A
ATOM 2104 N MET A 267 -27.483 0.344 -52.507 1.00 31.37 A

ATOM 2105 CA MET A 267 -26.336 1.102 -53.004 1.00 31.65 A
ATOM 2106 CB MET A 267 -25.321 1.338 -51.887 1.00 32.28 A
ATOM 2107 CG MET A 267 -25.722 2.326 -50.806 1.00 33.91 A
ATOM 2108 SD MET A 267 -24.417 2.386 -49.544 1.00 37.42 A
ATOM 2109 CE MET A 267 -23.479 3.731 -50.089 1.00 34.59 A
ATOM 2110 C MET A 267 -25.618 0.390 -54.143 1.00 31.66 A
ATOM 2111 O MET A 267 -24.748 0.967 -54.792 1.00 31.58 A
ATOM 2112 N VAL A 268 -25.957 -0.872 -54.370 1.00 32.25 A
ATOM 2113 CA VAL A 268 -25.314 -1.633 -55.428 1.00 34.03 A
ATOM 2114 CB VAL A 268 -24.474 -2.803 -54.879 1.00 33.65 A
ATOM 2115 CG1 VAL A 268 -23.445 -2.289 -53.889 1.00 34.73 A
ATOM 2116 CG2 VAL A 268 -25.380 -3.830 -54.241 1.00 33.63 A
ATOM 2117 C VAL A 268 -26.334 -2.209 -56.384 1.00 34.93 A
ATOM 2118 O VAL A 268 -25.977 -2.654 -57.479 1.00 35.38 A
ATOM 2119 N VAL A 269 -27.601 -2.211 -55.968 1.00 35.41 A
ATOM 2120 CA VAL A 269 -28.664 -2.746 -56.813 1.00 34.96 A
ATOM 2121 CB VAL A 269 -30.061 -2.215 -56.379 1.00 34.56 A
ATOM 2122 CG1 VAL A 269 -30.236 -0.780 -56.791 1.00 34.65 A
ATOM 2123 CG2 VAL A 269 -31.148 -3.064 -56.983 1.00 34.54 A
ATOM 2124 C VAL A 269 -28.340 -2.302 -58.234 1.00 34.42 A
ATOM 2125 O VAL A 269 -28.244 -1.111 -58.517 1.00 32.82 A
ATOM 2126 N PRO A 270 -28.113 -3.266 -59.138 1.00 35.25 A
ATOM 2127 CD PRO A 270 -28.156 -4.725 -58.945 1.00 35.71 A
ATOM 2128 CA PRO A 270 -27.791 -2.934 -60.530 1.00 36.32 A
ATOM 2129 CB PRO A 270 -27.493 -4.302 -61.152 1.00 35.28 A
ATOM 2130 CG PRO A 270 -28.349 -5.228 -60.354 1.00 35.54 A
ATOM 2131 C PRO A 270 -28.909 -2.171 -61.241 1.00 36.97 A
ATOM 2132 O PRO A 270 -28.724 -1.021 -61.639 1.00 36.77 A
ATOM 2133 N PHE A 271 -30.070 -2.798 -61.392 1.00 37.97 A
ATOM 2134 CA PHE A 271 -31.173 -2.117 -62.056 1.00 38.41 A
ATOM 2135 CB PHE A 271 -31.855 -3.056 -63.051 1.00 35.40 A
ATOM 2136 CG PHE A 271 -30.891 -3.766 -63.940 1.00 33.92 A
ATOM 2137 CD1 PHE A 271 -30.571 -5.104 -63.713 1.00 33.83 A
ATOM 2138 CD2 PHE A 271 -30.232 -3.081 -64.955 1.00 31.74 A

ATOM 2139 CE1 PHE A 271 -29.605 -5.747 -64.481 1.00 32.50 A
ATOM 2140 CE2 PHE A 271 -29.265 -3.711 -65.724 1.00 30.97 A
ATOM 2141 CZ PHE A 271 -28.949 -5.045 -65.489 1.00 31.01 A
ATOM 2142 C PHE A 271 -32.163 -1.611 -61.032 1.00 39.65 A
ATOM 2143 O PHE A 271 -33.078 -2.323 -60.625 1.00 39.71 A
ATOM 2144 N PRO A 272 -31.969 -0.364 -60.577 1.00 41.11 A
ATOM 2145 CD PRO A 272 -30.902 0.580 -60.946 1.00 40.91 A
ATOM 2146 CA PRO A 272 -32.871 0.228 -59.588 1.00 42.37 A
ATOM 2147 CB PRO A 272 -32.069 1.413 -59.070 1.00 40.22 A
ATOM 2148 CG PRO A 272 -31.361 1.871 -60.290 1.00 40.26 A
ATOM 2149 C PRO A 272 -34.123 0.651 -60.330 1.00 44.54 A
ATOM 2150 O PRO A 272 -34.342 0.231 -61.467 1.00 46.26 A
ATOM 2151 N ALA A 273 -34.949 1.472 -59.700 1.00 45.82 A
ATOM 2152 CA ALA A 273 -36.165 1.943 -60.351 1.00 47.58 A
ATOM 2153 CB ALA A 273 -35.809 2.746 -61.607 1.00 46.24 A
ATOM 2154 C ALA A 273 -37.120 0.811 -60.711 1.00 48.33 A
ATOM 2155 O ALA A 273 -38.050 1.002 -61.491 1.00 48.66 A
ATOM 2156 N LYS A 274 -36.879 -0.370 -60.155 1.00 49.18 A
ATOM 2157 CA LYS A 274 -37.754 -1.519 -60.399 1.00 50.03 A
ATOM 2158 CB LYS A 274 -36.971 -2.665 -61.059 1.00 47.73 A
ATOM 2159 CG LYS A 274 -36.763 -2.459 -62.545 1.00 46.69 A
ATOM 2160 CD LYS A 274 -36.933 -3.775 -63.307 1.00 46.49 A
ATOM 2161 CE LYS A 274 -36.994 -3.576 -64.843 0.00 46.63 A
ATOM 2162 NZ LYS A 274 -37.527 -4.793 -65.572 0.00 46.61 A
ATOM 2163 C LYS A 274 -38.326 -1.964 -59.050 1.00 51.79 A
ATOM 2164 O LYS A 274 -37.891 -1.475 -58.007 1.00 53.02 A
ATOM 2165 N PRO A 275 -39.319 -2.874 -59.053 1.00 53.15 A
ATOM 2166 CD PRO A 275 -39.766 -3.777 -60.126 1.00 54.47 A
ATOM 2167 CA PRO A 275 -39.861 -3.298 -57.759 1.00 54.20 A
ATOM 2168 CB PRO A 275 -40.773 -4.466 -58.131 1.00 54.12 A
ATOM 2169 CG PRO A 275 -40.124 -5.026 -59.359 1.00 53.83 A
ATOM 2170 C PRO A 275 -38.697 -3.702 -56.860 1.00 55.38 A
ATOM 2171 O PRO A 275 -37.789 -4.424 -57.281 1.00 55.50 A
ATOM 2172 N ASN A 276 -38.836 -3.423 -55.555 1.00 56.34 A

ATOM 2173 CA ASN A 276 -37.812 -3.576 -54.509 1.00 56.65 A
ATOM 2174 CB ASN A 276 -38.078 -2.614 -53.331 1.00 56.86 A
ATOM 2175 CG ASN A 276 -37.089 -2.793 -52.113 1.00 57.47 A
ATOM 2176 OD1 ASN A 276 -35.894 -2.721 -52.255 1.00 57.85 A
ATOM 2177 ND2 ASN A 276 -37.627 -2.961 -50.934 1.00 56.05 A
ATOM 2178 C ASN A 276 -37.907 -4.897 -53.931 1.00 57.14 A
ATOM 2179 O ASN A 276 -38.925 -5.231 -53.411 1.00 56.94 A
ATOM 2180 N LEU A 277 -36.832 -5.675 -54.010 1.00 58.10 A
ATOM 2181 CA LEU A 277 -36.814 -7.016 -53.439 1.00 59.18 A
ATOM 2182 CB LEU A 277 -35.778 -7.888 -54.151 1.00 58.57 A
ATOM 2183 CG LEU A 277 -36.166 -8.408 -55.537 1.00 58.13 A
ATOM 2184 CD1 LEU A 277 -35.064 -9.284 -56.110 1.00 57.72 A
ATOM 2185 CD2 LEU A 277 -37.483 -9.167 -55.476 1.00 57.80 A
ATOM 2186 C LEU A 277 -36.525 -6.978 -51.941 1.00 60.04 A
ATOM 2187 O LEU A 277 -35.678 -7.720 -51.444 1.00 60.90 A
ATOM 2188 N ALA A 278 -37.234 -6.109 -51.228 1.00 61.14 A
ATOM 2189 CA ALA A 278 -36.741 -5.573 -49.964 1.00 61.66 A
ATOM 2190 CB ALA A 278 -35.525 -6.357 -49.495 1.00 61.93 A
ATOM 2191 C ALA A 278 -37.828 -5.583 -48.894 1.00 61.84 A
ATOM 2192 O ALA A 278 -37.998 -4.610 -48.160 1.00 62.55 A
ATOM 2193 N VAL A 279 -38.561 -6.688 -48.812 1.00 61.25 A
ATOM 2194 CA VAL A 279 -39.821 -6.720 -48.078 1.00 59.93 A
ATOM 2195 CB VAL A 279 -40.267 -8.164 -47.783 1.00 60.99 A
ATOM 2196 CG1 VAL A 279 -41.600 -8.172 -47.052 1.00 63.71 A
ATOM 2197 CG2 VAL A 279 -40.353 -8.968 -49.072 1.00 61.48 A
ATOM 2198 C VAL A 279 -39.716 -5.953 -46.764 1.00 58.97 A
ATOM 2199 O VAL A 279 -40.717 -5.472 -46.232 1.00 58.01 A
ATOM 2200 N THR A 280 -38.497 -5.842 -46.245 1.00 57.82 A
ATOM 2201 CA THR A 280 -38.271 -5.230 -44.947 1.00 56.13 A
ATOM 2202 CB THR A 280 -36.755 -4.933 -44.775 1.00 56.62 A
ATOM 2203 OG1 THR A 280 -36.509 -4.381 -43.477 1.00 56.46 A
ATOM 2204 CG2 THR A 280 -36.271 -3.968 -45.857 1.00 58.61 A
ATOM 2205 C THR A 280 -39.106 -3.967 -44.663 1.00 54.28 A
ATOM 2206 O THR A 280 -39.262 -3.579 -43.508 1.00 53.27 A

ATOM 2207 N SER A 281 -39.658 -3.343 -45.701 1.00 53.32 A
ATOM 2208 CA SER A 281 -40.468 -2.133 -45.513 1.00 52.73 A
ATOM 2209 CB SER A 281 -40.044 -1.042 -46.503 1.00 52.38 A
ATOM 2210 OG SER A 281 -40.067 -1.520 -47.835 1.00 53.37 A
ATOM 2211 C SER A 281 -41.974 -2.372 -45.633 1.00 51.84 A
ATOM 2212 O SER A 281 -42.777 -1.546 -45.201 1.00 51.21 A
ATOM 2213 N THR A 282 -42.352 -3.500 -46.225 1.00 51.37 A
ATOM 2214 CA THR A 282 -43.762 -3.848 -46.385 1.00 49.74 A
ATOM 2215 CB THR A 282 -43.979 -4.756 -47.617 1.00 49.52 A
ATOM 2216 OG1 THR A 282 -43.150 -4.305 -48.690 1.00 49.62 A
ATOM 2217 CG2 THR A 282 -45.429 -4.712 -48.068 1.00 48.30 A
ATOM 2218 C THR A 282 -44.191 -4.605 -45.124 1.00 49.01 A
ATOM 2219 O THR A 282 -45.371 -4.639 -44.761 1.00 47.11 A
ATOM 2220 N MET A 283 -43.209 -5.217 -44.469 1.00 48.67 A
ATOM 2221 CA MET A 283 -43.453 -5.962 -43.248 1.00 48.47 A
ATOM 2222 CB MET A 283 -42.161 -6.654 -42.782 1.00 48.13 A
ATOM 2223 CG MET A 283 -41.786 -7.900 -43.595 1.00 46.77 A
ATOM 2224 SD MET A 283 -40.176 -8.623 -43.179 1.00 46.24 A
ATOM 2225 CE MET A 283 -40.646 -10.050 -42.250 1.00 46.37 A
ATOM 2226 C MET A 283 -43.952 -4.973 -42.198 1.00 48.36 A
ATOM 2227 O MET A 283 -44.939 -5.228 -41.508 1.00 48.36 A
ATOM 2228 N LEU A 284 -43.270 -3.836 -42.097 1.00 48.06 A
ATOM 2229 CA LEU A 284 -43.648 -2.798 -41.149 1.00 47.85 A
ATOM 2230 CB LEU A 284 -42.602 -1.679 -41.150 1.00 45.38 A
ATOM 2231 CG LEU A 284 -41.172 -2.099 -40.797 1.00 44.66 A
ATOM 2232 CD1 LEU A 284 -40.202 -0.987 -41.109 1.00 43.61 A
ATOM 2233 CD2 LEU A 284 -41.098 -2.475 -39.339 1.00 44.96 A
ATOM 2234 C LEU A 284 -45.007 -2.237 -41.552 1.00 49.52 A
ATOM 2235 O LEU A 284 -45.898 -2.065 -40.721 1.00 49.98 A
ATOM 2236 N GLN A 285 -45.163 -1.961 -42.841 1.00 51.60 A
ATOM 2237 CA GLN A 285 -46.408 -1.414 -43.369 1.00 52.65 A
ATOM 2238 CB GLN A 285 -46.380 -1.443 -44.894 1.00 53.91 A
ATOM 2239 CG GLN A 285 -47.373 -0.517 -45.563 1.00 55.92 A
ATOM 2240 CD GLN A 285 -46.799 0.869 -45.757 1.00 57.90 A

ATOM 2241 OE1 GLN A 285 -45.664 1.015 -46.221 1.00 58.70 A
ATOM 2242 NE2 GLN A 285 -47.578 1.898 -45.419 1.00 58.62 A
ATOM 2243 C GLN A 285 -47.611 -2.208 -42.888 1.00 52.55 A
ATOM 2244 O GLN A 285 -48.619 -1.636 -42.489 1.00 52.52 A
ATOM 2245 N GLN A 286 -47.493 -3.505 -42.823 1.00 53.29 A
ATOM 2246 CA GLN A 286 -48.636 -4.322 -42.471 1.00 53.87 A
ATOM 2247 CB GLN A 286 -48.564 -5.695 -43.104 1.00 54.49 A
ATOM 2248 CG GLN A 286 -48.784 -5.715 -44.580 1.00 56.17 A
ATOM 2249 CD GLN A 286 -48.751 -7.073 -45.174 1.00 57.63 A
ATOM 2250 OE1 GLN A 286 -47.792 -7.411 -45.818 1.00 57.51 A
ATOM 2251 NE2 GLN A 286 -49.816 -7.860 -44.983 1.00 57.60 A
ATOM 2252 C GLN A 286 -48.747 -4.482 -41.006 1.00 53.42 A
ATOM 2253 O GLN A 286 -49.698 -5.016 -40.551 1.00 54.29 A
ATOM 2254 N GLY A 287 -47.768 -4.012 -40.261 1.00 51.73 A
ATOM 2255 CA GLY A 287 -47.767 -4.186 -38.816 1.00 49.64 A
ATOM 2256 C GLY A 287 -47.339 -5.567 -38.343 1.00 47.95 A
ATOM 2257 O GLY A 287 -47.920 -6.129 -37.422 1.00 46.72 A
ATOM 2258 N TRP A 288 -46.306 -6.113 -38.964 1.00 47.50 A
ATOM 2259 CA TRP A 288 -45.824 -7.433 -38.593 1.00 47.59 A
ATOM 2260 CB TRP A 288 -44.801 -7.912 -39.639 1.00 48.03 A
ATOM 2261 CG TRP A 288 -45.440 -8.535 -40.870 1.00 48.77 A
ATOM 2262 CD2 TRP A 288 -45.045 -9.749 -41.528 1.00 48.54 A
ATOM 2263 CE2 TRP A 288 -45.943 -9.959 -42.596 1.00 48.23 A
ATOM 2264 CE3 TRP A 288 -44.019 -10.680 -41.317 1.00 47.80 A
ATOM 2265 CD1 TRP A 288 -46.530 -8.068 -41.558 1.00 48.71 A
ATOM 2266 NE1 TRP A 288 -46.837 -8.921 -42.593 1.00 48.14 A
ATOM 2267 CZ2 TRP A 288 -45.847 -11.058 -43.447 1.00 47.68 A
ATOM 2268 CZ3 TRP A 288 -43.926 -11.772 -42.167 1.00 46.79 A
ATOM 2269 CH2 TRP A 288 -44.835 -11.951 -43.216 1.00 46.87 A
ATOM 2270 C TRP A 288 -45.259 -7.585 -37.162 1.00 47.03 A
ATOM 2271 O TRP A 288 -44.282 -6.950 -36.767 1.00 45.80 A
ATOM 2272 N ASN A 289 -45.913 -8.455 -36.405 1.00 47.78 A
ATOM 2273 CA ASN A 289 -45.565 -8.797 -35.028 1.00 47.54 A
ATOM 2274 CB ASN A 289 -46.684 -9.689 -34.469 1.00 47.90 A

ATOM 2275 CG ASN A 289 -47.121 -9.303 -33.080 1.00 49.23 A
ATOM 2276 OD1 ASN A 289 -47.347 -8.129 -32.786 1.00 49.13 A
ATOM 2277 ND2 ASN A 289 -47.276 -10.304 -32.214 1.00 51.71 A
ATOM 2278 C ASN A 289 -44.264 -9.600 -35.091 1.00 47.29 A
ATOM 2279 O ASN A 289 -43.860 -10.047 -36.161 1.00 47.17 A
ATOM 2280 N ALA A 290 -43.601 -9.787 -33.959 1.00 47.24 A
ATOM 2281 CA ALA A 290 -42.393 -10.594 -33.977 1.00 47.47 A
ATOM 2282 CB ALA A 290 -41.562 -10.334 -32.732 1.00 47.04 A
ATOM 2283 C ALA A 290 -42.892 -12.038 -34.004 1.00 47.73 A
ATOM 2284 O ALA A 290 -42.207 -12.949 -34.454 1.00 47.18 A
ATOM 2285 N THR A 291 -44.111 -12.230 -33.517 1.00 49.29 A
ATOM 2286 CA THR A 291 -44.720 -13.554 -33.485 1.00 50.78 A
ATOM 2287 CB THR A 291 -45.945 -13.594 -32.535 1.00 50.18 A
ATOM 2288 OG1 THR A 291 -45.535 -13.266 -31.205 1.00 48.53 A
ATOM 2289 CG2 THR A 291 -46.568 -14.975 -32.524 1.00 49.17 A
ATOM 2290 C THR A 291 -45.188 -13.882 -34.895 1.00 51.55 A
ATOM 2291 O THR A 291 -44.998 -14.997 -35.387 1.00 50.92 A
ATOM 2292 N HIS A 292 -45.802 -12.895 -35.538 1.00 52.39 A
ATOM 2293 CA HIS A 292 -46.295 -13.049 -36.899 1.00 53.14 A
ATOM 2294 CB HIS A 292 -46.678 -11.675 -37.467 1.00 56.29 A
ATOM 2295 CG HIS A 292 -47.468 -11.737 -38.741 1.00 60.35 A
ATOM 2296 CD2 HIS A 292 -48.221 -10.803 -39.375 1.00 61.48 A
ATOM 2297 ND1 HIS A 292 -47.542 -12.878 -39.515 1.00 62.05 A
ATOM 2298 CE1 HIS A 292 -48.303 -12.645 -40.571 1.00 62.15 A
ATOM 2299 NE2 HIS A 292 -48.728 -11.393 -40.509 1.00 62.89 A
ATOM 2300 C HIS A 292 -45.202 -13.696 -37.753 1.00 52.03 A
ATOM 2301 O HIS A 292 -45.479 -14.502 -38.640 1.00 52.05 A
ATOM 2302 N MET A 293 -43.955 -13.342 -37.470 1.00 50.45 A
ATOM 2303 CA MET A 293 -42.829 -13.889 -38.208 1.00 48.16 A
ATOM 2304 CB MET A 293 -41.552 -13.108 -37.884 1.00 48.42 A
ATOM 2305 CG MET A 293 -41.447 -11.790 -38.646 1.00 48.32 A
ATOM 2306 SD MET A 293 -40.158 -10.699 -38.034 1.00 48.72 A
ATOM 2307 CE MET A 293 -38.711 -11.698 -38.354 1.00 48.96 A
ATOM 2308 C MET A 293 -42.635 -15.366 -37.929 1.00 46.73 A

ATOM 2309 O MET A 293 -42.374 -16.136 -38.845 1.00 47.63 A
ATOM 2310 N PHE A 294 -42.773 -15.777 -36.676 1.00 45.17 A
ATOM 2311 CA PHE A 294 -42.603 -17.189 -36.351 1.00 43.68 A
ATOM 2312 CB PHE A 294 -42.352 -17.374 -34.852 1.00 40.35 A
ATOM 2313 CG PHE A 294 -40.981 -16.956 -34.417 1.00 36.79 A
ATOM 2314 CD1 PHE A 294 -40.661 -15.615 -34.274 1.00 35.06 A
ATOM 2315 CD2 PHE A 294 -39.997 -17.908 -34.185 1.00 35.75 A
ATOM 2316 CE1 PHE A 294 -39.387 -15.231 -33.907 1.00 33.22 A
ATOM 2317 CE2 PHE A 294 -38.721 -17.533 -33.820 1.00 34.26 A
ATOM 2318 CZ PHE A 294 -38.416 -16.192 -33.680 1.00 33.79 A
ATOM 2319 C PHE A 294 -43.786 -18.046 -36.801 1.00 44.38 A
ATOM 2320 O PHE A 294 -43.745 -19.272 -36.712 1.00 44.86 A
ATOM 2321 N ARG A 295 -44.760 -17.442 -37.422 1.00 45.00 A
ATOM 2322 CA ARG A 295 -45.944 -18.153 -37.833 1.00 46.23 A
ATOM 2323 CB ARG A 295 -47.163 -17.338 -37.499 1.00 48.19 A
ATOM 2324 CG ARG A 295 -47.787 -17.628 -36.218 1.00 50.42 A
ATOM 2325 CD ARG A 295 -49.122 -17.065 -36.126 1.00 52.42 A
ATOM 2326 NE ARG A 295 -49.561 -16.478 -37.371 1.00 54.53 A
ATOM 2327 CZ ARG A 295 -50.660 -16.813 -38.006 1.00 55.99 A
ATOM 2328 NH1 ARG A 295 -51.439 -17.739 -37.537 1.00 55.63 A
ATOM 2329 NH2 ARG A 295 -50.985 -16.231 -39.126 1.00 56.81 A
ATOM 2330 C ARG A 295 -45.995 -18.387 -39.287 1.00 45.96 A
ATOM 2331 O ARG A 295 -46.498 -19.376 -39.733 1.00 45.98 A
ATOM 2332 N VAL A 296 -45.529 -17.408 -40.034 1.00 45.29 A
ATOM 2333 CA VAL A 296 -45.275 -17.532 -41.459 1.00 44.03 A
ATOM 2334 CB VAL A 296 -44.818 -16.182 -42.044 1.00 43.10 A
ATOM 2335 CG1 VAL A 296 -44.973 -16.179 -43.556 1.00 42.43 A
ATOM 2336 CG2 VAL A 296 -45.626 -15.061 -41.429 1.00 42.76 A
ATOM 2337 C VAL A 296 -44.190 -18.576 -41.695 1.00 43.78 A
ATOM 2338 O VAL A 296 -44.310 -19.430 -42.570 1.00 44.52 A
ATOM 2339 N ALA A 297 -43.126 -18.504 -40.908 1.00 42.69 A
ATOM 2340 CA ALA A 297 -42.042 -19.457 -41.040 1.00 43.01 A
ATOM 2341 CB ALA A 297 -40.955 -19.147 -40.047 1.00 41.85 A
ATOM 2342 C ALA A 297 -42.578 -20.853 -40.797 1.00 44.05 A

ATOM 2343 O ALA A 297 -42.228 -21.791 -41.507 1.00 44.98 A
ATOM 2344 N GLU A 298 -43.430 -20.988 -39.787 1.00 44.72 A
ATOM 2345 CA GLU A 298 -44.012 -22.281 -39.453 1.00 44.68 A
ATOM 2346 CB GLU A 298 -44.837 -22.177 -38.163 1.00 45.17 A
ATOM 2347 CG GLU A 298 -45.570 -23.459 -37.768 1.00 45.21 A
ATOM 2348 CD GLU A 298 -46.475 -23.277 -36.548 1.00 45.68 A
ATOM 2349 OE1 GLU A 298 -47.214 -22.273 -36.505 1.00 46.03 A
ATOM 2350 OE2 GLU A 298 -46.460 -24.141 -35.641 1.00 45.61 A
ATOM 2351 C GLU A 298 -44.896 -22.745 -40.598 1.00 44.42 A
ATOM 2352 O GLU A 298 -44.772 -23.870 -41.071 1.00 42.67 A
ATOM 2353 N GLU A 299 -45.844 -21.951 -40.994 1.00 45.21 A
ATOM 2354 CA GLU A 299 -46.650 -22.294 -42.117 1.00 47.08 A
ATOM 2355 CB GLU A 299 -47.336 -21.086 -42.612 1.00 47.94 A
ATOM 2356 CG GLU A 299 -48.581 -21.413 -43.325 1.00 51.36 A
ATOM 2357 CD GLU A 299 -48.657 -20.698 -44.593 1.00 53.85 A
ATOM 2358 OE1 GLU A 299 -49.464 -21.114 -45.407 1.00 55.01 A
ATOM 2359 OE2 GLU A 299 -47.894 -19.746 -44.767 1.00 55.05 A
ATOM 2360 C GLU A 299 -45.950 -22.950 -43.274 1.00 47.09 A
ATOM 2361 O GLU A 299 -46.414 -23.897 -43.814 1.00 47.43 A
ATOM 2362 N PHE A 300 -44.830 -22.446 -43.683 1.00 45.66 A
ATOM 2363 CA PHE A 300 -44.119 -23.088 -44.786 1.00 43.98 A
ATOM 2364 CB PHE A 300 -42.782 -22.379 -45.063 1.00 43.64 A
ATOM 2365 CG PHE A 300 -42.061 -22.879 -46.303 1.00 43.14 A
ATOM 2366 CD1 PHE A 300 -42.093 -22.148 -47.490 1.00 42.21 A
ATOM 2367 CD2 PHE A 300 -41.355 -24.083 -46.285 1.00 43.25 A
ATOM 2368 CE1 PHE A 300 -41.438 -22.608 -48.629 1.00 41.02 A
ATOM 2369 CE2 PHE A 300 -40.696 -24.549 -47.427 1.00 41.50 A
ATOM 2370 CZ PHE A 300 -40.739 -23.813 -48.594 1.00 41.03 A
ATOM 2371 C PHE A 300 -43.850 -24.524 -44.336 1.00 43.56 A
ATOM 2372 O PHE A 300 -44.262 -25.476 -44.989 1.00 44.47 A
ATOM 2373 N PHE A 301 -43.172 -24.660 -43.199 1.00 42.19 A
ATOM 2374 CA PHE A 301 -42.825 -25.965 -42.645 1.00 40.18 A
ATOM 2375 CB PHE A 301 -42.283 -25.814 -41.219 1.00 37.78 A
ATOM 2376 CG PHE A 301 -40.811 -25.523 -41.146 1.00 34.84 A

ATOM 2377 CD1 PHE A 301 -40.337 -24.223 -41.246 1.00 34.08 A
ATOM 2378 CD2 PHE A 301 -39.895 -26.558 -40.971 1.00 33.67 A
ATOM 2379 CE1 PHE A 301 -38.971 -23.959 -41.171 1.00 33.29 A
ATOM 2380 CE2 PHE A 301 -38.527 -26.301 -40.897 1.00 32.70 A
ATOM 2381 CZ PHE A 301 -38.068 -25.000 -40.996 1.00 32.07 A
ATOM 2382 C PHE A 301 -43.961 -26.982 -42.622 1.00 39.60 A
ATOM 2383 O PHE A 301 -43.761 -28.160 -42.925 1.00 38.51 A
ATOM 2384 N THR A 302 -45.152 -26.539 -42.244 1.00 39.59 A
ATOM 2385 CA THR A 302 -46.274 -27.459 -42.172 1.00 41.02 A
ATOM 2386 CB THR A 302 -47.509 -26.800 -41.479 1.00 39.84 A
ATOM 2387 OG1 THR A 302 -47.864 -25.589 -42.155 1.00 39.60 A
ATOM 2388 CG2 THR A 302 -47.203 -26.483 -40.028 1.00 39.29 A
ATOM 2389 C THR A 302 -46.663 -27.988 -43.563 1.00 42.86 A
ATOM 2390 O THR A 302 -46.840 -29.203 -43.760 1.00 42.70 A
ATOM 2391 N SER A 303 -46.768 -27.081 -44.531 1.00 43.58 A
ATOM 2392 CA SER A 303 -47.149 -27.452 -45.890 1.00 44.01 A
ATOM 2393 CB SER A 303 -47.096 -26.225 -46.809 1.00 44.17 A
ATOM 2394 OG SER A 303 -45.763 -25.830 -47.079 1.00 44.37 A
ATOM 2395 C SER A 303 -46.296 -28.574 -46.484 1.00 44.52 A
ATOM 2396 O SER A 303 -46.769 -29.326 -47.339 1.00 45.65 A
ATOM 2397 N LEU A 304 -45.050 -28.696 -46.038 1.00 44.20 A
ATOM 2398 CA LEU A 304 -44.174 -29.736 -46.558 1.00 43.61 A
ATOM 2399 CB LEU A 304 -42.709 -29.325 -46.441 1.00 44.13 A
ATOM 2400 CG LEU A 304 -42.283 -27.946 -46.931 1.00 44.53 A
ATOM 2401 CD1 LEU A 304 -40.756 -27.892 -46.955 1.00 45.82 A
ATOM 2402 CD2 LEU A 304 -42.858 -27.674 -48.309 1.00 44.97 A
ATOM 2403 C LEU A 304 -44.386 -31.021 -45.791 1.00 43.16 A
ATOM 2404 O LEU A 304 -43.546 -31.911 -45.833 1.00 43.58 A
ATOM 2405 N ALA A 305 -45.509 -31.108 -45.086 1.00 43.29 A
ATOM 2406 CA ALA A 305 -45.846 -32.293 -44.297 1.00 44.68 A
ATOM 2407 CB ALA A 305 -46.010 -33.526 -45.218 1.00 45.41 A
ATOM 2408 C ALA A 305 -44.826 -32.580 -43.184 1.00 44.56 A
ATOM 2409 O ALA A 305 -44.503 -33.741 -42.892 1.00 43.53 A
ATOM 2410 N LEU A 306 -44.317 -31.505 -42.584 1.00 45.06 A

ATOM 2411 CA LEU A 306 -43.373 -31.581 -41.470 1.00 45.51 A
ATOM 2412 CB LEU A 306 -42.164 -30.679 -41.729 1.00 45.35 A
ATOM 2413 CG LEU A 306 -41.140 -31.202 -42.737 1.00 44.52 A
ATOM 2414 CD1 LEU A 306 -40.056 -30.165 -42.937 1.00 44.63 A
ATOM 2415 CD2 LEU A 306 -40.535 -32.504 -42.241 1.00 43.49 A
ATOM 2416 C LEU A 306 -44.152 -31.106 -40.229 1.00 46.15 A
ATOM 2417 O LEU A 306 -45.150 -30.389 -40.366 1.00 46.08 A
ATOM 2418 N SER A 307 -43.716 -31.496 -39.031 1.00 46.01 A
ATOM 2419 CA SER A 307 -44.443 -31.108 -37.814 1.00 45.51 A
ATOM 2420 CB SER A 307 -43.982 -31.942 -36.614 1.00 43.93 A
ATOM 2421 OG SER A 307 -42.579 -31.999 -36.543 1.00 44.26 A
ATOM 2422 C SER A 307 -44.357 -29.628 -37.487 1.00 45.68 A
ATOM 2423 O SER A 307 -43.357 -28.983 -37.797 1.00 46.29 A
ATOM 2424 N PRO A 308 -45.426 -29.066 -36.873 1.00 45.91 A
ATOM 2425 CD PRO A 308 -46.707 -29.743 -36.585 1.00 45.44 A
ATOM 2426 CA PRO A 308 -45.503 -27.650 -36.490 1.00 45.32 A
ATOM 2427 CB PRO A 308 -47.003 -27.387 -36.458 1.00 44.65 A
ATOM 2428 CG PRO A 308 -47.519 -28.655 -35.878 1.00 45.01 A
ATOM 2429 C PRO A 308 -44.860 -27.439 -35.129 1.00 45.03 A
ATOM 2430 O PRO A 308 -44.426 -28.396 -34.485 1.00 44.68 A
ATOM 2431 N MET A 309 -44.796 -26.194 -34.687 1.00 45.07 A
ATOM 2432 CA MET A 309 -44.188 -25.917 -33.399 1.00 46.33 A
ATOM 2433 CB MET A 309 -43.944 -24.416 -33.245 1.00 47.46 A
ATOM 2434 CG MET A 309 -42.849 -23.876 -34.154 1.00 48.16 A
ATOM 2435 SD MET A 309 -41.287 -24.765 -33.963 1.00 49.70 A
ATOM 2436 CE MET A 309 -41.229 -25.740 -35.483 1.00 48.35 A
ATOM 2437 C MET A 309 -45.083 -26.428 -32.278 1.00 46.90 A
ATOM 2438 O MET A 309 -46.283 -26.129 -32.249 1.00 47.22 A
ATOM 2439 N PRO A 310 -44.513 -27.214 -31.343 1.00 46.78 A
ATOM 2440 CD PRO A 310 -43.105 -27.626 -31.258 1.00 46.29 A
ATOM 2441 CA PRO A 310 -45.269 -27.767 -30.216 1.00 46.85 A
ATOM 2442 CB PRO A 310 -44.238 -28.619 -29.482 1.00 45.99 A
ATOM 2443 CG PRO A 310 -43.226 -28.923 -30.512 1.00 46.44 A
ATOM 2444 C PRO A 310 -45.778 -26.631 -29.336 1.00 47.87 A

ATOM 2445 O PRO A 310 -45.324 -25.487 -29.455 1.00 48.50 A
ATOM 2446 N PRO A 311 -46.749 -26.917 -28.460 1.00 47.98 A
ATOM 2447 CD PRO A 311 -47.712 -28.033 -28.482 1.00 47.84 A
ATOM 2448 CA PRO A 311 -47.229 -25.825 -27.608 1.00 47.56 A
ATOM 2449 CB PRO A 311 -48.452 -26.433 -26.933 1.00 47.83 A
ATOM 2450 CG PRO A 311 -48.984 -27.361 -28.001 1.00 47.61 A
ATOM 2451 C PRO A 311 -46.140 -25.380 -26.612 1.00 47.35 A
ATOM 2452 O PRO A 311 -46.028 -24.191 -26.298 1.00 47.68 A
ATOM 2453 N GLU A 312 -45.332 -26.327 -26.130 1.00 45.60 A
ATOM 2454 CA GLU A 312 -44.255 -26.006 -25.192 1.00 45.03 A
ATOM 2455 CB GLU A 312 -43.391 -27.237 -24.889 1.00 46.14 A
ATOM 2456 CG GLU A 312 -44.110 -28.378 -24.184 1.00 48.91 A
ATOM 2457 CD GLU A 312 -44.872 -29.279 -25.144 1.00 51.53 A
ATOM 2458 OE1 GLU A 312 -45.686 -28.761 -25.943 1.00 52.09 A
ATOM 2459 OE2 GLU A 312 -44.659 -30.511 -25.098 1.00 52.72 A
ATOM 2460 C GLU A 312 -43.368 -24.915 -25.778 1.00 44.55 A
ATOM 2461 O GLU A 312 -42.958 -23.995 -25.071 1.00 43.54 A
ATOM 2462 N PHE A 313 -43.076 -25.034 -27.074 1.00 44.47 A
ATOM 2463 CA PHE A 313 -42.236 -24.074 -27.794 1.00 43.27 A
ATOM 2464 CB PHE A 313 -42.063 -24.498 -29.261 1.00 41.88 A
ATOM 2465 CG PHE A 313 -41.521 -23.404 -30.160 1.00 40.31 A
ATOM 2466 CD1 PHE A 313 -40.156 -23.192 -30.284 1.00 38.59 A
ATOM 2467 CD2 PHE A 313 -42.388 -22.581 -30.879 1.00 39.97 A
ATOM 2468 CE1 PHE A 313 -39.664 -22.179 -31.109 1.00 37.54 A
ATOM 2469 CE2 PHE A 313 -41.903 -21.565 -31.704 1.00 38.36 A
ATOM 2470 CZ PHE A 313 -40.540 -21.366 -31.819 1.00 37.59 A
ATOM 2471 C PHE A 313 -42.850 -22.688 -27.755 1.00 43.49 A
ATOM 2472 O PHE A 313 -42.147 -21.693 -27.589 1.00 43.91 A
ATOM 2473 N TRP A 314 -44.162 -22.617 -27.916 1.00 43.61 A
ATOM 2474 CA TRP A 314 -44.814 -21.327 -27.910 1.00 45.36 A
ATOM 2475 CB TRP A 314 -46.198 -21.427 -28.541 1.00 47.01 A
ATOM 2476 CG TRP A 314 -46.154 -21.566 -30.023 1.00 48.38 A
ATOM 2477 CD2 TRP A 314 -45.872 -20.531 -30.967 1.00 49.14 A
ATOM 2478 CE2 TRP A 314 -45.959 -21.104 -32.255 1.00 49.83 A

ATOM 2479 CE3 TRP A 314 -45.556 -19.172 -30.851 1.00 49.92 A
ATOM 2480 CD1 TRP A 314 -46.386 -22.695 -30.749 1.00 49.75 A
ATOM 2481 NE1 TRP A 314 -46.273 -22.427 -32.093 1.00 50.05 A
ATOM 2482 CZ2 TRP A 314 -45.742 -20.368 -33.421 1.00 50.47 A
ATOM 2483 CZ3 TRP A 314 -45.340 -18.439 -32.010 1.00 50.46 A
ATOM 2484 CH2 TRP A 314 -45.436 -19.043 -33.281 1.00 50.94 A
ATOM 2485 C TRP A 314 -44.919 -20.723 -26.529 1.00 45.57 A
ATOM 2486 O TRP A 314 -44.947 -19.511 -26.392 1.00 45.84 A
ATOM 2487 N ALA A 315 -44.971 -21.558 -25.501 1.00 46.64 A
ATOM 2488 CA ALA A 315 -45.078 -21.046 -24.142 1.00 46.92 A
ATOM 2489 CB ALA A 315 -45.768 -22.072 -23.241 1.00 46.47 A
ATOM 2490 C ALA A 315 -43.700 -20.713 -23.592 1.00 47.83 A
ATOM 2491 O ALA A 315 -43.514 -19.684 -22.934 1.00 48.24 A
ATOM 2492 N GLY A 316 -42.730 -21.573 -23.887 1.00 48.69 A
ATOM 2493 CA GLY A 316 -41.386 -21.372 -23.374 1.00 50.26 A
ATOM 2494 C GLY A 316 -40.348 -20.620 -24.192 1.00 50.83 A
ATOM 2495 O GLY A 316 -39.219 -20.452 -23.729 1.00 52.01 A
ATOM 2496 N SER A 317 -40.695 -20.153 -25.386 1.00 50.48 A
ATOM 2497 CA SER A 317 -39.712 -19.440 -26.203 1.00 50.05 A
ATOM 2498 CB SER A 317 -39.959 -19.687 -27.696 1.00 49.41 A
ATOM 2499 OG SER A 317 -39.559 -20.992 -28.081 1.00 50.33 A
ATOM 2500 C SER A 317 -39.701 -17.950 -25.954 1.00 49.75 A
ATOM 2501 O SER A 317 -40.701 -17.378 -25.526 1.00 51.07 A
ATOM 2502 N MET A 318 -38.558 -17.329 -26.219 1.00 48.28 A
ATOM 2503 CA MET A 318 -38.413 -15.889 -26.067 1.00 46.77 A
ATOM 2504 CB MET A 318 -37.232 -15.553 -25.166 1.00 47.20 A
ATOM 2505 CG MET A 318 -37.151 -14.083 -24.820 1.00 48.61 A
ATOM 2506 SD MET A 318 -35.537 -13.650 -24.189 1.00 51.05 A
ATOM 2507 CE MET A 318 -34.589 -13.681 -25.702 1.00 50.70 A
ATOM 2508 C MET A 318 -38.159 -15.369 -27.470 1.00 45.29 A
ATOM 2509 O MET A 318 -37.072 -15.536 -28.013 1.00 45.05 A
ATOM 2510 N LEU A 319 -39.160 -14.736 -28.058 1.00 43.87 A
ATOM 2511 CA LEU A 319 -39.020 -14.260 -29.416 1.00 43.93 A
ATOM 2512 CB LEU A 319 -40.201 -14.768 -30.239 1.00 42.93 A

ATOM 2513 CG LEU A 319 -40.633 -16.205 -29.939 1.00 41.40 A
ATOM 2514 CD1 LEU A 319 -41.803 -16.570 -30.825 1.00 41.02 A
ATOM 2515 CD2 LEU A 319 -39.476 -17.158 -30.155 1.00 41.65 A
ATOM 2516 C LEU A 319 -38.920 -12.748 -29.534 1.00 45.15 A
ATOM 2517 O LEU A 319 -39.087 -12.192 -30.623 1.00 46.47 A
ATOM 2518 N GLU A 320 -38.651 -12.082 -28.418 1.00 45.25 A
ATOM 2519 CA GLU A 320 -38.527 -10.629 -28.402 1.00 45.68 A
ATOM 2520 CB GLU A 320 -39.890 -9.973 -28.188 1.00 45.43 A
ATOM 2521 CG GLU A 320 -40.809 -10.022 -29.399 1.00 48.16 A
ATOM 2522 CD GLU A 320 -42.225 -9.535 -29.096 1.00 49.53 A
ATOM 2523 OE1 GLU A 320 -42.903 -10.185 -28.274 1.00 50.45 A
ATOM 2524 OE2 GLU A 320 -42.665 -8.511 -29.673 1.00 49.57 A
ATOM 2525 C GLU A 320 -37.607 -10.229 -27.274 1.00 46.46 A
ATOM 2526 O GLU A 320 -37.471 -10.955 -26.299 1.00 47.25 A
ATOM 2527 N LYS A 321 -36.963 -9.079 -27.408 1.00 47.42 A
ATOM 2528 CA LYS A 321 -36.079 -8.603 -26.360 1.00 48.46 A
ATOM 2529 CB LYS A 321 -35.230 -7.439 -26.868 1.00 47.61 A
ATOM 2530 CG LYS A 321 -34.024 -7.124 -26.004 1.00 47.19 A
ATOM 2531 CD LYS A 321 -33.313 -5.870 -26.474 1.00 46.34 A
ATOM 2532 CE LYS A 321 -32.160 -5.518 -25.553 1.00 46.22 A
ATOM 2533 NZ LYS A 321 -31.593 -4.177 -25.879 1.00 46.44 A
ATOM 2534 C LYS A 321 -37.027 -8.128 -25.268 1.00 49.93 A
ATOM 2535 O LYS A 321 -37.778 -7.176 -25.465 1.00 50.39 A
ATOM 2536 N PRO A 322 -36.986 -8.795 -24.119 1.00 51.31 A
ATOM 2537 CD PRO A 322 -36.159 -9.984 -23.846 1.00 52.43 A
ATOM 2538 CA PRO A 322 -37.932 -8.519 -23.033 1.00 52.25 A
ATOM 2539 CB PRO A 322 -37.472 -9.466 -21.925 1.00 53.08 A
ATOM 2540 CG PRO A 322 -36.824 -10.594 -22.646 1.00 52.83 A
ATOM 2541 C PRO A 322 -37.839 -7.072 -22.557 1.00 53.49 A
ATOM 2542 O PRO A 322 -37.014 -6.310 -23.059 1.00 53.08 A
ATOM 2543 N ALA A 323 -38.682 -6.705 -21.596 1.00 55.17 A
ATOM 2544 CA ALA A 323 -38.864 -5.306 -21.231 1.00 56.32 A
ATOM 2545 CB ALA A 323 -40.206 -4.797 -21.739 1.00 55.48 A
ATOM 2546 C ALA A 323 -38.756 -5.111 -19.722 1.00 57.50 A

ATOM 2547 O ALA A 323 -38.791 -3.984 -19.229 1.00 58.43 A
ATOM 2548 N ALA A 324 -38.624 -6.216 -18.995 1.00 58.32 A
ATOM 2549 CA ALA A 324 -38.367 -6.163 -17.561 1.00 58.25 A
ATOM 2550 CB ALA A 324 -38.533 -7.542 -16.942 1.00 57.56 A
ATOM 2551 C ALA A 324 -36.975 -5.612 -17.271 1.00 58.53 A
ATOM 2552 O ALA A 324 -36.475 -5.720 -16.151 1.00 58.53 A
ATOM 2553 N GLY A 325 -36.354 -5.020 -18.286 1.00 58.98 A
ATOM 2554 CA GLY A 325 -34.995 -4.527 -18.166 1.00 58.88 A
ATOM 2555 C GLY A 325 -33.974 -5.646 -18.119 1.00 58.25 A
ATOM 2556 O GLY A 325 -32.772 -5.409 -18.240 1.00 58.50 A
ATOM 2557 N ARG A 326 -34.455 -6.873 -17.943 1.00 56.31 A
ATOM 2558 CA ARG A 326 -33.588 -8.045 -17.954 1.00 55.26 A
ATOM 2559 CB ARG A 326 -34.412 -9.320 -18.144 1.00 55.27 A
ATOM 2560 CG ARG A 326 -35.821 -9.238 -17.580 1.00 55.77 A
ATOM 2561 CD ARG A 326 -36.344 -10.552 -17.023 1.00 55.61 A
ATOM 2562 NE ARG A 326 -35.988 -11.686 -17.870 1.00 54.23 A
ATOM 2563 CZ ARG A 326 -36.667 -12.053 -18.949 1.00 54.37 A
ATOM 2564 NH1 ARG A 326 -37.745 -11.376 -19.318 1.00 54.32 A
ATOM 2565 NH2 ARG A 326 -36.269 -13.099 -19.661 1.00 53.97 A
ATOM 2566 C ARG A 326 -32.528 -7.938 -19.046 1.00 55.56 A
ATOM 2567 O ARG A 326 -32.819 -7.519 -20.166 1.00 56.77 A
ATOM 2568 N GLU A 327 -31.325 -8.354 -18.746 1.00 54.37 A
ATOM 2569 CA GLU A 327 -30.265 -8.346 -19.692 1.00 52.58 A
ATOM 2570 CB GLU A 327 -29.016 -7.959 -18.950 1.00 53.30 A
ATOM 2571 CG GLU A 327 -27.884 -7.486 -19.804 1.00 55.73 A
ATOM 2572 CD GLU A 327 -27.298 -6.217 -19.300 1.00 56.88 A
ATOM 2573 OE1 GLU A 327 -27.147 -6.091 -18.088 1.00 57.95 A
ATOM 2574 OE2 GLU A 327 -27.000 -5.359 -20.113 1.00 57.03 A
ATOM 2575 C GLU A 327 -30.103 -9.706 -20.280 1.00 50.91 A
ATOM 2576 O GLU A 327 -29.875 -10.634 -19.573 1.00 49.89 A
ATOM 2577 N VAL A 328 -30.197 -9.814 -21.602 1.00 48.95 A
ATOM 2578 CA VAL A 328 -30.160 -11.111 -22.282 1.00 46.42 A
ATOM 2579 CB VAL A 328 -31.546 -11.467 -22.851 1.00 44.97 A
ATOM 2580 CG1 VAL A 328 -32.573 -11.469 -21.747 1.00 45.10 A

ATOM 2581 CG2 VAL A 328 -31.941 -10.471 -23.928 1.00 44.05 A
ATOM 2582 C VAL A 328 -29.172 -11.267 -23.432 1.00 45.65 A
ATOM 2583 O VAL A 328 -28.794 -10.301 -24.087 1.00 46.39 A
ATOM 2584 N VAL A 329 -28.768 -12.512 -23.667 1.00 44.93 A
ATOM 2585 CA VAL A 329 -27.862 -12.842 -24.758 1.00 43.67 A
ATOM 2586 CB VAL A 329 -27.294 -14.261 -24.611 1.00 42.47 A
ATOM 2587 CG1 VAL A 329 -26.215 -14.493 -25.643 1.00 41.51 A
ATOM 2588 CG2 VAL A 329 -26.752 -14.462 -23.214 1.00 41.53 A
ATOM 2589 C VAL A 329 -28.766 -12.801 -25.982 1.00 43.98 A
ATOM 2590 O VAL A 329 -29.410 -13.792 -26.325 1.00 42.84 A
ATOM 2591 N CYS A 330 -28.822 -11.641 -26.628 1.00 44.30 A
ATOM 2592 CA CYS A 330 -29.678 -11.444 -27.784 1.00 44.94 A
ATOM 2593 C CYS A 330 -29.435 -12.296 -29.022 1.00 44.95 A
ATOM 2594 O CYS A 330 -30.324 -12.421 -29.871 1.00 45.34 A
ATOM 2595 CB CYS A 330 -29.668 -9.974 -28.186 1.00 45.77 A
ATOM 2596 SG CYS A 330 -30.970 -8.984 -27.379 1.00 51.29 A
ATOM 2597 N HIS A 331 -28.252 -12.886 -29.142 1.00 44.35 A
ATOM 2598 CA HIS A 331 -27.970 -13.703 -30.315 1.00 43.52 A
ATOM 2599 CB HIS A 331 -26.609 -14.368 -30.180 1.00 44.40 A
ATOM 2600 CG HIS A 331 -25.948 -14.665 -31.491 1.00 46.22 A
ATOM 2601 CD2 HIS A 331 -25.537 -15.833 -32.040 1.00 47.00 A
ATOM 2602 ND1 HIS A 331 -25.603 -13.676 -32.389 1.00 47.55 A
ATOM 2603 CE1 HIS A 331 -25.004 -14.220 -33.431 1.00 48.36 A
ATOM 2604 NE2 HIS A 331 -24.952 -15.528 -33.246 1.00 48.19 A
ATOM 2605 C HIS A 331 -29.042 -14.768 -30.473 1.00 42.85 A
ATOM 2606 O HIS A 331 -29.392 -15.449 -29.514 1.00 43.53 A
ATOM 2607 N ALA A 332 -29.569 -14.904 -31.681 1.00 41.47 A
ATOM 2608 CA ALA A 332 -30.593 -15.898 -31.955 1.00 39.57 A
ATOM 2609 CB ALA A 332 -31.170 -15.678 -33.339 1.00 39.70 A
ATOM 2610 C ALA A 332 -29.989 -17.295 -31.860 1.00 38.69 A
ATOM 2611 O ALA A 332 -28.869 -17.522 -32.316 1.00 37.97 A
ATOM 2612 N SER A 333 -30.733 -18.223 -31.259 1.00 38.48 A
ATOM 2613 CA SER A 333 -30.287 -19.608 -31.111 1.00 38.16 A
ATOM 2614 CB SER A 333 -29.315 -19.729 -29.943 1.00 38.29 A

ATOM 2615 OG SER A 333 -29.890 -19.203 -28.765 1.00 39.09 A
ATOM 2616 C SER A 333 -31.479 -20.537 -30.890 1.00 37.81 A
ATOM 2617 O SER A 333 -32.588 -20.079 -30.600 1.00 36.94 A
ATOM 2618 N ALA A 334 -31.245 -21.840 -31.039 1.00 37.25 A
ATOM 2619 CA ALA A 334 -32.293 -22.843 -30.857 1.00 37.13 A
ATOM 2620 CB ALA A 334 -32.559 -23.552 -32.165 1.00 37.00 A
ATOM 2621 C ALA A 334 -31.895 -23.846 -29.771 1.00 37.29 A
ATOM 2622 O ALA A 334 -30.770 -24.339 -29.742 1.00 37.22 A
ATOM 2623 N TRP A 335 -32.839 -24.159 -28.892 1.00 37.54 A
ATOM 2624 CA TRP A 335 -32.578 -25.048 -27.768 1.00 37.20 A
ATOM 2625 CB TRP A 335 -32.927 -24.312 -26.474 1.00 36.46 A
ATOM 2626 CG TRP A 335 -32.198 -23.011 -26.337 1.00 36.46 A
ATOM 2627 CD2 TRP A 335 -31.272 -22.654 -25.309 1.00 36.03 A
ATOM 2628 CE2 TRP A 335 -30.803 -21.351 -25.601 1.00 36.00 A
ATOM 2629 CE3 TRP A 335 -30.791 -23.308 -24.169 1.00 35.11 A
ATOM 2630 CD1 TRP A 335 -32.256 -21.937 -27.189 1.00 36.40 A
ATOM 2631 NE1 TRP A 335 -31.419 -20.940 -26.754 1.00 35.90 A
ATOM 2632 CZ2 TRP A 335 -29.876 -20.693 -24.795 1.00 35.28 A
ATOM 2633 CZ3 TRP A 335 -29.873 -22.655 -23.371 1.00 35.70 A
ATOM 2634 CH2 TRP A 335 -29.423 -21.357 -23.686 1.00 35.28 A
ATOM 2635 C TRP A 335 -33.249 -26.413 -27.765 1.00 36.99 A
ATOM 2636 O TRP A 335 -34.454 -26.535 -27.975 1.00 36.86 A
ATOM 2637 N ASP A 336 -32.444 -27.435 -27.502 1.00 37.04 A
ATOM 2638 CA ASP A 336 -32.916 -28.808 -27.428 1.00 37.26 A
ATOM 2639 CB ASP A 336 -32.114 -29.685 -28.395 1.00 37.58 A
ATOM 2640 CG ASP A 336 -32.640 -31.109 -28.484 1.00 36.98 A
ATOM 2641 OD1 ASP A 336 -33.836 -31.323 -28.194 1.00 36.61 A
ATOM 2642 OD2 ASP A 336 -31.855 -32.007 -28.869 1.00 35.00 A
ATOM 2643 C ASP A 336 -32.677 -29.239 -25.984 1.00 37.95 A
ATOM 2644 O ASP A 336 -31.526 -29.379 -25.558 1.00 38.41 A
ATOM 2645 N PHE A 337 -33.764 -29.427 -25.233 1.00 38.07 A
ATOM 2646 CA PHE A 337 -33.681 -29.815 -23.825 1.00 38.41 A
ATOM 2647 CB PHE A 337 -34.916 -29.327 -23.055 1.00 38.35 A
ATOM 2648 CG PHE A 337 -34.926 -27.845 -22.770 1.00 38.46 A

ATOM 2649 CD1 PHE A 337 -35.230 -26.925 -23.774 1.00 37.31 A
ATOM 2650 CD2 PHE A 337 -34.663 -27.371 -21.481 1.00 38.07 A
ATOM 2651 CE1 PHE A 337 -35.278 -25.544 -23.499 1.00 35.95 A
ATOM 2652 CE2 PHE A 337 -34.706 -26.001 -21.194 1.00 38.33 A
ATOM 2653 CZ PHE A 337 -35.017 -25.082 -22.208 1.00 36.81 A
ATOM 2654 C PHE A 337 -33.503 -31.312 -23.569 1.00 38.17 A
ATOM 2655 O PHE A 337 -33.529 -31.749 -22.424 1.00 38.13 A
ATOM 2656 N TYR A 338 -33.332 -32.091 -24.628 1.00 38.35 A
ATOM 2657 CA TYR A 338 -33.137 -33.535 -24.502 1.00 39.02 A
ATOM 2658 CB TYR A 338 -31.731 -33.821 -23.973 1.00 39.49 A
ATOM 2659 CG TYR A 338 -30.654 -33.403 -24.942 1.00 41.28 A
ATOM 2660 CD1 TYR A 338 -30.351 -32.058 -25.147 1.00 41.85 A
ATOM 2661 CE1 TYR A 338 -29.403 -31.671 -26.086 1.00 43.04 A
ATOM 2662 CD2 TYR A 338 -29.978 -34.349 -25.699 1.00 41.89 A
ATOM 2663 CE2 TYR A 338 -29.031 -33.980 -26.639 1.00 43.62 A
ATOM 2664 CZ TYR A 338 -28.747 -32.641 -26.834 1.00 44.33 A
ATOM 2665 OH TYR A 338 -27.833 -32.287 -27.809 1.00 46.76 A
ATOM 2666 C TYR A 338 -34.170 -34.280 -23.659 1.00 39.09 A
ATOM 2667 O TYR A 338 -33.858 -35.273 -23.003 1.00 38.65 A
ATOM 2668 N ASN A 339 -35.409 -33.812 -23.704 1.00 39.78 A
ATOM 2669 CA ASN A 339 -36.487 -34.434 -22.957 1.00 40.08 A
ATOM 2670 CB ASN A 339 -36.898 -33.515 -21.801 1.00 39.81 A
ATOM 2671 CG ASN A 339 -37.743 -32.346 -22.260 1.00 40.39 A
ATOM 2672 OD1 ASN A 339 -37.720 -31.969 -23.437 1.00 41.41 A
ATOM 2673 ND2 ASN A 339 -38.491 -31.757 -21.332 1.00 39.35 A
ATOM 2674 C ASN A 339 -37.683 -34.702 -23.884 1.00 40.40 A
ATOM 2675 O ASN A 339 -38.804 -34.911 -23.427 1.00 40.77 A
ATOM 2676 N ARG A 340 -37.436 -34.677 -25.191 1.00 40.46 A
ATOM 2677 CA ARG A 340 -38.478 -34.929 -26.191 1.00 40.15 A
ATOM 2678 CB ARG A 340 -38.864 -36.409 -26.173 1.00 38.95 A
ATOM 2679 CG ARG A 340 -37.783 -37.327 -26.691 1.00 39.69 A
ATOM 2680 CD ARG A 340 -37.887 -38.712 -26.087 1.00 40.72 A
ATOM 2681 NE ARG A 340 -37.636 -38.675 -24.647 1.00 42.72 A
ATOM 2682 CZ ARG A 340 -38.581 -38.667 -23.711 1.00 42.69 A

ATOM 2683 NH1 ARG A 340 -39.865 -38.701 -24.045 1.00 42.55 A
ATOM 2684 NH2 ARG A 340 -38.239 -38.611 -22.433 1.00 43.16 A
ATOM 2685 C ARG A 340 -39.741 -34.094 -26.034 1.00 39.90 A
ATOM 2686 O ARG A 340 -40.710 -34.307 -26.758 1.00 40.12 A
ATOM 2687 N LYS A 341 -39.739 -33.113 -25.162 1.00 40.32 A
ATOM 2688 CA LYS A 341 -40.911 -32.307 -24.855 1.00 41.89 A
ATOM 2689 CB LYS A 341 -41.266 -32.528 -23.414 1.00 42.25 A
ATOM 2690 CG LYS A 341 -42.689 -32.503 -23.030 1.00 42.88 A
ATOM 2691 CD LYS A 341 -42.863 -31.927 -21.641 1.00 43.46 A
ATOM 2692 CE LYS A 341 -43.858 -30.810 -21.581 1.00 43.41 A
ATOM 2693 NZ LYS A 341 -44.044 -30.295 -20.231 1.00 41.57 A
ATOM 2694 C LYS A 341 -40.638 -30.848 -25.047 1.00 42.97 A
ATOM 2695 O LYS A 341 -41.375 -30.195 -25.710 1.00 42.21 A
ATOM 2696 N ASP A 342 -39.553 -30.351 -24.468 1.00 44.11 A
ATOM 2697 CA ASP A 342 -39.157 -28.944 -24.489 1.00 44.52 A
ATOM 2698 CB ASP A 342 -38.560 -28.558 -23.131 1.00 46.94 A
ATOM 2699 CG ASP A 342 -39.573 -27.912 -22.201 1.00 48.86 A
ATOM 2700 OD1 ASP A 342 -40.685 -28.459 -22.038 1.00 49.85 A
ATOM 2701 OD2 ASP A 342 -39.246 -26.854 -21.619 1.00 51.55 A
ATOM 2702 C ASP A 342 -38.164 -28.571 -25.571 1.00 43.48 A
ATOM 2703 O ASP A 342 -37.020 -29.029 -25.562 1.00 43.17 A
ATOM 2704 N PHE A 343 -38.616 -27.722 -26.491 1.00 42.53 A
ATOM 2705 CA PHE A 343 -37.799 -27.230 -27.603 1.00 40.78 A
ATOM 2706 CB PHE A 343 -38.145 -27.946 -28.920 1.00 37.68 A
ATOM 2707 CG PHE A 343 -38.231 -29.450 -28.810 1.00 36.00 A
ATOM 2708 CD1 PHE A 343 -39.457 -30.075 -28.582 1.00 34.52 A
ATOM 2709 CD2 PHE A 343 -37.092 -30.242 -28.951 1.00 35.25 A
ATOM 2710 CE1 PHE A 343 -39.548 -31.462 -28.498 1.00 34.50 A
ATOM 2711 CE2 PHE A 343 -37.173 -31.629 -28.870 1.00 35.37 A
ATOM 2712 CZ PHE A 343 -38.406 -32.239 -28.642 1.00 35.35 A
ATOM 2713 C PHE A 343 -38.148 -25.750 -27.740 1.00 41.36 A
ATOM 2714 O PHE A 343 -39.308 -25.405 -27.986 1.00 41.25 A
ATOM 2715 N ARG A 344 -37.164 -24.870 -27.581 1.00 42.08 A
ATOM 2716 CA ARG A 344 -37.452 -23.438 -27.676 1.00 42.64 A

ATOM 2717 CB ARG A 344 -37.593 -22.829 -26.278 1.00 44.23 A
ATOM 2718 CG ARG A 344 -38.053 -23.793 -25.203 1.00 47.79 A
ATOM 2719 CD ARG A 344 -38.267 -23.054 -23.901 1.00 49.33 A
ATOM 2720 NE ARG A 344 -38.104 -23.920 -22.738 1.00 51.50 A
ATOM 2721 CZ ARG A 344 -38.145 -23.485 -21.482 1.00 51.72 A
ATOM 2722 NH1 ARG A 344 -38.349 -22.193 -21.245 1.00 52.80 A
ATOM 2723 NH2 ARG A 344 -37.966 -24.333 -20.470 1.00 51.44 A
ATOM 2724 C ARG A 344 -36.421 -22.623 -28.446 1.00 41.75 A
ATOM 2725 O ARG A 344 -35.312 -23.078 -28.714 1.00 41.86 A
ATOM 2726 N ILE A 345 -36.803 -21.398 -28.780 1.00 40.33 A
ATOM 2727 CA ILE A 345 -35.930 -20.493 -29.502 1.00 40.05 A
ATOM 2728 CB ILE A 345 -36.515 -20.171 -30.898 1.00 39.92 A
ATOM 2729 CG2 ILE A 345 -35.901 -18.892 -31.448 1.00 39.29 A
ATOM 2730 CG1 ILE A 345 -36.296 -21.369 -31.834 1.00 39.58 A
ATOM 2731 CD1 ILE A 345 -36.752 -21.150 -33.262 1.00 36.26 A
ATOM 2732 C ILE A 345 -35.745 -19.198 -28.718 1.00 40.50 A
ATOM 2733 O ILE A 345 -36.705 -18.660 -28.162 1.00 41.70 A
ATOM 2734 N LYS A 346 -34.541 -18.660 -28.674 1.00 39.94 A
ATOM 2735 CA LYS A 346 -34.199 -17.422 -27.983 1.00 38.69 A
ATOM 2736 CB LYS A 346 -33.112 -17.723 -26.989 1.00 37.09 A
ATOM 2737 CG LYS A 346 -32.590 -16.622 -26.110 1.00 34.23 A
ATOM 2738 CD LYS A 346 -31.181 -16.892 -25.693 1.00 32.44 A
ATOM 2739 CE LYS A 346 -30.163 -16.352 -26.684 1.00 32.66 A
ATOM 2740 NZ LYS A 346 -29.155 -17.270 -27.313 1.00 31.32 A
ATOM 2741 C LYS A 346 -33.653 -16.423 -28.943 1.00 38.97 A
ATOM 2742 O LYS A 346 -32.616 -16.595 -29.446 1.00 39.50 A
ATOM 2743 N GLN A 347 -34.373 -15.370 -29.216 1.00 38.55 A
ATOM 2744 CA GLN A 347 -33.947 -14.398 -30.213 1.00 39.05 A
ATOM 2745 CB GLN A 347 -34.221 -14.950 -31.604 1.00 38.68 A
ATOM 2746 CG GLN A 347 -33.932 -13.975 -32.710 1.00 39.12 A
ATOM 2747 CD GLN A 347 -34.500 -14.435 -34.019 1.00 39.67 A
ATOM 2748 OE1 GLN A 347 -34.371 -15.601 -34.383 1.00 40.23 A
ATOM 2749 NE2 GLN A 347 -35.133 -13.521 -34.743 1.00 40.20 A
ATOM 2750 C GLN A 347 -34.642 -13.054 -30.073 1.00 39.55 A

ATOM 2751 O GLN A 347 -35.872 -12.979 -30.131 1.00 39.14 A
ATOM 2752 N CYS A 348 -33.853 -11.995 -29.909 1.00 40.47 A
ATOM 2753 CA CYS A 348 -34.403 -10.650 -29.765 1.00 42.70 A
ATOM 2754 C CYS A 348 -34.872 -10.164 -31.140 1.00 42.61 A
ATOM 2755 O CYS A 348 -34.354 -9.190 -31.691 1.00 43.38 A
ATOM 2756 CB CYS A 348 -33.350 -9.688 -29.182 1.00 44.58 A
ATOM 2757 SG CYS A 348 -32.665 -10.127 -27.537 1.00 46.39 A
ATOM 2758 N THR A 349 -35.867 -10.860 -31.676 1.00 41.20 A
ATOM 2759 CA THR A 349 -36.421 -10.566 -32.989 1.00 39.39 A
ATOM 2760 CB THR A 349 -37.674 -11.426 -33.261 1.00 39.50 A
ATOM 2761 OG1 THR A 349 -37.364 -12.808 -33.050 1.00 39.71 A
ATOM 2762 CG2 THR A 349 -38.150 -11.241 -34.687 1.00 38.77 A
ATOM 2763 C THR A 349 -36.796 -9.112 -33.226 1.00 38.24 A
ATOM 2764 O THR A 349 -37.486 -8.496 -32.425 1.00 37.73 A
ATOM 2765 N ALA A 350 -36.321 -8.586 -34.348 1.00 37.86 A
ATOM 2766 CA ALA A 350 -36.606 -7.228 -34.790 1.00 37.83 A
ATOM 2767 CB ALA A 350 -35.311 -6.439 -34.943 1.00 37.69 A
ATOM 2768 C ALA A 350 -37.278 -7.440 -36.152 1.00 38.23 A
ATOM 2769 O ALA A 350 -36.843 -8.275 -36.938 1.00 38.55 A
ATOM 2770 N VAL A 351 -38.349 -6.711 -36.429 1.00 38.82 A
ATOM 2771 CA VAL A 351 -39.062 -6.872 -37.695 1.00 39.43 A
ATOM 2772 CB VAL A 351 -40.398 -6.111 -37.644 1.00 39.64 A
ATOM 2773 CG1 VAL A 351 -40.981 -5.969 -39.035 1.00 40.50 A
ATOM 2774 CG2 VAL A 351 -41.369 -6.862 -36.734 1.00 37.94 A
ATOM 2775 C VAL A 351 -38.240 -6.430 -38.907 1.00 40.64 A
ATOM 2776 O VAL A 351 -38.272 -5.265 -39.313 1.00 40.10 A
ATOM 2777 N THR A 352 -37.516 -7.388 -39.486 1.00 41.79 A
ATOM 2778 CA THR A 352 -36.646 -7.146 -40.633 1.00 41.94 A
ATOM 2779 CB THR A 352 -35.244 -6.784 -40.145 1.00 41.83 A
ATOM 2780 OG1 THR A 352 -35.304 -5.521 -39.484 1.00 42.07 A
ATOM 2781 CG2 THR A 352 -34.266 -6.695 -41.295 1.00 43.79 A
ATOM 2782 C THR A 352 -36.557 -8.372 -41.537 1.00 42.51 A
ATOM 2783 O THR A 352 -36.625 -9.500 -41.061 1.00 42.27 A
ATOM 2784 N MET A 353 -36.394 -8.153 -42.839 1.00 43.29 A

ATOM 2785 CA MET A 353 -36.309 -9.272 -43.758 1.00 44.08 A
ATOM 2786 CB MET A 353 -36.152 -8.795 -45.205 1.00 47.53 A
ATOM 2787 CG MET A 353 -36.519 -9.861 -46.251 1.00 50.24 A
ATOM 2788 SD MET A 353 -36.263 -9.368 -47.997 1.00 54.12 A
ATOM 2789 CE MET A 353 -34.603 -10.060 -48.297 1.00 53.08 A
ATOM 2790 C MET A 353 -35.145 -10.159 -43.375 1.00 43.41 A
ATOM 2791 O MET A 353 -35.321 -11.358 -43.215 1.00 42.34 A
ATOM 2792 N ASP A 354 -33.954 -9.587 -43.217 1.00 44.64 A
ATOM 2793 CA ASP A 354 -32.806 -10.411 -42.839 1.00 46.57 A
ATOM 2794 CB ASP A 354 -31.499 -9.594 -42.702 1.00 48.00 A
ATOM 2795 CG ASP A 354 -31.717 -8.077 -42.745 1.00 51.83 A
ATOM 2796 OD1 ASP A 354 -32.396 -7.580 -43.675 1.00 52.68 A
ATOM 2797 OD2 ASP A 354 -31.186 -7.371 -41.850 1.00 54.11 A
ATOM 2798 C ASP A 354 -33.111 -11.141 -41.532 1.00 47.53 A
ATOM 2799 O ASP A 354 -32.511 -12.174 -41.231 1.00 47.38 A
ATOM 2800 N GLN A 355 -34.132 -10.704 -40.838 1.00 48.81 A
ATOM 2801 CA GLN A 355 -34.475 -11.300 -39.587 1.00 48.08 A
ATOM 2802 CB GLN A 355 -34.843 -10.270 -38.556 1.00 47.13 A
ATOM 2803 CG GLN A 355 -33.683 -9.789 -37.770 1.00 48.31 A
ATOM 2804 CD GLN A 355 -33.594 -10.305 -36.388 1.00 48.09 A
ATOM 2805 OE1 GLN A 355 -34.148 -9.774 -35.507 1.00 48.37 A
ATOM 2806 NE2 GLN A 355 -32.982 -11.406 -36.235 1.00 47.82 A
ATOM 2807 C GLN A 355 -35.550 -12.284 -39.749 1.00 47.78 A
ATOM 2808 O GLN A 355 -35.702 -13.129 -38.954 1.00 48.60 A
ATOM 2809 N LEU A 356 -36.295 -12.169 -40.807 1.00 46.44 A
ATOM 2810 CA LEU A 356 -37.297 -13.164 -41.176 1.00 43.62 A
ATOM 2811 CB LEU A 356 -38.203 -12.637 -42.291 1.00 42.36 A
ATOM 2812 CG LEU A 356 -39.241 -13.630 -42.828 1.00 41.19 A
ATOM 2813 CD1 LEU A 356 -40.126 -14.149 -41.704 1.00 40.62 A
ATOM 2814 CD2 LEU A 356 -40.081 -12.947 -43.877 1.00 39.57 A
ATOM 2815 C LEU A 356 -36.676 -14.480 -41.609 1.00 42.99 A
ATOM 2816 O LEU A 356 -37.253 -15.538 -41.376 1.00 43.36 A
ATOM 2817 N SER A 357 -35.505 -14.423 -42.239 1.00 42.07 A
ATOM 2818 CA SER A 357 -34.851 -15.652 -42.675 1.00 41.18 A

ATOM 2819 CB SER A 357 -33.919 -15.393 -43.865 1.00 39.62 A
ATOM 2820 OG SER A 357 -32.977 -14.394 -43.576 1.00 38.03 A
ATOM 2821 C SER A 357 -34.095 -16.289 -41.522 1.00 40.65 A
ATOM 2822 O SER A 357 -33.914 -17.505 -41.494 1.00 40.23 A
ATOM 2823 N THR A 358 -33.659 -15.471 -40.566 1.00 40.85 A
ATOM 2824 CA THR A 358 -32.958 -15.993 -39.396 1.00 40.86 A
ATOM 2825 CB THR A 358 -32.406 -14.875 -38.492 1.00 40.84 A
ATOM 2826 OG1 THR A 358 -31.246 -14.285 -39.097 1.00 39.27 A
ATOM 2827 CG2 THR A 358 -32.036 -15.443 -37.122 1.00 40.75 A
ATOM 2828 C THR A 358 -33.981 -16.786 -38.595 1.00 40.77 A
ATOM 2829 O THR A 358 -33.651 -17.766 -37.922 1.00 39.94 A
ATOM 2830 N VAL A 359 -35.231 -16.350 -38.668 1.00 40.24 A
ATOM 2831 CA VAL A 359 -36.290 -17.050 -37.971 1.00 39.58 A
ATOM 2832 CB VAL A 359 -37.620 -16.279 -38.043 1.00 39.32 A
ATOM 2833 CG1 VAL A 359 -38.758 -17.153 -37.539 1.00 39.04 A
ATOM 2834 CG2 VAL A 359 -37.520 -15.010 -37.199 1.00 38.97 A
ATOM 2835 C VAL A 359 -36.442 -18.418 -38.618 1.00 39.18 A
ATOM 2836 O VAL A 359 -36.568 -19.422 -37.915 1.00 39.87 A
ATOM 2837 N HIS A 360 -36.417 -18.462 -39.951 1.00 37.66 A
ATOM 2838 CA HIS A 360 -36.525 -19.738 -40.657 1.00 36.81 A
ATOM 2839 CB HIS A 360 -36.575 -19.536 -42.171 1.00 35.97 A
ATOM 2840 CG HIS A 360 -37.878 -18.994 -42.666 1.00 37.14 A
ATOM 2841 CD2 HIS A 360 -38.898 -19.589 -43.329 1.00 37.42 A
ATOM 2842 ND1 HIS A 360 -38.253 -17.679 -42.490 1.00 38.78 A
ATOM 2843 CE1 HIS A 360 -39.446 -17.486 -43.024 1.00 39.34 A
ATOM 2844 NE2 HIS A 360 -39.862 -18.629 -43.540 1.00 39.00 A
ATOM 2845 C HIS A 360 -35.321 -20.602 -40.301 1.00 35.68 A
ATOM 2846 O HIS A 360 -35.455 -21.795 -40.007 1.00 34.73 A
ATOM 2847 N HIS A 361 -34.147 -19.980 -40.321 1.00 34.03 A
ATOM 2848 CA HIS A 361 -32.903 -20.659 -39.988 1.00 33.65 A
ATOM 2849 CB HIS A 361 -31.768 -19.650 -39.882 1.00 33.34 A
ATOM 2850 CG HIS A 361 -30.513 -20.221 -39.302 1.00 31.80 A
ATOM 2851 CD2 HIS A 361 -29.993 -20.140 -38.058 1.00 31.41 A
ATOM 2852 ND1 HIS A 361 -29.648 -21.007 -40.027 1.00 31.30 A

ATOM 2853 CE1 HIS A 361 -28.647 -21.386 -39.254 1.00 30.91 A
ATOM 2854 NE2 HIS A 361 -28.832 -20.874 -38.053 1.00 31.01 A
ATOM 2855 C HIS A 361 -33.016 -21.388 -38.659 1.00 33.70 A
ATOM 2856 O HIS A 361 -32.649 -22.561 -38.543 1.00 32.65 A
ATOM 2857 N GLU A 362 -33.513 -20.669 -37.655 1.00 34.07 A
ATOM 2858 CA GLU A 362 -33.680 -21.218 -36.319 1.00 33.62 A
ATOM 2859 CB GLU A 362 -34.036 -20.100 -35.333 1.00 33.93 A
ATOM 2860 CG GLU A 362 -32.940 -19.044 -35.137 1.00 34.15 A
ATOM 2861 CD GLU A 362 -31.596 -19.639 -34.754 1.00 35.22 A
ATOM 2862 OE1 GLU A 362 -31.574 -20.670 -34.070 1.00 36.91 A
ATOM 2863 OE2 GLU A 362 -30.551 -19.071 -35.116 1.00 35.16 A
ATOM 2864 C GLU A 362 -34.738 -22.325 -36.297 1.00 33.91 A
ATOM 2865 O GLU A 362 -34.499 -23.392 -35.720 1.00 33.70 A
ATOM 2866 N MET A 363 -35.893 -22.085 -36.924 1.00 33.63 A
ATOM 2867 CA MET A 363 -36.945 -23.102 -36.981 1.00 34.31 A
ATOM 2868 CB MET A 363 -38.100 -22.649 -37.863 1.00 35.71 A
ATOM 2869 CG MET A 363 -39.049 -21.692 -37.206 1.00 38.96 A
ATOM 2870 SD MET A 363 -40.759 -22.252 -37.392 1.00 41.06 A
ATOM 2871 CE MET A 363 -41.588 -21.035 -36.330 1.00 39.57 A
ATOM 2872 C MET A 363 -36.373 -24.383 -37.571 1.00 34.10 A
ATOM 2873 O MET A 363 -36.830 -25.481 -37.275 1.00 33.78 A
ATOM 2874 N GLY A 364 -35.375 -24.225 -38.428 1.00 33.86 A
ATOM 2875 CA GLY A 364 -34.756 -25.375 -39.043 1.00 33.52 A
ATOM 2876 C GLY A 364 -34.107 -26.247 -38.004 1.00 33.69 A
ATOM 2877 O GLY A 364 -34.082 -27.460 -38.158 1.00 34.93 A
ATOM 2878 N HIS A 365 -33.567 -25.635 -36.953 1.00 34.17 A
ATOM 2879 CA HIS A 365 -32.927 -26.383 -35.867 1.00 34.86 A
ATOM 2880 CB HIS A 365 -32.141 -25.436 -34.958 1.00 33.95 A
ATOM 2881 CG HIS A 365 -30.864 -24.947 -35.561 1.00 34.55 A
ATOM 2882 CD2 HIS A 365 -30.405 -23.692 -35.790 1.00 34.78 A
ATOM 2883 ND1 HIS A 365 -29.876 -25.803 -36.000 1.00 33.79 A
ATOM 2884 CE1 HIS A 365 -28.863 -25.096 -36.472 1.00 34.38 A
ATOM 2885 NE2 HIS A 365 -29.159 -23.813 -36.357 1.00 33.95 A
ATOM 2886 C HIS A 365 -33.997 -27.105 -35.047 1.00 35.07 A

ATOM 2887 O HIS A 365 -33.877 -28.299 -34.752 1.00 33.51 A
ATOM 2888 N ILE A 366 -35.042 -26.360 -34.696 1.00 34.86 A
ATOM 2889 CA ILE A 366 -36.163 -26.888 -33.936 1.00 35.34 A
ATOM 2890 CB ILE A 366 -37.239 -25.799 -33.741 1.00 35.51 A
ATOM 2891 CG2 ILE A 366 -38.415 -26.349 -32.965 1.00 35.57 A
ATOM 2892 CG1 ILE A 366 -36.623 -24.593 -33.033 1.00 35.55 A
ATOM 2893 CD1 ILE A 366 -35.759 -24.958 -31.845 1.00 36.59 A
ATOM 2894 C ILE A 366 -36.788 -28.087 -34.652 1.00 35.58 A
ATOM 2895 O ILE A 366 -37.058 -29.118 -34.032 1.00 35.58 A
ATOM 2896 N GLN A 367 -37.006 -27.943 -35.959 1.00 35.53 A
ATOM 2897 CA GLN A 367 -37.600 -29.005 -36.768 1.00 35.60 A
ATOM 2898 CB GLN A 367 -37.871 -28.527 -38.195 1.00 34.08 A
ATOM 2899 CG GLN A 367 -38.606 -29.563 -39.040 1.00 33.86 A
ATOM 2900 CD GLN A 367 -40.074 -29.697 -38.668 1.00 34.01 A
ATOM 2901 OE1 GLN A 367 -40.688 -30.742 -38.875 1.00 35.15 A
ATOM 2902 NE2 GLN A 367 -40.646 -28.630 -38.132 1.00 33.31 A
ATOM 2903 C GLN A 367 -36.702 -30.229 -36.828 1.00 36.04 A
ATOM 2904 O GLN A 367 -37.186 -31.349 -36.988 1.00 36.40 A
ATOM 2905 N TYR A 368 -35.396 -30.017 -36.707 1.00 35.45 A
ATOM 2906 CA TYR A 368 -34.462 -31.120 -36.744 1.00 35.55 A
ATOM 2907 CB TYR A 368 -33.039 -30.600 -36.923 1.00 35.74 A
ATOM 2908 CG TYR A 368 -32.116 -31.545 -37.670 1.00 37.21 A
ATOM 2909 CD1 TYR A 368 -30.992 -31.065 -38.348 1.00 37.93 A
ATOM 2910 CE1 TYR A 368 -30.121 -31.929 -39.022 1.00 38.53 A
ATOM 2911 CD2 TYR A 368 -32.348 -32.916 -37.689 1.00 38.05 A
ATOM 2912 CE2 TYR A 368 -31.485 -33.789 -38.362 1.00 39.18 A
ATOM 2913 CZ TYR A 368 -30.371 -33.291 -39.025 1.00 39.10 A
ATOM 2914 OH TYR A 368 -29.500 -34.155 -39.666 1.00 37.48 A
ATOM 2915 C TYR A 368 -34.609 -31.848 -35.420 1.00 36.64 A
ATOM 2916 O TYR A 368 -34.580 -33.075 -35.374 1.00 36.91 A
ATOM 2917 N TYR A 369 -34.791 -31.082 -34.344 1.00 37.50 A
ATOM 2918 CA TYR A 369 -34.959 -31.646 -33.003 1.00 37.48 A
ATOM 2919 CB TYR A 369 -35.098 -30.536 -31.961 1.00 35.62 A
ATOM 2920 CG TYR A 369 -33.899 -29.635 -31.850 1.00 33.19 A

ATOM 2921 CD1 TYR A 369 -34.057 -28.275 -31.618 1.00 32.92 A
ATOM 2922 CE1 TYR A 369 -32.964 -27.434 -31.531 1.00 34.36 A
ATOM 2923 CD2 TYR A 369 -32.612 -30.139 -31.986 1.00 32.70 A
ATOM 2924 CE2 TYR A 369 -31.506 -29.309 -31.900 1.00 34.01 A
ATOM 2925 CZ TYR A 369 -31.689 -27.953 -31.675 1.00 35.30 A
ATOM 2926 OH TYR A 369 -30.598 -27.112 -31.616 1.00 36.23 A
ATOM 2927 C TYR A 369 -36.213 -32.493 -32.971 1.00 38.49 A
ATOM 2928 O TYR A 369 -36.166 -33.680 -32.650 1.00 39.60 A
ATOM 2929 N LEU A 370 -37.334 -31.862 -33.307 1.00 38.26 A
ATOM 2930 CA LEU A 370 -38.627 -32.528 -33.326 1.00 37.47 A
ATOM 2931 CB LEU A 370 -39.681 -31.615 -33.958 1.00 34.09 A
ATOM 2932 CG LEU A 370 -39.867 -30.226 -33.358 1.00 32.59 A
ATOM 2933 CD1 LEU A 370 -40.775 -29.406 -34.245 1.00 32.73 A
ATOM 2934 CD2 LEU A 370 -40.441 -30.349 -31.973 1.00 32.20 A
ATOM 2935 C LEU A 370 -38.567 -33.832 -34.111 1.00 38.97 A
ATOM 2936 O LEU A 370 -39.213 -34.807 -33.748 1.00 40.37 A
ATOM 2937 N GLN A 371 -37.783 -33.856 -35.180 1.00 40.33 A
ATOM 2938 CA GLN A 371 -37.699 -35.050 -36.014 1.00 41.82 A
ATOM 2939 CB GLN A 371 -37.193 -34.693 -37.420 1.00 42.99 A
ATOM 2940 CG GLN A 371 -38.129 -33.803 -38.249 1.00 41.62 A
ATOM 2941 CD GLN A 371 -39.520 -34.384 -38.410 1.00 40.46 A
ATOM 2942 OE1 GLN A 371 -39.696 -35.601 -38.488 1.00 39.12 A
ATOM 2943 NE2 GLN A 371 -40.516 -33.513 -38.477 1.00 39.61 A
ATOM 2944 C GLN A 371 -36.870 -36.206 -35.467 1.00 42.33 A
ATOM 2945 O GLN A 371 -37.235 -37.364 -35.670 1.00 43.17 A
ATOM 2946 N TYR A 372 -35.765 -35.927 -34.785 1.00 42.69 A
ATOM 2947 CA TYR A 372 -34.965 -37.035 -34.282 1.00 44.21 A
ATOM 2948 CB TYR A 372 -33.479 -36.872 -34.671 1.00 45.88 A
ATOM 2949 CG TYR A 372 -32.744 -35.624 -34.189 1.00 47.12 A
ATOM 2950 CD1 TYR A 372 -33.264 -34.794 -33.193 1.00 47.39 A
ATOM 2951 CE1 TYR A 372 -32.540 -33.688 -32.719 1.00 47.90 A
ATOM 2952 CD2 TYR A 372 -31.486 -35.313 -34.705 1.00 48.58 A
ATOM 2953 CE2 TYR A 372 -30.758 -34.212 -34.241 1.00 49.61 A
ATOM 2954 CZ TYR A 372 -31.285 -33.406 -33.250 1.00 48.82 A

ATOM 2955 OH TYR A 372 -30.542 -32.338 -32.795 1.00 47.60 A
ATOM 2956 C TYR A 372 -35.087 -37.315 -32.790 1.00 44.50 A
ATOM 2957 O TYR A 372 -34.360 -38.164 -32.251 1.00 44.28 A
ATOM 2958 N LYS A 373 -36.024 -36.634 -32.129 1.00 44.11 A
ATOM 2959 CA LYS A 373 -36.220 -36.815 -30.690 1.00 43.18 A
ATOM 2960 CB LYS A 373 -37.437 -36.017 -30.204 1.00 42.04 A
ATOM 2961 CG LYS A 373 -38.785 -36.531 -30.674 1.00 41.69 A
ATOM 2962 CD LYS A 373 -39.900 -35.630 -30.150 1.00 42.07 A
ATOM 2963 CE LYS A 373 -41.268 -35.981 -30.733 1.00 41.86 A
ATOM 2964 NZ LYS A 373 -41.712 -37.361 -30.388 1.00 41.51 A
ATOM 2965 C LYS A 373 -36.380 -38.280 -30.288 1.00 43.21 A
ATOM 2966 O LYS A 373 -36.198 -38.624 -29.124 1.00 43.14 A
ATOM 2967 N ASP A 374 -36.696 -39.145 -31.246 1.00 43.39 A
ATOM 2968 CA ASP A 374 -36.881 -40.554 -30.947 1.00 43.26 A
ATOM 2969 CB ASP A 374 -38.095 -41.076 -31.696 1.00 46.24 A
ATOM 2970 CG ASP A 374 -39.382 -40.458 -31.191 1.00 50.04 A
ATOM 2971 OD1 ASP A 374 -39.625 -40.531 -29.960 1.00 51.44 A
ATOM 2972 OD2 ASP A 374 -40.143 -39.897 -32.013 1.00 51.92 A
ATOM 2973 C ASP A 374 -35.681 -41.442 -31.209 1.00 42.09 A
ATOM 2974 O ASP A 374 -35.816 -42.527 -31.757 1.00 42.02 A
ATOM 2975 N LEU A 375 -34.510 -40.980 -30.788 1.00 41.94 A
ATOM 2976 CA LEU A 375 -33.269 -41.728 -30.957 1.00 41.84 A
ATOM 2977 CB LEU A 375 -32.433 -41.123 -32.091 1.00 43.30 A
ATOM 2978 CG LEU A 375 -33.024 -41.038 -33.499 1.00 43.82 A
ATOM 2979 CD1 LEU A 375 -32.274 -39.990 -34.306 1.00 44.15 A
ATOM 2980 CD2 LEU A 375 -32.952 -42.402 -34.161 1.00 43.55 A
ATOM 2981 C LEU A 375 -32.454 -41.640 -29.674 1.00 40.70 A
ATOM 2982 O LEU A 375 -32.677 -40.752 -28.852 1.00 39.20 A
ATOM 2983 N PRO A 376 -31.508 -42.573 -29.478 1.00 40.63 A
ATOM 2984 CD PRO A 376 -31.149 -43.761 -30.274 1.00 40.97 A
ATOM 2985 CA PRO A 376 -30.701 -42.500 -28.264 1.00 40.75 A
ATOM 2986 CB PRO A 376 -29.571 -43.479 -28.558 1.00 40.90 A
ATOM 2987 CG PRO A 376 -30.277 -44.551 -29.311 1.00 40.74 A
ATOM 2988 C PRO A 376 -30.210 -41.059 -28.165 1.00 40.76 A

ATOM 2989 O PRO A 376 -29.806 -40.468 -29.165 1.00 42.46 A
ATOM 2990 N VAL A 377 -30.277 -40.488 -26.971 1.00 39.66 A
ATOM 2991 CA VAL A 377 -29.844 -39.114 -26.745 1.00 37.92 A
ATOM 2992 CB VAL A 377 -29.704 -38.836 -25.220 1.00 36.49 A
ATOM 2993 CG1 VAL A 377 -28.517 -39.608 -24.647 1.00 37.67 A
ATOM 2994 CG2 VAL A 377 -29.556 -37.367 -24.966 1.00 34.14 A
ATOM 2995 C VAL A 377 -28.521 -38.769 -27.453 1.00 37.64 A
ATOM 2996 O VAL A 377 -28.445 -37.779 -28.180 1.00 37.60 A
ATOM 2997 N SER A 378 -27.491 -39.588 -27.259 1.00 36.49 A
ATOM 2998 CA SER A 378 -26.192 -39.317 -27.860 1.00 36.63 A
ATOM 2999 CB SER A 378 -25.167 -40.336 -27.362 1.00 36.94 A
ATOM 3000 OG SER A 378 -25.657 -41.653 -27.517 1.00 39.91 A
ATOM 3001 C SER A 378 -26.165 -39.253 -29.389 1.00 35.84 A
ATOM 3002 O SER A 378 -25.116 -39.014 -29.979 1.00 34.67 A
ATOM 3003 N LEU A 379 -27.311 -39.459 -30.028 1.00 36.12 A
ATOM 3004 CA LEU A 379 -27.392 -39.398 -31.485 1.00 36.83 A
ATOM 3005 CB LEU A 379 -27.896 -40.723 -32.066 1.00 36.62 A
ATOM 3006 CG LEU A 379 -27.108 -42.020 -31.849 1.00 36.80 A
ATOM 3007 CD1 LEU A 379 -27.862 -43.168 -32.495 1.00 35.69 A
ATOM 3008 CD2 LEU A 379 -25.728 -41.917 -32.444 1.00 36.45 A
ATOM 3009 C LEU A 379 -28.320 -38.270 -31.954 1.00 37.73 A
ATOM 3010 O LEU A 379 -28.655 -38.195 -33.136 1.00 37.11 A
ATOM 3011 N ARG A 380 -28.733 -37.400 -31.032 1.00 39.25 A
ATOM 3012 CA ARG A 380 -29.623 -36.283 -31.367 1.00 40.66 A
ATOM 3013 CB ARG A 380 -30.497 -35.904 -30.159 1.00 42.63 A
ATOM 3014 CG ARG A 380 -31.322 -37.066 -29.630 1.00 43.18 A
ATOM 3015 CD ARG A 380 -32.250 -36.697 -28.482 1.00 43.72 A
ATOM 3016 NE ARG A 380 -32.791 -37.919 -27.878 1.00 45.88 A
ATOM 3017 CZ ARG A 380 -33.611 -37.958 -26.829 1.00 45.83 A
ATOM 3018 NH1 ARG A 380 -34.011 -36.835 -26.238 1.00 44.45 A
ATOM 3019 NH2 ARG A 380 -34.030 -39.129 -26.366 1.00 46.80 A
ATOM 3020 C ARG A 380 -28.820 -35.072 -31.832 1.00 40.70 A
ATOM 3021 O ARG A 380 -28.738 -34.039 -31.148 1.00 40.70 A
ATOM 3022 N ARG A 381 -28.204 -35.234 -32.989 1.00 40.89 A

ATOM 3023 CA ARG A 381 -27.228 -34.356 -33.590 1.00 40.63 A
ATOM 3024 CB ARG A 381 -25.912 -35.107 -33.457 1.00 42.06 A
ATOM 3025 CG ARG A 381 -25.121 -34.798 -32.290 1.00 42.26 A
ATOM 3026 CD ARG A 381 -25.766 -33.841 -31.430 1.00 45.08 A
ATOM 3027 NE ARG A 381 -24.839 -32.818 -30.976 1.00 48.47 A
ATOM 3028 CZ ARG A 381 -25.127 -31.572 -30.662 1.00 49.05 A
ATOM 3029 NH1 ARG A 381 -26.333 -31.086 -30.742 1.00 48.20 A
ATOM 3030 NH2 ARG A 381 -24.147 -30.804 -30.287 1.00 49.59 A
ATOM 3031 C ARG A 381 -27.657 -34.270 -35.089 1.00 39.16 A
ATOM 3032 O ARG A 381 -28.411 -35.066 -35.456 1.00 39.48 A
ATOM 3033 N GLY A 382 -27.192 -33.349 -35.938 1.00 37.16 A
ATOM 3034 CA GLY A 382 -27.314 -33.456 -37.386 1.00 35.25 A
ATOM 3035 C GLY A 382 -26.297 -34.434 -37.946 1.00 33.42 A
ATOM 3036 O GLY A 382 -25.360 -34.800 -37.241 1.00 33.53 A
ATOM 3037 N ALA A 383 -26.478 -34.871 -39.191 1.00 32.75 A
ATOM 3038 CA ALA A 383 -25.535 -35.809 -39.815 1.00 31.91 A
ATOM 3039 CB ALA A 383 -25.734 -35.837 -41.323 1.00 33.76 A
ATOM 3040 C ALA A 383 -24.144 -35.308 -39.472 1.00 30.27 A
ATOM 3041 O ALA A 383 -23.248 -36.083 -39.136 1.00 29.89 A
ATOM 3042 N ASN A 384 -23.989 -33.995 -39.603 1.00 28.03 A
ATOM 3043 CA ASN A 384 -22.785 -33.278 -39.227 1.00 28.64 A
ATOM 3044 CB ASN A 384 -21.659 -33.331 -40.295 1.00 30.24 A
ATOM 3045 CG ASN A 384 -21.994 -32.605 -41.602 1.00 31.98 A
ATOM 3046 OD1 ASN A 384 -22.546 -31.503 -41.610 1.00 33.11 A
ATOM 3047 ND2 ASN A 384 -21.611 -33.219 -42.718 1.00 29.17 A
ATOM 3048 C ASN A 384 -23.300 -31.865 -38.958 1.00 28.56 A
ATOM 3049 O ASN A 384 -24.369 -31.488 -39.451 1.00 27.53 A
ATOM 3050 N PRO A 385 -22.575 -31.081 -38.145 1.00 28.51 A
ATOM 3051 CD PRO A 385 -21.184 -31.334 -37.731 1.00 27.49 A
ATOM 3052 CA PRO A 385 -22.974 -29.712 -37.801 1.00 28.96 A
ATOM 3053 CB PRO A 385 -21.703 -29.117 -37.211 1.00 28.26 A
ATOM 3054 CG PRO A 385 -21.002 -30.312 -36.658 1.00 27.98 A
ATOM 3055 C PRO A 385 -23.471 -28.922 -39.003 1.00 30.29 A
ATOM 3056 O PRO A 385 -24.345 -28.059 -38.875 1.00 32.12 A

ATOM 3057 N GLY A 386 -22.902 -29.223 -40.168 1.00 29.85 A
ATOM 3058 CA GLY A 386 -23.285 -28.541 -41.386 1.00 28.62 A
ATOM 3059 C GLY A 386 -24.734 -28.769 -41.747 1.00 29.23 A
ATOM 3060 O GLY A 386 -25.450 -27.812 -42.022 1.00 29.20 A
ATOM 3061 N PHE A 387 -25.173 -30.026 -41.752 1.00 29.65 A
ATOM 3062 CA PHE A 387 -26.563 -30.326 -42.082 1.00 30.14 A
ATOM 3063 CB PHE A 387 -26.869 -31.817 -41.885 1.00 30.04 A
ATOM 3064 CG PHE A 387 -26.269 -32.719 -42.939 1.00 30.84 A
ATOM 3065 CD1 PHE A 387 -24.892 -32.735 -43.176 1.00 31.00 A
ATOM 3066 CD2 PHE A 387 -27.080 -33.585 -43.673 1.00 29.77 A
ATOM 3067 CE1 PHE A 387 -24.334 -33.606 -44.131 1.00 30.68 A
ATOM 3068 CE2 PHE A 387 -26.531 -34.457 -44.627 1.00 30.22 A
ATOM 3069 CZ PHE A 387 -25.158 -34.468 -44.855 1.00 29.38 A
ATOM 3070 C PHE A 387 -27.496 -29.504 -41.198 1.00 30.14 A
ATOM 3071 O PHE A 387 -28.506 -28.980 -41.666 1.00 29.35 A
ATOM 3072 N HIS A 388 -27.142 -29.379 -39.921 1.00 29.68 A
ATOM 3073 CA HIS A 388 -27.974 -28.635 -38.990 1.00 29.23 A
ATOM 3074 CB HIS A 388 -27.406 -28.699 -37.562 1.00 29.87 A
ATOM 3075 CG HIS A 388 -28.407 -29.145 -36.526 1.00 30.57 A
ATOM 3076 CD2 HIS A 388 -28.415 -30.213 -35.695 1.00 30.18 A
ATOM 3077 ND1 HIS A 388 -29.587 -28.465 -36.283 1.00 30.81 A
ATOM 3078 CE1 HIS A 388 -30.276 -29.099 -35.352 1.00 30.16 A
ATOM 3079 NE2 HIS A 388 -29.590 -30.162 -34.976 1.00 30.14 A
ATOM 3080 C HIS A 388 -28.149 -27.193 -39.413 1.00 28.54 A
ATOM 3081 O HIS A 388 -29.274 -26.709 -39.502 1.00 29.28 A
ATOM 3082 N GLU A 389 -27.051 -26.500 -39.689 1.00 28.07 A
ATOM 3083 CA GLU A 389 -27.149 -25.098 -40.089 1.00 28.29 A
ATOM 3084 CB GLU A 389 -25.761 -24.452 -40.120 1.00 28.13 A
ATOM 3085 CG GLU A 389 -24.948 -24.544 -38.820 1.00 29.84 A
ATOM 3086 CD GLU A 389 -25.696 -24.021 -37.600 1.00 30.64 A
ATOM 3087 OE1 GLU A 389 -26.468 -23.051 -37.732 1.00 30.20 A
ATOM 3088 OE2 GLU A 389 -25.500 -24.574 -36.499 1.00 30.65 A
ATOM 3089 C GLU A 389 -27.825 -24.915 -41.453 1.00 28.36 A
ATOM 3090 O GLU A 389 -28.266 -23.815 -41.795 1.00 29.82 A

ATOM 3091 N ALA A 390 -27.901 -25.997 -42.221 1.00 26.14 A
ATOM 3092 CA ALA A 390 -28.527 -25.959 -43.537 1.00 23.23 A
ATOM 3093 CB ALA A 390 -28.124 -27.179 -44.352 1.00 23.61 A
ATOM 3094 C ALA A 390 -30.046 -25.872 -43.424 1.00 23.38 A
ATOM 3095 O ALA A 390 -30.685 -25.081 -44.117 1.00 22.78 A
ATOM 3096 N ILE A 391 -30.616 -26.690 -42.546 1.00 23.42 A
ATOM 3097 CA ILE A 391 -31.985 -27.162 -42.716 1.00 22.36 A
ATOM 3098 CB ILE A 391 -32.419 -28.008 -41.504 1.00 20.22 A
ATOM 3099 CG2 ILE A 391 -33.909 -28.305 -41.567 1.00 16.75 A
ATOM 3100 CG1 ILE A 391 -31.611 -29.305 -41.442 1.00 20.32 A
ATOM 3101 CD1 ILE A 391 -31.501 -30.019 -42.771 1.00 19.50 A
ATOM 3102 C ILE A 391 -32.950 -25.998 -42.914 1.00 23.56 A
ATOM 3103 O ILE A 391 -33.849 -26.059 -43.753 1.00 24.41 A
ATOM 3104 N GLY A 392 -32.758 -24.938 -42.136 1.00 24.03 A
ATOM 3105 CA GLY A 392 -33.619 -23.772 -42.209 1.00 25.24 A
ATOM 3106 C GLY A 392 -33.303 -22.893 -43.403 1.00 26.93 A
ATOM 3107 O GLY A 392 -34.193 -22.264 -43.975 1.00 27.39 A
ATOM 3108 N ASP A 393 -32.030 -22.851 -43.782 1.00 29.78 A
ATOM 3109 CA ASP A 393 -31.590 -22.029 -44.902 1.00 30.91 A
ATOM 3110 CB ASP A 393 -30.062 -22.004 -44.982 1.00 33.01 A
ATOM 3111 CG ASP A 393 -29.451 -20.924 -44.110 1.00 35.37 A
ATOM 3112 OD1 ASP A 393 -29.786 -20.868 -42.908 1.00 34.06 A
ATOM 3113 OD2 ASP A 393 -28.628 -20.089 -44.538 1.00 37.74 A
ATOM 3114 C ASP A 393 -32.176 -22.532 -46.218 1.00 30.46 A
ATOM 3115 O ASP A 393 -32.612 -21.742 -47.055 1.00 30.15 A
ATOM 3116 N VAL A 394 -32.182 -23.849 -46.393 1.00 30.06 A
ATOM 3117 CA VAL A 394 -32.780 -24.464 -47.578 1.00 29.38 A
ATOM 3118 CB VAL A 394 -32.974 -25.976 -47.399 1.00 27.50 A
ATOM 3119 CG1 VAL A 394 -33.667 -26.543 -48.606 1.00 25.21 A
ATOM 3120 CG2 VAL A 394 -31.639 -26.660 -47.188 1.00 27.06 A
ATOM 3121 C VAL A 394 -34.159 -23.841 -47.813 1.00 30.78 A
ATOM 3122 O VAL A 394 -34.371 -23.117 -48.788 1.00 31.67 A
ATOM 3123 N LEU A 395 -35.094 -24.123 -46.908 1.00 31.02 A
ATOM 3124 CA LEU A 395 -36.447 -23.587 -47.007 1.00 30.35 A

ATOM 3125 CB LEU A 395 -37.275 -23.938 -45.766 1.00 29.21 A
ATOM 3126 CG LEU A 395 -37.739 -25.380 -45.585 1.00 29.04 A
ATOM 3127 CD1 LEU A 395 -36.565 -26.295 -45.245 1.00 28.67 A
ATOM 3128 CD2 LEU A 395 -38.771 -25.404 -44.484 1.00 28.50 A
ATOM 3129 C LEU A 395 -36.428 -22.079 -47.174 1.00 30.38 A
ATOM 3130 O LEU A 395 -37.343 -21.505 -47.753 1.00 31.31 A
ATOM 3131 N ALA A 396 -35.395 -21.432 -46.658 1.00 29.84 A
ATOM 3132 CA ALA A 396 -35.303 -19.987 -46.788 1.00 30.81 A
ATOM 3133 CB ALA A 396 -34.127 -19.467 -45.993 1.00 32.14 A
ATOM 3134 C ALA A 396 -35.148 -19.605 -48.262 1.00 31.43 A
ATOM 3135 O ALA A 396 -35.729 -18.608 -48.714 1.00 31.32 A
ATOM 3136 N LEU A 397 -34.371 -20.402 -49.006 1.00 31.49 A
ATOM 3137 CA LEU A 397 -34.132 -20.152 -50.434 1.00 30.57 A
ATOM 3138 CB LEU A 397 -33.337 -21.294 -51.075 1.00 28.20 A
ATOM 3139 CG LEU A 397 -31.837 -21.312 -50.763 1.00 27.50 A
ATOM 3140 CD1 LEU A 397 -31.204 -22.558 -51.340 1.00 26.24 A
ATOM 3141 CD2 LEU A 397 -31.171 -20.072 -51.325 1.00 25.83 A
ATOM 3142 C LEU A 397 -35.446 -19.985 -51.161 1.00 31.24 A
ATOM 3143 O LEU A 397 -35.624 -19.020 -51.912 1.00 32.54 A
ATOM 3144 N SER A 398 -36.369 -20.914 -50.920 1.00 31.26 A
ATOM 3145 CA SER A 398 -37.679 -20.875 -51.553 1.00 30.66 A
ATOM 3146 CB SER A 398 -38.452 -22.170 -51.264 1.00 29.37 A
ATOM 3147 OG SER A 398 -37.731 -23.325 -51.672 1.00 27.56 A
ATOM 3148 C SER A 398 -38.488 -19.667 -51.075 1.00 31.33 A
ATOM 3149 O SER A 398 -39.273 -19.102 -51.825 1.00 32.06 A
ATOM 3150 N VAL A 399 -38.296 -19.251 -49.833 1.00 31.71 A
ATOM 3151 CA VAL A 399 -39.061 -18.123 -49.331 1.00 32.24 A
ATOM 3152 CB VAL A 399 -38.953 -18.011 -47.788 1.00 32.17 A
ATOM 3153 CG1 VAL A 399 -39.932 -16.965 -47.259 1.00 29.97 A
ATOM 3154 CG2 VAL A 399 -39.223 -19.359 -47.154 1.00 31.41 A
ATOM 3155 C VAL A 399 -38.593 -16.819 -49.958 1.00 33.12 A
ATOM 3156 O VAL A 399 -39.402 -15.971 -50.308 1.00 33.08 A
ATOM 3157 N SER A 400 -37.286 -16.665 -50.112 1.00 33.88 A
ATOM 3158 CA SER A 400 -36.727 -15.440 -50.682 1.00 35.80 A

ATOM 3159 CB SER A 400 -35.207 -15.497 -50.625 1.00 36.18 A
ATOM 3160 OG SER A 400 -34.781 -15.742 -49.303 1.00 38.27 A
ATOM 3161 C SER A 400 -37.150 -15.107 -52.118 1.00 36.52 A
ATOM 3162 O SER A 400 -37.155 -13.933 -52.505 1.00 34.84 A
ATOM 3163 N THR A 401 -37.493 -16.133 -52.900 1.00 37.13 A
ATOM 3164 CA THR A 401 -37.888 -15.932 -54.295 1.00 37.30 A
ATOM 3165 CB THR A 401 -38.338 -17.252 -54.967 1.00 37.10 A
ATOM 3166 OG1 THR A 401 -39.593 -17.668 -54.421 1.00 36.11 A
ATOM 3167 CG2 THR A 401 -37.304 -18.347 -54.759 1.00 36.99 A
ATOM 3168 C THR A 401 -39.017 -14.917 -54.450 1.00 38.52 A
ATOM 3169 O THR A 401 -40.007 -14.961 -53.723 1.00 37.77 A
ATOM 3170 N PRO A 402 -38.886 -13.994 -55.420 1.00 39.99 A
ATOM 3171 CD PRO A 402 -37.767 -13.852 -56.369 1.00 39.57 A
ATOM 3172 CA PRO A 402 -39.904 -12.966 -55.669 1.00 40.77 A
ATOM 3173 CB PRO A 402 -39.359 -12.229 -56.889 1.00 40.32 A
ATOM 3174 CG PRO A 402 -37.883 -12.409 -56.762 1.00 39.62 A
ATOM 3175 C PRO A 402 -41.291 -13.574 -55.928 1.00 42.35 A
ATOM 3176 O PRO A 402 -42.317 -12.973 -55.610 1.00 42.08 A
ATOM 3177 N ALA A 403 -41.313 -14.768 -56.514 1.00 44.09 A
ATOM 3178 CA ALA A 403 -42.571 -15.438 -56.801 1.00 45.34 A
ATOM 3179 CB ALA A 403 -42.336 -16.653 -57.689 1.00 46.00 A
ATOM 3180 C ALA A 403 -43.227 -15.865 -55.500 1.00 46.02 A
ATOM 3181 O ALA A 403 -44.440 -15.744 -55.346 1.00 46.35 A
ATOM 3182 N HIS A 404 -42.428 -16.359 -54.561 1.00 47.34 A
ATOM 3183 CA HIS A 404 -42.956 -16.798 -53.273 1.00 48.51 A
ATOM 3184 CB HIS A 404 -41.917 -17.622 -52.510 1.00 47.98 A
ATOM 3185 CG HIS A 404 -42.453 -18.268 -51.270 1.00 47.58 A
ATOM 3186 CD2 HIS A 404 -42.403 -17.885 -49.972 1.00 48.35 A
ATOM 3187 ND1 HIS A 404 -43.142 -19.461 -51.291 1.00 47.43 A
ATOM 3188 CE1 HIS A 404 -43.494 -19.786 -50.060 1.00 47.17 A
ATOM 3189 NE2 HIS A 404 -43.057 -18.846 -49.241 1.00 48.26 A
ATOM 3190 C HIS A 404 -43.421 -15.620 -52.423 1.00 49.15 A
ATOM 3191 O HIS A 404 -44.490 -15.666 -51.815 1.00 49.82 A
ATOM 3192 N LEU A 405 -42.612 -14.567 -52.384 1.00 49.09 A

ATOM 3193 CA LEU A 405 -42.931 -13.386 -51.590 1.00 48.81 A
ATOM 3194 CB LEU A 405 -41.879 -12.295 -51.803 1.00 47.87 A
ATOM 3195 CG LEU A 405 -40.477 -12.590 -51.267 1.00 46.76 A
ATOM 3196 CD1 LEU A 405 -39.578 -11.372 -51.418 1.00 45.74 A
ATOM 3197 CD2 LEU A 405 -40.538 -13.039 -49.815 1.00 44.69 A
ATOM 3198 C LEU A 405 -44.317 -12.851 -51.933 1.00 49.57 A
ATOM 3199 O LEU A 405 -45.057 -12.408 -51.055 1.00 49.79 A
ATOM 3200 N HIS A 406 -44.661 -12.895 -53.216 1.00 49.82 A
ATOM 3201 CA HIS A 406 -45.953 -12.406 -53.681 1.00 48.66 A
ATOM 3202 CB HIS A 406 -45.971 -12.312 -55.208 1.00 48.91 A
ATOM 3203 CG HIS A 406 -47.241 -11.748 -55.765 1.00 50.76 A
ATOM 3204 CD2 HIS A 406 -47.471 -10.652 -56.527 1.00 50.86 A
ATOM 3205 ND1 HIS A 406 -48.471 -12.333 -55.553 1.00 52.42 A
ATOM 3206 CE1 HIS A 406 -49.404 -11.621 -56.159 1.00 52.24 A
ATOM 3207 NE2 HIS A 406 -48.824 -10.596 -56.758 1.00 51.03 A
ATOM 3208 C HIS A 406 -47.088 -13.303 -53.198 1.00 48.17 A
ATOM 3209 O HIS A 406 -48.176 -12.825 -52.876 1.00 48.24 A
ATOM 3210 N ALA A 407 -46.803 -14.570 -53.155 1.00 47.55 A
ATOM 3211 CA ALA A 407 -47.778 -15.544 -52.849 1.00 47.09 A
ATOM 3212 CB ALA A 407 -47.175 -16.843 -52.913 1.00 45.58 A
ATOM 3213 C ALA A 407 -48.231 -15.287 -51.492 1.00 47.12 A
ATOM 3214 O ALA A 407 -49.247 -15.777 -51.088 1.00 48.12 A
ATOM 3215 N ILE A 408 -47.472 -14.502 -50.769 1.00 45.69 A
ATOM 3216 CA ILE A 408 -47.679 -14.381 -49.356 1.00 44.43 A
ATOM 3217 CB ILE A 408 -46.788 -15.239 -48.621 1.00 43.09 A
ATOM 3218 CG2 ILE A 408 -45.856 -15.842 -49.486 1.00 42.85 A
ATOM 3219 CG1 ILE A 408 -45.985 -14.416 -47.723 1.00 41.20 A
ATOM 3220 CD1 ILE A 408 -44.720 -14.866 -47.743 1.00 39.90 A
ATOM 3221 C ILE A 408 -47.529 -13.065 -48.762 1.00 43.91 A
ATOM 3222 O ILE A 408 -47.701 -12.895 -47.612 1.00 44.14 A
ATOM 3223 N GLY A 409 -47.238 -12.100 -49.551 1.00 43.79 A
ATOM 3224 CA GLY A 409 -47.990 -10.922 -49.425 1.00 44.50 A
ATOM 3225 C GLY A 409 -47.088 -9.774 -49.438 1.00 45.74 A
ATOM 3226 O GLY A 409 -47.515 -8.698 -49.288 1.00 45.92 A

ATOM 3227 N LEU A 410 -45.827 -9.951 -49.621 1.00 46.73 A
ATOM 3228 CA LEU A 410 -45.112 -8.763 -49.518 1.00 48.68 A
ATOM 3229 CB LEU A 410 -44.218 -8.769 -48.346 1.00 48.91 A
ATOM 3230 CG LEU A 410 -43.682 -10.023 -47.758 1.00 48.12 A
ATOM 3231 CD1 LEU A 410 -42.242 -9.906 -47.755 1.00 48.34 A
ATOM 3232 CD2 LEU A 410 -44.092 -9.912 -46.445 1.00 47.14 A
ATOM 3233 C LEU A 410 -44.429 -8.247 -50.695 1.00 50.39 A
ATOM 3234 O LEU A 410 -43.682 -7.330 -50.599 1.00 50.07 A
ATOM 3235 N LEU A 411 -44.689 -8.826 -51.836 1.00 52.00 A
ATOM 3236 CA LEU A 411 -44.150 -8.292 -53.033 1.00 53.63 A
ATOM 3237 CB LEU A 411 -43.240 -9.257 -53.669 1.00 53.77 A
ATOM 3238 CG LEU A 411 -41.880 -8.727 -53.950 1.00 54.20 A
ATOM 3239 CD1 LEU A 411 -41.193 -9.481 -54.990 1.00 54.49 A
ATOM 3240 CD2 LEU A 411 -42.082 -7.444 -54.409 1.00 54.08 A
ATOM 3241 C LEU A 411 -45.253 -8.047 -53.932 1.00 55.43 A
ATOM 3242 O LEU A 411 -45.773 -8.911 -54.522 1.00 56.12 A
ATOM 3243 N ALA A 412 -45.617 -6.810 -53.994 1.00 57.46 A
ATOM 3244 CA ALA A 412 -46.861 -6.343 -54.595 1.00 59.06 A
ATOM 3245 CB ALA A 412 -47.020 -4.845 -54.386 1.00 57.79 A
ATOM 3246 C ALA A 412 -46.919 -6.685 -56.080 1.00 60.36 A
ATOM 3247 O ALA A 412 -47.943 -6.483 -56.733 1.00 60.73 A
ATOM 3248 N ALA A 413 -45.815 -7.204 -56.606 1.00 63.14 A
ATOM 3249 CA ALA A 413 -45.596 -7.238 -58.047 1.00 65.57 A
ATOM 3250 CB ALA A 413 -44.249 -6.623 -58.393 1.00 64.50 A
ATOM 3251 C ALA A 413 -45.687 -8.663 -58.584 1.00 67.19 A
ATOM 3252 O ALA A 413 -45.907 -9.608 -57.827 1.00 68.89 A
ATOM 3253 N ALA A 414 -45.514 -8.808 -59.893 1.00 68.04 A
ATOM 3254 CA ALA A 414 -44.461 -9.656 -60.438 1.00 68.43 A
ATOM 3255 CB ALA A 414 -44.977 -11.070 -60.655 1.00 67.74 A
ATOM 3256 C ALA A 414 -43.909 -9.083 -61.739 1.00 68.56 A
ATOM 3257 O ALA A 414 -44.663 -8.770 -62.660 1.00 70.23 A
ATOM 3258 N ALA A 415 -42.589 -8.947 -61.807 1.00 67.29 A
ATOM 3259 CA ALA A 415 -41.924 -8.521 -63.033 1.00 65.61 A
ATOM 3260 CB ALA A 415 -41.123 -7.252 -62.789 1.00 65.25 A

ATOM 3261 C ALA A 415 -41.025 -9.623 -63.584 1.00 64.49 A
ATOM 3262 O ALA A 415 -39.840 -9.692 -63.256 1.00 66.13 A
ATOM 3263 N ALA A 416 -41.596 -10.483 -64.421 1.00 61.83 A
ATOM 3264 CA ALA A 416 -40.875 -11.638 -64.942 1.00 59.70 A
ATOM 3265 CB ALA A 416 -41.850 -12.729 -65.355 1.00 59.64 A
ATOM 3266 C ALA A 416 -39.982 -11.248 -66.115 1.00 58.20 A
ATOM 3267 O ALA A 416 -40.388 -11.338 -67.274 1.00 58.88 A
ATOM 3268 N ASP A 417 -38.764 -10.814 -65.807 1.00 55.91 A
ATOM 3269 CA ASP A 417 -37.804 -10.423 -66.838 1.00 53.90 A
ATOM 3270 CB ASP A 417 -37.966 -8.952 -67.139 1.00 53.38 A
ATOM 3271 CG ASP A 417 -37.997 -8.135 -65.886 1.00 53.91 A
ATOM 3272 OD1 ASP A 417 -39.050 -8.150 -65.195 1.00 54.73 A
ATOM 3273 OD2 ASP A 417 -36.960 -7.507 -65.580 1.00 54.90 A
ATOM 3274 C ASP A 417 -36.387 -10.659 -66.321 1.00 53.34 A
ATOM 3275 O ASP A 417 -36.203 -11.159 -65.207 1.00 54.14 A
ATOM 3276 N THR A 418 -35.390 -10.292 -67.126 1.00 51.46 A
ATOM 3277 CA THR A 418 -33.998 -10.480 -66.732 1.00 49.15 A
ATOM 3278 CB THR A 418 -33.029 -10.367 -67.938 1.00 47.43 A
ATOM 3279 OG1 THR A 418 -33.309 -9.166 -68.664 1.00 48.09 A
ATOM 3280 CG2 THR A 418 -33.170 -11.559 -68.861 1.00 47.09 A
ATOM 3281 C THR A 418 -33.588 -9.465 -65.678 1.00 48.82 A
ATOM 3282 O THR A 418 -33.194 -9.840 -64.575 1.00 48.64 A
ATOM 3283 N GLU A 419 -33.689 -8.183 -66.014 1.00 48.45 A
ATOM 3284 CA GLU A 419 -33.306 -7.126 -65.087 1.00 47.51 A
ATOM 3285 CB GLU A 419 -33.871 -5.777 -65.549 1.00 48.99 A
ATOM 3286 CG GLU A 419 -33.042 -5.123 -66.650 1.00 51.51 A
ATOM 3287 CD GLU A 419 -33.451 -3.684 -66.926 1.00 54.24 A
ATOM 3288 OE1 GLU A 419 -34.131 -3.079 -66.064 1.00 55.87 A
ATOM 3289 OE2 GLU A 419 -33.080 -3.152 -67.997 1.00 55.58 A
ATOM 3290 C GLU A 419 -33.725 -7.426 -63.649 1.00 45.73 A
ATOM 3291 O GLU A 419 -32.907 -7.382 -62.736 1.00 44.88 A
ATOM 3292 N SER A 420 -34.995 -7.739 -63.440 1.00 44.44 A
ATOM 3293 CA SER A 420 -35.446 -8.051 -62.097 1.00 43.27 A
ATOM 3294 CB SER A 420 -36.963 -8.244 -62.078 1.00 43.75 A

ATOM 3295 OG SER A 420 -37.629 -7.024 -62.360 1.00 43.55 A
ATOM 3296 C SER A 420 -34.736 -9.325 -61.643 1.00 42.24 A
ATOM 3297 O SER A 420 -34.327 -9.441 -60.493 1.00 42.70 A
ATOM 3298 N ASP A 421 -34.577 -10.267 -62.566 1.00 41.02 A
ATOM 3299 CA ASP A 421 -33.921 -11.532 -62.277 1.00 40.29 A
ATOM 3300 CB ASP A 421 -33.928 -12.412 -63.537 1.00 43.85 A
ATOM 3301 CG ASP A 421 -33.562 -13.867 -63.249 1.00 47.18 A
ATOM 3302 OD1 ASP A 421 -34.019 -14.402 -62.210 1.00 49.21 A
ATOM 3303 OD2 ASP A 421 -32.830 -14.482 -64.069 1.00 48.36 A
ATOM 3304 C ASP A 421 -32.496 -11.286 -61.778 1.00 38.50 A
ATOM 3305 O ASP A 421 -32.072 -11.886 -60.791 1.00 38.87 A
ATOM 3306 N ILE A 422 -31.759 -10.408 -62.456 1.00 35.45 A
ATOM 3307 CA ILE A 422 -30.389 -10.066 -62.050 1.00 32.47 A
ATOM 3308 CB ILE A 422 -29.726 -9.052 -63.065 1.00 31.16 A
ATOM 3309 CG2 ILE A 422 -28.496 -8.388 -62.457 1.00 29.04 A
ATOM 3310 CG1 ILE A 422 -29.326 -9.772 -64.352 1.00 27.41 A
ATOM 3311 CD1 ILE A 422 -28.151 -10.677 -64.201 1.00 26.09 A
ATOM 3312 C ILE A 422 -30.412 -9.449 -60.640 1.00 31.94 A
ATOM 3313 O ILE A 422 -29.665 -9.884 -59.768 1.00 32.22 A
ATOM 3314 N ASN A 423 -31.268 -8.445 -60.422 1.00 30.22 A
ATOM 3315 CA ASN A 423 -31.395 -7.796 -59.113 1.00 27.60 A
ATOM 3316 CB ASN A 423 -32.623 -6.882 -59.056 1.00 26.15 A
ATOM 3317 CG ASN A 423 -32.411 -5.552 -59.762 1.00 24.67 A
ATOM 3318 OD1 ASN A 423 -31.528 -4.775 -59.414 1.00 24.01 A
ATOM 3319 ND2 ASN A 423 -33.235 -5.285 -60.755 1.00 26.39 A
ATOM 3320 C ASN A 423 -31.537 -8.845 -58.026 1.00 27.25 A
ATOM 3321 O ASN A 423 -30.765 -8.860 -57.076 1.00 27.16 A
ATOM 3322 N TYR A 424 -32.537 -9.712 -58.164 1.00 27.02 A
ATOM 3323 CA TYR A 424 -32.759 -10.772 -57.191 1.00 29.02 A
ATOM 3324 CB TYR A 424 -33.839 -11.753 -57.667 1.00 29.19 A
ATOM 3325 CG TYR A 424 -33.965 -12.996 -56.796 1.00 29.82 A
ATOM 3326 CD1 TYR A 424 -34.273 -12.900 -55.431 1.00 30.39 A
ATOM 3327 CE1 TYR A 424 -34.339 -14.045 -54.614 1.00 30.56 A
ATOM 3328 CD2 TYR A 424 -33.732 -14.266 -57.324 1.00 30.81 A

ATOM 3329 CE2 TYR A 424 -33.795 -15.411 -56.521 1.00 31.64 A
ATOM 3330 CZ TYR A 424 -34.097 -15.296 -55.169 1.00 31.87 A
ATOM 3331 OH TYR A 424 -34.146 -16.434 -54.383 1.00 30.68 A
ATOM 3332 C TYR A 424 -31.469 -11.541 -56.929 1.00 30.18 A
ATOM 3333 O TYR A 424 -31.005 -11.627 -55.785 1.00 31.16 A
ATOM 3334 N LEU A 425 -30.892 -12.103 -57.986 1.00 29.73 A
ATOM 3335 CA LEU A 425 -29.661 -12.867 -57.852 1.00 28.67 A
ATOM 3336 CB LEU A 425 -29.203 -13.396 -59.216 1.00 28.70 A
ATOM 3337 CG LEU A 425 -29.818 -14.711 -59.683 1.00 26.91 A
ATOM 3338 CD1 LEU A 425 -29.093 -15.196 -60.929 1.00 28.16 A
ATOM 3339 CD2 LEU A 425 -29.693 -15.739 -58.577 1.00 27.02 A
ATOM 3340 C LEU A 425 -28.530 -12.081 -57.192 1.00 28.01 A
ATOM 3341 O LEU A 425 -27.731 -12.654 -56.449 1.00 27.72 A
ATOM 3342 N LEU A 426 -28.443 -10.780 -57.462 1.00 26.90 A
ATOM 3343 CA LEU A 426 -27.392 -9.995 -56.834 1.00 26.80 A
ATOM 3344 CB LEU A 426 -27.280 -8.594 -57.434 1.00 23.93 A
ATOM 3345 CG LEU A 426 -26.255 -7.783 -56.634 1.00 22.44 A
ATOM 3346 CD1 LEU A 426 -24.859 -8.146 -57.067 1.00 21.13 A
ATOM 3347 CD2 LEU A 426 -26.486 -6.317 -56.822 1.00 22.57 A
ATOM 3348 C LEU A 426 -27.698 -9.880 -55.343 1.00 27.65 A
ATOM 3349 O LEU A 426 -26.813 -10.047 -54.508 1.00 27.73 A
ATOM 3350 N LYS A 427 -28.953 -9.605 -55.003 1.00 29.51 A
ATOM 3351 CA LYS A 427 -29.315 -9.495 -53.595 1.00 30.79 A
ATOM 3352 CB LYS A 427 -30.822 -9.299 -53.407 1.00 31.88 A
ATOM 3353 CG LYS A 427 -31.125 -8.564 -52.111 1.00 33.97 A
ATOM 3354 CD LYS A 427 -32.565 -8.674 -51.676 1.00 36.42 A
ATOM 3355 CE LYS A 427 -32.721 -8.095 -50.272 1.00 38.43 A
ATOM 3356 NZ LYS A 427 -31.879 -8.808 -49.261 1.00 38.08 A
ATOM 3357 C LYS A 427 -28.874 -10.764 -52.873 1.00 30.16 A
ATOM 3358 O LYS A 427 -28.168 -10.689 -51.863 1.00 29.92 A
ATOM 3359 N MET A 428 -29.284 -11.923 -53.393 1.00 29.18 A
ATOM 3360 CA MET A 428 -28.899 -13.206 -52.807 1.00 29.18 A
ATOM 3361 CB MET A 428 -29.530 -14.361 -53.584 1.00 28.83 A
ATOM 3362 CG MET A 428 -31.039 -14.459 -53.461 1.00 30.84 A

ATOM 3363 SD MET A 428 -31.605 -14.982 -51.840 1.00 30.63 A
ATOM 3364 CE MET A 428 -31.200 -16.689 -51.913 1.00 31.50 A
ATOM 3365 C MET A 428 -27.376 -13.388 -52.797 1.00 29.60 A
ATOM 3366 O MET A 428 -26.837 -14.088 -51.947 1.00 29.55 A
ATOM 3367 N ALA A 429 -26.687 -12.762 -53.748 1.00 29.39 A
ATOM 3368 CA ALA A 429 -25.235 -12.861 -53.835 1.00 27.95 A
ATOM 3369 CB ALA A 429 -24.757 -12.285 -55.158 1.00 26.44 A
ATOM 3370 C ALA A 429 -24.603 -12.102 -52.674 1.00 28.08 A
ATOM 3371 O ALA A 429 -23.583 -12.520 -52.117 1.00 27.22 A
ATOM 3372 N LEU A 430 -25.217 -10.979 -52.318 1.00 27.70 A
ATOM 3373 CA LEU A 430 -24.734 -10.154 -51.227 1.00 27.41 A
ATOM 3374 CB LEU A 430 -25.547 -8.864 -51.139 1.00 25.13 A
ATOM 3375 CG LEU A 430 -25.372 -7.807 -52.223 1.00 22.90 A
ATOM 3376 CD1 LEU A 430 -26.216 -6.595 -51.873 1.00 21.30 A
ATOM 3377 CD2 LEU A 430 -23.914 -7.416 -52.330 1.00 22.15 A
ATOM 3378 C LEU A 430 -24.842 -10.906 -49.909 1.00 28.84 A
ATOM 3379 O LEU A 430 -24.035 -10.695 -49.006 1.00 28.53 A
ATOM 3380 N GLU A 431 -25.843 -11.780 -49.809 1.00 30.41 A
ATOM 3381 CA GLU A 431 -26.075 -12.575 -48.600 1.00 32.53 A
ATOM 3382 CB GLU A 431 -27.557 -12.948 -48.464 1.00 34.07 A
ATOM 3383 CG GLU A 431 -27.849 -13.840 -47.250 1.00 38.11 A
ATOM 3384 CD GLU A 431 -29.347 -14.056 -46.997 1.00 40.47 A
ATOM 3385 OE1 GLU A 431 -30.135 -13.105 -47.244 1.00 40.48 A
ATOM 3386 OE2 GLU A 431 -29.731 -15.166 -46.534 1.00 41.87 A
ATOM 3387 C GLU A 431 -25.256 -13.860 -48.512 1.00 32.79 A
ATOM 3388 O GLU A 431 -24.610 -14.115 -47.500 1.00 34.98 A
ATOM 3389 N LYS A 432 -25.281 -14.668 -49.565 1.00 32.40 A
ATOM 3390 CA LYS A 432 -24.564 -15.939 -49.562 1.00 30.94 A
ATOM 3391 CB LYS A 432 -25.350 -16.984 -50.372 1.00 31.16 A
ATOM 3392 CG LYS A 432 -26.856 -17.105 -50.041 1.00 32.62 A
ATOM 3393 CD LYS A 432 -27.144 -17.685 -48.660 1.00 34.17 A
ATOM 3394 CE LYS A 432 -28.650 -17.888 -48.447 1.00 35.49 A
ATOM 3395 NZ LYS A 432 -29.009 -18.228 -47.027 1.00 35.42 A
ATOM 3396 C LYS A 432 -23.122 -15.907 -50.066 1.00 29.30 A

ATOM 3397 O LYS A 432 -22.249 -16.523 -49.477 1.00 30.16 A
ATOM 3398 N ILE A 433 -22.860 -15.200 -51.152 1.00 28.39 A
ATOM 3399 CA ILE A 433 -21.507 -15.170 -51.696 1.00 27.71 A
ATOM 3400 CB ILE A 433 -21.472 -14.510 -53.098 1.00 27.80 A
ATOM 3401 CG2 ILE A 433 -20.043 -14.525 -53.650 1.00 27.34 A
ATOM 3402 CG1 ILE A 433 -22.422 -15.236 -54.049 1.00 26.64 A
ATOM 3403 CD1 ILE A 433 -22.099 -16.684 -54.250 1.00 24.29 A
ATOM 3404 C ILE A 433 -20.539 -14.412 -50.803 1.00 27.67 A
ATOM 3405 O ILE A 433 -19.449 -14.892 -50.498 1.00 28.26 A
ATOM 3406 N ALA A 434 -20.946 -13.214 -50.401 1.00 27.14 A
ATOM 3407 CA ALA A 434 -20.117 -12.351 -49.565 1.00 25.55 A
ATOM 3408 CB ALA A 434 -20.862 -11.034 -49.269 1.00 24.31 A
ATOM 3409 C ALA A 434 -19.694 -13.007 -48.263 1.00 24.09 A
ATOM 3410 O ALA A 434 -18.704 -12.604 -47.657 1.00 25.45 A
ATOM 3411 N PHE A 435 -20.440 -14.020 -47.842 1.00 22.38 A
ATOM 3412 CA PHE A 435 -20.175 -14.711 -46.593 1.00 21.70 A
ATOM 3413 CB PHE A 435 -21.469 -15.354 -46.085 1.00 22.37 A
ATOM 3414 CG PHE A 435 -21.334 -16.029 -44.752 1.00 24.26 A
ATOM 3415 CD1 PHE A 435 -21.473 -15.304 -43.570 1.00 26.04 A
ATOM 3416 CD2 PHE A 435 -21.036 -17.394 -44.675 1.00 24.68 A
ATOM 3417 CE1 PHE A 435 -21.314 -15.930 -42.316 1.00 27.05 A
ATOM 3418 CE2 PHE A 435 -20.875 -18.032 -43.443 1.00 25.53 A
ATOM 3419 CZ PHE A 435 -21.014 -17.295 -42.252 1.00 27.01 A
ATOM 3420 C PHE A 435 -19.089 -15.770 -46.710 1.00 20.54 A
ATOM 3421 O PHE A 435 -18.278 -15.945 -45.803 1.00 21.12 A
ATOM 3422 N LEU A 436 -19.071 -16.474 -47.832 1.00 20.28 A
ATOM 3423 CA LEU A 436 -18.108 -17.544 -48.057 1.00 19.96 A
ATOM 3424 CB LEU A 436 -18.047 -17.871 -49.545 1.00 21.67 A
ATOM 3425 CG LEU A 436 -19.382 -18.370 -50.068 1.00 22.94 A
ATOM 3426 CD1 LEU A 436 -19.192 -18.883 -51.484 1.00 25.86 A
ATOM 3427 CD2 LEU A 436 -19.908 -19.471 -49.166 1.00 21.18 A
ATOM 3428 C LEU A 436 -16.701 -17.291 -47.527 1.00 18.76 A
ATOM 3429 O LEU A 436 -16.159 -18.103 -46.764 1.00 16.27 A
ATOM 3430 N PRO A 437 -16.079 -16.172 -47.932 1.00 17.95 A

ATOM 3431 CD PRO A 437 -16.517 -14.990 -48.698 1.00 15.22 A
ATOM 3432 CA PRO A 437 -14.735 -15.984 -47.390 1.00 18.02 A
ATOM 3433 CB PRO A 437 -14.329 -14.609 -47.948 1.00 16.08 A
ATOM 3434 CG PRO A 437 -15.638 -13.907 -48.135 1.00 14.85 A
ATOM 3435 C PRO A 437 -14.736 -16.070 -45.846 1.00 18.39 A
ATOM 3436 O PRO A 437 -14.114 -16.964 -45.279 1.00 17.93 A
ATOM 3437 N PHE A 438 -15.462 -15.167 -45.187 1.00 18.36 A
ATOM 3438 CA PHE A 438 -15.548 -15.133 -43.729 1.00 20.27 A
ATOM 3439 CB PHE A 438 -16.668 -14.185 -43.297 1.00 20.49 A
ATOM 3440 CG PHE A 438 -16.686 -13.902 -41.818 1.00 22.05 A
ATOM 3441 CD1 PHE A 438 -15.652 -13.188 -41.221 1.00 22.96 A
ATOM 3442 CD2 PHE A 438 -17.739 -14.349 -41.023 1.00 22.81 A
ATOM 3443 CE1 PHE A 438 -15.667 -12.920 -39.857 1.00 25.14 A
ATOM 3444 CE2 PHE A 438 -17.767 -14.086 -39.650 1.00 24.16 A
ATOM 3445 CZ PHE A 438 -16.728 -13.369 -39.066 1.00 24.81 A
ATOM 3446 C PHE A 438 -15.785 -16.510 -43.099 1.00 20.79 A
ATOM 3447 O PHE A 438 -15.004 -16.964 -42.261 1.00 20.02 A
ATOM 3448 N GLY A 439 -16.872 -17.165 -43.490 1.00 21.12 A
ATOM 3449 CA GLY A 439 -17.163 -18.478 -42.949 1.00 21.27 A
ATOM 3450 C GLY A 439 -15.950 -19.398 -42.967 1.00 23.22 A
ATOM 3451 O GLY A 439 -15.722 -20.169 -42.033 1.00 26.53 A
ATOM 3452 N TYR A 440 -15.164 -19.325 -44.033 1.00 22.35 A
ATOM 3453 CA TYR A 440 -13.974 -20.155 -44.175 1.00 21.52 A
ATOM 3454 CB TYR A 440 -13.423 -19.998 -45.594 1.00 20.29 A
ATOM 3455 CG TYR A 440 -12.311 -20.952 -45.925 1.00 17.52 A
ATOM 3456 CD1 TYR A 440 -12.555 -22.316 -46.017 1.00 17.12 A
ATOM 3457 CE1 TYR A 440 -11.534 -23.211 -46.316 1.00 16.95 A
ATOM 3458 CD2 TYR A 440 -11.015 -20.494 -46.137 1.00 16.21 A
ATOM 3459 CE2 TYR A 440 -9.983 -21.378 -46.434 1.00 16.47 A
ATOM 3460 CZ TYR A 440 -10.250 -22.739 -46.523 1.00 16.21 A
ATOM 3461 OH TYR A 440 -9.249 -23.639 -46.811 1.00 12.39 A
ATOM 3462 C TYR A 440 -12.914 -19.721 -43.163 1.00 22.02 A
ATOM 3463 O TYR A 440 -12.441 -20.503 -42.341 1.00 22.67 A
ATOM 3464 N LEU A 441 -12.564 -18.447 -43.256 1.00 21.90 A

ATOM 3465 CA LEU A 441 -11.565 -17.775 -42.435 1.00 21.58 A
ATOM 3466 CB LEU A 441 -11.641 -16.284 -42.767 1.00 22.89 A
ATOM 3467 CG LEU A 441 -11.317 -15.166 -41.769 1.00 24.57 A
ATOM 3468 CD1 LEU A 441 -11.375 -13.869 -42.552 1.00 27.81 A
ATOM 3469 CD2 LEU A 441 -12.301 -15.091 -40.618 1.00 23.70 A
ATOM 3470 C LEU A 441 -11.577 -17.962 -40.906 1.00 21.14 A
ATOM 3471 O LEU A 441 -10.539 -18.244 -40.301 1.00 20.90 A
ATOM 3472 N VAL A 442 -12.740 -17.795 -40.283 1.00 19.63 A
ATOM 3473 CA VAL A 442 -12.846 -17.887 -38.833 1.00 18.48 A
ATOM 3474 CB VAL A 442 -14.314 -17.749 -38.385 1.00 16.57 A
ATOM 3475 CG1 VAL A 442 -14.452 -18.127 -36.923 1.00 15.46 A
ATOM 3476 CG2 VAL A 442 -14.780 -16.307 -38.599 1.00 14.72 A
ATOM 3477 C VAL A 442 -12.213 -19.117 -38.188 1.00 19.80 A
ATOM 3478 O VAL A 442 -11.294 -18.988 -37.368 1.00 19.92 A
ATOM 3479 N ASP A 443 -12.687 -20.305 -38.537 1.00 20.90 A
ATOM 3480 CA ASP A 443 -12.110 -21.494 -37.944 1.00 21.62 A
ATOM 3481 CB ASP A 443 -13.021 -22.689 -38.159 1.00 22.30 A
ATOM 3482 CG ASP A 443 -13.945 -22.930 -36.980 1.00 22.13 A
ATOM 3483 OD1 ASP A 443 -14.328 -21.951 -36.298 1.00 18.75 A
ATOM 3484 OD2 ASP A 443 -14.287 -24.110 -36.747 1.00 23.90 A
ATOM 3485 C ASP A 443 -10.727 -21.746 -38.505 1.00 22.11 A
ATOM 3486 O ASP A 443 -9.995 -22.603 -38.019 1.00 22.37 A
ATOM 3487 N GLN A 444 -10.375 -20.996 -39.542 1.00 23.37 A
ATOM 3488 CA GLN A 444 -9.042 -21.089 -40.118 1.00 24.45 A
ATOM 3489 CB GLN A 444 -8.935 -20.215 -41.374 1.00 27.22 A
ATOM 3490 CG GLN A 444 -9.581 -20.796 -42.616 1.00 31.23 A
ATOM 3491 CD GLN A 444 -8.948 -22.120 -42.998 1.00 34.10 A
ATOM 3492 OE1 GLN A 444 -7.725 -22.203 -43.199 1.00 36.11 A
ATOM 3493 NE2 GLN A 444 -9.772 -23.168 -43.092 1.00 33.25 A
ATOM 3494 C GLN A 444 -8.146 -20.504 -39.027 1.00 23.80 A
ATOM 3495 O GLN A 444 -7.129 -21.084 -38.636 1.00 22.44 A
ATOM 3496 N TRP A 445 -8.557 -19.336 -38.540 1.00 23.38 A
ATOM 3497 CA TRP A 445 -7.850 -18.623 -37.493 1.00 23.09 A
ATOM 3498 CB TRP A 445 -8.567 -17.307 -37.185 1.00 22.16 A

ATOM 3499 CG TRP A 445 -7.989 -16.574 -36.004 1.00 22.85 A
ATOM 3500 CD2 TRP A 445 -8.513 -16.544 -34.658 1.00 23.14 A
ATOM 3501 CE2 TRP A 445 -7.630 -15.762 -33.884 1.00 22.08 A
ATOM 3502 CE3 TRP A 445 -9.640 -17.104 -34.036 1.00 22.69 A
ATOM 3503 CD1 TRP A 445 -6.848 -15.831 -35.984 1.00 22.23 A
ATOM 3504 NE1 TRP A 445 -6.626 -15.340 -34.714 1.00 22.96 A
ATOM 3505 CZ2 TRP A 445 -7.836 -15.522 -32.521 1.00 20.49 A
ATOM 3506 CZ3 TRP A 445 -9.846 -16.866 -32.679 1.00 21.70 A
ATOM 3507 CH2 TRP A 445 -8.948 -16.082 -31.937 1.00 20.61 A
ATOM 3508 C TRP A 445 -7.788 -19.463 -36.223 1.00 23.41 A
ATOM 3509 O TRP A 445 -6.710 -19.633 -35.634 1.00 24.33 A
ATOM 3510 N ARG A 446 -8.943 -19.987 -35.813 1.00 21.70 A
ATOM 3511 CA ARG A 446 -9.036 -20.779 -34.592 1.00 20.79 A
ATOM 3512 CB ARG A 446 -10.490 -21.064 -34.230 1.00 21.22 A
ATOM 3513 CG ARG A 446 -10.929 -20.327 -33.005 1.00 21.94 A
ATOM 3514 CD ARG A 446 -12.220 -20.853 -32.456 1.00 23.12 A
ATOM 3515 NE ARG A 446 -13.324 -20.718 -33.396 1.00 25.87 A
ATOM 3516 CZ ARG A 446 -14.598 -20.602 -33.025 1.00 28.25 A
ATOM 3517 NH1 ARG A 446 -14.923 -20.602 -31.731 1.00 31.49 A
ATOM 3518 NH2 ARG A 446 -15.550 -20.489 -33.936 1.00 28.83 A
ATOM 3519 C ARG A 446 -8.276 -22.083 -34.546 1.00 21.40 A
ATOM 3520 O ARG A 446 -7.632 -22.357 -33.547 1.00 21.39 A
ATOM 3521 N TRP A 447 -8.350 -22.898 -35.595 1.00 21.41 A
ATOM 3522 CA TRP A 447 -7.629 -24.167 -35.561 1.00 21.71 A
ATOM 3523 CB TRP A 447 -7.742 -24.934 -36.891 1.00 24.23 A
ATOM 3524 CG TRP A 447 -9.111 -25.409 -37.242 1.00 25.09 A
ATOM 3525 CD2 TRP A 447 -9.606 -25.669 -38.554 1.00 26.47 A
ATOM 3526 CE2 TRP A 447 -10.948 -26.090 -38.421 1.00 27.09 A
ATOM 3527 CE3 TRP A 447 -9.046 -25.586 -39.836 1.00 26.63 A
ATOM 3528 CD1 TRP A 447 -10.135 -25.679 -36.386 1.00 26.21 A
ATOM 3529 NE1 TRP A 447 -11.250 -26.088 -37.085 1.00 27.08 A
ATOM 3530 CZ2 TRP A 447 -11.740 -26.422 -39.520 1.00 27.29 A
ATOM 3531 CZ3 TRP A 447 -9.833 -25.915 -40.929 1.00 26.72 A
ATOM 3532 CH2 TRP A 447 -11.168 -26.327 -40.763 1.00 27.26 A

ATOM 3533 C TRP A 447 -6.167 -23.899 -35.276 1.00 20.17 A
ATOM 3534 O TRP A 447 -5.471 -24.736 -34.703 1.00 19.06 A
ATOM 3535 N GLY A 448 -5.719 -22.720 -35.688 1.00 19.58 A
ATOM 3536 CA GLY A 448 -4.340 -22.318 -35.494 1.00 20.58 A
ATOM 3537 C GLY A 448 -4.038 -21.785 -34.104 1.00 21.48 A
ATOM 3538 O GLY A 448 -2.888 -21.836 -33.655 1.00 21.72 A
ATOM 3539 N VAL A 449 -5.054 -21.248 -33.430 1.00 21.03 A
ATOM 3540 CA VAL A 449 -4.874 -20.754 -32.075 1.00 20.32 A
ATOM 3541 CB VAL A 449 -6.068 -19.902 -31.609 1.00 21.00 A
ATOM 3542 CG1 VAL A 449 -5.955 -19.631 -30.115 1.00 21.02 A
ATOM 3543 CG2 VAL A 449 -6.110 -18.595 -32.376 1.00 19.62 A
ATOM 3544 C VAL A 449 -4.787 -21.974 -31.177 1.00 19.42 A
ATOM 3545 O VAL A 449 -3.926 -22.061 -30.314 1.00 19.23 A
ATOM 3546 N PHE A 450 -5.701 -22.908 -31.403 1.00 19.35 A
ATOM 3547 CA PHE A 450 -5.779 -24.154 -30.648 1.00 20.25 A
ATOM 3548 CB PHE A 450 -6.993 -24.984 -31.090 1.00 20.48 A
ATOM 3549 CG PHE A 450 -8.288 -24.573 -30.457 1.00 20.63 A
ATOM 3550 CD1 PHE A 450 -9.445 -24.500 -31.212 1.00 21.06 A
ATOM 3551 CD2 PHE A 450 -8.365 -24.301 -29.098 1.00 21.32 A
ATOM 3552 CE1 PHE A 450 -10.660 -24.164 -30.618 1.00 21.58 A
ATOM 3553 CE2 PHE A 450 -9.580 -23.964 -28.503 1.00 20.59 A
ATOM 3554 CZ PHE A 450 -10.721 -23.898 -29.262 1.00 19.68 A
ATOM 3555 C PHE A 450 -4.546 -25.007 -30.847 1.00 21.17 A
ATOM 3556 O PHE A 450 -4.212 -25.823 -29.989 1.00 21.95 A
ATOM 3557 N SER A 451 -3.875 -24.841 -31.982 1.00 21.31 A
ATOM 3558 CA SER A 451 -2.689 -25.646 -32.259 1.00 22.22 A
ATOM 3559 CB SER A 451 -2.649 -26.060 -33.730 1.00 22.35 A
ATOM 3560 OG SER A 451 -2.021 -25.074 -34.536 1.00 25.87 A
ATOM 3561 C SER A 451 -1.388 -24.947 -31.902 1.00 22.43 A
ATOM 3562 O SER A 451 -0.333 -25.574 -31.894 1.00 23.31 A
ATOM 3563 N GLY A 452 -1.456 -23.652 -31.623 1.00 22.54 A
ATOM 3564 CA GLY A 452 -0.251 -22.929 -31.266 1.00 24.09 A
ATOM 3565 C GLY A 452 0.463 -22.228 -32.402 1.00 26.41 A
ATOM 3566 O GLY A 452 1.543 -21.686 -32.201 1.00 27.59 A

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ATOM  3567  N   ARG A 453     -0.182 -22.037 -33.498  1.00 28.87      A
ATOM  3568  CA  ARG A 453      0.506 -21.502 -34.599  1.00 31.83      A
ATOM  3569  CB  ARG A 453      0.004 -22.197 -35.842  1.00 34.80      A
ATOM  3570  CG  ARG A 453     -0.023 -21.387 -37.106  1.00 39.04      A
ATOM  3571  CD  ARG A 453     -1.380 -21.323 -37.750  1.00 42.67      A
ATOM  3572  NE  ARG A 453     -1.460 -21.864 -39.073  1.00 47.08      A
ATOM  3573  CZ  ARG A 453     -2.539 -22.362 -39.625  1.00 47.43      A
ATOM  3574  NH1 ARG A 453     -3.674 -22.416 -38.977  1.00 46.12      A
ATOM  3575  NH2 ARG A 453     -2.465 -22.771 -40.877  1.00 47.15      A
ATOM  3576  C   ARG A 453      0.163 -20.088 -34.590  1.00 31.42      A
ATOM  3577  O   ARG A 453      0.751 -19.262 -35.226  1.00 31.97      A
ATOM  3578  N   THR A 454     -0.817 -19.817 -33.793  1.00 30.21      A
ATOM  3579  CA  THR A 454     -1.213 -18.453 -33.499  1.00 30.22      A
ATOM  3580  CB  THR A 454     -2.576 -18.101 -34.141  1.00 31.51      A
ATOM  3581  OG1 THR A 454     -2.502 -18.244 -35.569  1.00 32.11      A
ATOM  3582  CG2 THR A 454     -2.959 -16.658 -33.792  1.00 31.46      A
ATOM  3583  C   THR A 454     -1.309 -18.234 -31.985  1.00 28.81      A
ATOM  3584  O   THR A 454     -2.381 -18.394 -31.393  1.00 30.11      A
ATOM  3585  N   PRO A 455     -0.179 -17.891 -31.334  1.00 26.25      A
ATOM  3586  CD  PRO A 455      1.185 -17.833 -31.892  1.00 24.90      A
ATOM  3587  CA  PRO A 455     -0.157 -17.648 -29.889  1.00 24.44      A
ATOM  3588  CB  PRO A 455      1.329 -17.645 -29.571  1.00 25.03      A
ATOM  3589  CG  PRO A 455      1.936 -17.101 -30.822  1.00 23.84      A
ATOM  3590  C   PRO A 455     -0.812 -16.300 -29.608  1.00 22.90      A
ATOM  3591  O   PRO A 455     -1.032 -15.515 -30.520  1.00 22.71      A
ATOM  3592  N   PRO A 456     -1.131 -16.006 -28.344  1.00 22.53      A
ATOM  3593  CD  PRO A 456     -1.051 -16.811 -27.118  1.00 21.88      A
ATOM  3594  CA  PRO A 456     -1.763 -14.711 -28.073  1.00 22.90      A
ATOM  3595  CB  PRO A 456     -1.946 -14.743 -26.562  1.00 21.95      A
ATOM  3596  CG  PRO A 456     -2.126 -16.194 -26.284  1.00 20.73      A
ATOM  3597  C   PRO A 456     -0.915 -13.527 -28.550  1.00 23.24      A
ATOM  3598  O   PRO A 456     -1.393 -12.396 -28.678  1.00 22.92      A
ATOM  3599  N   SER A 457      0.352 -13.806 -28.822  1.00 22.64      A
ATOM  3600  CA  SER A 457      1.263 -12.780 -29.275  1.00 22.95      A
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ATOM 3601 CB SER A 457 2.713 -13.262 -29.150 1.00 23.24 A
ATOM 3602 OG SER A 457 3.032 -14.239 -30.125 1.00 26.16 A
ATOM 3603 C SER A 457 0.963 -12.382 -30.713 1.00 22.84 A
ATOM 3604 O SER A 457 1.475 -11.366 -31.186 1.00 23.98 A
ATOM 3605 N ARG A 458 0.140 -13.184 -31.398 1.00 22.74 A
ATOM 3606 CA ARG A 458 -0.256 -12.919 -32.801 1.00 22.56 A
ATOM 3607 CB ARG A 458 0.465 -13.857 -33.779 1.00 21.47 A
ATOM 3608 CG ARG A 458 1.976 -13.767 -33.757 1.00 20.43 A
ATOM 3609 CD ARG A 458 2.589 -14.587 -34.873 1.00 19.60 A
ATOM 3610 NE ARG A 458 3.838 -15.191 -34.445 1.00 17.93 A
ATOM 3611 CZ ARG A 458 4.002 -16.489 -34.229 1.00 18.97 A
ATOM 3612 NH1 ARG A 458 2.994 -17.332 -34.404 1.00 19.09 A
ATOM 3613 NH2 ARG A 458 5.177 -16.945 -33.834 1.00 20.45 A
ATOM 3614 C ARG A 458 -1.758 -13.062 -33.047 1.00 21.81 A
ATOM 3615 O ARG A 458 -2.187 -13.262 -34.175 1.00 20.92 A
ATOM 3616 N TYR A 459 -2.551 -12.955 -31.991 1.00 22.24 A
ATOM 3617 CA TYR A 459 -3.993 -13.083 -32.121 1.00 22.70 A
ATOM 3618 CB TYR A 459 -4.681 -12.850 -30.765 1.00 24.47 A
ATOM 3619 CG TYR A 459 -4.814 -14.075 -29.874 1.00 24.77 A
ATOM 3620 CD1 TYR A 459 -5.664 -14.062 -28.768 1.00 24.45 A
ATOM 3621 CE1 TYR A 459 -5.790 -15.168 -27.937 1.00 24.34 A
ATOM 3622 CD2 TYR A 459 -4.091 -15.238 -30.125 1.00 26.41 A
ATOM 3623 CE2 TYR A 459 -4.213 -16.348 -29.298 1.00 26.68 A
ATOM 3624 CZ TYR A 459 -5.064 -16.305 -28.204 1.00 25.83 A
ATOM 3625 OH TYR A 459 -5.172 -17.404 -27.375 1.00 29.52 A
ATOM 3626 C TYR A 459 -4.578 -12.113 -33.143 1.00 22.65 A
ATOM 3627 O TYR A 459 -5.332 -12.521 -34.028 1.00 22.41 A
ATOM 3628 N ASN A 460 -4.248 -10.828 -33.024 1.00 21.50 A
ATOM 3629 CA ASN A 460 -4.804 -9.852 -33.950 1.00 20.16 A
ATOM 3630 CB ASN A 460 -4.844 -8.464 -33.318 1.00 19.14 A
ATOM 3631 CG ASN A 460 -6.166 -7.756 -33.570 1.00 19.69 A
ATOM 3632 OD1 ASN A 460 -7.239 -8.321 -33.326 1.00 18.65 A
ATOM 3633 ND2 ASN A 460 -6.100 -6.520 -34.059 1.00 19.97 A
ATOM 3634 C ASN A 460 -4.058 -9.798 -35.266 1.00 19.78 A

ATOM 3635 O ASN A 460 -4.660 -9.607 -36.323 1.00 21.02 A
ATOM 3636 N PHE A 461 -2.749 -9.981 -35.210 1.00 17.97 A
ATOM 3637 CA PHE A 461 -1.955 -9.954 -36.408 1.00 15.62 A
ATOM 3638 CB PHE A 461 -0.495 -9.957 -36.032 1.00 16.13 A
ATOM 3639 CG PHE A 461 0.425 -10.351 -37.133 1.00 16.86 A
ATOM 3640 CD1 PHE A 461 0.837 -11.673 -37.266 1.00 17.09 A
ATOM 3641 CD2 PHE A 461 0.964 -9.397 -37.978 1.00 18.04 A
ATOM 3642 CE1 PHE A 461 1.776 -12.038 -38.210 1.00 17.01 A
ATOM 3643 CE2 PHE A 461 1.912 -9.755 -38.934 1.00 18.08 A
ATOM 3644 CZ PHE A 461 2.321 -11.074 -39.049 1.00 17.61 A
ATOM 3645 C PHE A 461 -2.296 -11.117 -37.306 1.00 16.41 A
ATOM 3646 O PHE A 461 -2.204 -10.979 -38.512 1.00 19.34 A
ATOM 3647 N ASP A 462 -2.698 -12.262 -36.755 1.00 16.99 A
ATOM 3648 CA ASP A 462 -3.056 -13.395 -37.624 1.00 18.19 A
ATOM 3649 CB ASP A 462 -2.724 -14.753 -36.977 1.00 19.47 A
ATOM 3650 CG ASP A 462 -1.301 -15.203 -37.265 1.00 20.73 A
ATOM 3651 OD1 ASP A 462 -0.629 -14.525 -38.064 1.00 22.71 A
ATOM 3652 OD2 ASP A 462 -0.849 -16.229 -36.706 1.00 21.37 A
ATOM 3653 C ASP A 462 -4.529 -13.355 -38.035 1.00 18.57 A
ATOM 3654 O ASP A 462 -4.939 -14.029 -38.987 1.00 18.85 A
ATOM 3655 N TRP A 463 -5.321 -12.562 -37.319 1.00 17.77 A
ATOM 3656 CA TRP A 463 -6.734 -12.408 -37.640 1.00 16.92 A
ATOM 3657 CB TRP A 463 -7.486 -11.829 -36.432 1.00 14.22 A
ATOM 3658 CG TRP A 463 -8.936 -11.401 -36.665 1.00 10.02 A
ATOM 3659 CD2 TRP A 463 -10.092 -12.253 -36.711 1.00 9.24 A
ATOM 3660 CE2 TRP A 463 -11.224 -11.414 -36.833 1.00 8.76 A
ATOM 3661 CE3 TRP A 463 -10.281 -13.645 -36.657 1.00 9.71 A
ATOM 3662 CD1 TRP A 463 -9.406 -10.122 -36.770 1.00 9.37 A
ATOM 3663 NE1 TRP A 463 -10.773 -10.121 -36.865 1.00 9.69 A
ATOM 3664 CZ2 TRP A 463 -12.526 -11.914 -36.896 1.00 8.90 A
ATOM 3665 CZ3 TRP A 463 -11.577 -14.145 -36.722 1.00 10.56 A
ATOM 3666 CH2 TRP A 463 -12.684 -13.277 -36.839 1.00 11.27 A
ATOM 3667 C TRP A 463 -6.858 -11.490 -38.855 1.00 17.54 A
ATOM 3668 O TRP A 463 -7.564 -11.799 -39.796 1.00 18.14 A

ATOM 3669 N TRP A 464 -6.165 -10.360 -38.849 1.00 19.35 A
ATOM 3670 CA TRP A 464 -6.255 -9.464 -39.998 1.00 21.50 A
ATOM 3671 CB TRP A 464 -5.818 -8.050 -39.620 1.00 22.37 A
ATOM 3672 CG TRP A 464 -6.867 -7.391 -38.799 1.00 25.27 A
ATOM 3673 CD2 TRP A 464 -8.082 -6.818 -39.287 1.00 27.31 A
ATOM 3674 CE2 TRP A 464 -8.855 -6.457 -38.161 1.00 27.82 A
ATOM 3675 CE3 TRP A 464 -8.595 -6.577 -40.571 1.00 28.49 A
ATOM 3676 CD1 TRP A 464 -6.944 -7.346 -37.433 1.00 25.51 A
ATOM 3677 NE1 TRP A 464 -8.136 -6.790 -37.043 1.00 26.13 A
ATOM 3678 CZ2 TRP A 464 -10.118 -5.867 -38.278 1.00 29.60 A
ATOM 3679 CZ3 TRP A 464 -9.851 -5.988 -40.691 1.00 29.45 A
ATOM 3680 CH2 TRP A 464 -10.598 -5.640 -39.548 1.00 30.76 A
ATOM 3681 C TRP A 464 -5.470 -9.988 -41.199 1.00 22.46 A
ATOM 3682 O TRP A 464 -5.627 -9.504 -42.328 1.00 22.21 A
ATOM 3683 N TYR A 465 -4.613 -10.977 -40.968 1.00 21.92 A
ATOM 3684 CA TYR A 465 -3.908 -11.565 -42.089 1.00 20.47 A
ATOM 3685 CB TYR A 465 -2.855 -12.574 -41.628 1.00 21.55 A
ATOM 3686 CG TYR A 465 -2.345 -13.418 -42.773 1.00 23.60 A
ATOM 3687 CD1 TYR A 465 -1.445 -12.904 -43.707 1.00 23.50 A
ATOM 3688 CE1 TYR A 465 -1.045 -13.653 -44.819 1.00 25.30 A
ATOM 3689 CD2 TYR A 465 -2.832 -14.708 -42.979 1.00 25.25 A
ATOM 3690 CE2 TYR A 465 -2.448 -15.458 -44.089 1.00 27.28 A
ATOM 3691 CZ TYR A 465 -1.555 -14.927 -45.006 1.00 26.75 A
ATOM 3692 OH TYR A 465 -1.198 -15.671 -46.112 1.00 27.23 A
ATOM 3693 C TYR A 465 -5.025 -12.300 -42.839 1.00 19.15 A
ATOM 3694 O TYR A 465 -5.264 -12.078 -44.024 1.00 19.77 A
ATOM 3695 N LEU A 466 -5.736 -13.153 -42.114 1.00 16.19 A
ATOM 3696 CA LEU A 466 -6.807 -13.934 -42.706 1.00 14.96 A
ATOM 3697 CB LEU A 466 -7.356 -14.937 -41.683 1.00 12.13 A
ATOM 3698 CG LEU A 466 -6.351 -15.981 -41.208 1.00 10.49 A
ATOM 3699 CD1 LEU A 466 -7.035 -16.923 -40.276 1.00 11.32 A
ATOM 3700 CD2 LEU A 466 -5.790 -16.751 -42.382 1.00 9.40 A
ATOM 3701 C LEU A 466 -7.941 -13.117 -43.292 1.00 15.16 A
ATOM 3702 O LEU A 466 -8.439 -13.451 -44.353 1.00 16.26 A

ATOM 3703 N ARG A 467 -8.344 -12.053 -42.604 1.00 16.10 A
ATOM 3704 CA ARG A 467 -9.444 -11.194 -43.058 1.00 16.29 A
ATOM 3705 CB ARG A 467 -9.795 -10.167 -41.980 1.00 16.59 A
ATOM 3706 CG ARG A 467 -10.258 -10.788 -40.674 1.00 16.94 A
ATOM 3707 CD ARG A 467 -11.777 -10.847 -40.567 1.00 19.18 A
ATOM 3708 NE ARG A 467 -12.389 -9.513 -40.595 1.00 20.42 A
ATOM 3709 CZ ARG A 467 -13.687 -9.268 -40.433 1.00 19.37 A
ATOM 3710 NH1 ARG A 467 -14.127 -8.025 -40.482 1.00 19.86 A
ATOM 3711 NH2 ARG A 467 -14.544 -10.258 -40.211 1.00 18.20 A
ATOM 3712 C ARG A 467 -9.076 -10.486 -44.353 1.00 17.10 A
ATOM 3713 O ARG A 467 -9.831 -10.534 -45.327 1.00 18.11 A
ATOM 3714 N THR A 468 -7.918 -9.832 -44.374 1.00 17.19 A
ATOM 3715 CA THR A 468 -7.486 -9.159 -45.590 1.00 17.27 A
ATOM 3716 CB THR A 468 -6.098 -8.478 -45.438 1.00 16.69 A
ATOM 3717 OG1 THR A 468 -6.202 -7.317 -44.594 1.00 15.44 A
ATOM 3718 CG2 THR A 468 -5.565 -8.058 -46.806 1.00 14.50 A
ATOM 3719 C THR A 468 -7.392 -10.233 -46.667 1.00 18.27 A
ATOM 3720 O THR A 468 -8.063 -10.142 -47.699 1.00 20.61 A
ATOM 3721 N LYS A 469 -6.585 -11.262 -46.403 1.00 17.40 A
ATOM 3722 CA LYS A 469 -6.392 -12.354 -47.347 1.00 15.93 A
ATOM 3723 CB LYS A 469 -5.616 -13.505 -46.705 1.00 14.24 A
ATOM 3724 CG LYS A 469 -5.509 -14.715 -47.625 1.00 12.48 A
ATOM 3725 CD LYS A 469 -4.649 -15.828 -47.059 1.00 11.60 A
ATOM 3726 CE LYS A 469 -4.944 -17.116 -47.805 1.00 12.05 A
ATOM 3727 NZ LYS A 469 -3.917 -18.181 -47.635 1.00 13.38 A
ATOM 3728 C LYS A 469 -7.647 -12.923 -47.975 1.00 16.31 A
ATOM 3729 O LYS A 469 -7.688 -13.124 -49.170 1.00 18.59 A
ATOM 3730 N TYR A 470 -8.676 -13.196 -47.192 1.00 17.11 A
ATOM 3731 CA TYR A 470 -9.874 -13.780 -47.783 1.00 18.71 A
ATOM 3732 CB TYR A 470 -10.441 -14.897 -46.894 1.00 17.17 A
ATOM 3733 CG TYR A 470 -9.572 -16.132 -46.842 1.00 17.88 A
ATOM 3734 CD1 TYR A 470 -8.549 -16.250 -45.905 1.00 17.58 A
ATOM 3735 CE1 TYR A 470 -7.721 -17.365 -45.892 1.00 18.02 A
ATOM 3736 CD2 TYR A 470 -9.744 -17.170 -47.765 1.00 16.98 A

ATOM 3737 CE2 TYR A 470 -8.923 -18.289 -47.757 1.00 14.63 A
ATOM 3738 CZ TYR A 470 -7.916 -18.381 -46.821 1.00 16.45 A
ATOM 3739 OH TYR A 470 -7.099 -19.489 -46.794 1.00 18.19 A
ATOM 3740 C TYR A 470 -10.986 -12.803 -48.132 1.00 20.06 A
ATOM 3741 O TYR A 470 -11.574 -12.907 -49.208 1.00 22.88 A
ATOM 3742 N GLN A 471 -11.281 -11.857 -47.249 1.00 18.91 A
ATOM 3743 CA GLN A 471 -12.348 -10.917 -47.545 1.00 18.37 A
ATOM 3744 CB GLN A 471 -13.053 -10.512 -46.254 1.00 19.72 A
ATOM 3745 CG GLN A 471 -14.005 -11.593 -45.753 1.00 23.55 A
ATOM 3746 CD GLN A 471 -14.758 -11.204 -44.495 1.00 25.32 A
ATOM 3747 OE1 GLN A 471 -14.180 -11.125 -43.409 1.00 23.98 A
ATOM 3748 NE2 GLN A 471 -16.056 -10.953 -44.638 1.00 26.86 A
ATOM 3749 C GLN A 471 -11.900 -9.678 -48.319 1.00 17.38 A
ATOM 3750 O GLN A 471 -12.706 -9.039 -49.003 1.00 15.73 A
ATOM 3751 N GLY A 472 -10.615 -9.353 -48.241 1.00 15.54 A
ATOM 3752 CA GLY A 472 -10.143 -8.175 -48.930 1.00 16.10 A
ATOM 3753 C GLY A 472 -10.736 -6.939 -48.284 1.00 16.73 A
ATOM 3754 O GLY A 472 -11.252 -6.019 -48.935 1.00 14.53 A
ATOM 3755 N ILE A 473 -10.681 -6.947 -46.961 1.00 18.68 A
ATOM 3756 CA ILE A 473 -11.172 -5.842 -46.169 1.00 18.10 A
ATOM 3757 CB ILE A 473 -12.436 -6.216 -45.398 1.00 17.35 A
ATOM 3758 CG2 ILE A 473 -13.540 -6.551 -46.370 1.00 17.73 A
ATOM 3759 CG1 ILE A 473 -12.158 -7.402 -44.478 1.00 17.91 A
ATOM 3760 CD1 ILE A 473 -13.266 -7.654 -43.427 1.00 17.89 A
ATOM 3761 C ILE A 473 -10.078 -5.498 -45.186 1.00 18.37 A
ATOM 3762 O ILE A 473 -9.259 -6.344 -44.815 1.00 18.23 A
ATOM 3763 N CYS A 474 -10.049 -4.245 -44.775 1.00 17.91 A
ATOM 3764 CA CYS A 474 -9.052 -3.817 -43.830 1.00 17.96 A
ATOM 3765 CB CYS A 474 -7.982 -3.010 -44.549 1.00 18.69 A
ATOM 3766 SG CYS A 474 -8.596 -1.500 -45.248 1.00 22.40 A
ATOM 3767 C CYS A 474 -9.732 -2.987 -42.741 1.00 17.38 A
ATOM 3768 O CYS A 474 -10.836 -2.473 -42.941 1.00 15.98 A
ATOM 3769 N PRO A 475 -9.091 -2.880 -41.560 1.00 17.21 A
ATOM 3770 CD PRO A 475 -7.790 -3.513 -41.265 1.00 16.36 A

ATOM 3771 CA PRO A 475 -9.567 -2.135 -40.391 1.00 16.16 A
ATOM 3772 CB PRO A 475 -8.580 -2.553 -39.307 1.00 16.23 A
ATOM 3773 CG PRO A 475 -7.321 -2.741 -40.078 1.00 15.68 A
ATOM 3774 C PRO A 475 -9.548 -0.637 -40.648 1.00 15.46 A
ATOM 3775 O PRO A 475 -8.561 -0.106 -41.140 1.00 15.04 A
ATOM 3776 N PRO A 476 -10.642 0.060 -40.324 1.00 15.80 A
ATOM 3777 CD PRO A 476 -11.945 -0.501 -39.940 1.00 16.17 A
ATOM 3778 CA PRO A 476 -10.741 1.510 -40.529 1.00 16.16 A
ATOM 3779 CB PRO A 476 -12.229 1.789 -40.312 1.00 15.24 A
ATOM 3780 CG PRO A 476 -12.652 0.704 -39.399 1.00 17.52 A
ATOM 3781 C PRO A 476 -9.831 2.384 -39.663 1.00 16.09 A
ATOM 3782 O PRO A 476 -9.530 3.520 -40.025 1.00 17.93 A
ATOM 3783 N VAL A 477 -9.409 1.853 -38.520 1.00 15.57 A
ATOM 3784 CA VAL A 477 -8.506 2.546 -37.607 1.00 15.66 A
ATOM 3785 CB VAL A 477 -9.182 2.885 -36.273 1.00 12.96 A
ATOM 3786 CG1 VAL A 477 -10.222 3.957 -36.473 1.00 11.95 A
ATOM 3787 CG2 VAL A 477 -9.814 1.645 -35.695 1.00 13.14 A
ATOM 3788 C VAL A 477 -7.376 1.561 -37.346 1.00 18.07 A
ATOM 3789 O VAL A 477 -7.545 0.361 -37.579 1.00 18.65 A
ATOM 3790 N THR A 478 -6.233 2.044 -36.867 1.00 20.51 A
ATOM 3791 CA THR A 478 -5.091 1.165 -36.615 1.00 22.21 A
ATOM 3792 CB THR A 478 -3.849 1.970 -36.248 1.00 22.13 A
ATOM 3793 OG1 THR A 478 -3.673 3.027 -37.202 1.00 23.83 A
ATOM 3794 CG2 THR A 478 -2.617 1.073 -36.269 1.00 22.49 A
ATOM 3795 C THR A 478 -5.369 0.167 -35.500 1.00 23.29 A
ATOM 3796 O THR A 478 -6.208 -0.432 -34.641 1.00 25.09 A
ATOM 3797 N ARG A 479 -4.682 -0.980 -35.526 1.00 23.91 A
ATOM 3798 CA ARG A 479 -4.856 -2.026 -34.506 1.00 25.43 A
ATOM 3799 CB ARG A 479 -5.751 -3.166 -35.021 1.00 26.26 A
ATOM 3800 CG ARG A 479 -6.837 -2.784 -36.036 1.00 25.49 A
ATOM 3801 CD ARG A 479 -7.930 -1.981 -35.383 1.00 25.49 A
ATOM 3802 NE ARG A 479 -8.647 -2.732 -34.351 1.00 24.68 A
ATOM 3803 CZ ARG A 479 -9.124 -2.188 -33.234 1.00 23.89 A
ATOM 3804 NH1 ARG A 479 -8.953 -0.891 -32.986 1.00 23.48 A

ATOM 3805 NH2 ARG A 479 -9.804 -2.929 -32.386 1.00 23.53 A
ATOM 3806 C ARG A 479 -3.499 -2.626 -34.111 1.00 26.31 A
ATOM 3807 O ARG A 479 -2.512 -2.491 -34.838 1.00 25.83 A
ATOM 3808 N ASN A 480 -3.477 -3.145 -32.891 1.00 27.66 A
ATOM 3809 CA ASN A 480 -2.369 -3.838 -32.282 1.00 29.08 A
ATOM 3810 CB ASN A 480 -1.521 -2.922 -31.467 1.00 30.24 A
ATOM 3811 CG ASN A 480 -2.241 -1.804 -30.920 1.00 32.70 A
ATOM 3812 OD1 ASN A 480 -3.160 -1.968 -30.239 1.00 34.75 A
ATOM 3813 ND2 ASN A 480 -1.783 -0.631 -31.175 1.00 34.84 A
ATOM 3814 C ASN A 480 -2.597 -5.099 -31.512 1.00 30.15 A
ATOM 3815 O ASN A 480 -3.677 -5.407 -31.267 1.00 30.54 A
ATOM 3816 N GLU A 481 -1.593 -5.786 -31.105 1.00 30.84 A
ATOM 3817 CA GLU A 481 -1.869 -6.885 -30.273 1.00 31.75 A
ATOM 3818 CB GLU A 481 -0.639 -7.692 -30.101 1.00 30.91 A
ATOM 3819 CG GLU A 481 -0.277 -8.612 -31.210 1.00 32.71 A
ATOM 3820 CD GLU A 481 -1.396 -9.356 -31.756 1.00 34.29 A
ATOM 3821 OE1 GLU A 481 -1.246 -9.789 -32.845 1.00 34.23 A
ATOM 3822 OE2 GLU A 481 -2.401 -9.534 -31.151 1.00 34.75 A
ATOM 3823 C GLU A 481 -2.315 -6.420 -28.935 1.00 32.11 A
ATOM 3824 O GLU A 481 -1.839 -6.896 -27.996 1.00 34.79 A
ATOM 3825 N THR A 482 -3.218 -5.498 -28.818 1.00 31.25 A
ATOM 3826 CA THR A 482 -3.813 -5.277 -27.560 1.00 30.63 A
ATOM 3827 CB THR A 482 -3.519 -3.972 -27.024 1.00 31.03 A
ATOM 3828 OG1 THR A 482 -4.696 -3.347 -26.610 1.00 32.48 A
ATOM 3829 CG2 THR A 482 -3.155 -3.167 -27.958 1.00 31.00 A
ATOM 3830 C THR A 482 -5.217 -5.424 -27.781 1.00 29.91 A
ATOM 3831 O THR A 482 -6.012 -5.193 -26.968 1.00 31.06 A
ATOM 3832 N HIS A 483 -5.519 -5.904 -28.934 1.00 28.71 A
ATOM 3833 CA HIS A 483 -6.789 -5.728 -29.433 1.00 26.10 A
ATOM 3834 CB HIS A 483 -6.620 -5.049 -30.695 1.00 26.58 A
ATOM 3835 CG HIS A 483 -6.584 -3.578 -30.618 1.00 28.00 A
ATOM 3836 CD2 HIS A 483 -7.405 -2.701 -30.033 1.00 27.05 A
ATOM 3837 ND1 HIS A 483 -5.507 -2.866 -31.010 1.00 30.09 A
ATOM 3838 CE1 HIS A 483 -5.702 -1.600 -30.771 1.00 28.75 A

ATOM 3839 NE2 HIS A 483 -6.855 -1.470 -30.185 1.00 27.98 A
ATOM 3840 C HIS A 483 -7.138 -7.116 -29.686 1.00 24.65 A
ATOM 3841 O HIS A 483 -6.304 -7.918 -29.713 1.00 23.77 A
ATOM 3842 N PHE A 484 -8.380 -7.432 -29.859 1.00 23.61 A
ATOM 3843 CA PHE A 484 -8.741 -8.822 -30.040 1.00 23.94 A
ATOM 3844 CB PHE A 484 -8.922 -9.491 -28.683 1.00 23.00 A
ATOM 3845 CG PHE A 484 -9.232 -10.947 -28.773 1.00 24.55 A
ATOM 3846 CD1 PHE A 484 -8.502 -11.772 -29.629 1.00 25.25 A
ATOM 3847 CD2 PHE A 484 -10.252 -11.500 -28.009 1.00 25.69 A
ATOM 3848 CE1 PHE A 484 -8.786 -13.126 -29.730 1.00 25.29 A
ATOM 3849 CE2 PHE A 484 -10.547 -12.853 -28.098 1.00 25.95 A
ATOM 3850 CZ PHE A 484 -9.813 -13.668 -28.964 1.00 26.91 A
ATOM 3851 C PHE A 484 -10.040 -8.816 -30.823 1.00 24.58 A
ATOM 3852 O PHE A 484 -11.103 -9.196 -30.327 1.00 25.89 A
ATOM 3853 N ASP A 485 -9.928 -8.372 -32.066 1.00 23.54 A
ATOM 3854 CA ASP A 485 -11.064 -8.247 -32.944 1.00 22.07 A
ATOM 3855 CB ASP A 485 -10.601 -7.500 -34.199 1.00 22.77 A
ATOM 3856 CG ASP A 485 -9.993 -6.132 -33.859 1.00 22.94 A
ATOM 3857 OD1 ASP A 485 -10.671 -5.329 -33.188 1.00 22.56 A
ATOM 3858 OD2 ASP A 485 -8.840 -5.852 -34.250 1.00 23.07 A
ATOM 3859 C ASP A 485 -11.784 -9.558 -33.254 1.00 21.18 A
ATOM 3860 O ASP A 485 -12.961 -9.553 -33.605 1.00 20.14 A
ATOM 3861 N ALA A 486 -11.097 -10.683 -33.101 1.00 20.66 A
ATOM 3862 CA ALA A 486 -11.738 -11.961 -33.356 1.00 21.29 A
ATOM 3863 CB ALA A 486 -10.719 -13.073 -33.348 1.00 20.40 A
ATOM 3864 C ALA A 486 -12.748 -12.170 -32.244 1.00 22.27 A
ATOM 3865 O ALA A 486 -13.785 -12.807 -32.426 1.00 23.34 A
ATOM 3866 N GLY A 487 -12.437 -11.608 -31.084 1.00 22.55 A
ATOM 3867 CA GLY A 487 -13.311 -11.744 -29.936 1.00 23.10 A
ATOM 3868 C GLY A 487 -14.593 -10.936 -29.985 1.00 23.85 A
ATOM 3869 O GLY A 487 -15.486 -11.154 -29.163 1.00 25.35 A
ATOM 3870 N ALA A 488 -14.702 -10.006 -30.929 1.00 23.27 A
ATOM 3871 CA ALA A 488 -15.903 -9.185 -31.035 1.00 23.25 A
ATOM 3872 CB ALA A 488 -15.572 -7.849 -31.661 1.00 22.67 A

ATOM 3873 C ALA A 488 -16.974 -9.893 -31.854 1.00 24.16 A
ATOM 3874 O ALA A 488 -18.035 -9.328 -32.124 1.00 25.32 A
ATOM 3875 N LYS A 489 -16.693 -11.131 -32.246 1.00 23.93 A
ATOM 3876 CA LYS A 489 -17.651 -11.929 -33.004 1.00 24.18 A
ATOM 3877 CB LYS A 489 -16.961 -12.622 -34.180 1.00 23.27 A
ATOM 3878 CG LYS A 489 -17.865 -13.560 -34.964 1.00 20.31 A
ATOM 3879 CD LYS A 489 -19.061 -12.819 -35.542 1.00 21.67 A
ATOM 3880 CE LYS A 489 -20.101 -13.788 -36.081 1.00 21.97 A
ATOM 3881 NZ LYS A 489 -21.392 -13.109 -36.379 1.00 25.09 A
ATOM 3882 C LYS A 489 -18.337 -12.962 -32.115 1.00 24.77 A
ATOM 3883 O LYS A 489 -17.683 -13.835 -31.543 1.00 25.27 A
ATOM 3884 N PHE A 490 -19.638 -12.892 -32.001 1.00 23.86 A
ATOM 3885 CA PHE A 490 -20.316 -13.692 -31.056 1.00 24.54 A
ATOM 3886 CB PHE A 490 -21.715 -13.813 -31.360 1.00 24.42 A
ATOM 3887 CG PHE A 490 -22.435 -14.790 -30.527 1.00 25.79 A
ATOM 3888 CD1 PHE A 490 -23.287 -14.428 -29.587 1.00 25.24 A
ATOM 3889 CD2 PHE A 490 -22.348 -16.066 -30.771 1.00 25.91 A
ATOM 3890 CE1 PHE A 490 -23.926 -15.318 -28.939 1.00 24.39 A
ATOM 3891 CE2 PHE A 490 -23.040 -16.933 -30.128 1.00 25.39 A
ATOM 3892 CZ PHE A 490 -23.781 -16.561 -29.210 1.00 24.73 A
ATOM 3893 C PHE A 490 -19.786 -15.001 -30.818 1.00 25.27 A
ATOM 3894 O PHE A 490 -19.787 -15.476 -29.758 1.00 25.38 A
ATOM 3895 N HIS A 491 -19.288 -15.640 -31.816 1.00 25.15 A
ATOM 3896 CA HIS A 491 -19.061 -17.081 -31.807 1.00 24.46 A
ATOM 3897 CB HIS A 491 -19.072 -17.632 -33.234 1.00 23.77 A
ATOM 3898 CG HIS A 491 -20.429 -17.647 -33.866 1.00 24.58 A
ATOM 3899 CD2 HIS A 491 -21.081 -16.716 -34.603 1.00 25.02 A
ATOM 3900 ND1 HIS A 491 -21.284 -18.725 -33.769 1.00 25.73 A
ATOM 3901 CE1 HIS A 491 -22.401 -18.457 -34.419 1.00 26.06 A
ATOM 3902 NE2 HIS A 491 -22.304 -17.245 -34.934 1.00 26.09 A
ATOM 3903 C HIS A 491 -17.743 -17.426 -31.121 1.00 24.46 A
ATOM 3904 O HIS A 491 -17.552 -18.549 -30.655 1.00 23.14 A
ATOM 3905 N VAL A 492 -16.846 -16.434 -31.078 1.00 24.78 A
ATOM 3906 CA VAL A 492 -15.512 -16.655 -30.508 1.00 26.46 A

ATOM 3907 CB VAL A 492 -14.467 -15.594 -30.959 1.00 27.00 A
ATOM 3908 CG1 VAL A 492 -13.158 -15.801 -30.182 1.00 26.88 A
ATOM 3909 CG2 VAL A 492 -14.188 -15.729 -32.454 1.00 25.03 A
ATOM 3910 C VAL A 492 -15.578 -16.697 -28.985 1.00 26.30 A
ATOM 3911 O VAL A 492 -15.014 -17.599 -28.370 1.00 27.38 A
ATOM 3912 N PRO A 493 -16.260 -15.724 -28.389 1.00 25.57 A
ATOM 3913 CD PRO A 493 -16.768 -14.503 -29.035 1.00 25.53 A
ATOM 3914 CA PRO A 493 -16.461 -15.705 -26.936 1.00 24.27 A
ATOM 3915 CB PRO A 493 -17.189 -14.378 -26.700 1.00 23.63 A
ATOM 3916 CG PRO A 493 -17.756 -14.007 -28.027 1.00 25.03 A
ATOM 3917 C PRO A 493 -17.324 -16.871 -26.466 1.00 23.96 A
ATOM 3918 O PRO A 493 -16.996 -17.517 -25.471 1.00 26.34 A
ATOM 3919 N ASN A 494 -18.415 -17.132 -27.179 1.00 22.69 A
ATOM 3920 CA ASN A 494 -19.312 -18.229 -26.833 1.00 22.06 A
ATOM 3921 CB ASN A 494 -20.752 -17.886 -27.219 1.00 23.76 A
ATOM 3922 CG ASN A 494 -21.264 -16.645 -26.513 1.00 27.02 A
ATOM 3923 OD1 ASN A 494 -22.279 -16.687 -25.818 1.00 30.57 A
ATOM 3924 ND2 ASN A 494 -20.563 -15.533 -26.689 1.00 28.71 A
ATOM 3925 C ASN A 494 -18.893 -19.544 -27.484 1.00 21.16 A
ATOM 3926 O ASN A 494 -19.722 -20.425 -27.713 1.00 20.92 A
ATOM 3927 N VAL A 495 -17.604 -19.668 -27.779 1.00 20.40 A
ATOM 3928 CA VAL A 495 -17.025 -20.951 -28.162 1.00 20.97 A
ATOM 3929 CB VAL A 495 -16.618 -21.778 -26.928 1.00 19.61 A
ATOM 3930 CG1 VAL A 495 -15.980 -23.092 -27.354 1.00 18.76 A
ATOM 3931 CG2 VAL A 495 -15.674 -20.982 -26.040 1.00 19.94 A
ATOM 3932 C VAL A 495 -17.999 -21.764 -29.010 1.00 21.79 A
ATOM 3933 O VAL A 495 -18.423 -22.849 -28.615 1.00 20.46 A
ATOM 3934 N THR A 496 -18.346 -21.231 -30.177 1.00 22.69 A
ATOM 3935 CA THR A 496 -18.966 -22.028 -31.229 1.00 23.52 A
ATOM 3936 CB THR A 496 -20.254 -21.349 -31.731 1.00 24.42 A
ATOM 3937 OG1 THR A 496 -21.364 -21.773 -30.930 1.00 23.96 A
ATOM 3938 CG2 THR A 496 -20.614 -21.852 -33.121 1.00 25.36 A
ATOM 3939 C THR A 496 -18.003 -22.251 -32.391 1.00 23.29 A
ATOM 3940 O THR A 496 -17.408 -21.305 -32.906 1.00 24.04 A

ATOM 3941 N PRO A 497 -17.856 -23.508 -32.799 1.00 23.40 A
ATOM 3942 CD PRO A 497 -18.380 -24.706 -32.123 1.00 22.06 A
ATOM 3943 CA PRO A 497 -17.173 -23.835 -34.055 1.00 23.92 A
ATOM 3944 CB PRO A 497 -17.335 -25.355 -34.154 1.00 24.09 A
ATOM 3945 CG PRO A 497 -17.584 -25.804 -32.757 1.00 23.68 A
ATOM 3946 C PRO A 497 -17.842 -23.161 -35.249 1.00 23.61 A
ATOM 3947 O PRO A 497 -19.067 -23.053 -35.285 1.00 22.86 A
ATOM 3948 N TYR A 498 -17.042 -22.713 -36.211 1.00 23.19 A
ATOM 3949 CA TYR A 498 -17.561 -21.932 -37.326 1.00 23.11 A
ATOM 3950 CB TYR A 498 -16.848 -20.572 -37.382 1.00 22.02 A
ATOM 3951 CG TYR A 498 -17.719 -19.401 -37.825 1.00 20.52 A
ATOM 3952 CD1 TYR A 498 -18.567 -18.754 -36.928 1.00 19.83 A
ATOM 3953 CE1 TYR A 498 -19.373 -17.672 -37.336 1.00 19.95 A
ATOM 3954 CD2 TYR A 498 -17.693 -18.940 -39.148 1.00 20.70 A
ATOM 3955 CE2 TYR A 498 -18.495 -17.862 -39.567 1.00 20.22 A
ATOM 3956 CZ TYR A 498 -19.331 -17.233 -38.659 1.00 20.07 A
ATOM 3957 OH TYR A 498 -20.125 -16.184 -39.075 1.00 20.11 A
ATOM 3958 C TYR A 498 -17.502 -22.603 -38.701 1.00 24.48 A
ATOM 3959 O TYR A 498 -18.372 -22.348 -39.546 1.00 24.64 A
ATOM 3960 N ILE A 499 -16.515 -23.472 -38.934 1.00 24.67 A
ATOM 3961 CA ILE A 499 -16.388 -24.114 -40.256 1.00 25.17 A
ATOM 3962 CB ILE A 499 -15.229 -25.144 -40.318 1.00 24.77 A
ATOM 3963 CG2 ILE A 499 -15.610 -26.429 -39.585 1.00 24.34 A
ATOM 3964 CG1 ILE A 499 -14.936 -25.511 -41.777 1.00 24.35 A
ATOM 3965 CD1 ILE A 499 -14.635 -24.337 -42.673 1.00 22.78 A
ATOM 3966 C ILE A 499 -17.639 -24.819 -40.714 1.00 25.28 A
ATOM 3967 O ILE A 499 -17.694 -25.316 -41.825 1.00 26.23 A
ATOM 3968 N ARG A 500 -18.639 -24.870 -39.849 1.00 26.48 A
ATOM 3969 CA ARG A 500 -19.900 -25.524 -40.162 1.00 27.79 A
ATOM 3970 CB ARG A 500 -20.647 -25.834 -38.872 1.00 29.54 A
ATOM 3971 CG ARG A 500 -19.860 -25.377 -37.649 1.00 33.75 A
ATOM 3972 CD ARG A 500 -20.715 -25.292 -36.415 1.00 34.51 A
ATOM 3973 NE ARG A 500 -20.356 -26.323 -35.448 1.00 35.82 A
ATOM 3974 CZ ARG A 500 -21.046 -26.557 -34.341 1.00 36.29 A

ATOM 3975 NH1 ARG A 500 -22.124 -25.819 -34.071 1.00 33.84 A
ATOM 3976 NH2 ARG A 500 -20.659 -27.534 -33.525 1.00 39.33 A
ATOM 3977 C ARG A 500 -20.761 -24.607 -41.030 1.00 27.43 A
ATOM 3978 O ARG A 500 -21.547 -25.087 -41.841 1.00 27.93 A
ATOM 3979 N TYR A 501 -20.623 -23.292 -40.854 1.00 27.12 A
ATOM 3980 CA TYR A 501 -21.412 -22.344 -41.636 1.00 27.51 A
ATOM 3981 CB TYR A 501 -21.349 -20.950 -41.018 1.00 29.59 A
ATOM 3982 CG TYR A 501 -22.002 -20.893 -39.663 1.00 31.64 A
ATOM 3983 CD1 TYR A 501 -21.249 -20.667 -38.513 1.00 33.80 A
ATOM 3984 CE1 TYR A 501 -21.844 -20.671 -37.251 1.00 33.88 A
ATOM 3985 CD2 TYR A 501 -23.372 -21.116 -39.521 1.00 30.84 A
ATOM 3986 CE2 TYR A 501 -23.976 -21.123 -38.275 1.00 31.43 A
ATOM 3987 CZ TYR A 501 -23.206 -20.903 -37.138 1.00 33.23 A
ATOM 3988 OH TYR A 501 -23.788 -20.939 -35.891 1.00 33.38 A
ATOM 3989 C TYR A 501 -20.982 -22.289 -43.090 1.00 26.81 A
ATOM 3990 O TYR A 501 -21.765 -21.909 -43.959 1.00 26.18 A
ATOM 3991 N PHE A 502 -19.731 -22.664 -43.342 1.00 26.48 A
ATOM 3992 CA PHE A 502 -19.177 -22.704 -44.692 1.00 23.75 A
ATOM 3993 CB PHE A 502 -17.662 -22.898 -44.636 1.00 23.92 A
ATOM 3994 CG PHE A 502 -16.991 -22.826 -45.972 1.00 24.93 A
ATOM 3995 CD1 PHE A 502 -16.830 -21.602 -46.626 1.00 25.73 A
ATOM 3996 CD2 PHE A 502 -16.506 -23.973 -46.579 1.00 24.29 A
ATOM 3997 CE1 PHE A 502 -16.192 -21.530 -47.865 1.00 24.82 A
ATOM 3998 CE2 PHE A 502 -15.871 -23.904 -47.815 1.00 24.05 A
ATOM 3999 CZ PHE A 502 -15.714 -22.682 -48.455 1.00 25.14 A
ATOM 4000 C PHE A 502 -19.819 -23.915 -45.346 1.00 22.84 A
ATOM 4001 O PHE A 502 -20.491 -23.801 -46.376 1.00 22.64 A
ATOM 4002 N VAL A 503 -19.612 -25.070 -44.718 1.00 21.04 A
ATOM 4003 CA VAL A 503 -20.161 -26.329 -45.195 1.00 20.36 A
ATOM 4004 CB VAL A 503 -20.016 -27.418 -44.114 1.00 19.43 A
ATOM 4005 CG1 VAL A 503 -20.684 -28.700 -44.561 1.00 18.92 A
ATOM 4006 CG2 VAL A 503 -18.547 -27.660 -43.819 1.00 17.50 A
ATOM 4007 C VAL A 503 -21.632 -26.107 -45.504 1.00 20.09 A
ATOM 4008 O VAL A 503 -22.140 -26.490 -46.559 1.00 20.21 A

ATOM 4009 N SER A 504 -22.290 -25.448 -44.566 1.00 19.89 A
ATOM 4010 CA SER A 504 -23.696 -25.126 -44.659 1.00 21.30 A
ATOM 4011 CB SER A 504 -24.096 -24.338 -43.416 1.00 20.48 A
ATOM 4012 OG SER A 504 -25.436 -23.918 -43.485 1.00 19.72 A
ATOM 4013 C SER A 504 -24.034 -24.324 -45.919 1.00 23.58 A
ATOM 4014 O SER A 504 -24.906 -24.702 -46.703 1.00 24.73 A
ATOM 4015 N PHE A 505 -23.336 -23.215 -46.122 1.00 24.99 A
ATOM 4016 CA PHE A 505 -23.610 -22.388 -47.278 1.00 25.81 A
ATOM 4017 CB PHE A 505 -22.820 -21.083 -47.172 1.00 26.60 A
ATOM 4018 CG PHE A 505 -23.547 -20.007 -46.400 1.00 28.93 A
ATOM 4019 CD1 PHE A 505 -24.062 -20.273 -45.136 1.00 30.23 A
ATOM 4020 CD2 PHE A 505 -23.739 -18.738 -46.946 1.00 28.87 A
ATOM 4021 CE1 PHE A 505 -24.756 -19.300 -44.429 1.00 31.44 A
ATOM 4022 CE2 PHE A 505 -24.434 -17.746 -46.246 1.00 29.34 A
ATOM 4023 CZ PHE A 505 -24.944 -18.029 -44.985 1.00 31.07 A
ATOM 4024 C PHE A 505 -23.364 -23.095 -48.606 1.00 25.85 A
ATOM 4025 O PHE A 505 -23.994 -22.784 -49.620 1.00 25.28 A
ATOM 4026 N VAL A 506 -22.464 -24.065 -48.612 1.00 26.29 A
ATOM 4027 CA VAL A 506 -22.219 -24.783 -49.848 1.00 25.96 A
ATOM 4028 CB VAL A 506 -20.777 -25.356 -49.923 1.00 25.44 A
ATOM 4029 CG1 VAL A 506 -20.719 -26.528 -50.908 1.00 22.82 A
ATOM 4030 CG2 VAL A 506 -19.799 -24.241 -50.358 1.00 23.64 A
ATOM 4031 C VAL A 506 -23.228 -25.904 -50.036 1.00 26.77 A
ATOM 4032 O VAL A 506 -23.761 -26.052 -51.136 1.00 29.18 A
ATOM 4033 N LEU A 507 -23.526 -26.683 -48.993 1.00 25.74 A
ATOM 4034 CA LEU A 507 -24.483 -27.770 -49.194 1.00 25.50 A
ATOM 4035 CB LEU A 507 -24.096 -29.029 -48.400 1.00 25.94 A
ATOM 4036 CG LEU A 507 -24.809 -29.424 -47.108 1.00 25.15 A
ATOM 4037 CD1 LEU A 507 -24.733 -30.918 -46.903 1.00 24.78 A
ATOM 4038 CD2 LEU A 507 -24.168 -28.694 -45.961 1.00 25.90 A
ATOM 4039 C LEU A 507 -25.941 -27.438 -48.947 1.00 25.50 A
ATOM 4040 O LEU A 507 -26.769 -28.336 -48.862 1.00 26.83 A
ATOM 4041 N GLN A 508 -26.273 -26.158 -48.842 1.00 26.02 A
ATOM 4042 CA GLN A 508 -27.670 -25.793 -48.639 1.00 26.02 A

ATOM 4043 CB GLN A 508 -27.801 -24.419 -47.964 1.00 25.89 A
ATOM 4044 CG GLN A 508 -27.631 -23.180 -48.838 1.00 27.95 A
ATOM 4045 CD GLN A 508 -27.623 -21.886 -48.004 1.00 30.56 A
ATOM 4046 OE1 GLN A 508 -28.133 -20.839 -48.434 1.00 30.96 A
ATOM 4047 NE2 GLN A 508 -27.030 -21.958 -46.807 1.00 30.26 A
ATOM 4048 C GLN A 508 -28.310 -25.796 -50.010 1.00 26.18 A
ATOM 4049 O GLN A 508 -29.500 -26.049 -50.149 1.00 26.89 A
ATOM 4050 N PHE A 509 -27.500 -25.533 -51.030 1.00 26.98 A
ATOM 4051 CA PHE A 509 -27.988 -25.531 -52.403 1.00 27.26 A
ATOM 4052 CB PHE A 509 -27.099 -24.657 -53.294 1.00 27.15 A
ATOM 4053 CG PHE A 509 -27.132 -23.193 -52.943 1.00 27.97 A
ATOM 4054 CD1 PHE A 509 -26.263 -22.669 -51.992 1.00 28.60 A
ATOM 4055 CD2 PHE A 509 -28.028 -22.336 -53.562 1.00 26.97 A
ATOM 4056 CE1 PHE A 509 -26.285 -21.316 -51.670 1.00 27.01 A
ATOM 4057 CE2 PHE A 509 -28.054 -20.984 -53.241 1.00 27.79 A
ATOM 4058 CZ PHE A 509 -27.183 -20.477 -52.296 1.00 26.34 A
ATOM 4059 C PHE A 509 -28.057 -26.963 -52.967 1.00 27.40 A
ATOM 4060 O PHE A 509 -28.881 -27.247 -53.839 1.00 27.00 A
ATOM 4061 N GLN A 510 -27.192 -27.860 -52.482 1.00 27.28 A
ATOM 4062 CA GLN A 510 -27.233 -29.245 -52.956 1.00 26.52 A
ATOM 4063 CB GLN A 510 -26.187 -30.127 -52.270 1.00 23.00 A
ATOM 4064 CG GLN A 510 -24.748 -29.757 -52.518 1.00 19.85 A
ATOM 4065 CD GLN A 510 -23.831 -30.950 -52.393 1.00 19.65 A
ATOM 4066 OE1 GLN A 510 -22.654 -30.817 -52.088 1.00 19.40 A
ATOM 4067 NE2 GLN A 510 -24.369 -32.128 -52.642 1.00 20.64 A
ATOM 4068 C GLN A 510 -28.616 -29.751 -52.573 1.00 27.40 A
ATOM 4069 O GLN A 510 -29.264 -30.483 -53.331 1.00 28.47 A
ATOM 4070 N PHE A 511 -29.048 -29.336 -51.383 1.00 26.68 A
ATOM 4071 CA PHE A 511 -30.351 -29.695 -50.837 1.00 26.98 A
ATOM 4072 CB PHE A 511 -30.497 -29.202 -49.383 1.00 29.08 A
ATOM 4073 CG PHE A 511 -29.799 -30.047 -48.343 1.00 28.82 A
ATOM 4074 CD1 PHE A 511 -28.818 -30.968 -48.684 1.00 29.51 A
ATOM 4075 CD2 PHE A 511 -30.097 -29.857 -46.998 1.00 29.18 A
ATOM 4076 CE1 PHE A 511 -28.140 -31.686 -47.693 1.00 29.62 A

ATOM 4077 CE2 PHE A 511 -29.427 -30.562 -46.008 1.00 29.58 A
ATOM 4078 CZ PHE A 511 -28.444 -31.481 -46.358 1.00 29.77 A
ATOM 4079 C PHE A 511 -31.436 -29.024 -51.672 1.00 25.88 A
ATOM 4080 O PHE A 511 -32.415 -29.655 -52.045 1.00 25.35 A
ATOM 4081 N HIS A 512 -31.256 -27.735 -51.943 1.00 26.06 A
ATOM 4082 CA HIS A 512 -32.226 -26.968 -52.714 1.00 26.84 A
ATOM 4083 CB HIS A 512 -31.762 -25.518 -52.862 1.00 26.99 A
ATOM 4084 CG HIS A 512 -32.778 -24.616 -53.493 1.00 27.39 A
ATOM 4085 CD2 HIS A 512 -32.653 -23.652 -54.434 1.00 28.09 A
ATOM 4086 ND1 HIS A 512 -34.107 -24.620 -53.126 1.00 29.00 A
ATOM 4087 CE1 HIS A 512 -34.757 -23.698 -53.816 1.00 30.09 A
ATOM 4088 NE2 HIS A 512 -33.897 -23.096 -54.616 1.00 29.35 A
ATOM 4089 C HIS A 512 -32.451 -27.571 -54.087 1.00 27.69 A
ATOM 4090 O HIS A 512 -33.562 -27.553 -54.603 1.00 28.48 A
ATOM 4091 N GLU A 513 -31.394 -28.104 -54.683 1.00 27.80 A
ATOM 4092 CA GLU A 513 -31.514 -28.712 -55.996 1.00 27.64 A
ATOM 4093 CB GLU A 513 -30.125 -28.999 -56.576 1.00 27.10 A
ATOM 4094 CG GLU A 513 -30.122 -29.406 -58.039 1.00 27.91 A
ATOM 4095 CD GLU A 513 -28.728 -29.715 -58.564 1.00 28.74 A
ATOM 4096 OE1 GLU A 513 -28.028 -30.533 -57.940 1.00 29.15 A
ATOM 4097 OE2 GLU A 513 -28.327 -29.150 -59.602 1.00 29.07 A
ATOM 4098 C GLU A 513 -32.277 -30.008 -55.786 1.00 28.18 A
ATOM 4099 O GLU A 513 -33.372 -30.190 -56.307 1.00 27.93 A
ATOM 4100 N ALA A 514 -31.693 -30.891 -54.987 1.00 28.71 A
ATOM 4101 CA ALA A 514 -32.287 -32.187 -54.691 1.00 29.81 A
ATOM 4102 CB ALA A 514 -31.496 -32.880 -53.573 1.00 29.28 A
ATOM 4103 C ALA A 514 -33.771 -32.119 -54.320 1.00 31.13 A
ATOM 4104 O ALA A 514 -34.557 -32.976 -54.736 1.00 31.89 A
ATOM 4105 N LEU A 515 -34.162 -31.117 -53.539 1.00 31.68 A
ATOM 4106 CA LEU A 515 -35.560 -31.006 -53.146 1.00 33.55 A
ATOM 4107 CB LEU A 515 -35.712 -30.095 -51.919 1.00 33.56 A
ATOM 4108 CG LEU A 515 -35.091 -30.687 -50.636 1.00 33.78 A
ATOM 4109 CD1 LEU A 515 -35.297 -29.733 -49.462 1.00 32.18 A
ATOM 4110 CD2 LEU A 515 -35.710 -32.059 -50.334 1.00 32.77 A

ATOM 4111 C LEU A 515 -36.422 -30.516 -54.295 1.00 34.69 A
ATOM 4112 O LEU A 515 -37.514 -31.034 -54.525 1.00 35.01 A
ATOM 4113 N CYS A 516 -35.929 -29.532 -55.033 1.00 35.86 A
ATOM 4114 CA CYS A 516 -36.682 -29.012 -56.160 1.00 36.89 A
ATOM 4115 C CYS A 516 -36.934 -30.094 -57.198 1.00 38.08 A
ATOM 4116 O CYS A 516 -37.950 -30.074 -57.890 1.00 37.74 A
ATOM 4117 CB CYS A 516 -35.941 -27.844 -56.791 1.00 36.33 A
ATOM 4118 SG CYS A 516 -35.898 -26.398 -55.700 1.00 37.29 A
ATOM 4119 N LYS A 517 -36.009 -31.042 -57.307 1.00 39.90 A
ATOM 4120 CA LYS A 517 -36.181 -32.121 -58.267 1.00 41.39 A
ATOM 4121 CB LYS A 517 -34.907 -32.960 -58.397 1.00 40.02 A
ATOM 4122 CG LYS A 517 -34.962 -33.956 -59.545 1.00 39.66 A
ATOM 4123 CD LYS A 517 -33.669 -34.730 -59.677 1.00 41.10 A
ATOM 4124 CE LYS A 517 -33.794 -35.860 -60.699 1.00 42.94 A
ATOM 4125 NZ LYS A 517 -34.016 -35.375 -62.096 1.00 44.20 A
ATOM 4126 C LYS A 517 -37.348 -33.001 -57.832 1.00 43.56 A
ATOM 4127 O LYS A 517 -38.252 -33.264 -58.629 1.00 45.90 A
ATOM 4128 N GLU A 518 -37.439 -33.408 -56.591 1.00 44.27 A
ATOM 4129 CA GLU A 518 -38.564 -34.244 -56.219 1.00 44.14 A
ATOM 4130 CB GLU A 518 -38.345 -34.915 -54.937 1.00 44.65 A
ATOM 4131 CG GLU A 518 -37.595 -36.179 -55.118 1.00 46.27 A
ATOM 4132 CD GLU A 518 -38.448 -37.300 -54.855 1.00 47.80 A
ATOM 4133 OE1 GLU A 518 -38.079 -38.241 -54.197 1.00 48.96 A
ATOM 4134 OE2 GLU A 518 -39.532 -37.229 -55.321 1.00 49.99 A
ATOM 4135 C GLU A 518 -39.812 -33.534 -56.105 1.00 43.66 A
ATOM 4136 O GLU A 518 -40.832 -34.091 -56.204 1.00 43.02 A
ATOM 4137 N ALA A 519 -39.748 -32.277 -55.852 1.00 43.95 A
ATOM 4138 CA ALA A 519 -40.985 -31.513 -55.873 1.00 44.83 A
ATOM 4139 CB ALA A 519 -40.709 -30.050 -55.540 1.00 44.04 A
ATOM 4140 C ALA A 519 -41.579 -31.630 -57.270 1.00 45.48 A
ATOM 4141 O ALA A 519 -42.798 -31.608 -57.448 1.00 46.33 A
ATOM 4142 N GLY A 520 -40.704 -31.768 -58.260 1.00 45.57 A
ATOM 4143 CA GLY A 520 -41.150 -31.871 -59.632 1.00 45.67 A
ATOM 4144 C GLY A 520 -41.102 -30.508 -60.288 1.00 46.39 A

ATOM 4145 O GLY A 520 -41.801 -30.238 -61.265 1.00 46.26 A
ATOM 4146 N TYR A 521 -40.263 -29.633 -59.744 1.00 47.25 A
ATOM 4147 CA TYR A 521 -40.041 -28.319 -60.336 1.00 47.13 A
ATOM 4148 CB TYR A 521 -39.465 -27.351 -59.300 1.00 46.85 A
ATOM 4149 CG TYR A 521 -39.260 -25.948 -59.823 1.00 47.30 A
ATOM 4150 CD1 TYR A 521 -40.257 -24.988 -59.704 1.00 47.81 A
ATOM 4151 CE1 TYR A 521 -40.074 -23.704 -60.181 1.00 46.74 A
ATOM 4152 CD2 TYR A 521 -38.070 -25.582 -60.439 1.00 46.23 A
ATOM 4153 CE2 TYR A 521 -37.878 -24.301 -60.919 1.00 45.27 A
ATOM 4154 CZ TYR A 521 -38.883 -23.366 -60.788 1.00 46.11 A
ATOM 4155 OH TYR A 521 -38.698 -22.089 -61.265 1.00 47.40 A
ATOM 4156 C TYR A 521 -39.115 -28.405 -61.544 1.00 47.94 A
ATOM 4157 O TYR A 521 -38.236 -29.264 -61.605 1.00 47.33 A
ATOM 4158 N GLU A 522 -39.426 -27.639 -62.553 1.00 49.45 A
ATOM 4159 CA GLU A 522 -38.468 -27.386 -63.567 1.00 50.87 A
ATOM 4160 CB GLU A 522 -38.577 -28.379 -64.670 1.00 51.32 A
ATOM 4161 CG GLU A 522 -37.546 -29.445 -64.618 1.00 53.71 A
ATOM 4162 CD GLU A 522 -38.129 -30.732 -65.034 1.00 55.56 A
ATOM 4163 OE1 GLU A 522 -39.214 -30.679 -65.622 1.00 56.26 A
ATOM 4164 OE2 GLU A 522 -37.515 -31.767 -64.760 1.00 56.12 A
ATOM 4165 C GLU A 522 -38.686 -26.043 -64.114 1.00 50.80 A
ATOM 4166 O GLU A 522 -39.743 -25.488 -63.989 1.00 52.29 A
ATOM 4167 N GLY A 523 -37.664 -25.521 -64.732 1.00 49.28 A
ATOM 4168 CA GLY A 523 -37.346 -24.156 -64.560 1.00 47.02 A
ATOM 4169 C GLY A 523 -36.123 -24.125 -63.740 1.00 45.60 A
ATOM 4170 O GLY A 523 -35.501 -25.131 -63.594 1.00 46.37 A
ATOM 4171 N PRO A 524 -35.806 -22.963 -63.199 1.00 43.67 A
ATOM 4172 CD PRO A 524 -36.442 -21.859 -63.887 1.00 42.87 A
ATOM 4173 CA PRO A 524 -34.474 -22.577 -62.960 1.00 42.11 A
ATOM 4174 CB PRO A 524 -34.503 -21.187 -63.455 1.00 41.55 A
ATOM 4175 CG PRO A 524 -35.290 -21.243 -64.400 1.00 41.14 A
ATOM 4176 C PRO A 524 -34.144 -22.554 -61.546 1.00 41.51 A
ATOM 4177 O PRO A 524 -34.832 -22.077 -60.705 1.00 41.91 A
ATOM 4178 N LEU A 525 -33.005 -23.081 -61.249 1.00 39.56 A

ATOM 4179 CA LEU A 525 -32.867 -23.540 -59.873 1.00 37.93 A
ATOM 4180 CB LEU A 525 -31.477 -24.136 -59.643 1.00 35.41 A
ATOM 4181 CG LEU A 525 -31.190 -24.660 -58.235 1.00 33.34 A
ATOM 4182 CD1 LEU A 525 -32.248 -25.667 -57.809 1.00 31.38 A
ATOM 4183 CD2 LEU A 525 -29.800 -25.274 -58.162 1.00 31.54 A
ATOM 4184 C LEU A 525 -33.121 -22.406 -58.885 1.00 38.05 A
ATOM 4185 O LEU A 525 -33.595 -22.633 -57.772 1.00 38.87 A
ATOM 4186 N HIS A 526 -32.803 -21.184 -59.300 1.00 36.81 A
ATOM 4187 CA HIS A 526 -32.948 -20.026 -58.440 1.00 35.30 A
ATOM 4188 CB HIS A 526 -31.924 -18.948 -58.813 1.00 34.19 A
ATOM 4189 CG HIS A 526 -32.271 -18.173 -60.042 1.00 33.72 A
ATOM 4190 CD2 HIS A 526 -32.839 -16.951 -60.191 1.00 33.62 A
ATOM 4191 ND1 HIS A 526 -32.026 -18.638 -61.313 1.00 33.80 A
ATOM 4192 CE1 HIS A 526 -32.424 -17.737 -62.194 1.00 33.94 A
ATOM 4193 NE2 HIS A 526 -32.921 -16.704 -61.537 1.00 32.71 A
ATOM 4194 C HIS A 526 -34.346 -19.428 -58.430 1.00 35.67 A
ATOM 4195 O HIS A 526 -34.572 -18.374 -57.837 1.00 36.50 A
ATOM 4196 N GLN A 527 -35.287 -20.085 -59.090 1.00 35.11 A
ATOM 4197 CA GLN A 527 -36.650 -19.579 -59.099 1.00 35.85 A
ATOM 4198 CB GLN A 527 -37.081 -19.175 -60.512 1.00 37.47 A
ATOM 4199 CG GLN A 527 -36.416 -17.900 -61.012 1.00 39.32 A
ATOM 4200 CD GLN A 527 -36.988 -17.414 -62.331 1.00 39.65 A
ATOM 4201 OE1 GLN A 527 -37.165 -18.196 -63.262 1.00 38.71 A
ATOM 4202 NE2 GLN A 527 -37.273 -16.116 -62.418 1.00 39.83 A
ATOM 4203 C GLN A 527 -37.565 -20.653 -58.550 1.00 35.52 A
ATOM 4204 O GLN A 527 -38.779 -20.486 -58.469 1.00 34.58 A
ATOM 4205 N CYS A 528 -36.961 -21.762 -58.160 1.00 36.50 A
ATOM 4206 CA CYS A 528 -37.717 -22.864 -57.605 1.00 37.51 A
ATOM 4207 C CYS A 528 -38.269 -22.515 -56.235 1.00 38.13 A
ATOM 4208 O CYS A 528 -37.653 -21.759 -55.476 1.00 38.75 A
ATOM 4209 CB CYS A 528 -36.838 -24.107 -57.489 1.00 37.95 A
ATOM 4210 SG CYS A 528 -37.497 -25.289 -56.279 1.00 38.36 A
ATOM 4211 N ASP A 529 -39.432 -23.076 -55.927 1.00 37.97 A
ATOM 4212 CA ASP A 529 -40.086 -22.852 -54.652 1.00 38.25 A

ATOM 4213 CB ASP A 529 -41.087 -21.708 -54.767 1.00 37.84 A
ATOM 4214 CG ASP A 529 -41.956 -21.572 -53.537 1.00 38.24 A
ATOM 4215 OD1 ASP A 529 -41.405 -21.649 -52.419 1.00 37.67 A
ATOM 4216 OD2 ASP A 529 -43.184 -21.378 -53.687 1.00 38.42 A
ATOM 4217 C ASP A 529 -40.798 -24.128 -54.270 1.00 38.73 A
ATOM 4218 O ASP A 529 -41.890 -24.396 -54.749 1.00 37.90 A
ATOM 4219 N ILE A 530 -40.175 -24.917 -53.402 1.00 40.75 A
ATOM 4220 CA ILE A 530 -40.762 -26.188 -52.988 1.00 43.46 A
ATOM 4221 CB ILE A 530 -39.710 -27.097 -52.280 1.00 43.25 A
ATOM 4222 CG2 ILE A 530 -38.561 -27.410 -53.230 1.00 42.14 A
ATOM 4223 CG1 ILE A 530 -39.192 -26.420 -51.010 1.00 43.02 A
ATOM 4224 CD1 ILE A 530 -38.241 -27.276 -50.215 1.00 40.90 A
ATOM 4225 C ILE A 530 -41.993 -26.062 -52.082 1.00 45.79 A
ATOM 4226 O ILE A 530 -42.406 -27.042 -51.451 1.00 45.86 A
ATOM 4227 N TYR A 531 -42.581 -24.868 -52.027 1.00 47.88 A
ATOM 4228 CA TYR A 531 -43.764 -24.630 -51.202 1.00 50.06 A
ATOM 4229 CB TYR A 531 -44.304 -23.222 -51.459 1.00 52.41 A
ATOM 4230 CG TYR A 531 -45.457 -22.800 -50.561 1.00 55.58 A
ATOM 4231 CD1 TYR A 531 -45.318 -22.766 -49.169 1.00 55.79 A
ATOM 4232 CE1 TYR A 531 -46.365 -22.329 -48.343 1.00 56.94 A
ATOM 4233 CD2 TYR A 531 -46.675 -22.389 -51.108 1.00 57.15 A
ATOM 4234 CE2 TYR A 531 -47.726 -21.949 -50.296 1.00 58.69 A
ATOM 4235 CZ TYR A 531 -47.566 -21.919 -48.915 1.00 58.51 A
ATOM 4236 OH TYR A 531 -48.606 -21.469 -48.124 1.00 58.41 A
ATOM 4237 C TYR A 531 -44.868 -25.668 -51.460 1.00 50.33 A
ATOM 4238 O TYR A 531 -45.072 -26.115 -52.593 1.00 50.83 A
ATOM 4239 N ARG A 532 -45.566 -26.044 -50.387 1.00 49.47 A
ATOM 4240 CA ARG A 532 -46.652 -27.026 -50.416 1.00 47.50 A
ATOM 4241 CB ARG A 532 -47.924 -26.409 -51.028 1.00 47.42 A
ATOM 4242 CG ARG A 532 -48.614 -25.369 -50.132 1.00 49.55 A
ATOM 4243 CD ARG A 532 -50.088 -25.138 -50.509 1.00 51.61 A
ATOM 4244 NE ARG A 532 -50.816 -24.354 -49.506 1.00 53.81 A
ATOM 4245 CZ ARG A 532 -51.041 -24.753 -48.252 1.00 55.83 A
ATOM 4246 NH1 ARG A 532 -50.600 -25.932 -47.832 1.00 55.39 A

ATOM 4247 NH2 ARG A 532 -51.694 -23.964 -47.402 1.00 57.46 A
ATOM 4248 C ARG A 532 -46.336 -28.365 -51.095 1.00 45.89 A
ATOM 4249 O ARG A 532 -47.247 -29.119 -51.435 1.00 46.40 A
ATOM 4250 N SER A 533 -45.054 -28.675 -51.278 1.00 43.49 A
ATOM 4251 CA SER A 533 -44.673 -29.942 -51.905 1.00 41.83 A
ATOM 4252 CB SER A 533 -43.392 -29.794 -52.722 1.00 40.57 A
ATOM 4253 OG SER A 533 -42.873 -31.077 -53.034 1.00 38.66 A
ATOM 4254 C SER A 533 -44.458 -31.041 -50.880 1.00 41.32 A
ATOM 4255 O SER A 533 -43.346 -31.223 -50.385 1.00 41.93 A
ATOM 4256 N THR A 534 -45.515 -31.782 -50.571 1.00 40.96 A
ATOM 4257 CA THR A 534 -45.414 -32.865 -49.599 1.00 40.54 A
ATOM 4258 CB THR A 534 -46.768 -33.566 -49.391 1.00 40.76 A
ATOM 4259 OG1 THR A 534 -47.106 -34.302 -50.568 1.00 39.34 A
ATOM 4260 CG2 THR A 534 -47.863 -32.546 -49.119 1.00 41.67 A
ATOM 4261 C THR A 534 -44.400 -33.908 -50.053 1.00 39.66 A
ATOM 4262 O THR A 534 -43.838 -34.638 -49.237 1.00 38.39 A
ATOM 4263 N ALA A 535 -44.167 -33.972 -51.361 1.00 39.88 A
ATOM 4264 CA ALA A 535 -43.214 -34.931 -51.907 1.00 40.44 A
ATOM 4265 CB ALA A 535 -43.433 -35.103 -53.403 1.00 39.16 A
ATOM 4266 C ALA A 535 -41.778 -34.504 -51.624 1.00 40.59 A
ATOM 4267 O ALA A 535 -40.913 -35.327 -51.307 1.00 39.93 A
ATOM 4268 N ALA A 536 -41.512 -33.199 -51.734 1.00 40.33 A
ATOM 4269 CA ALA A 536 -40.184 -32.671 -51.443 1.00 39.48 A
ATOM 4270 CB ALA A 536 -40.116 -31.208 -51.829 1.00 38.83 A
ATOM 4271 C ALA A 536 -39.897 -32.833 -49.941 1.00 39.46 A
ATOM 4272 O ALA A 536 -38.883 -33.417 -49.547 1.00 39.07 A
ATOM 4273 N GLY A 537 -40.808 -32.315 -49.117 1.00 38.56 A
ATOM 4274 CA GLY A 537 -40.661 -32.392 -47.676 1.00 37.77 A
ATOM 4275 C GLY A 537 -40.377 -33.772 -47.104 1.00 38.59 A
ATOM 4276 O GLY A 537 -39.642 -33.898 -46.122 1.00 38.61 A
ATOM 4277 N ALA A 538 -40.956 -34.807 -47.703 1.00 38.64 A
ATOM 4278 CA ALA A 538 -40.757 -36.172 -47.230 1.00 38.07 A
ATOM 4279 CB ALA A 538 -41.687 -37.096 -47.959 1.00 37.50 A
ATOM 4280 C ALA A 538 -39.316 -36.621 -47.436 1.00 38.33 A

ATOM 4281 O ALA A 538 -38.796 -37.451 -46.691 1.00 37.98 A
ATOM 4282 N LYS A 539 -38.625 -36.017 -48.361 1.00 38.99 A
ATOM 4283 CA LYS A 539 -37.288 -36.383 -48.695 1.00 38.67 A
ATOM 4284 CB LYS A 539 -37.003 -35.788 -50.035 1.00 37.54 A
ATOM 4285 CG LYS A 539 -35.942 -36.423 -50.882 1.00 35.92 A
ATOM 4286 CD LYS A 539 -35.301 -35.464 -51.742 1.00 33.76 A
ATOM 4287 CE LYS A 539 -34.236 -36.111 -52.423 1.00 32.69 A
ATOM 4288 NZ LYS A 539 -34.501 -37.487 -52.430 1.00 31.05 A
ATOM 4289 C LYS A 539 -36.373 -35.756 -47.747 1.00 39.63 A
ATOM 4290 O LYS A 539 -35.362 -36.289 -47.449 1.00 38.85 A
ATOM 4291 N LEU A 540 -36.716 -34.559 -47.330 1.00 40.03 A
ATOM 4292 CA LEU A 540 -35.961 -33.819 -46.325 1.00 40.45 A
ATOM 4293 CB LEU A 540 -36.488 -32.390 -46.216 1.00 38.46 A
ATOM 4294 CG LEU A 540 -35.563 -31.266 -45.725 1.00 37.54 A
ATOM 4295 CD1 LEU A 540 -36.417 -30.246 -45.003 1.00 36.97 A
ATOM 4296 CD2 LEU A 540 -34.480 -31.776 -44.805 1.00 36.47 A
ATOM 4297 C LEU A 540 -36.096 -34.491 -44.964 1.00 41.98 A
ATOM 4298 O LEU A 540 -35.103 -34.732 -44.271 1.00 42.60 A
ATOM 4299 N ARG A 541 -37.296 -34.866 -44.604 1.00 42.12 A
ATOM 4300 CA ARG A 541 -37.442 -35.405 -43.320 1.00 43.15 A
ATOM 4301 CB ARG A 541 -38.847 -35.536 -42.962 1.00 45.48 A
ATOM 4302 CG ARG A 541 -39.056 -36.861 -42.458 1.00 49.39 A
ATOM 4303 CD ARG A 541 -40.446 -37.160 -41.901 1.00 52.41 A
ATOM 4304 NE ARG A 541 -41.481 -36.323 -42.440 1.00 56.57 A
ATOM 4305 CZ ARG A 541 -42.285 -36.685 -43.406 1.00 58.70 A
ATOM 4306 NH1 ARG A 541 -42.171 -37.860 -43.963 1.00 59.03 A
ATOM 4307 NH2 ARG A 541 -43.204 -35.872 -43.844 1.00 59.11 A
ATOM 4308 C ARG A 541 -36.828 -36.709 -43.081 1.00 42.29 A
ATOM 4309 O ARG A 541 -36.591 -37.060 -41.998 1.00 42.33 A
ATOM 4310 N ALA A 542 -36.587 -37.466 -44.094 1.00 40.90 A
ATOM 4311 CA ALA A 542 -35.796 -38.685 -43.980 1.00 39.39 A
ATOM 4312 CB ALA A 542 -35.738 -39.408 -45.318 1.00 39.38 A
ATOM 4313 C ALA A 542 -34.389 -38.383 -43.475 1.00 38.42 A
ATOM 4314 O ALA A 542 -33.823 -39.164 -42.698 1.00 37.57 A

ATOM 4315 N VAL A 543 -33.806 -37.294 -43.933 1.00 37.79 A
ATOM 4316 CA VAL A 543 -32.458 -36.928 -43.520 1.00 36.54 A
ATOM 4317 CB VAL A 543 -31.866 -35.790 -44.433 1.00 35.43 A
ATOM 4318 CG1 VAL A 543 -32.566 -35.795 -45.774 1.00 34.12 A
ATOM 4319 CG2 VAL A 543 -31.998 -34.431 -43.777 1.00 33.76 A
ATOM 4320 C VAL A 543 -32.539 -36.461 -42.069 1.00 36.60 A
ATOM 4321 O VAL A 543 -31.673 -36.777 -41.243 1.00 36.23 A
ATOM 4322 N LEU A 544 -33.597 -35.715 -41.763 1.00 35.55 A
ATOM 4323 CA LEU A 544 -33.788 -35.212 -40.418 1.00 34.72 A
ATOM 4324 CB LEU A 544 -35.048 -34.345 -40.352 1.00 31.47 A
ATOM 4325 CG LEU A 544 -34.969 -33.064 -41.178 1.00 29.88 A
ATOM 4326 CD1 LEU A 544 -36.157 -32.173 -40.903 1.00 28.15 A
ATOM 4327 CD2 LEU A 544 -33.709 -32.340 -40.818 1.00 30.33 A
ATOM 4328 C LEU A 544 -33.880 -36.372 -39.429 1.00 35.59 A
ATOM 4329 O LEU A 544 -33.066 -36.483 -38.511 1.00 36.79 A
ATOM 4330 N GLN A 545 -34.855 -37.222 -39.610 1.00 34.97 A
ATOM 4331 CA GLN A 545 -34.966 -38.369 -38.804 1.00 34.10 A
ATOM 4332 CB GLN A 545 -36.104 -39.207 -39.247 1.00 36.14 A
ATOM 4333 CG GLN A 545 -37.387 -38.539 -39.387 1.00 39.28 A
ATOM 4334 CD GLN A 545 -38.515 -39.393 -38.928 1.00 41.95 A
ATOM 4335 OE1 GLN A 545 -39.461 -38.930 -38.356 1.00 42.64 A
ATOM 4336 NE2 GLN A 545 -38.402 -40.646 -39.152 1.00 44.00 A
ATOM 4337 C GLN A 545 -33.810 -39.258 -38.642 1.00 32.73 A
ATOM 4338 O GLN A 545 -33.933 -40.249 -38.034 1.00 32.74 A
ATOM 4339 N ALA A 546 -32.687 -38.957 -39.207 1.00 31.78 A
ATOM 4340 CA ALA A 546 -31.499 -39.803 -39.098 1.00 31.70 A
ATOM 4341 CB ALA A 546 -30.780 -39.866 -40.448 1.00 32.23 A
ATOM 4342 C ALA A 546 -30.511 -39.382 -38.001 1.00 32.11 A
ATOM 4343 O ALA A 546 -29.747 -40.215 -37.496 1.00 30.61 A
ATOM 4344 N GLY A 547 -30.513 -38.097 -37.644 1.00 31.92 A
ATOM 4345 CA GLY A 547 -29.604 -37.611 -36.620 1.00 32.99 A
ATOM 4346 C GLY A 547 -28.161 -37.989 -36.902 1.00 34.11 A
ATOM 4347 O GLY A 547 -27.674 -37.748 -37.997 1.00 36.15 A
ATOM 4348 N SER A 548 -27.473 -38.577 -35.925 1.00 34.90 A

ATOM 4349 CA SER A 548 -26.078 -38.985 -36.100 1.00 35.56 A
ATOM 4350 CB SER A 548 -25.237 -38.553 -34.900 1.00 35.52 A
ATOM 4351 OG SER A 548 -23.897 -38.961 -35.047 1.00 40.49 A
ATOM 4352 C SER A 548 -25.992 -40.500 -36.206 1.00 35.33 A
ATOM 4353 O SER A 548 -24.903 -41.065 -36.091 1.00 35.14 A
ATOM 4354 N SER A 549 -27.136 -41.154 -36.408 1.00 35.30 A
ATOM 4355 CA SER A 549 -27.191 -42.614 -36.502 1.00 35.97 A
ATOM 4356 CB SER A 549 -28.642 -43.068 -36.625 1.00 35.82 A
ATOM 4357 OG SER A 549 -29.026 -43.161 -37.984 1.00 37.19 A
ATOM 4358 C SER A 549 -26.373 -43.159 -37.679 1.00 37.05 A
ATOM 4359 O SER A 549 -25.585 -44.098 -37.517 1.00 37.43 A
ATOM 4360 N ARG A 550 -26.516 -42.567 -38.851 1.00 36.97 A
ATOM 4361 CA ARG A 550 -25.850 -42.961 -40.073 1.00 34.91 A
ATOM 4362 CB ARG A 550 -26.917 -42.895 -41.111 1.00 36.08 A
ATOM 4363 CG ARG A 550 -27.291 -44.110 -41.791 1.00 37.62 A
ATOM 4364 CD ARG A 550 -28.712 -44.164 -42.083 1.00 39.72 A
ATOM 4365 NE ARG A 550 -29.083 -43.597 -43.365 1.00 42.07 A
ATOM 4366 CZ ARG A 550 -28.629 -43.984 -44.533 1.00 43.03 A
ATOM 4367 NH1 ARG A 550 -27.767 -44.953 -44.632 1.00 41.88 A
ATOM 4368 NH2 ARG A 550 -29.042 -43.387 -45.608 1.00 41.87 A
ATOM 4369 C ARG A 550 -24.826 -41.910 -40.436 1.00 33.07 A
ATOM 4370 O ARG A 550 -25.024 -40.800 -40.024 1.00 33.25 A
ATOM 4371 N PRO A 551 -23.790 -42.238 -41.237 1.00 30.88 A
ATOM 4372 CD PRO A 551 -23.413 -43.637 -41.512 1.00 29.57 A
ATOM 4373 CA PRO A 551 -22.728 -41.326 -41.694 1.00 29.44 A
ATOM 4374 CB PRO A 551 -21.768 -42.255 -42.427 1.00 27.57 A
ATOM 4375 CG PRO A 551 -21.922 -43.533 -41.705 1.00 28.24 A
ATOM 4376 C PRO A 551 -23.330 -40.265 -42.638 1.00 30.00 A
ATOM 4377 O PRO A 551 -24.123 -40.596 -43.525 1.00 29.79 A
ATOM 4378 N TRP A 552 -22.956 -39.001 -42.464 1.00 30.11 A
ATOM 4379 CA TRP A 552 -23.517 -37.959 -43.307 1.00 30.55 A
ATOM 4380 CB TRP A 552 -22.907 -36.590 -42.992 1.00 30.80 A
ATOM 4381 CG TRP A 552 -21.430 -36.407 -43.277 1.00 31.69 A
ATOM 4382 CD2 TRP A 552 -20.836 -35.948 -44.506 1.00 32.33 A

ATOM 4383 CE2 TRP A 552 -19.444 -35.829 -44.280 1.00 30.88 A
ATOM 4384 CE3 TRP A 552 -21.345 -35.625 -45.775 1.00 31.15 A
ATOM 4385 CD1 TRP A 552 -20.399 -36.550 -42.390 1.00 32.16 A
ATOM 4386 NE1 TRP A 552 -19.206 -36.199 -42.982 1.00 31.05 A
ATOM 4387 CZ2 TRP A 552 -18.560 -35.402 -45.272 1.00 29.55 A
ATOM 4388 CZ3 TRP A 552 -20.463 -35.203 -46.757 1.00 28.79 A
ATOM 4389 CH2 TRP A 552 -19.087 -35.096 -46.500 1.00 28.84 A
ATOM 4390 C TRP A 552 -23.282 -38.302 -44.758 1.00 32.02 A
ATOM 4391 O TRP A 552 -24.173 -38.167 -45.604 1.00 32.80 A
ATOM 4392 N GLN A 553 -22.171 -38.913 -45.020 1.00 32.51 A
ATOM 4393 CA GLN A 553 -21.772 -39.118 -46.347 1.00 32.38 A
ATOM 4394 CB GLN A 553 -20.358 -39.527 -46.327 1.00 29.30 A
ATOM 4395 CG GLN A 553 -19.774 -39.316 -45.079 1.00 29.37 A
ATOM 4396 CD GLN A 553 -18.381 -39.023 -45.159 1.00 31.64 A
ATOM 4397 OE1 GLN A 553 -17.970 -38.134 -45.818 1.00 33.64 A
ATOM 4398 NE2 GLN A 553 -17.633 -39.712 -44.440 1.00 32.32 A
ATOM 4399 C GLN A 553 -22.615 -40.121 -47.006 1.00 34.38 A
ATOM 4400 O GLN A 553 -22.602 -40.200 -48.159 1.00 36.53 A
ATOM 4401 N GLU A 554 -23.381 -40.888 -46.250 1.00 35.52 A
ATOM 4402 CA GLU A 554 -24.466 -41.751 -46.739 1.00 35.47 A
ATOM 4403 CB GLU A 554 -24.577 -43.005 -45.876 1.00 35.47 A
ATOM 4404 CG GLU A 554 -23.670 -44.134 -46.307 1.00 37.05 A
ATOM 4405 CD GLU A 554 -23.624 -45.267 -45.293 1.00 38.51 A
ATOM 4406 OE1 GLU A 554 -24.677 -45.565 -44.669 1.00 38.37 A
ATOM 4407 OE2 GLU A 554 -22.533 -45.865 -45.132 1.00 38.33 A
ATOM 4408 C GLU A 554 -25.824 -41.055 -46.775 1.00 34.92 A
ATOM 4409 O GLU A 554 -26.534 -41.106 -47.775 1.00 35.11 A
ATOM 4410 N VAL A 555 -26.187 -40.413 -45.674 1.00 33.96 A
ATOM 4411 CA VAL A 555 -27.456 -39.710 -45.604 1.00 33.42 A
ATOM 4412 CB VAL A 555 -27.607 -39.033 -44.244 1.00 32.99 A
ATOM 4413 CG1 VAL A 555 -29.044 -38.602 -44.031 1.00 33.19 A
ATOM 4414 CG2 VAL A 555 -27.157 -39.989 -43.161 1.00 33.03 A
ATOM 4415 C VAL A 555 -27.513 -38.662 -46.714 1.00 33.13 A
ATOM 4416 O VAL A 555 -28.586 -38.274 -47.172 1.00 31.30 A

ATOM 4417 N LEU A 556 -26.341 -38.208 -47.143 1.00 33.88 A
ATOM 4418 CA LEU A 556 -26.262 -37.223 -48.213 1.00 34.54 A
ATOM 4419 CB LEU A 556 -24.878 -36.556 -48.228 1.00 30.87 A
ATOM 4420 CG LEU A 556 -24.660 -35.441 -49.257 1.00 26.08 A
ATOM 4421 CD1 LEU A 556 -25.774 -34.418 -49.159 1.00 23.27 A
ATOM 4422 CD2 LEU A 556 -23.317 -34.789 -49.015 1.00 25.07 A
ATOM 4423 C LEU A 556 -26.538 -37.914 -49.557 1.00 36.26 A
ATOM 4424 O LEU A 556 -27.387 -37.463 -50.336 1.00 36.12 A
ATOM 4425 N LYS A 557 -25.833 -39.017 -49.818 1.00 37.08 A
ATOM 4426 CA LYS A 557 -26.021 -39.753 -51.060 1.00 37.81 A
ATOM 4427 CB LYS A 557 -25.208 -41.046 -51.051 1.00 38.58 A
ATOM 4428 CG LYS A 557 -25.098 -41.700 -52.427 1.00 40.17 A
ATOM 4429 CD LYS A 557 -23.977 -42.730 -52.466 1.00 40.16 A
ATOM 4430 CE LYS A 557 -23.497 -42.963 -53.883 1.00 40.05 A
ATOM 4431 NZ LYS A 557 -22.163 -43.630 -53.898 1.00 41.51 A
ATOM 4432 C LYS A 557 -27.496 -40.069 -51.285 1.00 38.35 A
ATOM 4433 O LYS A 557 -28.039 -39.751 -52.336 1.00 39.42 A
ATOM 4434 N ASP A 558 -28.149 -40.685 -50.304 1.00 38.40 A
ATOM 4435 CA ASP A 558 -29.567 -41.009 -50.436 1.00 38.70 A
ATOM 4436 CB ASP A 558 -30.138 -41.530 -49.113 1.00 41.45 A
ATOM 4437 CG ASP A 558 -29.797 -42.988 -48.854 1.00 43.30 A
ATOM 4438 OD1 ASP A 558 -28.601 -43.347 -48.909 1.00 43.83 A
ATOM 4439 OD2 ASP A 558 -30.729 -43.781 -48.584 1.00 45.51 A
ATOM 4440 C ASP A 558 -30.378 -39.793 -50.862 1.00 37.89 A
ATOM 4441 O ASP A 558 -31.229 -39.878 -51.739 1.00 39.11 A
ATOM 4442 N MET A 559 -30.101 -38.651 -50.252 1.00 36.74 A
ATOM 4443 CA MET A 559 -30.857 -37.451 -50.563 1.00 36.08 A
ATOM 4444 CB MET A 559 -30.832 -36.498 -49.372 1.00 35.23 A
ATOM 4445 CG MET A 559 -31.526 -35.184 -49.641 1.00 33.32 A
ATOM 4446 SD MET A 559 -30.816 -33.837 -48.703 1.00 34.42 A
ATOM 4447 CE MET A 559 -32.264 -32.714 -48.592 1.00 34.45 A
ATOM 4448 C MET A 559 -30.439 -36.678 -51.799 1.00 36.27 A
ATOM 4449 O MET A 559 -31.290 -36.214 -52.541 1.00 37.04 A
ATOM 4450 N VAL A 560 -29.140 -36.514 -52.015 1.00 36.42 A

ATOM 4451 CA VAL A 560 -28.679 -35.737 -53.157 1.00 36.76 A
ATOM 4452 CB VAL A 560 -27.699 -34.646 -52.693 1.00 37.57 A
ATOM 4453 CG1 VAL A 560 -27.073 -33.930 -53.892 1.00 39.11 A
ATOM 4454 CG2 VAL A 560 -28.444 -33.648 -51.829 1.00 37.61 A
ATOM 4455 C VAL A 560 -28.054 -36.538 -54.294 1.00 37.22 A
ATOM 4456 O VAL A 560 -28.033 -36.085 -55.437 1.00 37.49 A
ATOM 4457 N GLY A 561 -27.558 -37.729 -53.993 1.00 37.69 A
ATOM 4458 CA GLY A 561 -26.957 -38.537 -55.033 1.00 37.89 A
ATOM 4459 C GLY A 561 -25.451 -38.397 -55.033 1.00 39.63 A
ATOM 4460 O GLY A 561 -24.759 -38.963 -55.884 1.00 39.91 A
ATOM 4461 N LEU A 562 -24.929 -37.648 -54.069 1.00 40.38 A
ATOM 4462 CA LEU A 562 -23.490 -37.453 -53.995 1.00 40.49 A
ATOM 4463 CB LEU A 562 -23.141 -35.996 -54.281 1.00 40.15 A
ATOM 4464 CG LEU A 562 -22.278 -35.771 -55.522 1.00 38.21 A
ATOM 4465 CD1 LEU A 562 -22.013 -34.279 -55.672 1.00 38.58 A
ATOM 4466 CD2 LEU A 562 -20.974 -36.530 -55.397 1.00 37.81 A
ATOM 4467 C LEU A 562 -22.847 -37.876 -52.682 1.00 40.88 A
ATOM 4468 O LEU A 562 -23.404 -37.703 -51.604 1.00 41.96 A
ATOM 4469 N ASP A 563 -21.651 -38.430 -52.808 1.00 41.70 A
ATOM 4470 CA ASP A 563 -20.858 -38.897 -51.685 1.00 41.52 A
ATOM 4471 CB ASP A 563 -19.703 -39.747 -52.206 1.00 44.46 A
ATOM 4472 CG ASP A 563 -19.740 -41.162 -51.690 1.00 47.87 A
ATOM 4473 OD1 ASP A 563 -20.654 -41.918 -52.094 1.00 50.42 A
ATOM 4474 OD2 ASP A 563 -18.850 -41.521 -50.882 1.00 50.12 A
ATOM 4475 C ASP A 563 -20.267 -37.745 -50.875 1.00 40.90 A
ATOM 4476 O ASP A 563 -19.759 -37.974 -49.783 1.00 40.76 A
ATOM 4477 N ALA A 564 -20.308 -36.520 -51.404 1.00 40.56 A
ATOM 4478 CA ALA A 564 -19.720 -35.392 -50.684 1.00 40.46 A
ATOM 4479 CB ALA A 564 -18.222 -35.431 -50.848 1.00 40.73 A
ATOM 4480 C ALA A 564 -20.222 -33.998 -51.047 1.00 40.57 A
ATOM 4481 O ALA A 564 -21.196 -33.846 -51.793 1.00 41.16 A
ATOM 4482 N LEU A 565 -19.545 -32.986 -50.493 1.00 39.99 A
ATOM 4483 CA LEU A 565 -19.867 -31.577 -50.746 1.00 39.32 A
ATOM 4484 CB LEU A 565 -19.061 -30.667 -49.824 1.00 39.32 A

ATOM 4485 CG LEU A 565 -19.600 -30.446 -48.417 1.00 38.64 A
ATOM 4486 CD1 LEU A 565 -18.531 -29.822 -47.548 1.00 36.75 A
ATOM 4487 CD2 LEU A 565 -20.821 -29.561 -48.493 1.00 38.36 A
ATOM 4488 C LEU A 565 -19.535 -31.249 -52.193 1.00 39.34 A
ATOM 4489 O LEU A 565 -18.527 -31.709 -52.729 1.00 39.75 A
ATOM 4490 N ASP A 566 -20.383 -30.446 -52.819 1.00 39.00 A
ATOM 4491 CA ASP A 566 -20.205 -30.087 -54.218 1.00 38.57 A
ATOM 4492 CB ASP A 566 -21.020 -31.047 -55.099 1.00 41.07 A
ATOM 4493 CG ASP A 566 -20.621 -30.991 -56.573 1.00 43.49 A
ATOM 4494 OD1 ASP A 566 -19.428 -31.235 -56.875 1.00 45.98 A
ATOM 4495 OD2 ASP A 566 -21.500 -30.719 -57.429 1.00 42.49 A
ATOM 4496 C ASP A 566 -20.684 -28.666 -54.421 1.00 37.25 A
ATOM 4497 O ASP A 566 -21.771 -28.294 -53.971 1.00 36.53 A
ATOM 4498 N ALA A 567 -19.874 -27.865 -55.100 1.00 36.23 A
ATOM 4499 CA ALA A 567 -20.249 -26.478 -55.345 1.00 36.56 A
ATOM 4500 CB ALA A 567 -19.020 -25.586 -55.320 1.00 35.28 A
ATOM 4501 C ALA A 567 -20.980 -26.318 -56.670 1.00 36.76 A
ATOM 4502 O ALA A 567 -21.542 -25.257 -56.946 1.00 37.78 A
ATOM 4503 N GLN A 568 -20.876 -27.308 -57.498 1.00 36.41 A
ATOM 4504 CA GLN A 568 -21.680 -27.373 -58.645 1.00 37.22 A
ATOM 4505 CB GLN A 568 -21.602 -28.736 -59.257 1.00 40.15 A
ATOM 4506 CG GLN A 568 -20.424 -28.904 -60.220 1.00 46.32 A
ATOM 4507 CD GLN A 568 -20.439 -30.185 -61.066 1.00 49.52 A
ATOM 4508 OE1 GLN A 568 -19.679 -30.298 -61.998 1.00 51.19 A
ATOM 4509 NE2 GLN A 568 -21.291 -31.111 -60.752 1.00 49.78 A
ATOM 4510 C GLN A 568 -23.057 -26.835 -58.577 1.00 35.58 A
ATOM 4511 O GLN A 568 -23.371 -25.974 -59.261 1.00 35.56 A
ATOM 4512 N PRO A 569 -23.922 -27.381 -57.796 1.00 33.57 A
ATOM 4513 CD PRO A 569 -23.674 -28.464 -56.833 1.00 32.71 A
ATOM 4514 CA PRO A 569 -25.308 -26.910 -57.699 1.00 31.89 A
ATOM 4515 CB PRO A 569 -25.954 -27.919 -56.748 1.00 30.76 A
ATOM 4516 CG PRO A 569 -24.837 -28.303 -55.878 1.00 32.42 A
ATOM 4517 C PRO A 569 -25.424 -25.472 -57.211 1.00 30.38 A
ATOM 4518 O PRO A 569 -26.486 -24.856 -57.317 1.00 30.62 A

ATOM 4519 N LEU A 570 -24.323 -24.943 -56.685 1.00 28.88 A
ATOM 4520 CA LEU A 570 -24.276 -23.572 -56.184 1.00 27.54 A
ATOM 4521 CB LEU A 570 -23.195 -23.463 -55.094 1.00 28.82 A
ATOM 4522 CG LEU A 570 -22.585 -22.122 -54.677 1.00 28.45 A
ATOM 4523 CD1 LEU A 570 -23.635 -21.047 -54.597 1.00 29.24 A
ATOM 4524 CD2 LEU A 570 -21.910 -22.297 -53.338 1.00 30.17 A
ATOM 4525 C LEU A 570 -23.975 -22.647 -57.351 1.00 25.68 A
ATOM 4526 O LEU A 570 -24.564 -21.580 -57.490 1.00 24.41 A
ATOM 4527 N LEU A 571 -23.055 -23.088 -58.198 1.00 25.15 A
ATOM 4528 CA LEU A 571 -22.647 -22.344 -59.379 1.00 24.44 A
ATOM 4529 CB LEU A 571 -21.480 -23.076 -60.040 1.00 23.38 A
ATOM 4530 CG LEU A 571 -20.314 -23.285 -59.071 1.00 21.69 A
ATOM 4531 CD1 LEU A 571 -19.214 -24.082 -59.734 1.00 22.99 A
ATOM 4532 CD2 LEU A 571 -19.787 -21.936 -58.613 1.00 18.93 A
ATOM 4533 C LEU A 571 -23.835 -22.232 -60.329 1.00 24.74 A
ATOM 4534 O LEU A 571 -24.047 -21.200 -60.966 1.00 23.72 A
ATOM 4535 N LYS A 572 -24.608 -23.309 -60.398 1.00 25.06 A
ATOM 4536 CA LYS A 572 -25.802 -23.381 -61.225 1.00 25.39 A
ATOM 4537 CB LYS A 572 -26.331 -24.820 -61.212 1.00 25.47 A
ATOM 4538 CG LYS A 572 -27.797 -24.985 -61.612 1.00 26.69 A
ATOM 4539 CD LYS A 572 -28.360 -26.323 -61.121 1.00 29.14 A
ATOM 4540 CE LYS A 572 -27.823 -27.513 -61.899 1.00 30.91 A
ATOM 4541 NZ LYS A 572 -28.763 -27.923 -62.986 1.00 31.97 A
ATOM 4542 C LYS A 572 -26.875 -22.417 -60.703 1.00 26.09 A
ATOM 4543 O LYS A 572 -27.677 -21.889 -61.469 1.00 25.40 A
ATOM 4544 N TYR A 573 -26.890 -22.191 -59.394 1.00 26.67 A
ATOM 4545 CA TYR A 573 -27.869 -21.291 -58.804 1.00 27.18 A
ATOM 4546 CB TYR A 573 -27.796 -21.336 -57.272 1.00 26.16 A
ATOM 4547 CG TYR A 573 -28.849 -20.499 -56.560 1.00 24.43 A
ATOM 4548 CD1 TYR A 573 -30.057 -21.064 -56.147 1.00 23.61 A
ATOM 4549 CE1 TYR A 573 -31.050 -20.284 -55.557 1.00 22.31 A
ATOM 4550 CD2 TYR A 573 -28.664 -19.129 -56.356 1.00 23.50 A
ATOM 4551 CE2 TYR A 573 -29.651 -18.343 -55.771 1.00 22.00 A
ATOM 4552 CZ TYR A 573 -30.840 -18.924 -55.376 1.00 22.66 A

ATOM 4553 OH TYR A 573 -31.826 -18.142 -54.814 1.00 21.99 A
ATOM 4554 C TYR A 573 -27.621 -19.860 -59.272 1.00 28.87 A
ATOM 4555 O TYR A 573 -28.519 -19.211 -59.806 1.00 30.92 A
ATOM 4556 N PHE A 574 -26.399 -19.378 -59.072 1.00 29.72 A
ATOM 4557 CA PHE A 574 -26.075 -17.980 -59.334 1.00 31.82 A
ATOM 4558 CB PHE A 574 -24.916 -17.524 -58.446 1.00 30.39 A
ATOM 4559 CG PHE A 574 -25.277 -17.400 -56.993 1.00 29.94 A
ATOM 4560 CD1 PHE A 574 -24.958 -18.408 -56.098 1.00 29.90 A
ATOM 4561 CD2 PHE A 574 -25.937 -16.277 -56.523 1.00 29.44 A
ATOM 4562 CE1 PHE A 574 -25.290 -18.297 -54.761 1.00 29.15 A
ATOM 4563 CE2 PHE A 574 -26.271 -16.161 -55.187 1.00 30.19 A
ATOM 4564 CZ PHE A 574 -25.947 -17.173 -54.305 1.00 30.65 A
ATOM 4565 C PHE A 574 -25.730 -17.755 -60.803 1.00 33.75 A
ATOM 4566 O PHE A 574 -25.151 -16.730 -61.164 1.00 33.71 A
ATOM 4567 N GLN A 575 -25.949 -18.677 -61.676 1.00 35.97 A
ATOM 4568 CA GLN A 575 -25.174 -18.614 -62.886 1.00 37.07 A
ATOM 4569 CB GLN A 575 -25.603 -19.614 -63.877 1.00 37.27 A
ATOM 4570 CG GLN A 575 -24.541 -20.018 -64.743 1.00 38.94 A
ATOM 4571 CD GLN A 575 -24.519 -21.413 -64.873 1.00 41.24 A
ATOM 4572 OE1 GLN A 575 -25.528 -22.000 -65.112 1.00 42.36 A
ATOM 4573 NE2 GLN A 575 -23.396 -21.987 -64.678 1.00 40.35 A
ATOM 4574 C GLN A 575 -25.295 -17.359 -63.584 1.00 37.79 A
ATOM 4575 O GLN A 575 -24.361 -16.904 -64.126 1.00 37.54 A
ATOM 4576 N PRO A 576 -26.482 -16.819 -63.658 1.00 38.00 A
ATOM 4577 CD PRO A 576 -27.762 -17.460 -63.310 1.00 38.94 A
ATOM 4578 CA PRO A 576 -26.666 -15.667 -64.545 1.00 36.92 A
ATOM 4579 CB PRO A 576 -28.169 -15.397 -64.450 1.00 36.94 A
ATOM 4580 CG PRO A 576 -28.765 -16.729 -64.160 1.00 39.57 A
ATOM 4581 C PRO A 576 -25.883 -14.448 -64.066 1.00 36.37 A
ATOM 4582 O PRO A 576 -25.077 -13.900 -64.819 1.00 37.47 A
ATOM 4583 N VAL A 577 -26.121 -14.034 -62.827 1.00 35.25 A
ATOM 4584 CA VAL A 577 -25.401 -12.909 -62.243 1.00 33.71 A
ATOM 4585 CB VAL A 577 -25.911 -12.587 -60.827 1.00 33.58 A
ATOM 4586 CG1 VAL A 577 -25.383 -13.603 -59.825 1.00 33.24 A

ATOM 4587 CG2 VAL A 577 -25.512 -11.175 -60.425 1.00 33.14 A
ATOM 4588 C VAL A 577 -23.902 -13.187 -62.183 1.00 32.37 A
ATOM 4589 O VAL A 577 -23.089 -12.263 -62.194 1.00 31.50 A
ATOM 4590 N THR A 578 -23.545 -14.465 -62.118 1.00 30.79 A
ATOM 4591 CA THR A 578 -22.137 -14.874 -62.112 1.00 30.70 A
ATOM 4592 CB THR A 578 -21.972 -16.415 -62.088 1.00 32.00 A
ATOM 4593 OG1 THR A 578 -22.225 -16.912 -60.769 1.00 32.60 A
ATOM 4594 CG2 THR A 578 -20.553 -16.811 -62.523 1.00 31.30 A
ATOM 4595 C THR A 578 -21.456 -14.386 -63.377 1.00 29.66 A
ATOM 4596 O THR A 578 -20.321 -13.907 -63.360 1.00 29.88 A
ATOM 4597 N GLN A 579 -22.157 -14.538 -64.485 1.00 28.21 A
ATOM 4598 CA GLN A 579 -21.623 -14.118 -65.755 1.00 27.07 A
ATOM 4599 CB GLN A 579 -22.349 -14.848 -66.881 1.00 28.54 A
ATOM 4600 CG GLN A 579 -21.443 -15.711 -67.754 1.00 30.37 A
ATOM 4601 CD GLN A 579 -20.793 -16.840 -66.989 1.00 31.95 A
ATOM 4602 OE1 GLN A 579 -21.475 -17.666 -66.361 1.00 31.51 A
ATOM 4603 NE2 GLN A 579 -19.465 -16.892 -67.041 1.00 32.32 A
ATOM 4604 C GLN A 579 -21.802 -12.615 -65.893 1.00 26.12 A
ATOM 4605 O GLN A 579 -20.938 -11.931 -66.435 1.00 26.25 A
ATOM 4606 N TRP A 580 -22.920 -12.106 -65.380 1.00 25.28 A
ATOM 4607 CA TRP A 580 -23.231 -10.680 -65.454 1.00 24.40 A
ATOM 4608 CB TRP A 580 -24.592 -10.388 -64.837 1.00 25.33 A
ATOM 4609 CG TRP A 580 -24.967 -8.939 -64.925 1.00 25.88 A
ATOM 4610 CD2 TRP A 580 -24.711 -7.931 -63.947 1.00 27.17 A
ATOM 4611 CE2 TRP A 580 -25.195 -6.708 -64.471 1.00 26.50 A
ATOM 4612 CE3 TRP A 580 -24.117 -7.936 -62.682 1.00 27.87 A
ATOM 4613 CD1 TRP A 580 -25.579 -8.312 -65.970 1.00 25.36 A
ATOM 4614 NE1 TRP A 580 -25.721 -6.971 -65.707 1.00 25.53 A
ATOM 4615 CZ2 TRP A 580 -25.109 -5.511 -63.775 1.00 26.77 A
ATOM 4616 CZ3 TRP A 580 -24.030 -6.747 -61.991 1.00 29.98 A
ATOM 4617 CH2 TRP A 580 -24.523 -5.546 -62.541 1.00 29.15 A
ATOM 4618 C TRP A 580 -22.199 -9.817 -64.759 1.00 24.40 A
ATOM 4619 O TRP A 580 -21.709 -8.846 -65.336 1.00 24.06 A
ATOM 4620 N LEU A 581 -21.890 -10.154 -63.510 1.00 24.30 A

ATOM 4621 CA LEU A 581 -20.906 -9.400 -62.745 1.00 22.28 A
ATOM 4622 CB LEU A 581 -20.770 -9.993 -61.338 1.00 19.79 A
ATOM 4623 CG LEU A 581 -21.872 -9.624 -60.341 1.00 16.53 A
ATOM 4624 CD1 LEU A 581 -21.722 -10.445 -59.071 1.00 11.65 A
ATOM 4625 CD2 LEU A 581 -21.797 -8.121 -60.051 1.00 13.00 A
ATOM 4626 C LEU A 581 -19.566 -9.424 -63.467 1.00 22.52 A
ATOM 4627 O LEU A 581 -18.944 -8.389 -63.694 1.00 21.61 A
ATOM 4628 N GLN A 582 -19.104 -10.577 -63.779 1.00 24.14 A
ATOM 4629 CA GLN A 582 -17.938 -10.790 -64.543 1.00 26.12 A
ATOM 4630 CB GLN A 582 -17.915 -12.253 -64.855 1.00 25.87 A
ATOM 4631 CG GLN A 582 -16.679 -12.958 -64.637 1.00 26.45 A
ATOM 4632 CD GLN A 582 -16.743 -14.290 -65.071 1.00 27.48 A
ATOM 4633 OE1 GLN A 582 -15.847 -14.768 -65.605 1.00 28.08 A
ATOM 4634 NE2 GLN A 582 -17.804 -14.905 -64.853 1.00 27.82 A
ATOM 4635 C GLN A 582 -17.796 -9.973 -65.764 1.00 27.32 A
ATOM 4636 O GLN A 582 -16.756 -9.527 -66.032 1.00 28.70 A
ATOM 4637 N GLU A 583 -18.838 -9.833 -66.550 1.00 28.10 A
ATOM 4638 CA GLU A 583 -18.875 -8.973 -67.729 1.00 28.29 A
ATOM 4639 CB GLU A 583 -20.133 -9.254 -68.567 1.00 29.77 A
ATOM 4640 CG GLU A 583 -20.277 -8.351 -69.800 1.00 32.20 A
ATOM 4641 CD GLU A 583 -19.389 -8.755 -70.982 1.00 33.73 A
ATOM 4642 OE1 GLU A 583 -18.291 -9.329 -70.780 1.00 33.02 A
ATOM 4643 OE2 GLU A 583 -19.795 -8.470 -72.130 1.00 35.04 A
ATOM 4644 C GLU A 583 -18.830 -7.502 -67.361 1.00 27.34 A
ATOM 4645 O GLU A 583 -18.180 -6.721 -68.041 1.00 26.86 A
ATOM 4646 N GLN A 584 -19.518 -7.135 -66.281 1.00 27.16 A
ATOM 4647 CA GLN A 584 -19.570 -5.750 -65.813 1.00 26.73 A
ATOM 4648 CB GLN A 584 -20.544 -5.612 -64.641 1.00 26.26 A
ATOM 4649 CG GLN A 584 -21.998 -5.626 -65.040 1.00 28.23 A
ATOM 4650 CD GLN A 584 -22.372 -4.411 -65.864 1.00 29.96 A
ATOM 4651 OE1 GLN A 584 -22.299 -3.267 -65.387 1.00 29.56 A
ATOM 4652 NE2 GLN A 584 -22.771 -4.645 -67.112 1.00 30.43 A
ATOM 4653 C GLN A 584 -18.228 -5.203 -65.379 1.00 26.45 A
ATOM 4654 O GLN A 584 -17.850 -4.093 -65.761 1.00 26.75 A

ATOM 4655 N ASN A 585 -17.510 -5.980 -64.573 1.00 26.22 A
ATOM 4656 CA ASN A 585 -16.212 -5.539 -64.059 1.00 26.73 A
ATOM 4657 CB ASN A 585 -15.654 -6.538 -63.028 1.00 26.93 A
ATOM 4658 CG ASN A 585 -16.498 -6.614 -61.769 1.00 25.15 A
ATOM 4659 OD1 ASN A 585 -16.959 -5.592 -61.266 1.00 24.88 A
ATOM 4660 ND2 ASN A 585 -16.689 -7.823 -61.249 1.00 23.32 A
ATOM 4661 C ASN A 585 -15.204 -5.340 -65.165 1.00 26.33 A
ATOM 4662 O ASN A 585 -14.513 -4.321 -65.218 1.00 26.21 A
ATOM 4663 N GLN A 586 -15.081 -6.269 -66.051 1.00 26.16 A
ATOM 4664 CA GLN A 586 -14.193 -6.124 -67.170 1.00 26.25 A
ATOM 4665 CB GLN A 586 -14.357 -7.302 -68.067 1.00 26.28 A
ATOM 4666 CG GLN A 586 -13.187 -7.712 -68.837 1.00 28.40 A
ATOM 4667 CD GLN A 586 -13.094 -7.031 -70.183 1.00 31.43 A
ATOM 4668 OE1 GLN A 586 -14.052 -6.867 -70.882 1.00 30.94 A
ATOM 4669 NE2 GLN A 586 -11.934 -6.666 -70.523 1.00 31.92 A
ATOM 4670 C GLN A 586 -14.470 -4.867 -67.875 1.00 25.95 A
ATOM 4671 O GLN A 586 -13.668 -4.015 -67.918 1.00 25.77 A
ATOM 4672 N GLN A 587 -15.631 -4.712 -68.426 1.00 25.45 A
ATOM 4673 CA GLN A 587 -15.850 -3.493 -69.192 1.00 25.83 A
ATOM 4674 CB GLN A 587 -17.312 -3.347 -69.628 1.00 24.59 A
ATOM 4675 CG GLN A 587 -18.125 -4.602 -69.535 1.00 25.62 A
ATOM 4676 CD GLN A 587 -19.299 -4.628 -70.497 1.00 25.90 A
ATOM 4677 OE1 GLN A 587 -19.144 -4.994 -71.656 1.00 28.21 A
ATOM 4678 NE2 GLN A 587 -20.479 -4.239 -70.021 1.00 26.35 A
ATOM 4679 C GLN A 587 -15.428 -2.273 -68.370 1.00 26.63 A
ATOM 4680 O GLN A 587 -14.654 -1.438 -68.844 1.00 27.64 A
ATOM 4681 N ASN A 588 -15.911 -2.116 -67.185 1.00 26.37 A
ATOM 4682 CA ASN A 588 -15.525 -0.994 -66.381 1.00 25.51 A
ATOM 4683 CB ASN A 588 -16.490 -0.874 -65.238 1.00 26.51 A
ATOM 4684 CG ASN A 588 -17.773 -0.287 -65.620 1.00 28.12 A
ATOM 4685 OD1 ASN A 588 -18.003 0.856 -65.470 1.00 29.79 A
ATOM 4686 ND2 ASN A 588 -18.638 -1.082 -66.087 1.00 29.14 A
ATOM 4687 C ASN A 588 -14.129 -1.060 -65.833 1.00 23.78 A
ATOM 4688 O ASN A 588 -13.815 -0.406 -64.943 1.00 24.20 A

ATOM 4689 N GLY A 589 -13.290 -1.883 -66.369 1.00 22.64 A
ATOM 4690 CA GLY A 589 -11.889 -1.967 -65.979 1.00 22.40 A
ATOM 4691 C GLY A 589 -11.493 -2.263 -64.542 1.00 23.13 A
ATOM 4692 O GLY A 589 -10.353 -1.995 -64.150 1.00 22.13 A
ATOM 4693 N GLU A 590 -12.409 -2.818 -63.754 1.00 23.77 A
ATOM 4694 CA GLU A 590 -12.114 -3.159 -62.358 1.00 23.91 A
ATOM 4695 CB GLU A 590 -13.314 -3.869 -61.702 1.00 24.72 A
ATOM 4696 CG GLU A 590 -14.491 -2.967 -61.410 1.00 25.46 A
ATOM 4697 CD GLU A 590 -14.032 -1.618 -60.910 1.00 27.80 A
ATOM 4698 OE1 GLU A 590 -13.125 -1.571 -60.049 1.00 29.68 A
ATOM 4699 OE2 GLU A 590 -14.572 -0.600 -61.377 1.00 29.62 A
ATOM 4700 C GLU A 590 -10.891 -4.063 -62.217 1.00 23.01 A
ATOM 4701 O GLU A 590 -10.376 -4.594 -63.198 1.00 22.59 A
ATOM 4702 N VAL A 591 -10.429 -4.220 -60.984 1.00 22.69 A
ATOM 4703 CA VAL A 591 -9.299 -5.089 -60.693 1.00 22.33 A
ATOM 4704 CB VAL A 591 -8.105 -4.325 -60.057 1.00 21.36 A
ATOM 4705 CG1 VAL A 591 -6.995 -5.309 -59.687 1.00 20.78 A
ATOM 4706 CG2 VAL A 591 -7.563 -3.303 -61.014 1.00 22.39 A
ATOM 4707 C VAL A 591 -9.777 -6.128 -59.682 1.00 22.85 A
ATOM 4708 O VAL A 591 -10.099 -5.785 -58.545 1.00 23.91 A
ATOM 4709 N LEU A 592 -9.850 -7.388 -60.093 1.00 22.75 A
ATOM 4710 CA LEU A 592 -10.273 -8.419 -59.162 1.00 22.24 A
ATOM 4711 CB LEU A 592 -10.523 -9.739 -59.895 1.00 20.48 A
ATOM 4712 CG LEU A 592 -11.584 -9.633 -60.991 1.00 21.02 A
ATOM 4713 CD1 LEU A 592 -11.820 -11.009 -61.620 1.00 18.66 A
ATOM 4714 CD2 LEU A 592 -12.882 -9.060 -60.412 1.00 19.20 A
ATOM 4715 C LEU A 592 -9.154 -8.579 -58.134 1.00 22.73 A
ATOM 4716 O LEU A 592 -8.013 -8.879 -58.486 1.00 22.22 A
ATOM 4717 N GLY A 593 -9.493 -8.376 -56.866 1.00 23.72 A
ATOM 4718 CA GLY A 593 -8.555 -8.599 -55.783 1.00 24.39 A
ATOM 4719 C GLY A 593 -8.060 -7.305 -55.169 1.00 24.68 A
ATOM 4720 O GLY A 593 -8.429 -6.214 -55.606 1.00 24.14 A
ATOM 4721 N TRP A 594 -7.219 -7.430 -54.150 1.00 25.24 A
ATOM 4722 CA TRP A 594 -6.435 -6.307 -53.652 1.00 25.37 A

ATOM 4723 CB TRP A 594 -6.699 -6.108 -52.160 1.00 24.18 A
ATOM 4724 CG TRP A 594 -7.074 -7.377 -51.462 1.00 22.76 A
ATOM 4725 CD2 TRP A 594 -8.218 -8.195 -51.727 1.00 19.95 A
ATOM 4726 CE2 TRP A 594 -8.168 -9.289 -50.840 1.00 20.25 A
ATOM 4727 CE3 TRP A 594 -9.287 -8.114 -52.625 1.00 17.34 A
ATOM 4728 CD1 TRP A 594 -6.390 -7.993 -50.454 1.00 22.71 A
ATOM 4729 NE1 TRP A 594 -7.042 -9.141 -50.073 1.00 22.24 A
ATOM 4730 CZ2 TRP A 594 -9.140 -10.287 -50.825 1.00 17.38 A
ATOM 4731 CZ3 TRP A 594 -10.250 -9.106 -52.609 1.00 15.88 A
ATOM 4732 CH2 TRP A 594 -10.170 -10.178 -51.716 1.00 15.40 A
ATOM 4733 C TRP A 594 -4.950 -6.567 -53.882 1.00 26.34 A
ATOM 4734 O TRP A 594 -4.362 -7.453 -53.257 1.00 29.44 A
ATOM 4735 N PRO A 595 -4.346 -5.793 -54.777 1.00 25.15 A
ATOM 4736 CD PRO A 595 -5.038 -5.242 -55.956 1.00 24.93 A
ATOM 4737 CA PRO A 595 -2.890 -5.814 -54.950 1.00 24.29 A
ATOM 4738 CB PRO A 595 -2.707 -5.402 -56.413 1.00 23.44 A
ATOM 4739 CG PRO A 595 -3.922 -4.608 -56.732 1.00 24.15 A
ATOM 4740 C PRO A 595 -2.198 -4.814 -54.031 1.00 24.14 A
ATOM 4741 O PRO A 595 -1.061 -5.041 -53.619 1.00 23.50 A
ATOM 4742 N GLU A 596 -2.883 -3.719 -53.715 1.00 24.08 A
ATOM 4743 CA GLU A 596 -2.395 -2.770 -52.722 1.00 23.76 A
ATOM 4744 CB GLU A 596 -2.888 -1.358 -53.043 1.00 23.78 A
ATOM 4745 CG GLU A 596 -2.254 -0.747 -54.282 1.00 27.03 A
ATOM 4746 CD GLU A 596 -2.600 0.719 -54.450 1.00 28.65 A
ATOM 4747 OE1 GLU A 596 -3.172 1.309 -53.509 1.00 30.60 A
ATOM 4748 OE2 GLU A 596 -2.301 1.283 -55.524 1.00 28.49 A
ATOM 4749 C GLU A 596 -2.830 -3.171 -51.316 1.00 24.12 A
ATOM 4750 O GLU A 596 -3.460 -2.390 -50.603 1.00 23.58 A
ATOM 4751 N TYR A 597 -2.488 -4.394 -50.923 1.00 24.18 A
ATOM 4752 CA TYR A 597 -2.719 -4.855 -49.551 1.00 22.41 A
ATOM 4753 CB TYR A 597 -2.150 -6.267 -49.384 1.00 21.40 A
ATOM 4754 CG TYR A 597 -0.653 -6.297 -49.472 1.00 20.52 A
ATOM 4755 CD1 TYR A 597 0.120 -5.914 -48.390 1.00 22.43 A
ATOM 4756 CE1 TYR A 597 1.505 -5.852 -48.470 1.00 23.20 A

ATOM 4757 CD2 TYR A 597 -0.004 -6.629 -50.651 1.00 21.96 A
ATOM 4758 CE2 TYR A 597 1.389 -6.570 -50.745 1.00 22.63 A
ATOM 4759 CZ TYR A 597 2.135 -6.180 -49.641 1.00 22.77 A
ATOM 4760 OH TYR A 597 3.507 -6.127 -49.665 1.00 21.93 A
ATOM 4761 C TYR A 597 -1.871 -3.844 -48.787 1.00 21.79 A
ATOM 4762 O TYR A 597 -1.057 -3.141 -49.399 1.00 24.79 A
ATOM 4763 N GLN A 598 -2.034 -3.748 -47.477 1.00 20.07 A
ATOM 4764 CA GLN A 598 -1.238 -2.781 -46.715 1.00 19.86 A
ATOM 4765 CB GLN A 598 0.215 -2.733 -47.242 1.00 17.95 A
ATOM 4766 CG GLN A 598 1.138 -1.710 -46.574 1.00 19.57 A
ATOM 4767 CD GLN A 598 2.606 -1.839 -47.013 1.00 22.24 A
ATOM 4768 OE1 GLN A 598 3.470 -1.096 -46.556 1.00 20.34 A
ATOM 4769 NE2 GLN A 598 2.885 -2.791 -47.898 1.00 24.70 A
ATOM 4770 C GLN A 598 -1.838 -1.379 -46.737 1.00 18.63 A
ATOM 4771 O GLN A 598 -1.391 -0.525 -45.989 1.00 20.57 A
ATOM 4772 N TRP A 599 -2.840 -1.138 -47.581 1.00 16.87 A
ATOM 4773 CA TRP A 599 -3.463 0.176 -47.648 1.00 17.34 A
ATOM 4774 CB TRP A 599 -4.126 0.420 -48.998 1.00 14.85 A
ATOM 4775 CG TRP A 599 -4.924 1.715 -49.038 1.00 13.15 A
ATOM 4776 CD2 TRP A 599 -6.340 1.870 -48.819 1.00 12.61 A
ATOM 4777 CE2 TRP A 599 -6.616 3.253 -48.849 1.00 11.73 A
ATOM 4778 CE3 TRP A 599 -7.397 0.975 -48.596 1.00 12.39 A
ATOM 4779 CD1 TRP A 599 -4.429 2.970 -49.193 1.00 13.43 A
ATOM 4780 NE1 TRP A 599 -5.432 3.898 -49.080 1.00 13.08 A
ATOM 4781 CZ2 TRP A 599 -7.904 3.768 -48.664 1.00 10.88 A
ATOM 4782 CZ3 TRP A 599 -8.683 1.490 -48.411 1.00 12.53 A
ATOM 4783 CH2 TRP A 599 -8.920 2.875 -48.446 1.00 11.35 A
ATOM 4784 C TRP A 599 -4.540 0.333 -46.587 1.00 21.33 A
ATOM 4785 O TRP A 599 -5.339 -0.586 -46.376 1.00 22.64 A
ATOM 4786 N HIS A 600 -4.576 1.499 -45.935 1.00 23.11 A
ATOM 4787 CA HIS A 600 -5.589 1.764 -44.933 1.00 23.61 A
ATOM 4788 CB HIS A 600 -5.015 1.642 -43.526 1.00 23.42 A
ATOM 4789 CG HIS A 600 -4.704 0.235 -43.118 1.00 24.52 A
ATOM 4790 CD2 HIS A 600 -5.379 -0.632 -42.325 1.00 25.01 A

ATOM 4791 ND1 HIS A 600 -3.585 -0.441 -43.560 1.00 24.98 A
ATOM 4792 CE1 HIS A 600 -3.582 -1.663 -43.056 1.00 25.67 A
ATOM 4793 NE2 HIS A 600 -4.661 -1.804 -42.304 1.00 27.07 A
ATOM 4794 C HIS A 600 -6.174 3.145 -45.118 1.00 24.86 A
ATOM 4795 O HIS A 600 -5.479 4.086 -45.480 1.00 24.64 A
ATOM 4796 N PRO A 601 -7.480 3.281 -44.867 1.00 26.30 A
ATOM 4797 CD PRO A 601 -8.418 2.255 -44.375 1.00 25.90 A
ATOM 4798 CA PRO A 601 -8.159 4.563 -45.006 1.00 27.16 A
ATOM 4799 CB PRO A 601 -9.626 4.170 -44.923 1.00 26.61 A
ATOM 4800 CG PRO A 601 -9.602 3.080 -43.919 1.00 24.21 A
ATOM 4801 C PRO A 601 -7.763 5.463 -43.861 1.00 28.60 A
ATOM 4802 O PRO A 601 -7.460 4.985 -42.773 1.00 29.64 A
ATOM 4803 N PRO A 602 -7.756 6.780 -44.089 1.00 29.79 A
ATOM 4804 CD PRO A 602 -7.958 7.416 -45.402 1.00 29.35 A
ATOM 4805 CA PRO A 602 -7.406 7.786 -43.079 1.00 30.76 A
ATOM 4806 CB PRO A 602 -7.022 8.985 -43.932 1.00 30.16 A
ATOM 4807 CG PRO A 602 -7.999 8.884 -45.048 1.00 30.18 A
ATOM 4808 C PRO A 602 -8.626 8.078 -42.182 1.00 30.93 A
ATOM 4809 O PRO A 602 -9.755 7.749 -42.544 1.00 30.56 A
ATOM 4810 N LEU A 603 -8.449 8.795 -41.109 1.00 31.81 A
ATOM 4811 CA LEU A 603 -9.572 8.991 -40.277 1.00 33.57 A
ATOM 4812 CB LEU A 603 -9.163 9.391 -38.904 1.00 33.75 A
ATOM 4813 CG LEU A 603 -8.353 8.445 -38.107 1.00 35.18 A
ATOM 4814 CD1 LEU A 603 -7.812 9.165 -37.029 1.00 34.73 A
ATOM 4815 CD2 LEU A 603 -9.256 7.503 -37.588 1.00 36.50 A
ATOM 4816 C LEU A 603 -10.324 10.089 -40.783 1.00 34.61 A
ATOM 4817 O LEU A 603 -9.815 10.867 -41.477 1.00 33.86 A
ATOM 4818 N PRO A 604 -11.601 10.158 -40.421 1.00 36.13 A
ATOM 4819 CD PRO A 604 -12.419 9.046 -39.906 1.00 37.13 A
ATOM 4820 CA PRO A 604 -12.383 11.386 -40.587 1.00 38.71 A
ATOM 4821 CB PRO A 604 -13.660 11.089 -39.800 1.00 37.28 A
ATOM 4822 CG PRO A 604 -13.813 9.611 -39.890 1.00 38.37 A
ATOM 4823 C PRO A 604 -11.670 12.596 -39.992 1.00 42.28 A
ATOM 4824 O PRO A 604 -10.740 12.436 -39.201 1.00 43.26 A

ATOM 4825 N ASP A 605 -12.106 13.792 -40.373 1.00 46.22 A
ATOM 4826 CA ASP A 605 -11.237 14.963 -40.364 1.00 49.85 A
ATOM 4827 CB ASP A 605 -11.967 16.177 -40.941 1.00 52.55 A
ATOM 4828 CG ASP A 605 -11.598 16.447 -42.386 1.00 56.03 A
ATOM 4829 OD1 ASP A 605 -11.342 15.475 -43.127 1.00 58.27 A
ATOM 4830 OD2 ASP A 605 -11.538 17.597 -42.869 1.00 55.38 A
ATOM 4831 C ASP A 605 -10.741 15.270 -38.955 1.00 50.73 A
ATOM 4832 O ASP A 605 -9.658 15.828 -38.776 1.00 52.03 A
ATOM 4833 N ASN A 606 -11.539 14.901 -37.959 1.00 49.99 A
ATOM 4834 CA ASN A 606 -11.482 15.547 -36.653 1.00 49.37 A
ATOM 4835 CB ASN A 606 -12.243 16.874 -36.678 1.00 49.35 A
ATOM 4836 CG ASN A 606 -11.361 18.057 -36.329 1.00 49.40 A
ATOM 4837 OD1 ASN A 606 -10.154 17.911 -36.134 1.00 47.80 A
ATOM 4838 ND2 ASN A 606 -11.961 19.239 -36.250 1.00 50.01 A
ATOM 4839 C ASN A 606 -12.026 14.652 -35.544 1.00 49.33 A
ATOM 4840 O ASN A 606 -13.010 14.990 -34.887 1.00 49.38 A
ATOM 4841 N TYR A 607 -11.378 13.510 -35.341 1.00 48.23 A
ATOM 4842 CA TYR A 607 -12.077 12.288 -34.963 1.00 47.20 A
ATOM 4843 CB TYR A 607 -11.829 11.186 -35.995 1.00 43.84 A
ATOM 4844 CG TYR A 607 -12.574 9.902 -35.712 1.00 40.46 A
ATOM 4845 CD1 TYR A 607 -13.913 9.765 -36.053 1.00 39.31 A
ATOM 4846 CE1 TYR A 607 -14.600 8.594 -35.797 1.00 37.91 A
ATOM 4847 CD2 TYR A 607 -11.940 8.827 -35.105 1.00 39.08 A
ATOM 4848 CE2 TYR A 607 -12.618 7.651 -34.845 1.00 38.02 A
ATOM 4849 CZ TYR A 607 -13.948 7.540 -35.193 1.00 38.36 A
ATOM 4850 OH TYR A 607 -14.628 6.371 -34.937 1.00 38.19 A
ATOM 4851 C TYR A 607 -11.652 11.814 -33.577 1.00 49.21 A
ATOM 4852 O TYR A 607 -10.500 11.434 -33.368 1.00 49.55 A
ATOM 4853 N PRO A 608 -12.589 11.837 -32.636 1.00 50.72 A
ATOM 4854 CD PRO A 608 -12.041 10.852 -31.687 1.00 50.76 A
ATOM 4855 CA PRO A 608 -13.999 11.579 -32.947 1.00 52.91 A
ATOM 4856 CB PRO A 608 -14.239 10.195 -32.340 1.00 51.54 A
ATOM 4857 CG PRO A 608 -13.259 10.105 -31.224 1.00 50.50 A
ATOM 4858 C PRO A 608 -14.920 12.604 -32.295 1.00 55.88 A

ATOM 4859 O PRO A 608 -15.386 12.391 -31.176 1.00 56.24 A
ATOM 4860 N ALA A 609 -15.176 13.705 -32.994 1.00 59.30 A
ATOM 4861 CA ALA A 609 -16.201 14.655 -32.579 1.00 61.97 A
ATOM 4862 CB ALA A 609 -15.570 15.826 -31.840 1.00 59.71 A
ATOM 4863 C ALA A 609 -17.011 15.151 -33.773 1.00 64.52 A
ATOM 4864 O ALA A 609 -16.555 16.007 -34.532 1.00 65.49 A
ATOM 4865 N GLY A 610 -18.213 14.607 -33.934 1.00 66.84 A
ATOM 4866 CA GLY A 610 -18.876 14.591 -35.225 1.00 69.46 A
ATOM 4867 C GLY A 610 -20.381 14.561 -35.038 1.00 71.87 A
ATOM 4868 O GLY A 610 -20.900 15.044 -34.032 1.00 73.10 A
ATOM 4869 N ALA A 611 -21.081 13.991 -36.013 1.00 73.56 A
ATOM 4870 CA ALA A 611 -22.464 13.572 -35.818 1.00 75.56 A
ATOM 4871 CB ALA A 611 -23.315 14.135 -36.946 1.00 75.02 A
ATOM 4872 C ALA A 611 -22.641 12.061 -35.719 1.00 76.97 A
ATOM 4873 O ALA A 611 -22.846 11.383 -36.726 1.00 77.36 A
ATOM 4874 N ALA A 612 -22.559 11.539 -34.499 1.00 77.67 A
ATOM 4875 CA ALA A 612 -21.337 10.910 -34.014 1.00 77.73 A
ATOM 4876 CB ALA A 612 -21.669 9.767 -33.067 1.00 76.94 A
ATOM 4877 C ALA A 612 -20.477 10.412 -35.171 1.00 77.77 A
ATOM 4878 O ALA A 612 -19.412 10.965 -35.448 1.00 77.11 A
ATOM 4879 ZN+2 ZN2 A 701 -27.749 -21.950 -36.694 1.00 31.58 A
ATOM 4880 CL CL A 702 -27.997 -18.440 -91.633 1.00 37.15 A
ATOM 4881 C1 NAG A 691 -2.656 0.205 -29.595 1.00 42.25 A
ATOM 4882 C2 NAG A 691 -1.485 1.001 -29.153 1.00 41.75 A
ATOM 4883 C3 NAG A 691 -2.114 1.986 -28.304 1.00 43.62 A
ATOM 4884 C4 NAG A 691 -2.940 2.962 -28.971 1.00 45.06 A
ATOM 4885 C5 NAG A 691 -4.088 2.162 -29.383 1.00 44.59 A
ATOM 4886 C6 NAG A 691 -4.770 3.098 -30.312 1.00 44.13 A
ATOM 4887 C7 NAG A 691 -0.347 -0.600 -27.831 1.00 41.96 A
ATOM 4888 C8 NAG A 691 -0.334 -1.075 -26.654 1.00 41.29 A
ATOM 4889 N2 NAG A 691 -1.199 0.302 -28.002 1.00 41.51 A
ATOM 4890 O3 NAG A 691 -1.197 2.696 -27.526 1.00 44.90 A
ATOM 4891 O4 NAG A 691 -3.264 3.946 -28.002 1.00 46.21 A
ATOM 4892 O5 NAG A 691 -3.686 1.023 -30.082 1.00 43.99 A

ATOM	4893	O6	NAG	A	691	-4.754	4.380	-29.685	1.00	44.45	A
ATOM	4894	O7	NAG	A	691	0.377	-0.980	-28.643	1.00	43.03	A
ATOM	4895	C1	NAG	A	692	-34.269	-12.671	-13.273	1.00	63.56	A
ATOM	4896	C2	NAG	A	692	-34.229	-12.631	-11.772	1.00	64.49	A
ATOM	4897	C3	NAG	A	692	-34.947	-13.777	-11.168	1.00	64.22	A
ATOM	4898	C4	NAG	A	692	-36.333	-13.672	-11.711	1.00	63.84	A
ATOM	4899	C5	NAG	A	692	-36.280	-13.595	-13.216	1.00	62.95	A
ATOM	4900	C6	NAG	A	692	-37.605	-13.487	-13.905	1.00	61.07	A
ATOM	4901	C7	NAG	A	692	-32.270	-13.676	-10.711	1.00	64.23	A
ATOM	4902	C8	NAG	A	692	-32.980	-14.689	-10.404	1.00	63.59	A
ATOM	4903	N2	NAG	A	692	-32.852	-12.712	-11.363	1.00	65.15	A
ATOM	4904	O3	NAG	A	692	-35.045	-13.606	-9.759	1.00	63.03	A
ATOM	4905	O4	NAG	A	692	-36.991	-14.825	-11.227	1.00	64.82	A
ATOM	4906	O5	NAG	A	692	-35.617	-12.414	-13.490	1.00	62.81	A
ATOM	4907	O6	NAG	A	692	-37.828	-12.112	-14.039	1.00	59.24	A
ATOM	4908	O7	NAG	A	692	-31.123	-13.642	-10.443	1.00	63.59	A
ATOM	4909	C1	NAG	A	693	-34.477	-42.696	-23.324	1.00	58.53	A
ATOM	4910	C2	NAG	A	693	-35.699	-41.795	-23.191	1.00	58.49	A
ATOM	4911	C3	NAG	A	693	-36.964	-42.523	-23.630	1.00	57.95	A
ATOM	4912	C4	NAG	A	693	-36.768	-43.187	-24.987	1.00	58.71	A
ATOM	4913	C5	NAG	A	693	-35.481	-44.004	-25.016	1.00	58.21	A
ATOM	4914	C6	NAG	A	693	-35.246	-44.604	-26.397	1.00	57.38	A
ATOM	4915	C7	NAG	A	693	-35.806	-42.606	-20.909	1.00	60.85	A
ATOM	4916	C8	NAG	A	693	-35.964	-42.315	-19.631	1.00	60.71	A
ATOM	4917	N2	NAG	A	693	-35.860	-41.586	-21.760	1.00	58.86	A
ATOM	4918	O3	NAG	A	693	-38.049	-41.592	-23.705	1.00	56.80	A
ATOM	4919	O4	NAG	A	693	-37.882	-44.043	-25.265	1.00	59.25	A
ATOM	4920	O5	NAG	A	693	-34.379	-43.169	-24.666	1.00	58.94	A
ATOM	4921	O6	NAG	A	693	-34.034	-45.366	-26.386	1.00	54.16	A
ATOM	4922	O7	NAG	A	693	-35.620	-43.758	-21.263	1.00	61.99	A
ATOM	4923	C1	NAG	A	694	-39.567	-42.058	-22.933	1.00	68.25	A
ATOM	4924	C2	NAG	A	694	-40.705	-41.687	-22.007	1.00	68.16	A
ATOM	4925	C3	NAG	A	694	-41.719	-42.766	-21.825	1.00	67.96	A
ATOM	4926	C4	NAG	A	694	-42.350	-42.900	-23.140	1.00	68.00	A

ATOM 4927 C5 NAG A 694 -41.230 -43.316 -23.993 1.00 67.98 A
ATOM 4928 C6 NAG A 694 -41.799 -43.349 -25.349 1.00 68.09 A
ATOM 4929 C7 NAG A 694 -39.966 -40.544 -20.061 1.00 65.37 A
ATOM 4930 C8 NAG A 694 -39.269 -40.754 -19.058 1.00 65.62 A
ATOM 4931 N2 NAG A 694 -40.022 -41.610 -20.774 1.00 66.47 A
ATOM 4932 O3 NAG A 694 -42.727 -42.236 -21.005 1.00 67.28 A
ATOM 4933 O4 NAG A 694 -43.327 -43.904 -23.056 1.00 68.33 A
ATOM 4934 O5 NAG A 694 -40.179 -42.368 -24.135 1.00 69.20 A
ATOM 4935 O6 NAG A 694 -40.635 -43.547 -26.130 1.00 68.13 A
ATOM 4936 O7 NAG A 694 -40.424 -39.468 -20.184 1.00 64.59 A
ATOM 4937 C1 NAG A 695 -15.374 -13.838 -13.994 1.00 67.83 A
ATOM 4938 C2 NAG A 695 -14.178 -14.613 -13.421 1.00 67.87 A
ATOM 4939 C3 NAG A 695 -14.382 -15.025 -11.956 1.00 67.82 A
ATOM 4940 C4 NAG A 695 -15.092 -13.946 -11.110 1.00 67.67 A
ATOM 4941 C5 NAG A 695 -16.291 -13.421 -11.872 1.00 67.30 A
ATOM 4942 C6 NAG A 695 -17.075 -12.361 -11.147 1.00 67.41 A
ATOM 4943 C7 NAG A 695 -12.804 -16.128 -14.727 1.00 67.19 A
ATOM 4944 C8 NAG A 695 -12.059 -17.299 -14.106 1.00 66.22 A
ATOM 4945 N2 NAG A 695 -13.989 -15.819 -14.208 1.00 67.85 A
ATOM 4946 O3 NAG A 695 -13.113 -15.308 -11.389 1.00 67.82 A
ATOM 4947 O4 NAG A 695 -15.524 -14.503 -9.876 1.00 67.46 A
ATOM 4948 O5 NAG A 695 -15.843 -12.847 -13.092 1.00 66.86 A
ATOM 4949 O6 NAG A 695 -18.092 -11.833 -11.987 1.00 68.27 A
ATOM 4950 O7 NAG A 695 -12.305 -15.522 -15.673 1.00 67.16 A
ATOM 4951 C1 NAG A 696 -3.891 5.074 -27.035 1.00102.35 A
ATOM 4952 C2 NAG A 696 -3.388 6.568 -27.106 1.00102.66 A
ATOM 4953 C3 NAG A 696 -3.831 7.253 -25.770 1.00102.62 A
ATOM 4954 C4 NAG A 696 -5.375 7.216 -25.734 1.00102.43 A
ATOM 4955 C5 NAG A 696 -5.832 5.693 -25.728 1.00102.39 A
ATOM 4956 C6 NAG A 696 -7.292 5.492 -25.676 1.00102.27 A
ATOM 4957 C7 NAG A 696 -1.211 7.219 -28.116 1.00103.23 A
ATOM 4958 C8 NAG A 696 0.233 7.137 -27.992 1.00102.86 A
ATOM 4959 N2 NAG A 696 -1.925 6.588 -27.139 1.00103.15 A
ATOM 4960 O3 NAG A 696 -3.384 8.619 -25.788 1.00102.27 A

ATOM 4961 O4 NAG A 696 -5.827 7.839 -24.519 1.00102.23 A
ATOM 4962 O5 NAG A 696 -5.319 5.086 -26.994 1.00102.41 A
ATOM 4963 O6 NAG A 696 -7.615 4.171 -25.330 1.00102.70 A
ATOM 4964 O7 NAG A 696 -1.709 7.786 -28.990 1.00103.24 A
ATOM 4965 C1 NAG A 697 -48.304 -10.691 -31.326 1.00114.89 A
ATOM 4966 C2 NAG A 697 -48.808 -10.576 -29.834 1.00115.54 A
ATOM 4967 C3 NAG A 697 -48.914 -12.037 -29.285 1.00115.59 A
ATOM 4968 C4 NAG A 697 -49.968 -12.768 -30.144 1.00115.33 A
ATOM 4969 C5 NAG A 697 -49.445 -12.800 -31.645 1.00114.98 A
ATOM 4970 C6 NAG A 697 -50.343 -13.487 -32.592 1.00115.31 A
ATOM 4971 C7 NAG A 697 -48.076 -8.771 -28.290 1.00116.10 A
ATOM 4972 C8 NAG A 697 -46.954 -8.212 -27.555 1.00115.13 A
ATOM 4973 N2 NAG A 697 -47.800 -9.883 -29.032 1.00115.82 A
ATOM 4974 O3 NAG A 697 -49.364 -11.980 -27.920 1.00115.61 A
ATOM 4975 O4 NAG A 697 -50.100 -14.120 -29.670 1.00114.93 A
ATOM 4976 O5 NAG A 697 -49.302 -11.378 -32.082 1.00114.30 A
ATOM 4977 O6 NAG A 697 -49.686 -13.784 -33.797 1.00115.94 A
ATOM 4978 O7 NAG A 697 -49.126 -8.294 -28.239 1.00116.05 A
ATOM 4979 C1 BMA A 900 -44.667 -44.071 -23.041 1.00105.78 A
ATOM 4980 C2 BMA A 900 -45.437 -42.905 -22.415 1.00105.64 A
ATOM 4981 O2 BMA A 900 -45.349 -41.763 -23.267 1.00105.46 A
ATOM 4982 C3 BMA A 900 -46.904 -43.309 -22.243 1.00105.88 A
ATOM 4983 O3 BMA A 900 -47.663 -42.183 -21.799 1.00105.67 A
ATOM 4984 C4 BMA A 900 -47.439 -43.793 -23.596 1.00106.16 A
ATOM 4985 O4 BMA A 900 -48.760 -44.312 -23.430 1.00107.54 A
ATOM 4986 C5 BMA A 900 -46.519 -44.891 -24.131 1.00105.89 A
ATOM 4987 C6 BMA A 900 -47.065 -45.407 -25.465 1.00104.97 A
ATOM 4988 O6 BMA A 900 -46.210 -46.437 -25.965 1.00104.32 A
ATOM 4989 O5 BMA A 900 -45.207 -44.371 -24.325 1.00105.59 A
ATOM 4990 C ACT A 800 -1.026 -18.401 -40.484 1.00 54.57 A
ATOM 4991 O ACT A 800 -0.975 -17.772 -41.626 1.00 54.77 A
ATOM 4992 OXT ACT A 800 -0.105 -19.110 -39.954 1.00 55.42 A
ATOM 4993 CH3 ACT A 800 -2.356 -18.236 -39.753 1.00 51.84 A
ATOM 4994 C1 GOL A2433 -11.417 -6.356 -73.980 1.00 28.25 A

ATOM 4995 O1 GOL A2433 -10.614 -5.261 -74.222 1.00 26.33 A
ATOM 4996 C2 GOL A2433 -12.311 -6.641 -75.118 1.00 28.99 A
ATOM 4997 O2 GOL A2433 -13.475 -7.164 -74.711 1.00 28.06 A
ATOM 4998 C3 GOL A2433 -12.737 -5.379 -75.637 1.00 30.22 A
ATOM 4999 O3 GOL A2433 -13.346 -5.606 -76.838 1.00 27.87 A
ATOM 5000 C1 GOL A2434 -6.493 -11.083 -54.520 1.00 33.16 A
ATOM 5001 O1 GOL A2434 -5.388 -10.288 -54.300 1.00 35.07 A
ATOM 5002 C2 GOL A2434 -6.772 -11.964 -53.371 1.00 33.47 A
ATOM 5003 O2 GOL A2434 -7.311 -13.127 -53.761 1.00 31.95 A
ATOM 5004 C3 GOL A2434 -5.507 -12.397 -52.864 1.00 34.38 A
ATOM 5005 O3 GOL A2434 -5.724 -12.994 -51.655 1.00 29.91 A
ATOM 5006 C ACT A 801 -23.630 -15.606 -37.570 1.00 39.60 A
ATOM 5007 O ACT A 801 -22.537 -16.066 -38.117 1.00 38.76 A
ATOM 5008 OXT ACT A 801 -23.875 -14.398 -37.239 1.00 40.11 A
ATOM 5009 CH3 ACT A 801 -24.689 -16.678 -37.326 1.00 37.10 A
ATOM 5010 C ACT B 801 -16.292 -23.491 -90.598 1.00 55.71 B
ATOM 5011 O ACT B 801 -15.020 -23.630 -90.853 1.00 56.05 B
ATOM 5012 OXT ACT B 801 -16.906 -22.409 -90.307 1.00 55.98 B
ATOM 5013 CH3 ACT B 801 -17.077 -24.798 -90.672 1.00 54.50 B
ATOM 5014 ZN+2 ZN2 B 701 -22.723 -27.770 -91.593 1.00 29.74 B
ATOM 5015 CL CL B 703 -18.098 -27.730 -36.933 1.00 30.54 B
ATOM 5016 N ALA B 2 -38.012 -26.571 -119.812 1.00 52.55 B
ATOM 5017 CA ALA B 2 -39.222 -26.174 -120.521 1.00 52.71 B
ATOM 5018 CB ALA B 2 -39.770 -24.876 -119.947 1.00 51.48 B
ATOM 5019 C ALA B 2 -40.280 -27.271 -120.466 1.00 53.65 B
ATOM 5020 O ALA B 2 -39.956 -28.452 -120.343 1.00 52.07 B
ATOM 5021 N PRO B 3 -41.544 -26.872 -120.559 1.00 55.09 B
ATOM 5022 CD PRO B 3 -41.623 -25.599 -121.296 1.00 54.55 B
ATOM 5023 CA PRO B 3 -42.618 -27.797 -120.937 1.00 55.17 B
ATOM 5024 CB PRO B 3 -43.441 -26.985 -121.941 1.00 54.73 B
ATOM 5025 CG PRO B 3 -42.498 -25.955 -122.457 1.00 54.66 B
ATOM 5026 C PRO B 3 -43.483 -28.179 -119.740 1.00 54.78 B
ATOM 5027 O PRO B 3 -44.118 -27.313 -119.138 1.00 53.82 B
ATOM 5028 N GLY B 4 -43.503 -29.465 -119.405 1.00 54.86 B

ATOM 5029 CA GLY B 4 -44.281 -29.947-118.279 1.00 55.34 B
ATOM 5030 C GLY B 4 -44.103 -28.934-117.165 1.00 55.83 B
ATOM 5031 O GLY B 4 -44.991 -28.750-116.332 1.00 56.40 B
ATOM 5032 N LEU B 5 -42.950 -28.274-117.150 1.00 55.59 B
ATOM 5033 CA LEU B 5 -42.434 -27.659-115.933 1.00 53.55 B
ATOM 5034 CB LEU B 5 -40.945 -27.474-116.230 1.00 49.69 B
ATOM 5035 CG LEU B 5 -40.081 -28.736-116.177 1.00 48.03 B
ATOM 5036 CD1 LEU B 5 -38.603 -28.378-116.200 1.00 46.32 B
ATOM 5037 CD2 LEU B 5 -40.417 -29.566-114.948 1.00 47.27 B
ATOM 5038 C LEU B 5 -43.043 -26.342-115.466 1.00 53.87 B
ATOM 5039 O LEU B 5 -42.473 -25.646-114.626 1.00 54.92 B
ATOM 5040 N GLN B 6 -44.205 -26.005-116.017 1.00 54.78 B
ATOM 5041 CA GLN B 6 -44.722 -24.688-115.921 1.00 55.58 B
ATOM 5042 CB GLN B 6 -45.062 -24.190-117.280 1.00 55.83 B
ATOM 5043 CG GLN B 6 -43.999 -23.475-117.913 1.00 56.58 B
ATOM 5044 CD GLN B 6 -43.947 -23.741-119.328 1.00 57.43 B
ATOM 5045 OE1 GLN B 6 -44.435 -22.971-120.110 1.00 58.66 B
ATOM 5046 NE2 GLN B 6 -43.352 -24.838-119.696 1.00 57.55 B
ATOM 5047 C GLN B 6 -45.947 -24.761-115.151 1.00 56.30 B
ATOM 5048 O GLN B 6 -46.575 -25.767-115.099 1.00 55.49 B
ATOM 5049 N PRO B 7 -46.298 -23.664-114.544 1.00 57.56 B
ATOM 5050 CD PRO B 7 -45.535 -22.411-114.386 1.00 57.46 B
ATOM 5051 CA PRO B 7 -47.528 -23.624-113.759 1.00 59.00 B
ATOM 5052 CB PRO B 7 -47.292 -22.443-112.825 1.00 58.23 B
ATOM 5053 CG PRO B 7 -46.531 -21.505-113.696 1.00 57.87 B
ATOM 5054 C PRO B 7 -48.813 -23.474-114.564 1.00 60.29 B
ATOM 5055 O PRO B 7 -49.064 -22.428-115.170 1.00 59.73 B
ATOM 5056 N GLY B 8 -49.621 -24.530-114.569 1.00 61.70 B
ATOM 5057 CA GLY B 8 -50.889 -24.469-115.260 1.00 62.99 B
ATOM 5058 C GLY B 8 -51.685 -23.407-114.532 1.00 64.39 B
ATOM 5059 O GLY B 8 -51.243 -22.903-113.500 1.00 65.52 B
ATOM 5060 N ALA B 9 -52.854 -23.068-115.066 1.00 65.21 B
ATOM 5061 CA ALA B 9 -53.715 -22.064-114.452 1.00 65.89 B
ATOM 5062 CB ALA B 9 -54.630 -21.441-115.495 1.00 65.51 B

ATOM 5063 C ALA B 9 -54.533 -22.662-113.312 1.00 66.35 B
ATOM 5064 O ALA B 9 -55.752 -22.797-113.414 1.00 67.27 B
ATOM 5065 N PHE B 10 -53.854 -23.018-112.227 1.00 66.12 B
ATOM 5066 CA PHE B 10 -54.527 -23.493-111.024 1.00 65.35 B
ATOM 5067 CB PHE B 10 -53.503 -23.911-109.966 1.00 61.40 B
ATOM 5068 CG PHE B 10 -52.683 -25.108-110.356 1.00 57.57 B
ATOM 5069 CD1 PHE B 10 -51.410 -24.951-110.879 1.00 55.45 B
ATOM 5070 CD2 PHE B 10 -53.184 -26.389-110.200 1.00 56.75 B
ATOM 5071 CE1 PHE B 10 -50.653 -26.050-111.239 1.00 55.89 B
ATOM 5072 CE2 PHE B 10 -52.432 -27.492-110.558 1.00 56.98 B
ATOM 5073 CZ PHE B 10 -51.165 -27.322-111.078 1.00 56.71 B
ATOM 5074 C PHE B 10 -55.460 -22.429-110.457 1.00 67.11 B
ATOM 5075 O PHE B 10 -55.086 -21.263-110.333 1.00 67.71 B
ATOM 5076 N ALA B 11 -56.678 -22.838-110.115 1.00 68.67 B
ATOM 5077 CA ALA B 11 -57.707 -21.902-109.680 1.00 70.27 B
ATOM 5078 CB ALA B 11 -58.896 -22.652-109.100 1.00 68.57 B
ATOM 5079 C ALA B 11 -57.155 -20.909-108.663 1.00 71.71 B
ATOM 5080 O ALA B 11 -56.225 -21.219-107.918 1.00 72.90 B
ATOM 5081 N ALA B 12 -57.733 -19.712-108.638 1.00 72.92 B
ATOM 5082 CA ALA B 12 -57.859 -18.947-107.403 1.00 74.07 B
ATOM 5083 CB ALA B 12 -58.040 -17.469-107.710 1.00 72.91 B
ATOM 5084 C ALA B 12 -59.011 -19.500-106.570 1.00 75.73 B
ATOM 5085 O ALA B 12 -60.156 -19.071-106.716 1.00 77.85 B
ATOM 5086 N ALA B 13 -58.701 -20.453-105.697 1.00 76.25 B
ATOM 5087 CA ALA B 13 -59.416 -20.599-104.435 1.00 75.92 B
ATOM 5088 CB ALA B 13 -60.097 -21.956-104.349 1.00 75.43 B
ATOM 5089 C ALA B 13 -58.368 -20.453-103.337 1.00 75.80 B
ATOM 5090 O ALA B 13 -57.430 -19.668-103.462 1.00 75.94 B
ATOM 5091 N GLU B 14 -58.537 -21.216-102.261 1.00 74.83 B
ATOM 5092 CA GLU B 14 -57.429 -21.541-101.372 1.00 73.72 B
ATOM 5093 CB GLU B 14 -57.877 -21.346 -99.922 1.00 74.12 B
ATOM 5094 CG GLU B 14 -57.058 -22.129 -98.908 1.00 73.92 B
ATOM 5095 CD GLU B 14 -57.272 -21.644 -97.488 1.00 74.21 B
ATOM 5096 OE1 GLU B 14 -57.842 -20.546 -97.312 1.00 74.20 B

ATOM 5097 OE2 GLU B 14 -56.871 -22.360 -96.547 1.00 74.30 B
ATOM 5098 C GLU B 14 -56.850 -22.940-101.558 1.00 73.11 B
ATOM 5099 O GLU B 14 -55.634 -23.130-101.530 1.00 73.96 B
ATOM 5100 N ALA B 15 -57.731 -23.917-101.749 1.00 72.25 B
ATOM 5101 CA ALA B 15 -57.319 -25.246-102.185 1.00 71.72 B
ATOM 5102 CB ALA B 15 -58.323 -26.291-101.722 1.00 71.15 B
ATOM 5103 C ALA B 15 -57.153 -25.302-103.700 1.00 70.77 B
ATOM 5104 O ALA B 15 -56.965 -26.398-104.252 1.00 70.75 B
ATOM 5105 N GLY B 16 -57.212 -24.163-104.343 1.00 69.58 B
ATOM 5106 CA GLY B 16 -56.501 -23.953-105.591 1.00 68.31 B
ATOM 5107 C GLY B 16 -55.011 -23.765-105.384 1.00 67.70 B
ATOM 5108 O GLY B 16 -54.198 -24.288-106.147 1.00 67.48 B
ATOM 5109 N ALA B 17 -54.652 -23.014-104.348 1.00 67.05 B
ATOM 5110 CA ALA B 17 -53.256 -22.828-103.986 1.00 65.80 B
ATOM 5111 CB ALA B 17 -53.135 -21.823-102.843 1.00 64.98 B
ATOM 5112 C ALA B 17 -52.723 -24.186-103.559 1.00 65.24 B
ATOM 5113 O ALA B 17 -51.549 -24.504-103.757 1.00 65.62 B
ATOM 5114 N GLN B 18 -53.594 -25.019-103.051 1.00 64.06 B
ATOM 5115 CA GLN B 18 -53.152 -26.309-102.623 1.00 63.82 B
ATOM 5116 CB GLN B 18 -54.247 -27.059-101.950 1.00 63.41 B
ATOM 5117 CG GLN B 18 -54.334 -26.761-100.555 1.00 63.99 B
ATOM 5118 CD GLN B 18 -53.178 -27.285 -99.803 1.00 64.56 B
ATOM 5119 OE1 GLN B 18 -53.147 -27.199 -98.601 1.00 64.89 B
ATOM 5120 NE2 GLN B 18 -52.217 -27.825-100.495 1.00 63.79 B
ATOM 5121 C GLN B 18 -52.737 -27.095-103.785 1.00 63.64 B
ATOM 5122 O GLN B 18 -51.691 -27.685-103.795 1.00 64.23 B
ATOM 5123 N ALA B 19 -53.613 -27.168-104.763 1.00 63.04 B
ATOM 5124 CA ALA B 19 -53.338 -27.971-105.952 1.00 61.37 B
ATOM 5125 CB ALA B 19 -54.534 -27.927-106.894 1.00 61.30 B
ATOM 5126 C ALA B 19 -52.103 -27.368-106.615 1.00 60.04 B
ATOM 5127 O ALA B 19 -51.296 -28.065-107.242 1.00 58.73 B
ATOM 5128 N PHE B 20 -51.971 -26.054-106.455 1.00 58.60 B
ATOM 5129 CA PHE B 20 -50.840 -25.314-106.991 1.00 57.84 B
ATOM 5130 CB PHE B 20 -50.975 -23.832-106.645 1.00 57.99 B

ATOM 5131 CG PHE B 20 -49.794 -23.012-107.060 1.00 58.34 B
ATOM 5132 CD1 PHE B 20 -49.730 -22.454-108.330 1.00 59.68 B
ATOM 5133 CD2 PHE B 20 -48.720 -22.840-106.205 1.00 58.61 B
ATOM 5134 CE1 PHE B 20 -48.610 -21.738-108.743 1.00 59.80 B
ATOM 5135 CE2 PHE B 20 -47.597 -22.128-106.609 1.00 59.35 B
ATOM 5136 CZ PHE B 20 -47.543 -21.577-107.881 1.00 59.69 B
ATOM 5137 C PHE B 20 -49.549 -25.862-106.374 1.00 57.25 B
ATOM 5138 O PHE B 20 -48.666 -26.346-107.092 1.00 57.78 B
ATOM 5139 N ALA B 21 -49.450 -25.777-105.045 1.00 55.66 B
ATOM 5140 CA ALA B 21 -48.284 -26.253-104.301 1.00 54.60 B
ATOM 5141 CB ALA B 21 -48.451 -25.943-102.828 1.00 55.05 B
ATOM 5142 C ALA B 21 -48.065 -27.748-104.493 1.00 54.24 B
ATOM 5143 O ALA B 21 -46.935 -28.239-104.404 1.00 54.07 B
ATOM 5144 N ALA B 22 -49.185 -28.473-104.702 1.00 53.94 B
ATOM 5145 CA ALA B 22 -49.107 -29.905-104.968 1.00 53.41 B
ATOM 5146 CB ALA B 22 -50.501 -30.487-105.148 1.00 53.91 B
ATOM 5147 C ALA B 22 -48.248 -30.192-106.194 1.00 52.65 B
ATOM 5148 O ALA B 22 -47.327 -30.966-106.170 1.00 51.91 B
ATOM 5149 N ALA B 23 -48.549 -29.407-107.268 1.00 51.94 B
ATOM 5150 CA ALA B 23 -47.814 -29.485-108.544 1.00 51.68 B
ATOM 5151 CB ALA B 23 -48.618 -28.774-109.678 1.00 51.03 B
ATOM 5152 C ALA B 23 -46.401 -28.874-108.446 1.00 51.12 B
ATOM 5153 O ALA B 23 -45.414 -29.521-108.818 1.00 50.79 B
ATOM 5154 N TYR B 24 -46.304 -27.639-107.954 1.00 49.86 B
ATOM 5155 CA TYR B 24 -45.007 -26.982-107.813 1.00 49.14 B
ATOM 5156 CB TYR B 24 -45.090 -25.832-106.811 1.00 49.68 B
ATOM 5157 CG TYR B 24 -43.726 -25.288-106.425 1.00 50.26 B
ATOM 5158 CD1 TYR B 24 -43.164 -24.207-107.100 1.00 50.10 B
ATOM 5159 CE1 TYR B 24 -41.875 -23.761-106.797 1.00 49.95 B
ATOM 5160 CD2 TYR B 24 -42.963 -25.907-105.427 1.00 50.66 B
ATOM 5161 CE2 TYR B 24 -41.676 -25.470-105.121 1.00 49.95 B
ATOM 5162 CZ TYR B 24 -41.138 -24.399-105.809 1.00 49.59 B
ATOM 5163 OH TYR B 24 -39.864 -23.974-105.514 1.00 48.79 B
ATOM 5164 C TYR B 24 -43.933 -27.950-107.332 1.00 48.54 B

ATOM 5165 O TYR B 24 -42.851 -28.048-107.905 1.00 47.92 B
ATOM 5166 N ASN B 25 -44.291 -28.723-106.331 1.00 47.79 B
ATOM 5167 CA ASN B 25 -43.399 -29.676-105.707 1.00 48.42 B
ATOM 5168 CB ASN B 25 -44.137 -30.483-104.674 1.00 48.76 B
ATOM 5169 CG ASN B 25 -43.354 -31.700-104.180 1.00 50.17 B
ATOM 5170 OD1 ASN B 25 -42.261 -31.583-103.608 1.00 50.11 B
ATOM 5171 ND2 ASN B 25 -43.881 -32.861-104.433 1.00 50.41 B
ATOM 5172 C ASN B 25 -42.840 -30.646-106.644 1.00 49.22 B
ATOM 5173 O ASN B 25 -41.685 -30.978-106.588 1.00 48.88 B
ATOM 5174 N SER B 26 -43.708 -31.174-107.482 1.00 49.87 B
ATOM 5175 CA SER B 26 -43.369 -32.229-108.442 1.00 49.71 B
ATOM 5176 CB SER B 26 -44.643 -32.799-109.052 1.00 50.34 B
ATOM 5177 OG SER B 26 -44.320 -33.802-109.997 1.00 53.39 B
ATOM 5178 C SER B 26 -42.462 -31.732-109.556 1.00 49.13 B
ATOM 5179 O SER B 26 -41.587 -32.458-110.039 1.00 48.44 B
ATOM 5180 N SER B 27 -42.698 -30.493-109.972 1.00 47.88 B
ATOM 5181 CA SER B 27 -41.901 -29.873-111.017 1.00 48.23 B
ATOM 5182 CB SER B 27 -42.605 -28.608-111.523 1.00 48.36 B
ATOM 5183 OG SER B 27 -43.979 -28.846-111.788 1.00 46.35 B
ATOM 5184 C SER B 27 -40.551 -29.507-110.397 1.00 48.69 B
ATOM 5185 O SER B 27 -39.493 -29.762-110.975 1.00 49.04 B
ATOM 5186 N ALA B 28 -40.618 -28.921-109.202 1.00 48.59 B
ATOM 5187 CA ALA B 28 -39.447 -28.496-108.438 1.00 47.29 B
ATOM 5188 CB ALA B 28 -39.895 -27.934-107.098 1.00 47.03 B
ATOM 5189 C ALA B 28 -38.412 -29.603-108.221 1.00 46.49 B
ATOM 5190 O ALA B 28 -37.224 -29.398-108.440 1.00 45.72 B
ATOM 5191 N GLU B 29 -38.801 -30.740-107.812 1.00 46.46 B
ATOM 5192 CA GLU B 29 -37.893 -31.804-107.577 1.00 46.37 B
ATOM 5193 CB GLU B 29 -38.701 -33.009-107.153 1.00 47.98 B
ATOM 5194 CG GLU B 29 -38.290 -33.785-105.911 1.00 50.51 B
ATOM 5195 CD GLU B 29 -39.075 -35.049-105.759 1.00 52.32 B
ATOM 5196 OE1 GLU B 29 -40.250 -34.983-105.472 1.00 53.33 B
ATOM 5197 OE2 GLU B 29 -38.527 -36.109-105.937 1.00 53.21 B
ATOM 5198 C GLU B 29 -37.083 -32.114-108.777 1.00 45.28 B

ATOM 5199 O GLU B 29 -36.033 -32.579-108.645 1.00 44.73 B
ATOM 5200 N GLN B 30 -37.600 -31.920-109.953 1.00 44.58 B
ATOM 5201 CA GLN B 30 -36.865 -32.169-111.183 1.00 44.92 B
ATOM 5202 CB GLN B 30 -37.841 -32.240-112.368 1.00 46.05 B
ATOM 5203 CG GLN B 30 -38.964 -33.266-112.208 1.00 48.19 B
ATOM 5204 CD GLN B 30 -39.831 -33.390-113.453 1.00 49.32 B
ATOM 5205 OE1 GLN B 30 -39.345 -33.763-114.519 1.00 50.12 B
ATOM 5206 NE2 GLN B 30 -41.120 -33.078-113.323 1.00 48.99 B
ATOM 5207 C GLN B 30 -35.812 -31.098-111.444 1.00 44.65 B
ATOM 5208 O GLN B 30 -34.626 -31.394-111.621 1.00 43.93 B
ATOM 5209 N VAL B 31 -36.258 -29.849-111.467 1.00 44.19 B
ATOM 5210 CA VAL B 31 -35.374 -28.722-111.713 1.00 43.44 B
ATOM 5211 CB VAL B 31 -36.204 -27.417-111.863 1.00 41.66 B
ATOM 5212 CG1 VAL B 31 -36.954 -27.131-110.593 1.00 42.68 B
ATOM 5213 CG2 VAL B 31 -35.304 -26.260-112.234 1.00 43.06 B
ATOM 5214 C VAL B 31 -34.317 -28.594-110.603 1.00 44.24 B
ATOM 5215 O VAL B 31 -33.183 -28.164-110.852 1.00 45.27 B
ATOM 5216 N LEU B 32 -34.679 -28.988-109.385 1.00 44.27 B
ATOM 5217 CA LEU B 32 -33.749 -28.934-108.263 1.00 43.44 B
ATOM 5218 CB LEU B 32 -34.513 -29.006-106.939 1.00 43.05 B
ATOM 5219 CG LEU B 32 -35.272 -27.718-106.597 1.00 42.75 B
ATOM 5220 CD1 LEU B 32 -36.415 -28.039-105.666 1.00 43.93 B
ATOM 5221 CD2 LEU B 32 -34.330 -26.684-105.983 1.00 41.86 B
ATOM 5222 C LEU B 32 -32.722 -30.063-108.363 1.00 43.54 B
ATOM 5223 O LEU B 32 -31.522 -29.824-108.228 1.00 44.21 B
ATOM 5224 N PHE B 33 -33.181 -31.290-108.598 1.00 42.66 B
ATOM 5225 CA PHE B 33 -32.254 -32.402-108.742 1.00 41.35 B
ATOM 5226 CB PHE B 33 -32.984 -33.679-109.150 1.00 38.10 B
ATOM 5227 CG PHE B 33 -32.065 -34.852-109.365 1.00 36.01 B
ATOM 5228 CD1 PHE B 33 -31.623 -35.617-108.295 1.00 34.93 B
ATOM 5229 CD2 PHE B 33 -31.604 -35.168-110.633 1.00 34.86 B
ATOM 5230 CE1 PHE B 33 -30.734 -36.678-108.486 1.00 33.37 B
ATOM 5231 CE2 PHE B 33 -30.716 -36.226-110.830 1.00 33.59 B
ATOM 5232 CZ PHE B 33 -30.283 -36.980-109.753 1.00 32.83 B

ATOM 5233 C PHE B 33 -31.285 -32.016-109.856 1.00 42.35 B
ATOM 5234 O PHE B 33 -30.077 -32.256-109.772 1.00 41.76 B
ATOM 5235 N ALA B 34 -31.835 -31.409-110.902 1.00 42.78 B
ATOM 5236 CA ALA B 34 -31.040 -30.987-112.045 1.00 43.77 B
ATOM 5237 CB ALA B 34 -31.923 -30.267-113.058 1.00 42.82 B
ATOM 5238 C ALA B 34 -29.899 -30.077-111.623 1.00 44.38 B
ATOM 5239 O ALA B 34 -28.732 -30.334-111.938 1.00 44.30 B
ATOM 5240 N SER B 35 -30.248 -29.013-110.906 1.00 44.38 B
ATOM 5241 CA SER B 35 -29.271 -28.034-110.456 1.00 44.59 B
ATOM 5242 CB SER B 35 -30.000 -26.825-109.858 1.00 45.78 B
ATOM 5243 OG SER B 35 -29.184 -25.663-109.880 1.00 47.82 B
ATOM 5244 C SER B 35 -28.250 -28.591-109.458 1.00 43.59 B
ATOM 5245 O SER B 35 -27.059 -28.287-109.562 1.00 44.28 B
ATOM 5246 N VAL B 36 -28.707 -29.404-108.505 1.00 41.95 B
ATOM 5247 CA VAL B 36 -27.821 -29.990-107.494 1.00 40.39 B
ATOM 5248 CB VAL B 36 -28.609 -30.762-106.428 1.00 39.58 B
ATOM 5249 CG1 VAL B 36 -27.642 -31.451-105.468 1.00 36.88 B
ATOM 5250 CG2 VAL B 36 -29.527 -29.814-105.679 1.00 38.79 B
ATOM 5251 C VAL B 36 -26.811 -30.949-108.089 1.00 40.71 B
ATOM 5252 O VAL B 36 -25.675 -31.027-107.633 1.00 39.96 B
ATOM 5253 N ALA B 37 -27.246 -31.693-109.098 1.00 41.39 B
ATOM 5254 CA ALA B 37 -26.385 -32.656-109.775 1.00 40.62 B
ATOM 5255 CB ALA B 37 -27.227 -33.581-110.642 1.00 39.52 B
ATOM 5256 C ALA B 37 -25.380 -31.889-110.628 1.00 40.74 B
ATOM 5257 O ALA B 37 -24.226 -32.297-110.780 1.00 39.89 B
ATOM 5258 N ALA B 38 -25.835 -30.767-111.176 1.00 41.60 B
ATOM 5259 CA ALA B 38 -24.995 -29.918-112.009 1.00 42.68 B
ATOM 5260 CB ALA B 38 -25.827 -28.794-112.621 1.00 42.51 B
ATOM 5261 C ALA B 38 -23.884 -29.345-111.146 1.00 42.95 B
ATOM 5262 O ALA B 38 -22.756 -29.160-111.602 1.00 44.56 B
ATOM 5263 N SER B 39 -24.214 -29.065-109.892 1.00 42.49 B
ATOM 5264 CA SER B 39 -23.240 -28.529-108.958 1.00 42.08 B
ATOM 5265 CB SER B 39 -23.951 -27.859-107.786 1.00 42.41 B
ATOM 5266 OG SER B 39 -24.828 -26.847-108.248 1.00 44.05 B

ATOM 5267 C SER B 39 -22.333 -29.646-108.454 1.00 41.88 B
ATOM 5268 O SER B 39 -21.125 -29.462-108.357 1.00 41.65 B
ATOM 5269 N TRP B 40 -22.908 -30.807-108.137 1.00 42.21 B
ATOM 5270 CA TRP B 40 -22.104 -31.927-107.659 1.00 41.85 B
ATOM 5271 CB TRP B 40 -22.960 -33.176-107.409 1.00 42.00 B
ATOM 5272 CG TRP B 40 -22.120 -34.359-107.007 1.00 42.09 B
ATOM 5273 CD2 TRP B 40 -21.790 -34.766-105.672 1.00 42.28 B
ATOM 5274 CE2 TRP B 40 -20.867 -35.829-105.772 1.00 42.93 B
ATOM 5275 CE3 TRP B 40 -22.180 -34.332-104.399 1.00 41.18 B
ATOM 5276 CD1 TRP B 40 -21.411 -35.176-107.835 1.00 42.40 B
ATOM 5277 NE1 TRP B 40 -20.653 -36.059-107.104 1.00 42.64 B
ATOM 5278 CZ2 TRP B 40 -20.324 -36.462-104.651 1.00 43.20 B
ATOM 5279 CZ3 TRP B 40 -21.640 -34.964-103.284 1.00 41.22 B
ATOM 5280 CH2 TRP B 40 -20.723 -36.017-103.420 1.00 41.92 B
ATOM 5281 C TRP B 40 -21.002 -32.271-108.647 1.00 42.30 B
ATOM 5282 O TRP B 40 -19.906 -32.626-108.242 1.00 40.84 B
ATOM 5283 N ALA B 41 -21.297 -32.173-109.939 1.00 44.15 B
ATOM 5284 CA ALA B 41 -20.311 -32.471-110.976 1.00 45.82 B
ATOM 5285 CB ALA B 41 -20.956 -32.384-112.342 1.00 47.01 B
ATOM 5286 C ALA B 41 -19.127 -31.517-110.906 1.00 47.23 B
ATOM 5287 O ALA B 41 -17.982 -31.939-111.034 1.00 47.49 B
ATOM 5288 N HIS B 42 -19.415 -30.232-110.704 1.00 49.24 B
ATOM 5289 CA HIS B 42 -18.384 -29.189-110.605 1.00 50.67 B
ATOM 5290 CB HIS B 42 -19.047 -27.801-110.536 1.00 52.13 B
ATOM 5291 CG HIS B 42 -18.075 -26.660-110.452 1.00 54.64 B
ATOM 5292 CD2 HIS B 42 -17.029 -26.345-111.243 1.00 55.35 B
ATOM 5293 ND1 HIS B 42 -18.141 -25.697-109.466 1.00 56.25 B
ATOM 5294 CE1 HIS B 42 -17.179 -24.810-109.651 1.00 55.97 B
ATOM 5295 NE2 HIS B 42 -16.491 -25.162-110.723 1.00 56.01 B
ATOM 5296 C HIS B 42 -17.466 -29.370-109.389 1.00 50.68 B
ATOM 5297 O HIS B 42 -16.261 -29.574-109.538 1.00 50.30 B
ATOM 5298 N ASP B 43 -18.048 -29.297-108.196 1.00 50.66 B
ATOM 5299 CA ASP B 43 -17.270 -29.280-106.963 1.00 50.96 B
ATOM 5300 CB ASP B 43 -18.188 -29.097-105.753 1.00 50.64 B

ATOM 5301 CG ASP B 43 -18.951 -27.788-105.793 1.00 51.47 B
ATOM 5302 OD1 ASP B 43 -19.919 -27.637-105.018 1.00 50.88 B
ATOM 5303 OD2 ASP B 43 -18.656 -26.852-106.566 1.00 51.69 B
ATOM 5304 C ASP B 43 -16.445 -30.554-106.809 1.00 51.63 B
ATOM 5305 O ASP B 43 -15.338 -30.525-106.272 1.00 51.56 B
ATOM 5306 N THR B 44 -16.992 -31.670-107.280 1.00 53.02 B
ATOM 5307 CA THR B 44 -16.305 -32.953-107.197 1.00 54.36 B
ATOM 5308 CB THR B 44 -17.308 -34.113-107.335 1.00 54.74 B
ATOM 5309 OG1 THR B 44 -18.272 -34.043-106.278 1.00 57.07 B
ATOM 5310 CG2 THR B 44 -16.617 -35.447-107.091 1.00 56.01 B
ATOM 5311 C THR B 44 -15.221 -33.069-108.263 1.00 54.48 B
ATOM 5312 O THR B 44 -14.387 -33.974-108.218 1.00 54.85 B
ATOM 5313 N ASN B 45 -15.238 -32.148-109.220 1.00 54.87 B
ATOM 5314 CA ASN B 45 -14.275 -32.162-110.315 1.00 54.77 B
ATOM 5315 CB ASN B 45 -14.558 -33.331-111.262 1.00 55.85 B
ATOM 5316 CG ASN B 45 -13.603 -33.371-112.438 1.00 57.81 B
ATOM 5317 OD1 ASN B 45 -12.418 -33.068-112.302 1.00 58.60 B
ATOM 5318 ND2 ASN B 45 -14.116 -33.748-113.604 1.00 58.79 B
ATOM 5319 C ASN B 45 -14.268 -30.850-111.092 1.00 54.31 B
ATOM 5320 O ASN B 45 -14.972 -30.704-112.091 1.00 55.11 B
ATOM 5321 N ILE B 46 -13.467 -29.897-110.625 1.00 53.32 B
ATOM 5322 CA ILE B 46 -13.453 -28.558-111.202 1.00 52.23 B
ATOM 5323 CB ILE B 46 -12.720 -27.576-110.268 1.00 52.28 B
ATOM 5324 CG2 ILE B 46 -12.999 -26.139-110.682 1.00 53.29 B
ATOM 5325 CG1 ILE B 46 -13.137 -27.811-108.815 1.00 52.05 B
ATOM 5326 CD1 ILE B 46 -12.513 -26.840-107.837 1.00 51.23 B
ATOM 5327 C ILE B 46 -12.798 -28.558-112.580 1.00 51.88 B
ATOM 5328 O ILE B 46 -11.579 -28.683-112.698 1.00 51.48 B
ATOM 5329 N THR B 47 -13.616 -28.418-113.618 1.00 51.27 B
ATOM 5330 CA THR B 47 -13.121 -28.051-114.939 1.00 49.36 B
ATOM 5331 CB THR B 47 -13.576 -29.082-115.990 1.00 48.57 B
ATOM 5332 OG1 THR B 47 -15.002 -29.218-115.944 1.00 46.98 B
ATOM 5333 CG2 THR B 47 -13.080 -30.472-115.623 1.00 47.03 B
ATOM 5334 C THR B 47 -13.589 -26.656-115.335 1.00 49.58 B

ATOM 5335 O THR B 47 -13.743 -25.778-114.486 1.00 50.94 B
ATOM 5336 N ALA B 48 -13.815 -26.457-116.630 1.00 48.24 B
ATOM 5337 CA ALA B 48 -14.425 -25.231-117.118 1.00 46.89 B
ATOM 5338 CB ALA B 48 -13.529 -24.570-118.114 1.00 45.80 B
ATOM 5339 C ALA B 48 -15.725 -25.637-117.774 1.00 47.35 B
ATOM 5340 O ALA B 48 -16.640 -24.837-117.944 1.00 46.78 B
ATOM 5341 N GLU B 49 -15.876 -26.895-118.004 1.00 48.84 B
ATOM 5342 CA GLU B 49 -17.075 -27.337-118.623 1.00 48.83 B
ATOM 5343 CB GLU B 49 -16.838 -28.598-119.351 1.00 50.26 B
ATOM 5344 CG GLU B 49 -18.145 -29.149-119.789 1.00 53.34 B
ATOM 5345 CD GLU B 49 -18.281 -29.144-121.254 1.00 54.70 B
ATOM 5346 OE1 GLU B 49 -17.881 -30.131-121.837 1.00 56.93 B
ATOM 5347 OE2 GLU B 49 -18.771 -28.164-121.814 1.00 54.66 B
ATOM 5348 C GLU B 49 -18.100 -27.630-117.656 1.00 46.95 B
ATOM 5349 O GLU B 49 -19.221 -27.304-117.823 1.00 45.53 B
ATOM 5350 N ASN B 50 -17.718 -28.327-116.629 1.00 44.90 B
ATOM 5351 CA ASN B 50 -18.694 -28.578-115.590 1.00 42.44 B
ATOM 5352 CB ASN B 50 -18.067 -29.424-114.488 1.00 40.63 B
ATOM 5353 CG ASN B 50 -17.760 -30.827-114.952 1.00 39.27 B
ATOM 5354 OD1 ASN B 50 -18.610 -31.481-115.545 1.00 40.19 B
ATOM 5355 ND2 ASN B 50 -16.550 -31.300-114.683 1.00 36.86 B
ATOM 5356 C ASN B 50 -19.169 -27.249-115.045 1.00 42.45 B
ATOM 5357 O ASN B 50 -20.295 -27.136-114.565 1.00 42.37 B
ATOM 5358 N ALA B 51 -18.298 -26.244-115.144 1.00 42.60 B
ATOM 5359 CA ALA B 51 -18.597 -24.891-114.672 1.00 42.52 B
ATOM 5360 CB ALA B 51 -17.327 -24.058-114.643 1.00 41.75 B
ATOM 5361 C ALA B 51 -19.636 -24.223-115.565 1.00 42.31 B
ATOM 5362 O ALA B 51 -20.491 -23.471-115.089 1.00 41.82 B
ATOM 5363 N ALA B 52 -19.549 -24.499-116.864 1.00 41.98 B
ATOM 5364 CA ALA B 52 -20.481 -23.945-117.832 1.00 41.01 B
ATOM 5365 CB ALA B 52 -19.937 -24.108-119.233 1.00 40.47 B
ATOM 5366 C ALA B 52 -21.791 -24.691-117.682 1.00 41.28 B
ATOM 5367 O ALA B 52 -22.859 -24.125-117.882 1.00 41.39 B
ATOM 5368 N ALA B 53 -21.700 -25.980-117.328 1.00 42.57 B

ATOM 5369 CA ALA B 53 -22.867 -26.828-117.117 1.00 43.00 B
ATOM 5370 CB ALA B 53 -22.454 -28.290-117.047 1.00 41.61 B
ATOM 5371 C ALA B 53 -23.619 -26.425-115.853 1.00 43.73 B
ATOM 5372 O ALA B 53 -24.847 -26.383-115.810 1.00 43.23 B
ATOM 5373 N GLN B 54 -22.957 -26.216-114.750 1.00 44.28 B
ATOM 5374 CA GLN B 54 -23.683 -25.627-113.678 1.00 44.98 B
ATOM 5375 CB GLN B 54 -22.850 -25.405-112.459 1.00 47.10 B
ATOM 5376 CG GLN B 54 -23.633 -24.635-111.420 1.00 51.27 B
ATOM 5377 CD GLN B 54 -22.892 -23.476-110.929 1.00 53.99 B
ATOM 5378 OE1 GLN B 54 -21.720 -23.390-111.181 1.00 56.99 B
ATOM 5379 NE2 GLN B 54 -23.561 -22.544-110.289 1.00 53.73 B
ATOM 5380 C GLN B 54 -24.254 -24.340-114.041 1.00 43.60 B
ATOM 5381 O GLN B 54 -25.396 -24.099-113.825 1.00 43.14 B
ATOM 5382 N GLU B 55 -23.424 -23.457-114.530 1.00 41.89 B
ATOM 5383 CA GLU B 55 -23.952 -22.140-114.873 1.00 41.00 B
ATOM 5384 CB GLU B 55 -22.883 -21.304-115.586 1.00 41.89 B
ATOM 5385 CG GLU B 55 -21.760 -20.845-114.672 1.00 45.11 B
ATOM 5386 CD GLU B 55 -20.838 -19.824-115.319 1.00 46.58 B
ATOM 5387 OE1 GLU B 55 -21.353 -18.802-115.831 1.00 48.54 B
ATOM 5388 OE2 GLU B 55 -19.602 -20.037-115.305 1.00 46.69 B
ATOM 5389 C GLU B 55 -25.215 -22.207-115.726 1.00 39.95 B
ATOM 5390 O GLU B 55 -26.002 -21.257-115.754 1.00 39.02 B
ATOM 5391 N ALA B 56 -25.389 -23.314-116.460 1.00 38.40 B
ATOM 5392 CA ALA B 56 -26.604 -23.483-117.249 1.00 36.55 B
ATOM 5393 CB ALA B 56 -26.387 -24.517-118.343 1.00 36.66 B
ATOM 5394 C ALA B 56 -27.783 -23.880-116.367 1.00 35.55 B
ATOM 5395 O ALA B 56 -28.797 -23.236-116.347 1.00 35.02 B
ATOM 5396 N ALA B 57 -27.518 -24.924-115.550 1.00 35.05 B
ATOM 5397 CA ALA B 57 -28.517 -25.431-114.611 1.00 34.53 B
ATOM 5398 CB ALA B 57 -27.924 -26.545-113.766 1.00 34.14 B
ATOM 5399 C ALA B 57 -29.000 -24.306-113.722 1.00 33.93 B
ATOM 5400 O ALA B 57 -30.163 -24.269-113.330 1.00 33.13 B
ATOM 5401 N ALA B 58 -28.090 -23.390-113.413 1.00 33.78 B
ATOM 5402 CA ALA B 58 -28.398 -22.234-112.583 1.00 34.55 B

ATOM 5403 CB ALA B 58 -27.121 -21.478-112.274 1.00 34.34 B
ATOM 5404 C ALA B 58 -29.399 -21.315-113.284 1.00 35.08 B
ATOM 5405 O ALA B 58 -30.341 -20.820-112.667 1.00 34.71 B
ATOM 5406 N LEU B 59 -29.177 -21.080-114.574 1.00 35.83 B
ATOM 5407 CA LEU B 59 -30.068 -20.239-115.360 1.00 36.67 B
ATOM 5408 CB LEU B 59 -29.495 -20.007-116.757 1.00 36.51 B
ATOM 5409 CG LEU B 59 -28.641 -18.751-116.931 1.00 36.85 B
ATOM 5410 CD1 LEU B 59 -28.183 -18.618-118.370 1.00 35.53 B
ATOM 5411 CD2 LEU B 59 -29.459 -17.543-116.527 1.00 37.97 B
ATOM 5412 C LEU B 59 -31.406 -20.935-115.474 1.00 36.99 B
ATOM 5413 O LEU B 59 -32.456 -20.298-115.517 1.00 37.58 B
ATOM 5414 N LEU B 60 -31.346 -22.259-115.524 1.00 37.01 B
ATOM 5415 CA LEU B 60 -32.534 -23.096-115.624 1.00 36.41 B
ATOM 5416 CB LEU B 60 -32.109 -24.562-115.720 1.00 36.62 B
ATOM 5417 CG LEU B 60 -32.923 -25.499-116.616 1.00 37.02 B
ATOM 5418 CD1 LEU B 60 -32.148 -26.801-116.830 1.00 36.13 B
ATOM 5419 CD2 LEU B 60 -34.280 -25.761-115.992 1.00 37.37 B
ATOM 5420 C LEU B 60 -33.411 -22.878-114.389 1.00 35.97 B
ATOM 5421 O LEU B 60 -34.581 -22.500-114.497 1.00 34.67 B
ATOM 5422 N SER B 61 -32.827 -23.112-113.215 1.00 35.05 B
ATOM 5423 CA SER B 61 -33.526 -22.943-111.951 1.00 33.47 B
ATOM 5424 CB SER B 61 -32.569 -23.207-110.790 1.00 33.42 B
ATOM 5425 OG SER B 61 -31.968 -24.485-110.885 1.00 32.02 B
ATOM 5426 C SER B 61 -34.084 -21.533-111.837 1.00 33.67 B
ATOM 5427 O SER B 61 -35.223 -21.333-111.422 1.00 33.63 B
ATOM 5428 N GLN B 62 -33.274 -20.555-112.210 1.00 34.66 B
ATOM 5429 CA GLN B 62 -33.687 -19.162-112.136 1.00 37.21 B
ATOM 5430 CB GLN B 62 -32.557 -18.258-112.607 1.00 36.85 B
ATOM 5431 CG GLN B 62 -31.340 -18.318-111.732 1.00 36.38 B
ATOM 5432 CD GLN B 62 -30.381 -17.200-112.030 1.00 37.93 B
ATOM 5433 OE1 GLN B 62 -29.512 -17.318-112.888 1.00 37.21 B
ATOM 5434 NE2 GLN B 62 -30.548 -16.093-111.328 1.00 40.42 B
ATOM 5435 C GLN B 62 -34.939 -18.899-112.952 1.00 39.48 B
ATOM 5436 O GLN B 62 -35.773 -18.075-112.583 1.00 39.62 B

ATOM 5437 N GLU B 63 -35.060 -19.597-114.073 1.00 42.76 B
ATOM 5438 CA GLU B 63 -36.236 -19.458-114.929 1.00 45.86 B
ATOM 5439 CB GLU B 63 -36.043 -20.230-116.231 1.00 47.89 B
ATOM 5440 CG GLU B 63 -35.319 -19.468-117.314 1.00 52.67 B
ATOM 5441 CD GLU B 63 -35.119 -20.314-118.547 1.00 55.44 B
ATOM 5442 OE1 GLU B 63 -34.156 -21.116-118.561 1.00 56.48 B
ATOM 5443 OE2 GLU B 63 -35.931 -20.183-119.494 1.00 57.55 B
ATOM 5444 C GLU B 63 -37.439 -20.030-114.192 1.00 45.69 B
ATOM 5445 O GLU B 63 -38.459 -19.359-114.018 1.00 45.83 B
ATOM 5446 N PHE B 64 -37.293 -21.283-113.768 1.00 45.52 B
ATOM 5447 CA PHE B 64 -38.320 -22.008-113.039 1.00 44.84 B
ATOM 5448 CB PHE B 64 -37.698 -23.230-112.378 1.00 43.76 B
ATOM 5449 CG PHE B 64 -38.689 -24.114-111.699 1.00 44.45 B
ATOM 5450 CD1 PHE B 64 -39.525 -24.938-112.440 1.00 45.22 B
ATOM 5451 CD2 PHE B 64 -38.784 -24.135-110.314 1.00 45.07 B
ATOM 5452 CE1 PHE B 64 -40.442 -25.778-111.813 1.00 46.26 B
ATOM 5453 CE2 PHE B 64 -39.699 -24.968-109.674 1.00 45.80 B
ATOM 5454 CZ PHE B 64 -40.530 -25.792-110.426 1.00 46.14 B
ATOM 5455 C PHE B 64 -38.961 -21.139-111.969 1.00 45.88 B
ATOM 5456 O PHE B 64 -40.144 -20.803-112.040 1.00 46.68 B
ATOM 5457 N ALA B 65 -38.157 -20.778-110.976 1.00 46.35 B
ATOM 5458 CA ALA B 65 -38.622 -19.964-109.868 1.00 47.08 B
ATOM 5459 CB ALA B 65 -37.451 -19.611-108.973 1.00 46.91 B
ATOM 5460 C ALA B 65 -39.344 -18.700-110.316 1.00 47.88 B
ATOM 5461 O ALA B 65 -40.204 -18.191-109.604 1.00 48.37 B
ATOM 5462 N GLU B 66 -39.103 -18.235-111.507 1.00 49.09 B
ATOM 5463 CA GLU B 66 -39.786 -17.050-111.932 1.00 50.96 B
ATOM 5464 CB GLU B 66 -39.024 -16.326-112.964 1.00 52.58 B
ATOM 5465 CG GLU B 66 -39.513 -14.922-113.044 1.00 56.18 B
ATOM 5466 CD GLU B 66 -39.814 -14.476-114.417 1.00 58.98 B
ATOM 5467 OE1 GLU B 66 -38.978 -14.703-115.283 1.00 60.94 B
ATOM 5468 OE2 GLU B 66 -40.875 -13.889-114.605 1.00 60.27 B
ATOM 5469 C GLU B 66 -41.087 -17.308-112.499 1.00 51.26 B
ATOM 5470 O GLU B 66 -41.987 -16.558-112.315 1.00 51.03 B

ATOM 5471 N ALA B 67 -41.178 -18.365-113.254 1.00 52.07 B
ATOM 5472 CA ALA B 67 -42.476 -18.728-113.811 1.00 52.84 B
ATOM 5473 CB ALA B 67 -42.365 -20.012-114.621 1.00 52.70 B
ATOM 5474 C ALA B 67 -43.432 -18.930-112.647 1.00 53.22 B
ATOM 5475 O ALA B 67 -44.400 -18.182-112.476 1.00 52.93 B
ATOM 5476 N TRP B 68 -43.139 -19.948-111.845 1.00 53.86 B
ATOM 5477 CA TRP B 68 -43.946 -20.270-110.679 1.00 54.39 B
ATOM 5478 CB TRP B 68 -43.308 -21.408-109.905 1.00 53.62 B
ATOM 5479 CG TRP B 68 -43.258 -22.646-110.700 1.00 53.60 B
ATOM 5480 CD2 TRP B 68 -44.245 -23.681-110.720 1.00 54.03 B
ATOM 5481 CE2 TRP B 68 -43.830 -24.634-111.675 1.00 54.11 B
ATOM 5482 CE3 TRP B 68 -45.446 -23.893-110.023 1.00 53.39 B
ATOM 5483 CD1 TRP B 68 -42.310 -22.996-111.610 1.00 53.21 B
ATOM 5484 NE1 TRP B 68 -42.646 -24.189-112.203 1.00 53.29 B
ATOM 5485 CZ2 TRP B 68 -44.575 -25.791-111.955 1.00 53.76 B
ATOM 5486 CZ3 TRP B 68 -46.185 -25.041-110.298 1.00 53.38 B
ATOM 5487 CH2 TRP B 68 -45.745 -25.976-111.258 1.00 54.05 B
ATOM 5488 C TRP B 68 -44.100 -19.072-109.770 1.00 54.62 B
ATOM 5489 O TRP B 68 -45.218 -18.674-109.449 1.00 55.22 B
ATOM 5490 N GLY B 69 -42.969 -18.506-109.359 1.00 54.53 B
ATOM 5491 CA GLY B 69 -42.987 -17.350-108.484 1.00 54.46 B
ATOM 5492 C GLY B 69 -43.985 -16.302-108.932 1.00 54.90 B
ATOM 5493 O GLY B 69 -44.798 -15.820-108.140 1.00 54.98 B
ATOM 5494 N ALA B 70 -43.918 -15.942-110.212 1.00 55.33 B
ATOM 5495 CA ALA B 70 -44.846 -14.949-110.737 1.00 55.94 B
ATOM 5496 CB ALA B 70 -44.465 -14.565-112.159 1.00 54.48 B
ATOM 5497 C ALA B 70 -46.283 -15.456-110.689 1.00 56.35 B
ATOM 5498 O ALA B 70 -47.195 -14.723-110.402 1.00 56.93 B
ATOM 5499 N LYS B 71 -46.455 -16.741-110.980 1.00 56.48 B
ATOM 5500 CA LYS B 71 -47.760 -17.384-110.871 1.00 57.25 B
ATOM 5501 CB LYS B 71 -47.676 -18.845-111.314 1.00 57.24 B
ATOM 5502 CG LYS B 71 -49.026 -19.494-111.574 1.00 58.19 B
ATOM 5503 CD LYS B 71 -49.706 -18.887-112.790 1.00 59.03 B
ATOM 5504 CE LYS B 71 -50.937 -19.684-113.189 1.00 60.21 B

ATOM 5505 NZ LYS B 71 -51.728 -18.991-114.243 1.00 61.81 B
ATOM 5506 C LYS B 71 -48.299 -17.298-109.447 1.00 58.14 B
ATOM 5507 O LYS B 71 -49.313 -16.646-109.194 1.00 58.38 B
ATOM 5508 N ALA B 72 -47.615 -17.961-108.520 1.00 58.44 B
ATOM 5509 CA ALA B 72 -47.947 -17.859-107.103 1.00 58.43 B
ATOM 5510 CB ALA B 72 -46.757 -18.269-106.250 1.00 58.00 B
ATOM 5511 C ALA B 72 -48.401 -16.448-106.744 1.00 59.21 B
ATOM 5512 O ALA B 72 -49.500 -16.254-106.220 1.00 59.26 B
ATOM 5513 N LYS B 73 -47.552 -15.468-107.029 1.00 60.84 B
ATOM 5514 CA LYS B 73 -47.935 -14.065-106.920 1.00 63.02 B
ATOM 5515 CB LYS B 73 -46.831 -13.163-107.475 1.00 63.27 B
ATOM 5516 CG LYS B 73 -45.547 -13.183-106.662 1.00 64.91 B
ATOM 5517 CD LYS B 73 -45.072 -11.773-106.347 1.00 65.70 B
ATOM 5518 CE LYS B 73 -43.562 -11.657-106.474 1.00 65.97 B
ATOM 5519 NZ LYS B 73 -43.125 -11.648-107.898 1.00 66.77 B
ATOM 5520 C LYS B 73 -49.248 -13.794-107.645 1.00 63.67 B
ATOM 5521 O LYS B 73 -50.252 -13.444-107.024 1.00 64.03 B
ATOM 5522 N ALA B 74 -49.233 -13.959-108.963 1.00 64.36 B
ATOM 5523 CA ALA B 74 -50.398 -13.659-109.786 1.00 65.23 B
ATOM 5524 CB ALA B 74 -50.208 -14.202-111.194 1.00 65.04 B
ATOM 5525 C ALA B 74 -51.672 -14.220-109.164 1.00 66.04 B
ATOM 5526 O ALA B 74 -52.680 -13.522-109.052 1.00 66.53 B
ATOM 5527 N LEU B 75 -51.620 -15.486-108.763 1.00 66.61 B
ATOM 5528 CA LEU B 75 -52.812 -16.199-108.320 1.00 67.26 B
ATOM 5529 CB LEU B 75 -52.581 -17.710-108.364 1.00 66.75 B
ATOM 5530 CG LEU B 75 -53.155 -18.449-109.574 1.00 66.11 B
ATOM 5531 CD1 LEU B 75 -52.414 -18.057-110.844 1.00 66.73 B
ATOM 5532 CD2 LEU B 75 -53.102 -19.954-109.362 1.00 65.62 B
ATOM 5533 C LEU B 75 -53.222 -15.771-106.914 1.00 68.72 B
ATOM 5534 O LEU B 75 -54.392 -15.487-106.658 1.00 68.73 B
ATOM 5535 N TYR B 76 -52.255 -15.732-106.003 1.00 70.14 B
ATOM 5536 CA TYR B 76 -52.531 -15.372-104.617 1.00 71.22 B
ATOM 5537 CB TYR B 76 -52.842 -16.619-103.786 1.00 69.54 B
ATOM 5538 CG TYR B 76 -53.005 -17.880-104.604 1.00 68.51 B

ATOM 5539 CD1 TYR B 76 -51.897 -18.598-105.033 1.00 67.40 B
ATOM 5540 CE1 TYR B 76 -52.041 -19.753-105.781 1.00 67.84 B
ATOM 5541 CD2 TYR B 76 -54.264 -18.352-104.944 1.00 69.41 B
ATOM 5542 CE2 TYR B 76 -54.418 -19.505-105.690 1.00 68.68 B
ATOM 5543 CZ TYR B 76 -53.303 -20.201-106.106 1.00 68.39 B
ATOM 5544 OH TYR B 76 -53.450 -21.350-106.850 1.00 68.32 B
ATOM 5545 C TYR B 76 -51.369 -14.603-103.996 1.00 72.88 B
ATOM 5546 O TYR B 76 -50.439 -15.198-103.451 1.00 74.95 B
ATOM 5547 N GLU B 77 -51.457 -13.289-104.081 1.00 73.68 B
ATOM 5548 CA GLU B 77 -50.807 -12.427-103.101 1.00 74.63 B
ATOM 5549 CB GLU B 77 -49.519 -11.836-103.678 1.00 72.74 B
ATOM 5550 CG GLU B 77 -49.258 -10.397-103.268 1.00 72.09 B
ATOM 5551 CD GLU B 77 -47.907 -9.892-103.736 0.00 72.26 B
ATOM 5552 OE1 GLU B 77 -47.168 -10.672-104.373 0.00 72.20 B
ATOM 5553 OE2 GLU B 77 -47.584 -8.716-103.467 0.00 72.20 B
ATOM 5554 C GLU B 77 -51.737 -11.309-102.643 1.00 75.85 B
ATOM 5555 O GLU B 77 -51.316 -10.382-101.952 1.00 76.28 B
ATOM 5556 N PRO B 78 -52.977 -11.393-103.032 1.00 76.51 B
ATOM 5557 CD PRO B 78 -53.276 -11.091-104.443 1.00 76.61 B
ATOM 5558 CA PRO B 78 -54.085 -11.029-102.143 1.00 75.80 B
ATOM 5559 CB PRO B 78 -55.243 -10.797-103.115 1.00 75.82 B
ATOM 5560 CG PRO B 78 -54.585 -10.353-104.374 1.00 76.15 B
ATOM 5561 C PRO B 78 -54.430 -12.155-101.175 1.00 74.94 B
ATOM 5562 O PRO B 78 -55.145 -13.087-101.543 1.00 74.00 B
ATOM 5563 N ALA B 79 -53.923 -12.063 -99.950 1.00 74.56 B
ATOM 5564 CA ALA B 79 -54.173 -13.091 -98.932 1.00 74.34 B
ATOM 5565 CB ALA B 79 -55.666 -13.080 -98.520 1.00 74.65 B
ATOM 5566 C ALA B 79 -53.723 -14.543 -99.170 1.00 73.65 B
ATOM 5567 O ALA B 79 -54.534 -15.427 -99.477 1.00 73.27 B
ATOM 5568 N TRP B 80 -52.416 -14.763 -99.027 1.00 72.73 B
ATOM 5569 CA TRP B 80 -51.819 -16.106 -99.099 1.00 70.85 B
ATOM 5570 CB TRP B 80 -50.666 -16.168-100.107 1.00 70.16 B
ATOM 5571 CG TRP B 80 -49.599 -15.166 -99.822 1.00 69.64 B
ATOM 5572 CD2 TRP B 80 -48.476 -15.338 -98.946 1.00 69.59 B

ATOM 5573 CE2 TRP B 80 -47.746 -14.116 -98.950 1.00 69.38 B
ATOM 5574 CE3 TRP B 80 -48.009 -16.407 -98.156 1.00 69.30 B
ATOM 5575 CD1 TRP B 80 -49.519 -13.889 -100.308 1.00 69.39 B
ATOM 5576 NE1 TRP B 80 -48.404 -13.249 -99.789 1.00 69.33 B
ATOM 5577 CZ2 TRP B 80 -46.573 -13.933 -98.192 1.00 69.58 B
ATOM 5578 CZ3 TRP B 80 -46.840 -16.229 -97.401 1.00 69.01 B
ATOM 5579 CH2 TRP B 80 -46.134 -14.995 -97.429 1.00 69.74 B
ATOM 5580 C TRP B 80 -51.278 -16.146 -97.669 1.00 69.95 B
ATOM 5581 O TRP B 80 -50.867 -17.184 -97.146 1.00 70.22 B
ATOM 5582 N GLN B 81 -51.291 -14.946 -97.077 1.00 68.65 B
ATOM 5583 CA GLN B 81 -50.878 -14.682 -95.695 1.00 66.69 B
ATOM 5584 CB GLN B 81 -50.405 -13.224 -95.548 1.00 65.39 B
ATOM 5585 CG GLN B 81 -49.116 -12.950 -96.320 1.00 64.47 B
ATOM 5586 CD GLN B 81 -48.756 -11.463 -96.372 1.00 64.63 B
ATOM 5587 OE1 GLN B 81 -49.619 -10.611 -96.665 1.00 64.56 B
ATOM 5588 NE2 GLN B 81 -47.472 -11.142 -96.105 1.00 64.97 B
ATOM 5589 C GLN B 81 -52.101 -14.925 -94.815 1.00 65.94 B
ATOM 5590 O GLN B 81 -51.997 -14.961 -93.587 1.00 66.29 B
ATOM 5591 N ASN B 82 -53.253 -15.078 -95.472 1.00 64.93 B
ATOM 5592 CA ASN B 82 -54.517 -15.346 -94.788 1.00 64.58 B
ATOM 5593 CB ASN B 82 -55.507 -14.184 -94.975 1.00 64.45 B
ATOM 5594 CG ASN B 82 -55.346 -13.110 -93.898 1.00 65.32 B
ATOM 5595 OD1 ASN B 82 -55.301 -13.428 -92.691 1.00 65.52 B
ATOM 5596 ND2 ASN B 82 -55.268 -11.832 -94.318 1.00 65.10 B
ATOM 5597 C ASN B 82 -55.167 -16.652 -95.237 1.00 64.34 B
ATOM 5598 O ASN B 82 -56.341 -16.672 -95.596 1.00 64.53 B
ATOM 5599 N PHE B 83 -54.388 -17.731 -95.236 1.00 64.08 B
ATOM 5600 CA PHE B 83 -54.896 -19.047 -95.602 1.00 63.81 B
ATOM 5601 CB PHE B 83 -53.910 -19.802 -96.495 1.00 65.00 B
ATOM 5602 CG PHE B 83 -53.864 -19.315 -97.916 1.00 66.37 B
ATOM 5603 CD1 PHE B 83 -55.026 -18.926 -98.576 1.00 66.97 B
ATOM 5604 CD2 PHE B 83 -52.662 -19.307 -98.620 1.00 66.72 B
ATOM 5605 CE1 PHE B 83 -54.992 -18.538 -99.924 1.00 66.50 B
ATOM 5606 CE2 PHE B 83 -52.618 -18.924 -99.963 1.00 66.08 B

ATOM 5607 CZ PHE B 83 -53.783 -18.538-100.614 1.00 65.97 B
ATOM 5608 C PHE B 83 -55.098 -19.834 -94.312 1.00 63.24 B
ATOM 5609 O PHE B 83 -54.177 -19.943 -93.496 1.00 62.79 B
ATOM 5610 N ALA B 84 -56.302 -20.376 -94.134 1.00 62.37 B
ATOM 5611 CA ALA B 84 -56.634 -21.145 -92.941 1.00 61.04 B
ATOM 5612 CB ALA B 84 -57.897 -21.958 -93.178 1.00 59.69 B
ATOM 5613 C ALA B 84 -55.471 -22.060 -92.597 1.00 60.47 B
ATOM 5614 O ALA B 84 -55.125 -22.224 -91.427 1.00 60.60 B
ATOM 5615 N ASP B 85 -54.856 -22.626 -93.631 1.00 59.57 B
ATOM 5616 CA ASP B 85 -53.725 -23.535 -93.469 1.00 58.77 B
ATOM 5617 CB ASP B 85 -53.647 -24.474 -94.677 1.00 58.50 B
ATOM 5618 CG ASP B 85 -52.538 -25.499 -94.553 1.00 58.22 B
ATOM 5619 OD1 ASP B 85 -52.469 -26.408 -95.406 1.00 58.02 B
ATOM 5620 OD2 ASP B 85 -51.729 -25.399 -93.609 1.00 58.06 B
ATOM 5621 C ASP B 85 -52.383 -22.811 -93.282 1.00 58.05 B
ATOM 5622 O ASP B 85 -51.975 -22.006 -94.119 1.00 58.00 B
ATOM 5623 N PRO B 86 -51.676 -23.103 -92.176 1.00 57.25 B
ATOM 5624 CD PRO B 86 -52.109 -23.982 -91.068 1.00 56.47 B
ATOM 5625 CA PRO B 86 -50.382 -22.487 -91.868 1.00 55.96 B
ATOM 5626 CB PRO B 86 -50.212 -22.790 -90.384 1.00 55.63 B
ATOM 5627 CG PRO B 86 -50.842 -24.147 -90.261 1.00 55.32 B
ATOM 5628 C PRO B 86 -49.204 -22.997 -92.706 1.00 55.16 B
ATOM 5629 O PRO B 86 -48.350 -22.212 -93.124 1.00 55.12 B
ATOM 5630 N GLN B 87 -49.157 -24.307 -92.943 1.00 54.06 B
ATOM 5631 CA GLN B 87 -48.076 -24.913 -93.721 1.00 53.10 B
ATOM 5632 CB GLN B 87 -48.124 -26.434 -93.620 1.00 53.20 B
ATOM 5633 CG GLN B 87 -47.661 -26.948 -92.281 1.00 54.29 B
ATOM 5634 CD GLN B 87 -47.323 -28.413 -92.323 1.00 55.03 B
ATOM 5635 OE1 GLN B 87 -46.966 -28.944 -93.375 1.00 54.19 B
ATOM 5636 NE2 GLN B 87 -47.404 -29.076 -91.174 1.00 56.03 B
ATOM 5637 C GLN B 87 -48.101 -24.520 -95.182 1.00 52.82 B
ATOM 5638 O GLN B 87 -47.055 -24.426 -95.819 1.00 51.91 B
ATOM 5639 N LEU B 88 -49.304 -24.310 -95.707 1.00 52.94 B
ATOM 5640 CA LEU B 88 -49.483 -23.920 -97.097 1.00 52.51 B

ATOM 5641 CB LEU B 88 -50.968 -23.945 -97.463 1.00 52.31 B
ATOM 5642 CG LEU B 88 -51.375 -23.696 -98.916 1.00 51.90 B
ATOM 5643 CD1 LEU B 88 -51.359 -22.205 -99.198 1.00 51.78 B
ATOM 5644 CD2 LEU B 88 -50.448 -24.461 -99.858 1.00 50.60 B
ATOM 5645 C LEU B 88 -48.934 -22.521 -97.224 1.00 52.55 B
ATOM 5646 O LEU B 88 -48.169 -22.227 -98.141 1.00 53.01 B
ATOM 5647 N ARG B 89 -49.324 -21.657 -96.292 1.00 52.50 B
ATOM 5648 CA ARG B 89 -48.838 -20.287 -96.290 1.00 52.36 B
ATOM 5649 CB ARG B 89 -49.257 -19.558 -95.015 1.00 53.45 B
ATOM 5650 CG ARG B 89 -50.694 -19.078 -94.999 1.00 56.38 B
ATOM 5651 CD ARG B 89 -51.015 -18.361 -93.692 1.00 58.61 B
ATOM 5652 NE ARG B 89 -50.727 -19.213 -92.536 1.00 61.93 B
ATOM 5653 CZ ARG B 89 -50.904 -18.858 -91.264 1.00 63.12 B
ATOM 5654 NH1 ARG B 89 -51.375 -17.656 -90.956 1.00 63.76 B
ATOM 5655 NH2 ARG B 89 -50.601 -19.711 -90.296 1.00 63.67 B
ATOM 5656 C ARG B 89 -47.318 -20.319 -96.375 1.00 51.93 B
ATOM 5657 O ARG B 89 -46.722 -19.646 -97.216 1.00 52.75 B
ATOM 5658 N ALA B 90 -46.686 -21.110 -95.510 1.00 51.05 B
ATOM 5659 CA ALA B 90 -45.231 -21.199 -95.521 1.00 50.06 B
ATOM 5660 CB ALA B 90 -44.754 -22.219 -94.498 1.00 49.30 B
ATOM 5661 C ALA B 90 -44.712 -21.554 -96.910 1.00 48.77 B
ATOM 5662 O ALA B 90 -43.669 -21.057 -97.349 1.00 47.78 B
ATOM 5663 N ILE B 91 -45.447 -22.401 -97.639 1.00 47.76 B
ATOM 5664 CA ILE B 91 -45.040 -22.814 -98.976 1.00 46.12 B
ATOM 5665 CB ILE B 91 -45.765 -24.106 -99.400 1.00 44.36 B
ATOM 5666 CG2 ILE B 91 -45.402 -24.468 -100.831 1.00 43.40 B
ATOM 5667 CG1 ILE B 91 -45.356 -25.245 -98.468 1.00 43.64 B
ATOM 5668 CD1 ILE B 91 -46.077 -26.540 -98.728 1.00 42.97 B
ATOM 5669 C ILE B 91 -45.257 -21.736 -100.039 1.00 46.70 B
ATOM 5670 O ILE B 91 -44.457 -21.617 -100.964 1.00 47.53 B
ATOM 5671 N ILE B 92 -46.318 -20.946 -99.914 1.00 46.42 B
ATOM 5672 CA ILE B 92 -46.579 -19.893 -100.897 1.00 46.92 B
ATOM 5673 CB ILE B 92 -47.989 -19.267 -100.713 1.00 46.13 B
ATOM 5674 CG2 ILE B 92 -48.169 -18.071 -101.643 1.00 45.20 B

ATOM 5675 CG1 ILE B 92 -49.057 -20.318-101.008 1.00 45.96 B
ATOM 5676 CD1 ILE B 92 -48.913 -20.979-102.368 1.00 44.82 B
ATOM 5677 C ILE B 92 -45.540 -18.775-100.841 1.00 47.32 B
ATOM 5678 O ILE B 92 -45.041 -18.320-101.872 1.00 47.67 B
ATOM 5679 N GLY B 93 -45.217 -18.334 -99.633 1.00 47.82 B
ATOM 5680 CA GLY B 93 -44.249 -17.264 -99.474 1.00 47.90 B
ATOM 5681 C GLY B 93 -42.856 -17.673 -99.899 1.00 47.72 B
ATOM 5682 O GLY B 93 -42.056 -16.831-100.311 1.00 47.80 B
ATOM 5683 N ALA B 94 -42.562 -18.965 -99.797 1.00 47.39 B
ATOM 5684 CA ALA B 94 -41.247 -19.482-100.156 1.00 47.90 B
ATOM 5685 CB ALA B 94 -41.007 -20.830 -99.492 1.00 47.50 B
ATOM 5686 C ALA B 94 -41.099 -19.598-101.669 1.00 48.08 B
ATOM 5687 O ALA B 94 -39.989 -19.709-102.187 1.00 48.55 B
ATOM 5688 N VAL B 95 -42.227 -19.572-102.372 1.00 47.56 B
ATOM 5689 CA VAL B 95 -42.230 -19.727-103.821 1.00 46.85 B
ATOM 5690 CB VAL B 95 -43.375 -20.646-104.287 1.00 46.92 B
ATOM 5691 CG1 VAL B 95 -43.196 -21.019-105.750 1.00 47.97 B
ATOM 5692 CG2 VAL B 95 -43.446 -21.891-103.416 1.00 46.06 B
ATOM 5693 C VAL B 95 -42.360 -18.376-104.518 1.00 46.10 B
ATOM 5694 O VAL B 95 -41.969 -18.225-105.676 1.00 45.83 B
ATOM 5695 N ARG B 96 -42.810 -17.400-103.769 1.00 45.40 B
ATOM 5696 CA ARG B 96 -42.858 -16.064-104.247 1.00 46.52 B
ATOM 5697 CB ARG B 96 -44.099 -15.340-103.779 1.00 47.87 B
ATOM 5698 CG ARG B 96 -44.292 -15.226-102.355 1.00 50.18 B
ATOM 5699 CD ARG B 96 -45.131 -14.079-101.929 1.00 51.91 B
ATOM 5700 NE ARG B 96 -44.301 -12.945-101.680 1.00 54.40 B
ATOM 5701 CZ ARG B 96 -44.690 -11.709-101.783 1.00 55.18 B
ATOM 5702 NH1 ARG B 96 -43.813 -10.757-101.581 1.00 55.24 B
ATOM 5703 NH2 ARG B 96 -45.943 -11.408-102.088 1.00 54.73 B
ATOM 5704 C ARG B 96 -41.643 -15.296-103.946 1.00 46.01 B
ATOM 5705 O ARG B 96 -41.553 -14.121-104.150 1.00 45.68 B
ATOM 5706 N THR B 97 -40.667 -16.006-103.470 1.00 45.22 B
ATOM 5707 CA THR B 97 -39.344 -15.436-103.249 1.00 43.82 B
ATOM 5708 CB THR B 97 -38.795 -15.865-101.875 1.00 43.46 B

ATOM 5709 OG1 THR B 97 -39.387 -15.060-100.848 1.00 43.97 B
ATOM 5710 CG2 THR B 97 -37.314 -15.536-101.767 1.00 43.77 B
ATOM 5711 C THR B 97 -38.375 -15.847-104.352 1.00 42.65 B
ATOM 5712 O THR B 97 -37.635 -16.820-104.209 1.00 42.62 B
ATOM 5713 N LEU B 98 -38.386 -15.100-105.451 1.00 40.69 B
ATOM 5714 CA LEU B 98 -37.612 -15.465-106.633 1.00 38.65 B
ATOM 5715 CB LEU B 98 -37.943 -14.517-107.788 1.00 39.37 B
ATOM 5716 CG LEU B 98 -39.395 -14.062-107.982 1.00 40.00 B
ATOM 5717 CD1 LEU B 98 -39.507 -13.285-109.281 1.00 39.79 B
ATOM 5718 CD2 LEU B 98 -40.325 -15.256-108.009 1.00 40.11 B
ATOM 5719 C LEU B 98 -36.105 -15.494-106.419 1.00 36.62 B
ATOM 5720 O LEU B 98 -35.401 -16.341-106.972 1.00 35.19 B
ATOM 5721 N GLY B 99 -35.599 -14.567-105.623 1.00 35.46 B
ATOM 5722 CA GLY B 99 -34.171 -14.550-105.386 1.00 35.63 B
ATOM 5723 C GLY B 99 -33.432 -13.971-106.572 1.00 35.30 B
ATOM 5724 O GLY B 99 -33.822 -12.920-107.085 1.00 35.61 B
ATOM 5725 N SER B 100 -32.372 -14.641-107.018 1.00 34.26 B
ATOM 5726 CA SER B 100 -31.606 -14.130-108.148 1.00 34.02 B
ATOM 5727 CB SER B 100 -30.299 -14.913-108.319 1.00 32.58 B
ATOM 5728 OG SER B 100 -30.528 -16.292-108.463 1.00 32.34 B
ATOM 5729 C SER B 100 -32.403 -14.135-109.452 1.00 35.22 B
ATOM 5730 O SER B 100 -31.966 -13.558-110.453 1.00 36.47 B
ATOM 5731 N ALA B 101 -33.579 -14.766-109.433 1.00 35.34 B
ATOM 5732 CA ALA B 101 -34.442 -14.838-110.605 1.00 34.69 B
ATOM 5733 CB ALA B 101 -35.532 -15.851-110.372 1.00 32.59 B
ATOM 5734 C ALA B 101 -35.052 -13.482-110.980 1.00 35.10 B
ATOM 5735 O ALA B 101 -35.535 -13.307-112.091 1.00 34.17 B
ATOM 5736 N ASN B 102 -35.021 -12.531-110.105 1.00 36.09 B
ATOM 5737 CA ASN B 102 -35.556 -11.262-110.413 1.00 38.24 B
ATOM 5738 CB ASN B 102 -35.732 -10.476-109.154 1.00 40.55 B
ATOM 5739 CG ASN B 102 -36.581 -11.121-108.177 1.00 43.37 B
ATOM 5740 OD1 ASN B 102 -37.709 -10.793-108.001 1.00 43.56 B
ATOM 5741 ND2 ASN B 102 -36.016 -11.979-107.465 1.00 44.99 B
ATOM 5742 C ASN B 102 -34.614 -10.481-111.250 1.00 38.50 B

ATOM 5743 O ASN B 102 -34.892 -9.394-111.612 1.00 38.68 B
ATOM 5744 N LEU B 103 -33.452 -11.023-111.477 1.00 38.33 B
ATOM 5745 CA LEU B 103 -32.419 -10.435-112.330 1.00 38.19 B
ATOM 5746 CB LEU B 103 -31.048 -10.922-111.879 1.00 38.90 B
ATOM 5747 CG LEU B 103 -30.458 -10.510-110.540 1.00 38.35 B
ATOM 5748 CD1 LEU B 103 -29.236 -11.377-110.306 1.00 39.52 B
ATOM 5749 CD2 LEU B 103 -30.077 -9.035-110.540 1.00 37.04 B
ATOM 5750 C LEU B 103 -32.559 -10.781-113.804 1.00 38.46 B
ATOM 5751 O LEU B 103 -32.816 -11.926-114.145 1.00 40.19 B
ATOM 5752 N PRO B 104 -32.356 -9.804-114.701 1.00 38.13 B
ATOM 5753 CD PRO B 104 -32.082 -8.389-114.407 1.00 37.73 B
ATOM 5754 CA PRO B 104 -32.454 -10.020-116.154 1.00 37.48 B
ATOM 5755 CB PRO B 104 -32.084 -8.659-116.735 1.00 37.53 B
ATOM 5756 CG PRO B 104 -32.529 -7.722-115.694 1.00 38.10 B
ATOM 5757 C PRO B 104 -31.487 -11.110-116.631 1.00 37.39 B
ATOM 5758 O PRO B 104 -30.482 -11.395-115.979 1.00 38.14 B
ATOM 5759 N LEU B 105 -31.790 -11.701-117.778 1.00 37.39 B
ATOM 5760 CA LEU B 105 -30.965 -12.759-118.352 1.00 37.58 B
ATOM 5761 CB LEU B 105 -31.298 -12.909-119.839 1.00 37.86 B
ATOM 5762 CG LEU B 105 -30.881 -14.144-120.664 1.00 37.80 B
ATOM 5763 CD1 LEU B 105 -30.401 -13.654-122.037 1.00 38.43 B
ATOM 5764 CD2 LEU B 105 -29.790 -14.968-119.972 1.00 36.90 B
ATOM 5765 C LEU B 105 -29.471 -12.472-118.202 1.00 37.40 B
ATOM 5766 O LEU B 105 -28.716 -13.266-117.640 1.00 37.08 B
ATOM 5767 N ALA B 106 -29.054 -11.323-118.713 1.00 37.50 B
ATOM 5768 CA ALA B 106 -27.650 -10.934-118.668 1.00 37.81 B
ATOM 5769 CB ALA B 106 -27.465 -9.603-119.396 1.00 39.21 B
ATOM 5770 C ALA B 106 -27.057 -10.852-117.261 1.00 37.11 B
ATOM 5771 O ALA B 106 -25.964 -11.372-117.015 1.00 35.72 B
ATOM 5772 N LYS B 107 -27.794 -10.344-116.311 1.00 36.02 B
ATOM 5773 CA LYS B 107 -27.252 -10.174-115.003 1.00 34.66 B
ATOM 5774 CB LYS B 107 -28.053 -9.192-114.258 1.00 32.76 B
ATOM 5775 CG LYS B 107 -27.463 -7.847-114.235 1.00 32.04 B
ATOM 5776 CD LYS B 107 -28.495 -6.846-114.113 1.00 32.22 B

ATOM 5777 CE LYS B 107 -27.990 -5.562-113.602 1.00 32.16 B
ATOM 5778 NZ LYS B 107 -29.042 -4.713-113.064 1.00 33.81 B
ATOM 5779 C LYS B 107 -27.237 -11.426-114.283 1.00 34.84 B
ATOM 5780 O LYS B 107 -26.344 -11.699-113.561 1.00 34.84 B
ATOM 5781 N ARG B 108 -28.206 -12.262-114.562 1.00 34.86 B
ATOM 5782 CA ARG B 108 -28.226 -13.599-113.976 1.00 34.64 B
ATOM 5783 CB ARG B 108 -29.373 -14.446-114.532 1.00 35.23 B
ATOM 5784 CG ARG B 108 -30.768 -14.052-114.087 1.00 37.13 B
ATOM 5785 CD ARG B 108 -31.790 -15.043-114.636 1.00 37.58 B
ATOM 5786 NE ARG B 108 -33.166 -14.586-114.469 1.00 38.63 B
ATOM 5787 CZ ARG B 108 -34.224 -15.231-114.947 1.00 40.00 B
ATOM 5788 NH1 ARG B 108 -34.056 -16.366-115.622 1.00 40.70 B
ATOM 5789 NH2 ARG B 108 -35.445 -14.739-114.761 1.00 39.30 B
ATOM 5790 C ARG B 108 -26.933 -14.306-114.311 1.00 33.82 B
ATOM 5791 O ARG B 108 -26.312 -14.905-113.451 1.00 35.13 B
ATOM 5792 N GLN B 109 -26.449 -14.157-115.483 1.00 33.17 B
ATOM 5793 CA GLN B 109 -25.322 -14.882-115.884 1.00 33.27 B
ATOM 5794 CB GLN B 109 -25.172 -14.823-117.384 1.00 35.11 B
ATOM 5795 CG GLN B 109 -26.411 -14.925-118.182 1.00 39.24 B
ATOM 5796 CD GLN B 109 -26.188 -14.747-119.634 1.00 41.81 B
ATOM 5797 OE1 GLN B 109 -26.946 -15.170-120.458 1.00 42.07 B
ATOM 5798 NE2 GLN B 109 -25.137 -14.111-119.945 1.00 44.57 B
ATOM 5799 C GLN B 109 -24.106 -14.343-115.278 1.00 31.70 B
ATOM 5800 O GLN B 109 -23.140 -15.030-115.140 1.00 29.58 B
ATOM 5801 N GLN B 110 -24.121 -13.060-114.989 1.00 30.31 B
ATOM 5802 CA GLN B 110 -23.011 -12.423-114.276 1.00 28.78 B
ATOM 5803 CB GLN B 110 -23.194 -10.906-114.218 1.00 28.75 B
ATOM 5804 CG GLN B 110 -23.096 -10.203-115.562 1.00 29.71 B
ATOM 5805 CD GLN B 110 -23.256 -8.699-115.448 1.00 30.63 B
ATOM 5806 OE1 GLN B 110 -22.498 -8.035-114.749 1.00 32.66 B
ATOM 5807 NE2 GLN B 110 -24.247 -8.155-116.136 1.00 30.94 B
ATOM 5808 C GLN B 110 -23.014 -12.992-112.871 1.00 28.29 B
ATOM 5809 O GLN B 110 -21.981 -13.431-112.353 1.00 27.01 B
ATOM 5810 N TYR B 111 -24.196 -12.987-112.264 1.00 28.31 B

ATOM 5811 CA TYR B 111 -24.377 -13.527-110.930 1.00 28.17 B
ATOM 5812 CB TYR B 111 -25.856 -13.544-110.564 1.00 29.89 B
ATOM 5813 CG TYR B 111 -26.084 -13.901-109.118 1.00 33.73 B
ATOM 5814 CD1 TYR B 111 -25.674 -13.037-108.098 1.00 35.22 B
ATOM 5815 CE1 TYR B 111 -25.836 -13.378-106.758 1.00 35.54 B
ATOM 5816 CD2 TYR B 111 -26.668 -15.118-108.757 1.00 34.56 B
ATOM 5817 CE2 TYR B 111 -26.834 -15.465-107.420 1.00 34.92 B
ATOM 5818 CZ TYR B 111 -26.412 -14.590-106.428 1.00 34.87 B
ATOM 5819 OH TYR B 111 -26.537 -14.930-105.108 1.00 33.82 B
ATOM 5820 C TYR B 111 -23.839 -14.951-110.893 1.00 27.36 B
ATOM 5821 O TYR B 111 -22.829 -15.223-110.246 1.00 25.91 B
ATOM 5822 N ASN B 112 -24.516 -15.850-111.601 1.00 26.45 B
ATOM 5823 CA ASN B 112 -24.120 -17.248-111.659 1.00 26.53 B
ATOM 5824 CB ASN B 112 -24.935 -18.014-112.710 1.00 26.18 B
ATOM 5825 CG ASN B 112 -26.433 -17.886-112.514 1.00 27.14 B
ATOM 5826 OD1 ASN B 112 -26.923 -17.746-111.400 1.00 28.72 B
ATOM 5827 ND2 ASN B 112 -27.170 -17.955-113.606 1.00 25.93 B
ATOM 5828 C ASN B 112 -22.638 -17.420-111.974 1.00 27.84 B
ATOM 5829 O ASN B 112 -22.025 -18.399-111.565 1.00 29.00 B
ATOM 5830 N ALA B 113 -22.056 -16.481-112.707 1.00 28.57 B
ATOM 5831 CA ALA B 113 -20.647 -16.600-113.053 1.00 28.33 B
ATOM 5832 CB ALA B 113 -20.361 -15.859-114.336 1.00 28.02 B
ATOM 5833 C ALA B 113 -19.766 -16.076-111.928 1.00 28.74 B
ATOM 5834 O ALA B 113 -18.699 -16.632-111.650 1.00 29.93 B
ATOM 5835 N LEU B 114 -20.205 -15.003-111.277 1.00 27.27 B
ATOM 5836 CA LEU B 114 -19.436 -14.457-110.171 1.00 23.99 B
ATOM 5837 CB LEU B 114 -20.108 -13.208-109.623 1.00 21.03 B
ATOM 5838 CG LEU B 114 -19.789 -11.931-110.386 1.00 18.99 B
ATOM 5839 CD1 LEU B 114 -20.527 -10.762-109.766 1.00 16.91 B
ATOM 5840 CD2 LEU B 114 -18.292 -11.697-110.355 1.00 18.53 B
ATOM 5841 C LEU B 114 -19.330 -15.516-109.085 1.00 24.15 B
ATOM 5842 O LEU B 114 -18.307 -15.628-108.410 1.00 23.67 B
ATOM 5843 N LEU B 115 -20.381 -16.312-108.930 1.00 23.42 B
ATOM 5844 CA LEU B 115 -20.366 -17.356-107.926 1.00 24.25 B

ATOM 5845 CB LEU B 115 -21.774 -17.933-107.742 1.00 23.35 B
ATOM 5846 CG LEU B 115 -22.804 -16.946-107.168 1.00 24.76 B
ATOM 5847 CD1 LEU B 115 -24.191 -17.539-107.268 1.00 24.18 B
ATOM 5848 CD2 LEU B 115 -22.472 -16.600-105.722 1.00 23.13 B
ATOM 5849 C LEU B 115 -19.355 -18.462-108.236 1.00 25.52 B
ATOM 5850 O LEU B 115 -18.517 -18.779-107.395 1.00 26.64 B
ATOM 5851 N SER B 116 -19.400 -19.035-109.435 1.00 25.75 B
ATOM 5852 CA SER B 116 -18.464 -20.115-109.750 1.00 27.89 B
ATOM 5853 CB SER B 116 -18.887 -20.908-111.007 1.00 29.85 B
ATOM 5854 OG SER B 116 -19.204 -20.089-112.116 1.00 32.83 B
ATOM 5855 C SER B 116 -17.023 -19.685-109.885 1.00 28.57 B
ATOM 5856 O SER B 116 -16.118 -20.495-109.665 1.00 29.06 B
ATOM 5857 N ASN B 117 -16.789 -18.424-110.241 1.00 28.87 B
ATOM 5858 CA ASN B 117 -15.413 -17.950-110.369 1.00 29.76 B
ATOM 5859 CB ASN B 117 -15.355 -16.651-111.165 1.00 32.05 B
ATOM 5860 CG ASN B 117 -15.284 -16.885-112.657 1.00 35.00 B
ATOM 5861 OD1 ASN B 117 -14.346 -17.513-113.163 1.00 36.45 B
ATOM 5862 ND2 ASN B 117 -16.279 -16.375-113.375 1.00 38.76 B
ATOM 5863 C ASN B 117 -14.772 -17.740-108.999 1.00 29.89 B
ATOM 5864 O ASN B 117 -13.598 -18.068-108.810 1.00 30.05 B
ATOM 5865 N MET B 118 -15.543 -17.199-108.049 1.00 28.94 B
ATOM 5866 CA MET B 118 -15.042 -16.961-106.697 1.00 27.77 B
ATOM 5867 CB MET B 118 -16.100 -16.267-105.828 1.00 27.42 B
ATOM 5868 CG MET B 118 -16.344 -14.803-106.136 1.00 25.18 B
ATOM 5869 SD MET B 118 -17.236 -13.945-104.812 1.00 25.98 B
ATOM 5870 CE MET B 118 -18.861 -14.689-104.875 1.00 21.78 B
ATOM 5871 C MET B 118 -14.696 -18.304-106.080 1.00 27.16 B
ATOM 5872 O MET B 118 -13.610 -18.495-105.537 1.00 25.49 B
ATOM 5873 N SER B 119 -15.644 -19.228-106.175 1.00 27.22 B
ATOM 5874 CA SER B 119 -15.475 -20.573-105.650 1.00 28.14 B
ATOM 5875 CB SER B 119 -16.713 -21.403-105.972 1.00 28.24 B
ATOM 5876 OG SER B 119 -16.556 -22.739-105.551 1.00 28.89 B
ATOM 5877 C SER B 119 -14.239 -21.214-106.266 1.00 28.98 B
ATOM 5878 O SER B 119 -13.468 -21.880-105.577 1.00 29.88 B

ATOM 5879 N ARG B 120 -14.055 -20.996-107.566 1.00 29.36 B
ATOM 5880 CA ARG B 120 -12.914 -21.531-108.294 1.00 29.46 B
ATOM 5881 CB ARG B 120 -13.060 -21.211-109.788 1.00 31.11 B
ATOM 5882 CG ARG B 120 -12.111 -21.983-110.714 1.00 33.43 B
ATOM 5883 CD ARG B 120 -10.970 -21.117-111.236 1.00 32.95 B
ATOM 5884 NE ARG B 120 -11.475 -19.949-111.950 1.00 34.34 B
ATOM 5885 CZ ARG B 120 -10.718 -18.908-112.281 1.00 37.43 B
ATOM 5886 NH1 ARG B 120 -9.425 -18.906-111.964 1.00 38.82 B
ATOM 5887 NH2 ARG B 120 -11.253 -17.854-112.895 1.00 37.48 B
ATOM 5888 C ARG B 120 -11.619 -20.933-107.746 1.00 28.97 B
ATOM 5889 O ARG B 120 -10.688 -21.653-107.400 1.00 28.04 B
ATOM 5890 N ILE B 121 -11.573 -19.610-107.662 1.00 29.72 B
ATOM 5891 CA ILE B 121 -10.399 -18.907-107.166 1.00 31.47 B
ATOM 5892 CB ILE B 121 -10.676 -17.401-107.103 1.00 30.68 B
ATOM 5893 CG2 ILE B 121 -9.508 -16.673-106.461 1.00 29.67 B
ATOM 5894 CG1 ILE B 121 -10.930 -16.875-108.515 1.00 29.18 B
ATOM 5895 CD1 ILE B 121 -11.517 -15.481-108.556 1.00 29.36 B
ATOM 5896 C ILE B 121 -9.963 -19.392-105.782 1.00 33.55 B
ATOM 5897 O ILE B 121 -8.773 -19.632-105.537 1.00 32.52 B
ATOM 5898 N TYR B 122 -10.936 -19.539-104.884 1.00 35.43 B
ATOM 5899 CA TYR B 122 -10.682 -19.978-103.515 1.00 36.24 B
ATOM 5900 CB TYR B 122 -11.979 -19.933-102.703 1.00 36.82 B
ATOM 5901 CG TYR B 122 -11.792 -20.310-101.246 1.00 39.78 B
ATOM 5902 CD1 TYR B 122 -11.296 -19.391-100.312 1.00 39.28 B
ATOM 5903 CE1 TYR B 122 -11.078 -19.763 -98.983 1.00 39.78 B
ATOM 5904 CD2 TYR B 122 -12.071 -21.605-100.806 1.00 40.82 B
ATOM 5905 CE2 TYR B 122 -11.858 -21.981 -99.483 1.00 40.96 B
ATOM 5906 CZ TYR B 122 -11.360 -21.066 -98.578 1.00 40.89 B
ATOM 5907 OH TYR B 122 -11.115 -21.483 -97.286 1.00 41.76 B
ATOM 5908 C TYR B 122 -10.070 -21.372-103.405 1.00 37.05 B
ATOM 5909 O TYR B 122 -9.058 -21.546-102.728 1.00 38.31 B
ATOM 5910 N SER B 123 -10.684 -22.360-104.062 1.00 37.62 B
ATOM 5911 CA SER B 123 -10.203 -23.747-104.024 1.00 37.93 B
ATOM 5912 CB SER B 123 -11.345 -24.715-104.345 1.00 38.45 B

ATOM 5913 OG SER B 123 -12.397 -24.608-103.399 1.00 41.52 B
ATOM 5914 C SER B 123 -9.046 -24.017-104.978 1.00 37.83 B
ATOM 5915 O SER B 123 -8.708 -25.170-105.234 1.00 39.02 B
ATOM 5916 N THR B 124 -8.435 -22.954-105.488 1.00 37.34 B
ATOM 5917 CA THR B 124 -7.327 -23.073-106.423 1.00 36.97 B
ATOM 5918 CB THR B 124 -7.713 -22.463-107.788 1.00 37.35 B
ATOM 5919 OG1 THR B 124 -8.637 -23.334-108.439 1.00 36.59 B
ATOM 5920 CG2 THR B 124 -6.488 -22.248-108.677 1.00 37.71 B
ATOM 5921 C THR B 124 -6.076 -22.374-105.911 1.00 37.32 B
ATOM 5922 O THR B 124 -4.965 -22.749-106.269 1.00 37.40 B
ATOM 5923 N ALA B 125 -6.265 -21.352-105.083 1.00 37.57 B
ATOM 5924 CA ALA B 125 -5.149 -20.586-104.538 1.00 37.41 B
ATOM 5925 CB ALA B 125 -5.650 -19.606-103.505 1.00 38.08 B
ATOM 5926 C ALA B 125 -4.103 -21.500-103.924 1.00 37.32 B
ATOM 5927 O ALA B 125 -4.435 -22.442-103.205 1.00 37.16 B
ATOM 5928 N LYS B 126 -2.862 -21.110-103.942 1.00 37.43 B
ATOM 5929 CA LYS B 126 -1.809 -21.991-103.613 1.00 38.28 B
ATOM 5930 CB LYS B 126 -1.254 -22.480-104.905 1.00 38.47 B
ATOM 5931 CG LYS B 126 -1.642 -23.827-105.250 1.00 37.76 B
ATOM 5932 CD LYS B 126 -1.822 -23.997-106.684 0.00 39.24 B
ATOM 5933 CE LYS B 126 -3.159 -24.689-107.003 0.00 40.00 B
ATOM 5934 NZ LYS B 126 -3.310 -25.229-108.400 1.00 41.87 B
ATOM 5935 C LYS B 126 -0.780 -21.121-103.019 1.00 39.38 B
ATOM 5936 O LYS B 126 -0.830 -19.981-103.274 1.00 39.61 B
ATOM 5937 N VAL B 127 0.186 -21.641-102.274 1.00 40.25 B
ATOM 5938 CA VAL B 127 1.262 -20.850-101.688 1.00 41.29 B
ATOM 5939 CB VAL B 127 1.231 -20.852-100.131 1.00 38.75 B
ATOM 5940 CG1 VAL B 127 2.331 -19.956 -99.595 1.00 34.32 B
ATOM 5941 CG2 VAL B 127 -0.115 -20.381 -99.622 1.00 37.27 B
ATOM 5942 C VAL B 127 2.590 -21.439-102.128 1.00 44.41 B
ATOM 5943 O VAL B 127 2.855 -22.605-101.874 1.00 44.51 B
ATOM 5944 N CYS B 128 3.417 -20.634-102.787 1.00 49.53 B
ATOM 5945 CA CYS B 128 4.728 -21.094-103.243 1.00 55.69 B
ATOM 5946 C CYS B 128 5.814 -20.453-102.401 1.00 59.00 B

ATOM 5947 O CYS B 128 5.624 -19.357-101.859 1.00 59.77 B
ATOM 5948 CB CYS B 128 4.961 -20.726-104.705 1.00 58.13 B
ATOM 5949 SG CYS B 128 3.552 -21.099-105.793 1.00 64.19 B
ATOM 5950 N LEU B 129 6.956 -21.132-102.304 1.00 62.86 B
ATOM 5951 CA LEU B 129 8.084 -20.640-101.514 1.00 66.84 B
ATOM 5952 CB LEU B 129 8.643 -21.776-100.654 1.00 65.97 B
ATOM 5953 CG LEU B 129 7.608 -22.564 -99.833 1.00 65.39 B
ATOM 5954 CD1 LEU B 129 6.840 -23.550-100.716 1.00 63.89 B
ATOM 5955 CD2 LEU B 129 8.326 -23.318 -98.736 1.00 66.31 B
ATOM 5956 C LEU B 129 9.177 -20.088-102.429 1.00 70.03 B
ATOM 5957 O LEU B 129 9.255 -20.475-103.597 1.00 71.38 B
ATOM 5958 N PRO B 130 10.009 -19.197-101.898 1.00 72.61 B
ATOM 5959 CD PRO B 130 9.934 -18.670-100.524 1.00 73.19 B
ATOM 5960 CA PRO B 130 10.985 -18.470-102.716 1.00 74.33 B
ATOM 5961 CB PRO B 130 11.720 -17.606-101.690 1.00 73.98 B
ATOM 5962 CG PRO B 130 10.729 -17.398-100.602 1.00 73.61 B
ATOM 5963 C PRO B 130 11.964 -19.417-103.401 1.00 76.13 B
ATOM 5964 O PRO B 130 12.729 -18.991-104.267 1.00 76.31 B
ATOM 5965 N ASN B 131 11.932 -20.690-103.020 1.00 78.25 B
ATOM 5966 CA ASN B 131 11.843 -21.775-103.990 1.00 80.47 B
ATOM 5967 CB ASN B 131 11.625 -23.113-103.281 1.00 80.79 B
ATOM 5968 CG ASN B 131 12.572 -24.192-103.768 1.00 81.80 B
ATOM 5969 OD1 ASN B 131 12.423 -24.711-104.874 1.00 82.36 B
ATOM 5970 ND2 ASN B 131 13.553 -24.535-102.942 1.00 82.32 B
ATOM 5971 C ASN B 131 10.742 -21.540-105.019 1.00 82.02 B
ATOM 5972 O ASN B 131 9.557 -21.534-104.684 1.00 83.75 B
ATOM 5973 N ALA B 132 11.141 -21.347-106.272 1.00 82.27 B
ATOM 5974 CA ALA B 132 10.229 -21.502-107.399 1.00 82.57 B
ATOM 5975 CB ALA B 132 8.823 -21.806-106.905 1.00 81.85 B
ATOM 5976 C ALA B 132 10.709 -22.593-108.350 1.00 83.10 B
ATOM 5977 O ALA B 132 10.441 -22.545-109.551 1.00 83.95 B
ATOM 5978 N ALA B 133 11.419 -23.575-107.806 1.00 83.24 B
ATOM 5979 CA ALA B 133 11.193 -24.971-108.160 1.00 82.83 B
ATOM 5980 CB ALA B 133 12.309 -25.846-107.610 1.00 82.51 B

ATOM 5981 C ALA B 133 9.837 -25.349-107.572 1.00 82.52 B
ATOM 5982 O ALA B 133 9.748 -25.789-106.426 1.00 82.68 B
ATOM 5983 N ALA B 134 8.785 -25.175-108.364 1.00 81.72 B
ATOM 5984 CA ALA B 134 7.421 -25.228-107.850 1.00 80.22 B
ATOM 5985 CB ALA B 134 6.423 -25.264-108.997 1.00 79.70 B
ATOM 5986 C ALA B 134 7.292 -26.480-106.990 1.00 79.10 B
ATOM 5987 O ALA B 134 7.320 -27.600-107.499 1.00 80.44 B
ATOM 5988 N ALA B 135 7.152 -26.282-105.683 1.00 75.95 B
ATOM 5989 CA ALA B 135 6.269 -27.113-104.873 1.00 72.56 B
ATOM 5990 CB ALA B 135 7.075 -28.142-104.096 1.00 72.03 B
ATOM 5991 C ALA B 135 5.430 -26.263-103.924 1.00 70.69 B
ATOM 5992 O ALA B 135 5.774 -26.102-102.753 1.00 72.07 B
ATOM 5993 N CYS B 136 4.330 -25.722-104.437 1.00 66.42 B
ATOM 5994 CA CYS B 136 3.487 -24.819-103.663 1.00 61.77 B
ATOM 5995 C CYS B 136 2.474 -25.593-102.825 1.00 57.93 B
ATOM 5996 O CYS B 136 2.082 -26.705-103.179 1.00 56.21 B
ATOM 5997 CB CYS B 136 2.765 -23.836-104.586 1.00 62.97 B
ATOM 5998 SG CYS B 136 3.772 -23.223-105.957 1.00 65.22 B
ATOM 5999 N TRP B 137 2.054 -24.997-101.714 1.00 54.83 B
ATOM 6000 CA TRP B 137 1.148 -25.664-100.780 1.00 51.24 B
ATOM 6001 CB TRP B 137 1.509 -25.329-99.335 1.00 50.75 B
ATOM 6002 CG TRP B 137 2.909 -25.621 -98.955 1.00 49.82 B
ATOM 6003 CD2 TRP B 137 3.713 -24.876 -98.040 1.00 50.08 B
ATOM 6004 CE2 TRP B 137 4.959 -25.533 -97.950 1.00 50.41 B
ATOM 6005 CE3 TRP B 137 3.502 -23.716 -97.283 1.00 50.57 B
ATOM 6006 CD1 TRP B 137 3.670 -26.666 -99.372 1.00 50.20 B
ATOM 6007 NE1 TRP B 137 4.905 -26.624 -98.775 1.00 50.22 B
ATOM 6008 CZ2 TRP B 137 5.999 -25.066 -97.132 1.00 51.03 B
ATOM 6009 CZ3 TRP B 137 4.537 -23.248 -96.464 1.00 50.81 B
ATOM 6010 CH2 TRP B 137 5.769 -23.924 -96.398 1.00 51.17 B
ATOM 6011 C TRP B 137 -0.306 -25.274-100.993 1.00 49.56 B
ATOM 6012 O TRP B 137 -0.607 -24.134-101.342 1.00 48.92 B
ATOM 6013 N SER B 138 -1.204 -26.227-100.771 1.00 47.87 B
ATOM 6014 CA SER B 138 -2.638 -25.997-100.910 1.00 47.70 B

ATOM 6015 CB SER B 138 -3.320 -27.248-101.451 1.00 49.86 B
ATOM 6016 OG SER B 138 -3.276 -28.303-100.498 1.00 51.82 B
ATOM 6017 C SER B 138 -3.179 -25.707 -99.518 1.00 46.54 B
ATOM 6018 O SER B 138 -2.448 -25.814 -98.542 1.00 46.69 B
ATOM 6019 N LEU B 139 -4.453 -25.353 -99.410 1.00 45.24 B
ATOM 6020 CA LEU B 139 -5.006 -25.077 -98.092 1.00 44.11 B
ATOM 6021 CB LEU B 139 -6.338 -24.327 -98.193 1.00 42.44 B
ATOM 6022 CG LEU B 139 -6.878 -23.775 -96.869 1.00 40.14 B
ATOM 6023 CD1 LEU B 139 -5.857 -22.843 -96.235 1.00 38.80 B
ATOM 6024 CD2 LEU B 139 -8.185 -23.038 -97.111 1.00 40.13 B
ATOM 6025 C LEU B 139 -5.186 -26.377 -97.306 1.00 43.65 B
ATOM 6026 O LEU B 139 -4.782 -26.467 -96.150 1.00 45.06 B
ATOM 6027 N ALA B 140 -5.820 -27.339 -97.917 1.00 43.12 B
ATOM 6028 CA ALA B 140 -5.973 -28.605 -97.308 1.00 43.98 B
ATOM 6029 CB ALA B 140 -7.346 -28.933 -97.215 1.00 43.65 B
ATOM 6030 C ALA B 140 -5.277 -29.648 -98.084 1.00 44.72 B
ATOM 6031 O ALA B 140 -5.759 -30.082 -99.069 1.00 43.99 B
ATOM 6032 N PRO B 141 -4.105 -30.049 -97.632 1.00 45.40 B
ATOM 6033 CD PRO B 141 -3.626 -31.230 -98.320 1.00 45.17 B
ATOM 6034 CA PRO B 141 -3.791 -30.166 -96.240 1.00 44.46 B
ATOM 6035 CB PRO B 141 -3.424 -31.569 -96.170 1.00 43.90 B
ATOM 6036 CG PRO B 141 -2.766 -31.716 -97.259 1.00 43.51 B
ATOM 6037 C PRO B 141 -2.557 -29.465 -95.988 1.00 43.98 B
ATOM 6038 O PRO B 141 -2.198 -29.186 -94.931 1.00 42.90 B
ATOM 6039 N ASP B 142 -1.811 -29.224 -96.996 1.00 44.16 B
ATOM 6040 CA ASP B 142 -0.531 -28.702 -96.718 1.00 44.45 B
ATOM 6041 CB ASP B 142 0.124 -28.227 -97.954 1.00 45.88 B
ATOM 6042 CG ASP B 142 0.337 -29.291 -98.883 1.00 47.41 B
ATOM 6043 OD1 ASP B 142 1.095 -30.166 -98.562 1.00 48.71 B
ATOM 6044 OD2 ASP B 142 -0.211 -29.368 -99.952 1.00 48.31 B
ATOM 6045 C ASP B 142 -0.510 -27.713 -95.648 1.00 43.39 B
ATOM 6046 O ASP B 142 0.312 -27.799 -94.814 1.00 43.73 B
ATOM 6047 N LEU B 143 -1.395 -26.739 -95.675 1.00 41.46 B
ATOM 6048 CA LEU B 143 -1.206 -25.487 -94.945 1.00 37.84 B

ATOM 6049 CB LEU B 143 -1.798 -24.323 -95.692 1.00 35.27 B
ATOM 6050 CG LEU B 143 -1.169 -23.669 -96.873 1.00 32.82 B
ATOM 6051 CD1 LEU B 143 -1.878 -22.500 -97.122 1.00 31.32 B
ATOM 6052 CD2 LEU B 143 0.172 -23.405 -96.665 1.00 32.19 B
ATOM 6053 C LEU B 143 -1.946 -25.624 -93.695 1.00 36.02 B
ATOM 6054 O LEU B 143 -1.502 -25.315 -92.660 1.00 34.20 B
ATOM 6055 N THR B 144 -3.080 -26.224 -93.825 1.00 34.66 B
ATOM 6056 CA THR B 144 -3.879 -26.628 -92.677 1.00 35.14 B
ATOM 6057 CB THR B 144 -5.020 -27.565 -93.108 1.00 33.95 B
ATOM 6058 OG1 THR B 144 -6.114 -26.790 -93.597 1.00 34.56 B
ATOM 6059 CG2 THR B 144 -5.489 -28.405 -91.956 1.00 34.68 B
ATOM 6060 C THR B 144 -3.014 -27.348 -91.627 1.00 36.48 B
ATOM 6061 O THR B 144 -3.182 -27.134 -90.423 1.00 37.23 B
ATOM 6062 N ASN B 145 -2.090 -28.190 -92.092 1.00 36.61 B
ATOM 6063 CA ASN B 145 -1.193 -28.938 -91.210 1.00 36.30 B
ATOM 6064 CB ASN B 145 -0.537 -30.106 -91.959 1.00 37.66 B
ATOM 6065 CG ASN B 145 -1.550 -31.107 -92.498 1.00 39.36 B
ATOM 6066 OD1 ASN B 145 -2.687 -31.202 -92.014 1.00 40.56 B
ATOM 6067 ND2 ASN B 145 -1.131 -31.878 -93.493 1.00 40.33 B
ATOM 6068 C ASN B 145 -0.091 -28.073 -90.623 1.00 35.25 B
ATOM 6069 O ASN B 145 0.338 -28.277 -89.490 1.00 35.88 B
ATOM 6070 N ILE B 146 0.385 -27.112 -91.401 1.00 33.91 B
ATOM 6071 CA ILE B 146 1.444 -26.238 -90.926 1.00 32.64 B
ATOM 6072 CB ILE B 146 1.985 -25.343 -92.054 1.00 31.27 B
ATOM 6073 CG2 ILE B 146 3.176 -24.548 -91.552 1.00 31.11 B
ATOM 6074 CG1 ILE B 146 2.404 -26.210 -93.244 1.00 30.05 B
ATOM 6075 CD1 ILE B 146 3.039 -25.442 -94.382 1.00 27.91 B
ATOM 6076 C ILE B 146 0.909 -25.365 -89.800 1.00 32.26 B
ATOM 6077 O ILE B 146 1.615 -25.069 -88.837 1.00 31.55 B
ATOM 6078 N LEU B 147 -0.352 -24.972 -89.925 1.00 31.71 B
ATOM 6079 CA LEU B 147 -0.975 -24.140 -88.919 1.00 30.28 B
ATOM 6080 CB LEU B 147 -2.044 -23.248 -89.544 1.00 28.79 B
ATOM 6081 CG LEU B 147 -1.532 -21.827 -89.736 1.00 27.68 B
ATOM 6082 CD1 LEU B 147 -1.121 -21.638 -91.177 1.00 28.13 B

ATOM 6083 CD2 LEU B 147 -2.611 -20.842 -89.326 1.00 27.77 B
ATOM 6084 C LEU B 147 -1.592 -24.944 -87.807 1.00 29.94 B
ATOM 6085 O LEU B 147 -2.200 -24.388 -86.908 1.00 30.96 B
ATOM 6086 N ALA B 148 -1.440 -26.255 -87.861 1.00 29.46 B
ATOM 6087 CA ALA B 148 -2.016 -27.092 -86.829 1.00 29.71 B
ATOM 6088 CB ALA B 148 -2.817 -28.215 -87.440 1.00 29.09 B
ATOM 6089 C ALA B 148 -0.939 -27.664 -85.944 1.00 31.02 B
ATOM 6090 O ALA B 148 -1.172 -27.877 -84.756 1.00 34.09 B
ATOM 6091 N SER B 149 0.249 -27.896 -86.502 1.00 30.60 B
ATOM 6092 CA SER B 149 1.334 -28.488 -85.721 1.00 29.80 B
ATOM 6093 CB SER B 149 1.465 -29.958 -86.092 1.00 31.93 B
ATOM 6094 OG SER B 149 1.449 -30.088 -87.502 1.00 35.83 B
ATOM 6095 C SER B 149 2.702 -27.832 -85.800 1.00 27.68 B
ATOM 6096 O SER B 149 3.622 -28.235 -85.093 1.00 26.70 B
ATOM 6097 N SER B 150 2.859 -26.846 -86.666 1.00 26.48 B
ATOM 6098 CA SER B 150 4.139 -26.174 -86.751 1.00 25.72 B
ATOM 6099 CB SER B 150 4.268 -25.415 -88.062 1.00 25.19 B
ATOM 6100 OG SER B 150 5.468 -24.661 -88.073 1.00 25.83 B
ATOM 6101 C SER B 150 4.245 -25.194 -85.590 1.00 26.29 B
ATOM 6102 O SER B 150 3.256 -24.548 -85.212 1.00 27.01 B
ATOM 6103 N ARG B 151 5.443 -25.085 -85.021 1.00 25.75 B
ATOM 6104 CA ARG B 151 5.673 -24.179 -83.902 1.00 24.93 B
ATOM 6105 CB ARG B 151 6.048 -24.966 -82.652 1.00 23.31 B
ATOM 6106 CG ARG B 151 4.907 -25.187 -81.689 1.00 20.68 B
ATOM 6107 CD ARG B 151 3.705 -25.788 -82.350 1.00 17.57 B
ATOM 6108 NE ARG B 151 2.773 -26.295 -81.355 1.00 18.49 B
ATOM 6109 CZ ARG B 151 1.506 -26.607 -81.600 1.00 20.11 B
ATOM 6110 NH1 ARG B 151 0.741 -27.066 -80.620 1.00 19.83 B
ATOM 6111 NH2 ARG B 151 1.000 -26.446 -82.823 1.00 19.20 B
ATOM 6112 C ARG B 151 6.759 -23.167 -84.219 1.00 25.26 B
ATOM 6113 O ARG B 151 7.386 -22.605 -83.315 1.00 25.50 B
ATOM 6114 N SER B 152 6.976 -22.942 -85.511 1.00 25.18 B
ATOM 6115 CA SER B 152 7.970 -21.979 -85.974 1.00 25.84 B
ATOM 6116 CB SER B 152 8.627 -22.487 -87.246 1.00 25.77 B

ATOM 6117 OG SER B 152 9.677 -21.633 -87.630 1.00 29.32 B
ATOM 6118 C SER B 152 7.200 -20.693 -86.259 1.00 25.83 B
ATOM 6119 O SER B 152 6.311 -20.677 -87.107 1.00 26.18 B
ATOM 6120 N TYR B 153 7.520 -19.618 -85.550 1.00 25.42 B
ATOM 6121 CA TYR B 153 6.772 -18.388 -85.754 1.00 26.24 B
ATOM 6122 CB TYR B 153 7.286 -17.261 -84.850 1.00 25.10 B
ATOM 6123 CG TYR B 153 6.469 -15.983 -84.934 1.00 23.31 B
ATOM 6124 CD1 TYR B 153 5.386 -15.761 -84.082 1.00 22.93 B
ATOM 6125 CE1 TYR B 153 4.636 -14.587 -84.163 1.00 21.05 B
ATOM 6126 CD2 TYR B 153 6.774 -14.999 -85.877 1.00 22.03 B
ATOM 6127 CE2 TYR B 153 6.027 -13.831 -85.969 1.00 20.86 B
ATOM 6128 CZ TYR B 153 4.967 -13.632 -85.109 1.00 20.89 B
ATOM 6129 OH TYR B 153 4.252 -12.469 -85.201 1.00 21.99 B
ATOM 6130 C TYR B 153 6.871 -17.970 -87.208 1.00 27.73 B
ATOM 6131 O TYR B 153 5.866 -17.583 -87.819 1.00 28.80 B
ATOM 6132 N ALA B 154 8.077 -18.061 -87.765 1.00 27.76 B
ATOM 6133 CA ALA B 154 8.302 -17.691 -89.161 1.00 26.90 B
ATOM 6134 CB ALA B 154 9.771 -17.818 -89.501 1.00 24.70 B
ATOM 6135 C ALA B 154 7.467 -18.530 -90.138 1.00 27.11 B
ATOM 6136 O ALA B 154 6.706 -17.982 -90.940 1.00 27.43 B
ATOM 6137 N MET B 155 7.598 -19.852 -90.071 1.00 27.29 B
ATOM 6138 CA MET B 155 6.852 -20.713 -90.981 1.00 29.02 B
ATOM 6139 CB MET B 155 7.225 -22.170 -90.741 1.00 31.49 B
ATOM 6140 CG MET B 155 6.692 -23.129 -91.795 1.00 35.56 B
ATOM 6141 SD MET B 155 7.652 -24.678 -91.814 1.00 42.16 B
ATOM 6142 CE MET B 155 7.269 -25.399 -90.175 1.00 38.82 B
ATOM 6143 C MET B 155 5.340 -20.518 -90.855 1.00 28.34 B
ATOM 6144 O MET B 155 4.612 -20.551 -91.852 1.00 28.97 B
ATOM 6145 N LEU B 156 4.867 -20.311 -89.630 1.00 27.74 B
ATOM 6146 CA LEU B 156 3.445 -20.086 -89.399 1.00 26.72 B
ATOM 6147 CB LEU B 156 3.152 -20.074 -87.892 1.00 26.42 B
ATOM 6148 CG LEU B 156 3.191 -21.449 -87.193 1.00 26.17 B
ATOM 6149 CD1 LEU B 156 3.188 -21.285 -85.691 1.00 26.48 B
ATOM 6150 CD2 LEU B 156 1.981 -22.275 -87.618 1.00 26.59 B

ATOM 6151 C LEU B 156 3.028 -18.763 -90.057 1.00 26.46 B
ATOM 6152 O LEU B 156 1.985 -18.684 -90.699 1.00 27.74 B
ATOM 6153 N LEU B 157 3.858 -17.733 -89.914 1.00 25.37 B
ATOM 6154 CA LEU B 157 3.577 -16.426 -90.507 1.00 24.75 B
ATOM 6155 CB LEU B 157 4.636 -15.411 -90.057 1.00 23.32 B
ATOM 6156 CG LEU B 157 4.623 -13.992 -90.644 1.00 21.40 B
ATOM 6157 CD1 LEU B 157 3.377 -13.258 -90.188 1.00 20.32 B
ATOM 6158 CD2 LEU B 157 5.883 -13.241 -90.215 1.00 18.46 B
ATOM 6159 C LEU B 157 3.576 -16.518 -92.031 1.00 25.81 B
ATOM 6160 O LEU B 157 2.756 -15.892 -92.707 1.00 26.08 B
ATOM 6161 N PHE B 158 4.502 -17.306 -92.570 1.00 27.08 B
ATOM 6162 CA PHE B 158 4.614 -17.468 -94.017 1.00 27.48 B
ATOM 6163 CB PHE B 158 5.850 -18.297 -94.363 1.00 29.80 B
ATOM 6164 CG PHE B 158 6.301 -18.147 -95.790 1.00 32.74 B
ATOM 6165 CD1 PHE B 158 7.000 -17.009 -96.192 1.00 33.67 B
ATOM 6166 CD2 PHE B 158 6.001 -19.125 -96.739 1.00 33.80 B
ATOM 6167 CE1 PHE B 158 7.393 -16.838 -97.515 1.00 34.00 B
ATOM 6168 CE2 PHE B 158 6.392 -18.968 -98.073 1.00 34.45 B
ATOM 6169 CZ PHE B 158 7.088 -17.821 -98.460 1.00 34.54 B
ATOM 6170 C PHE B 158 3.370 -18.117 -94.626 1.00 25.89 B
ATOM 6171 O PHE B 158 2.882 -17.674 -95.661 1.00 26.78 B
ATOM 6172 N ALA B 159 2.862 -19.162 -93.978 1.00 23.43 B
ATOM 6173 CA ALA B 159 1.672 -19.847 -94.457 1.00 22.10 B
ATOM 6174 CB ALA B 159 1.529 -21.175 -93.746 1.00 20.41 B
ATOM 6175 C ALA B 159 0.418 -18.999 -94.241 1.00 22.11 B
ATOM 6176 O ALA B 159 -0.493 -19.016 -95.070 1.00 22.05 B
ATOM 6177 N TRP B 160 0.371 -18.265 -93.129 1.00 21.46 B
ATOM 6178 CA TRP B 160 -0.781 -17.419 -92.822 1.00 20.90 B
ATOM 6179 CB TRP B 160 -0.690 -16.818 -91.412 1.00 20.05 B
ATOM 6180 CG TRP B 160 -1.927 -16.015 -91.035 1.00 19.37 B
ATOM 6181 CD2 TRP B 160 -2.161 -14.622 -91.279 1.00 17.74 B
ATOM 6182 CE2 TRP B 160 -3.465 -14.330 -90.823 1.00 17.70 B
ATOM 6183 CE3 TRP B 160 -1.397 -13.591 -91.840 1.00 17.57 B
ATOM 6184 CD1 TRP B 160 -3.067 -16.491 -90.456 1.00 19.51 B

ATOM 6185 NE1 TRP B 160 -3.995 -15.489 -90.324 1.00 17.96 B
ATOM 6186 CZ2 TRP B 160 -4.022 -13.056 -90.908 1.00 17.76 B
ATOM 6187 CZ3 TRP B 160 -1.951 -12.319 -91.924 1.00 17.92 B
ATOM 6188 CH2 TRP B 160 -3.252 -12.064 -91.459 1.00 17.97 B
ATOM 6189 C TRP B 160 -0.860 -16.279 -93.821 1.00 20.47 B
ATOM 6190 O TRP B 160 -1.884 -16.075 -94.465 1.00 19.77 B
ATOM 6191 N GLU B 161 0.223 -15.523 -93.926 1.00 20.40 B
ATOM 6192 CA GLU B 161 0.272 -14.405 -94.860 1.00 21.66 B
ATOM 6193 CB GLU B 161 1.640 -13.730 -94.792 1.00 21.38 B
ATOM 6194 CG GLU B 161 1.765 -12.498 -95.661 1.00 21.93 B
ATOM 6195 CD GLU B 161 3.189 -11.970 -95.726 1.00 23.97 B
ATOM 6196 OE1 GLU B 161 3.354 -10.792 -96.099 1.00 24.83 B
ATOM 6197 OE2 GLU B 161 4.139 -12.727 -95.420 1.00 24.15 B
ATOM 6198 C GLU B 161 0.028 -14.933 -96.275 1.00 22.07 B
ATOM 6199 O GLU B 161 -0.868 -14.465 -96.981 1.00 22.73 B
ATOM 6200 N GLY B 162 0.834 -15.920 -96.669 1.00 20.98 B
ATOM 6201 CA GLY B 162 0.727 -16.524 -97.980 1.00 20.61 B
ATOM 6202 C GLY B 162 -0.681 -16.900 -98.384 1.00 21.17 B
ATOM 6203 O GLY B 162 -1.123 -16.563 -99.481 1.00 20.65 B
ATOM 6204 N TRP B 163 -1.399 -17.598 -97.516 1.00 21.90 B
ATOM 6205 CA TRP B 163 -2.761 -17.982 -97.855 1.00 22.40 B
ATOM 6206 CB TRP B 163 -3.347 -18.933 -96.791 1.00 21.14 B
ATOM 6207 CG TRP B 163 -4.831 -19.118 -96.949 1.00 21.06 B
ATOM 6208 CD2 TRP B 163 -5.508 -19.798 -98.018 1.00 20.23 B
ATOM 6209 CE2 TRP B 163 -6.902 -19.612 -97.820 1.00 19.98 B
ATOM 6210 CE3 TRP B 163 -5.076 -20.541 -99.127 1.00 18.38 B
ATOM 6211 CD1 TRP B 163 -5.812 -18.573 -96.168 1.00 21.95 B
ATOM 6212 NE1 TRP B 163 -7.058 -18.863 -96.684 1.00 21.61 B
ATOM 6213 CZ2 TRP B 163 -7.864 -20.143 -98.692 1.00 18.48 B
ATOM 6214 CZ3 TRP B 163 -6.037 -21.065 -99.991 1.00 18.64 B
ATOM 6215 CH2 TRP B 163 -7.414 -20.861 -99.766 1.00 19.27 B
ATOM 6216 C TRP B 163 -3.658 -16.751 -98.029 1.00 22.99 B
ATOM 6217 O TRP B 163 -4.404 -16.653 -98.999 1.00 24.04 B
ATOM 6218 N HIS B 164 -3.537 -15.776 -97.187 1.00 23.15 B

ATOM 6219 CA HIS B 164 -4.349 -14.597 -97.202 1.00 23.12 B
ATOM 6220 CB HIS B 164 -4.145 -13.864 -95.884 1.00 20.50 B
ATOM 6221 CG HIS B 164 -4.945 -14.411 -94.773 1.00 20.07 B
ATOM 6222 CD2 HIS B 164 -6.091 -13.993 -94.249 1.00 18.68 B
ATOM 6223 ND1 HIS B 164 -4.635 -15.560 -94.128 1.00 21.35 B
ATOM 6224 CE1 HIS B 164 -5.544 -15.792 -93.217 1.00 19.71 B
ATOM 6225 NE2 HIS B 164 -6.443 -14.856 -93.274 1.00 17.81 B
ATOM 6226 C HIS B 164 -4.101 -13.664 -98.322 1.00 23.62 B
ATOM 6227 O HIS B 164 -4.974 -12.997 -98.779 1.00 24.09 B
ATOM 6228 N ASN B 165 -2.882 -13.534 -98.737 1.00 22.79 B
ATOM 6229 CA ASN B 165 -2.616 -12.723 -99.896 1.00 22.21 B
ATOM 6230 CB ASN B 165 -1.128 -12.417 -99.989 1.00 21.27 B
ATOM 6231 CG ASN B 165 -0.684 -11.421 -98.955 1.00 21.74 B
ATOM 6232 OD1 ASN B 165 -1.447 -10.537 -98.559 1.00 21.90 B
ATOM 6233 ND2 ASN B 165 0.564 -11.539 -98.518 1.00 24.17 B
ATOM 6234 C ASN B 165 -3.099 -13.453 -101.156 1.00 23.12 B
ATOM 6235 O ASN B 165 -3.767 -12.873 -102.014 1.00 23.53 B
ATOM 6236 N ALA B 166 -2.784 -14.739 -101.240 1.00 22.60 B
ATOM 6237 CA ALA B 166 -3.147 -15.547 -102.384 1.00 22.62 B
ATOM 6238 CB ALA B 166 -2.501 -16.892 -102.258 1.00 21.38 B
ATOM 6239 C ALA B 166 -4.641 -15.721 -102.605 1.00 23.93 B
ATOM 6240 O ALA B 166 -5.102 -15.771 -103.741 1.00 24.10 B
ATOM 6241 N ALA B 167 -5.407 -15.796 -101.526 1.00 25.58 B
ATOM 6242 CA ALA B 167 -6.848 -16.026 -101.641 1.00 26.26 B
ATOM 6243 CB ALA B 167 -7.300 -16.944 -100.501 1.00 24.91 B
ATOM 6244 C ALA B 167 -7.787 -14.812 -101.719 1.00 26.74 B
ATOM 6245 O ALA B 167 -8.716 -14.784 -102.541 1.00 26.76 B
ATOM 6246 N GLY B 168 -7.559 -13.814 -100.874 1.00 26.24 B
ATOM 6247 CA GLY B 168 -8.452 -12.671 -100.864 1.00 26.08 B
ATOM 6248 C GLY B 168 -8.210 -11.533 -101.844 1.00 26.01 B
ATOM 6249 O GLY B 168 -9.159 -10.874 -102.280 1.00 26.61 B
ATOM 6250 N ILE B 169 -6.953 -11.280 -102.186 1.00 24.10 B
ATOM 6251 CA ILE B 169 -6.652 -10.187 -103.094 1.00 21.99 B
ATOM 6252 CB ILE B 169 -5.116 -10.073 -103.306 1.00 20.82 B

ATOM 6253 CG2 ILE B 169 -4.799 -9.121-104.457 1.00 20.39 B
ATOM 6254 CG1 ILE B 169 -4.466 -9.588-102.005 1.00 18.16 B
ATOM 6255 CD1 ILE B 169 -2.976 -9.386-102.087 1.00 16.47 B
ATOM 6256 C ILE B 169 -7.390 -10.305-104.436 1.00 22.26 B
ATOM 6257 O ILE B 169 -8.159 -9.417-104.817 1.00 22.63 B
ATOM 6258 N PRO B 170 -7.202 -11.421-105.146 1.00 21.78 B
ATOM 6259 CD PRO B 170 -6.507 -12.653-104.734 1.00 21.83 B
ATOM 6260 CA PRO B 170 -7.859 -11.611-106.440 1.00 22.05 B
ATOM 6261 CB PRO B 170 -7.226 -12.895-106.943 1.00 21.58 B
ATOM 6262 CG PRO B 170 -7.085 -13.678-105.683 1.00 20.96 B
ATOM 6263 C PRO B 170 -9.371 -11.734-106.354 1.00 23.00 B
ATOM 6264 O PRO B 170 -10.080 -11.543-107.339 1.00 25.16 B
ATOM 6265 N LEU B 171 -9.857 -12.042-105.164 1.00 22.86 B
ATOM 6266 CA LEU B 171 -11.273 -12.257-104.940 1.00 22.27 B
ATOM 6267 CB LEU B 171 -11.400 -13.250-103.782 1.00 23.41 B
ATOM 6268 CG LEU B 171 -12.583 -14.200-103.599 1.00 25.26 B
ATOM 6269 CD1 LEU B 171 -13.098 -14.707-104.957 1.00 25.82 B
ATOM 6270 CD2 LEU B 171 -12.123 -15.348-102.689 1.00 22.07 B
ATOM 6271 C LEU B 171 -12.066 -10.988-104.656 1.00 21.04 B
ATOM 6272 O LEU B 171 -13.266 -10.946-104.884 1.00 19.44 B
ATOM 6273 N LYS B 172 -11.416 -9.919-104.431 1.00 21.74 B
ATOM 6274 CA LYS B 172 -12.089 -8.783-103.962 1.00 22.67 B
ATOM 6275 CB LYS B 172 -11.080 -7.831-103.431 1.00 24.19 B
ATOM 6276 CG LYS B 172 -11.627 -6.647-102.764 1.00 24.87 B
ATOM 6277 CD LYS B 172 -10.595 -5.918-102.143 1.00 28.85 B
ATOM 6278 CE LYS B 172 -11.144 -4.753-101.628 1.00 31.11 B
ATOM 6279 NZ LYS B 172 -10.321 -4.242-100.530 1.00 33.52 B
ATOM 6280 C LYS B 172 -12.865 -8.103-104.966 1.00 22.23 B
ATOM 6281 O LYS B 172 -13.959 -7.787-104.738 1.00 20.81 B
ATOM 6282 N PRO B 173 -12.288 -7.811-106.102 1.00 21.45 B
ATOM 6283 CD PRO B 173 -10.959 -8.201-106.600 1.00 20.21 B
ATOM 6284 CA PRO B 173 -13.072 -7.175-107.166 1.00 20.49 B
ATOM 6285 CB PRO B 173 -12.108 -7.175-108.349 1.00 19.32 B
ATOM 6286 CG PRO B 173 -11.219 -8.343-108.063 1.00 18.88 B

ATOM 6287 C PRO B 173 -14.386 -7.916-107.444 1.00 20.61 B
ATOM 6288 O PRO B 173 -15.427 -7.292-107.680 1.00 19.71 B
ATOM 6289 N LEU B 174 -14.336 -9.243-107.377 1.00 20.23 B
ATOM 6290 CA LEU B 174 -15.522 -10.048-107.618 1.00 21.74 B
ATOM 6291 CB LEU B 174 -15.132 -11.513-107.824 1.00 20.66 B
ATOM 6292 CG LEU B 174 -14.030 -11.848-108.825 1.00 19.15 B
ATOM 6293 CD1 LEU B 174 -14.028 -13.343-109.045 1.00 19.68 B
ATOM 6294 CD2 LEU B 174 -14.272 -11.157-110.141 1.00 23.72 B
ATOM 6295 C LEU B 174 -16.581 -9.946-106.496 1.00 23.56 B
ATOM 6296 O LEU B 174 -17.787 -9.838-106.788 1.00 22.95 B
ATOM 6297 N TYR B 175 -16.151 -9.971-105.226 1.00 24.30 B
ATOM 6298 CA TYR B 175 -17.102 -9.898-104.113 1.00 23.75 B
ATOM 6299 CB TYR B 175 -16.387 -9.979-102.756 1.00 23.38 B
ATOM 6300 CG TYR B 175 -17.317 -10.363-101.616 1.00 23.97 B
ATOM 6301 CD1 TYR B 175 -17.823 -11.661-101.515 1.00 25.47 B
ATOM 6302 CE1 TYR B 175 -18.712 -12.016-100.509 1.00 24.83 B
ATOM 6303 CD2 TYR B 175 -17.725 -9.428-100.668 1.00 23.22 B
ATOM 6304 CE2 TYR B 175 -18.615 -9.773 -99.654 1.00 24.06 B
ATOM 6305 CZ TYR B 175 -19.104 -11.069 -99.587 1.00 25.23 B
ATOM 6306 OH TYR B 175 -20.007 -11.429 -98.619 1.00 26.03 B
ATOM 6307 C TYR B 175 -17.936 -8.620-104.169 1.00 23.95 B
ATOM 6308 O TYR B 175 -19.080 -8.618-103.742 1.00 23.28 B
ATOM 6309 N GLU B 176 -17.365 -7.542-104.700 1.00 24.82 B
ATOM 6310 CA GLU B 176 -18.067 -6.268-104.798 1.00 25.91 B
ATOM 6311 CB GLU B 176 -17.089 -5.157-105.164 1.00 25.46 B
ATOM 6312 CG GLU B 176 -15.842 -5.149-104.314 1.00 26.82 B
ATOM 6313 CD GLU B 176 -14.773 -4.231-104.863 1.00 27.26 B
ATOM 6314 OE1 GLU B 176 -15.136 -3.151-105.368 1.00 26.04 B
ATOM 6315 OE2 GLU B 176 -13.576 -4.584-104.780 1.00 28.08 B
ATOM 6316 C GLU B 176 -19.171 -6.328-105.840 1.00 27.43 B
ATOM 6317 O GLU B 176 -20.258 -5.801-105.616 1.00 27.23 B
ATOM 6318 N ASP B 177 -18.895 -6.953-106.986 1.00 29.55 B
ATOM 6319 CA ASP B 177 -19.901 -7.067-108.042 1.00 31.28 B
ATOM 6320 CB ASP B 177 -19.288 -7.587-109.346 1.00 34.46 B

ATOM 6321 CG ASP B 177 -18.276 -6.631-109.945 1.00 36.90 B
ATOM 6322 OD1 ASP B 177 -18.446 -5.398-109.773 1.00 40.15 B
ATOM 6323 OD2 ASP B 177 -17.322 -7.113-110.602 1.00 36.84 B
ATOM 6324 C ASP B 177 -21.005 -8.019-107.606 1.00 31.25 B
ATOM 6325 O ASP B 177 -22.193 -7.751-107.846 1.00 31.48 B
ATOM 6326 N PHE B 178 -20.604 -9.133-106.982 1.00 29.44 B
ATOM 6327 CA PHE B 178 -21.547 -10.136-106.481 1.00 27.60 B
ATOM 6328 CB PHE B 178 -20.812 -11.285-105.781 1.00 28.75 B
ATOM 6329 CG PHE B 178 -21.680 -12.045-104.809 1.00 30.90 B
ATOM 6330 CD1 PHE B 178 -22.544 -13.045-105.257 1.00 32.62 B
ATOM 6331 CD2 PHE B 178 -21.708 -11.690-103.454 1.00 30.92 B
ATOM 6332 CE1 PHE B 178 -23.425 -13.671-104.371 1.00 33.94 B
ATOM 6333 CE2 PHE B 178 -22.585 -12.307-102.562 1.00 31.13 B
ATOM 6334 CZ PHE B 178 -23.445 -13.295-103.017 1.00 32.44 B
ATOM 6335 C PHE B 178 -22.488 -9.498-105.469 1.00 26.24 B
ATOM 6336 O PHE B 178 -23.692 -9.750-105.474 1.00 26.05 B
ATOM 6337 N THR B 179 -21.911 -8.687-104.589 1.00 24.87 B
ATOM 6338 CA THR B 179 -22.656 -8.015-103.544 1.00 24.19 B
ATOM 6339 CB THR B 179 -21.695 -7.238-102.588 1.00 25.28 B
ATOM 6340 OG1 THR B 179 -20.697 -8.131-102.081 1.00 27.02 B
ATOM 6341 CG2 THR B 179 -22.445 -6.665-101.407 1.00 24.11 B
ATOM 6342 C THR B 179 -23.707 -7.071-104.122 1.00 23.34 B
ATOM 6343 O THR B 179 -24.850 -7.095-103.692 1.00 23.51 B
ATOM 6344 N ALA B 180 -23.342 -6.255-105.105 1.00 22.63 B
ATOM 6345 CA ALA B 180 -24.305 -5.325-105.688 1.00 22.75 B
ATOM 6346 CB ALA B 180 -23.630 -4.435-106.703 1.00 22.36 B
ATOM 6347 C ALA B 180 -25.464 -6.050-106.347 1.00 23.53 B
ATOM 6348 O ALA B 180 -26.618 -5.641-106.215 1.00 23.46 B
ATOM 6349 N LEU B 181 -25.154 -7.128-107.059 1.00 23.65 B
ATOM 6350 CA LEU B 181 -26.176 -7.884-107.757 1.00 25.45 B
ATOM 6351 CB LEU B 181 -25.529 -8.862-108.743 1.00 25.20 B
ATOM 6352 CG LEU B 181 -25.015 -8.251-110.043 1.00 25.19 B
ATOM 6353 CD1 LEU B 181 -24.421 -9.332-110.933 1.00 27.40 B
ATOM 6354 CD2 LEU B 181 -26.167 -7.553-110.747 1.00 25.23 B

ATOM 6355 C LEU B 181 -27.096 -8.631-106.816 1.00 27.21 B
ATOM 6356 O LEU B 181 -28.319 -8.647-107.002 1.00 27.42 B
ATOM 6357 N SER B 182 -26.499 -9.255-105.805 1.00 29.06 B
ATOM 6358 CA SER B 182 -27.249 -10.026-104.821 1.00 29.37 B
ATOM 6359 CB SER B 182 -26.286 -10.661-103.818 1.00 29.10 B
ATOM 6360 OG SER B 182 -26.978 -11.548-102.961 1.00 30.68 B
ATOM 6361 C SER B 182 -28.246 -9.125-104.108 1.00 29.03 B
ATOM 6362 O SER B 182 -29.281 -9.577-103.622 1.00 29.67 B
ATOM 6363 N ASN B 183 -27.926 -7.841-104.061 1.00 28.04 B
ATOM 6364 CA ASN B 183 -28.786 -6.871-103.422 1.00 28.99 B
ATOM 6365 CB ASN B 183 -27.983 -5.649-102.991 1.00 29.74 B
ATOM 6366 CG ASN B 183 -27.490 -5.747-101.567 1.00 28.04 B
ATOM 6367 OD1 ASN B 183 -26.610 -6.531-101.250 1.00 27.45 B
ATOM 6368 ND2 ASN B 183 -28.070 -4.948-100.700 1.00 30.48 B
ATOM 6369 C ASN B 183 -29.908 -6.436-104.341 1.00 30.37 B
ATOM 6370 O ASN B 183 -31.069 -6.413-103.938 1.00 30.99 B
ATOM 6371 N GLU B 184 -29.626 -6.008-105.536 1.00 31.98 B
ATOM 6372 CA GLU B 184 -30.646 -5.772-106.520 1.00 32.35 B
ATOM 6373 CB GLU B 184 -30.008 -5.927-107.842 1.00 34.05 B
ATOM 6374 CG GLU B 184 -29.957 -4.701-108.688 1.00 39.02 B
ATOM 6375 CD GLU B 184 -30.137 -4.981-110.129 1.00 42.29 B
ATOM 6376 OE1 GLU B 184 -29.260 -4.659-110.921 1.00 44.06 B
ATOM 6377 OE2 GLU B 184 -31.184 -5.514-110.462 1.00 43.81 B
ATOM 6378 C GLU B 184 -31.593 -6.833-106.520 1.00 31.06 B
ATOM 6379 O GLU B 184 -32.732 -6.656-106.559 1.00 29.94 B
ATOM 6380 N ALA B 185 -31.070 -7.993-106.621 1.00 29.58 B
ATOM 6381 CA ALA B 185 -31.899 -9.175-106.693 1.00 30.05 B
ATOM 6382 CB ALA B 185 -31.033 -10.413-106.553 1.00 27.67 B
ATOM 6383 C ALA B 185 -32.960 -9.152-105.605 1.00 31.55 B
ATOM 6384 O ALA B 185 -34.140 -8.931-105.875 1.00 32.15 B
ATOM 6385 N TYR B 186 -32.521 -9.365-104.367 1.00 33.02 B
ATOM 6386 CA TYR B 186 -33.411 -9.403-103.212 1.00 33.17 B
ATOM 6387 CB TYR B 186 -32.644 -9.943-102.005 1.00 31.22 B
ATOM 6388 CG TYR B 186 -32.403 -11.432-102.089 1.00 30.76 B

ATOM 6389 CD1 TYR B 186 -31.128 -11.944-102.310 1.00 28.96 B
ATOM 6390 CE1 TYR B 186 -30.920 -13.318-102.429 1.00 29.24 B
ATOM 6391 CD2 TYR B 186 -33.469 -12.334-101.987 1.00 31.10 B
ATOM 6392 CE2 TYR B 186 -33.270 -13.707-102.112 1.00 29.79 B
ATOM 6393 CZ TYR B 186 -31.998 -14.189-102.333 1.00 29.11 B
ATOM 6394 OH TYR B 186 -31.813 -15.538-102.480 1.00 29.59 B
ATOM 6395 C TYR B 186 -34.167 -8.122-102.838 1.00 34.21 B
ATOM 6396 O TYR B 186 -35.185 -8.183-102.139 1.00 34.25 B
ATOM 6397 N LYS B 187 -33.695 -6.965-103.293 1.00 35.08 B
ATOM 6398 CA LYS B 187 -34.402 -5.739-102.973 1.00 37.37 B
ATOM 6399 CB LYS B 187 -33.623 -4.502-103.435 1.00 36.32 B
ATOM 6400 CG LYS B 187 -34.275 -3.171-103.062 1.00 35.98 B
ATOM 6401 CD LYS B 187 -33.280 -2.022-103.192 1.00 38.33 B
ATOM 6402 CE LYS B 187 -33.958 -0.635-103.141 1.00 40.55 B
ATOM 6403 NZ LYS B 187 -34.545 -0.235-101.815 1.00 40.56 B
ATOM 6404 C LYS B 187 -35.751 -5.815-103.664 1.00 38.78 B
ATOM 6405 O LYS B 187 -36.677 -5.105-103.298 1.00 39.33 B
ATOM 6406 N GLN B 188 -35.862 -6.701-104.650 1.00 40.87 B
ATOM 6407 CA GLN B 188 -37.115 -6.869-105.383 1.00 43.68 B
ATOM 6408 CB GLN B 188 -36.859 -7.267-106.838 1.00 47.68 B
ATOM 6409 CG GLN B 188 -36.407 -6.108-107.715 1.00 53.40 B
ATOM 6410 CD GLN B 188 -36.456 -6.448-109.189 1.00 56.48 B
ATOM 6411 OE1 GLN B 188 -37.532 -6.704-109.742 1.00 58.64 B
ATOM 6412 NE2 GLN B 188 -35.291 -6.457-109.839 1.00 57.87 B
ATOM 6413 C GLN B 188 -38.023 -7.892-104.736 1.00 42.78 B
ATOM 6414 O GLN B 188 -39.158 -8.086-105.174 1.00 42.06 B
ATOM 6415 N ASP B 189 -37.513 -8.550-103.699 1.00 42.48 B
ATOM 6416 CA ASP B 189 -38.285 -9.535-102.958 1.00 42.31 B
ATOM 6417 CB ASP B 189 -37.408 -10.723-102.552 1.00 44.31 B
ATOM 6418 CG ASP B 189 -37.279 -11.767-103.663 1.00 46.37 B
ATOM 6419 OD1 ASP B 189 -36.986 -11.387-104.818 1.00 48.84 B
ATOM 6420 OD2 ASP B 189 -37.467 -12.973-103.386 1.00 47.14 B
ATOM 6421 C ASP B 189 -38.839 -8.840-101.729 1.00 41.85 B
ATOM 6422 O ASP B 189 -39.534 -9.448-100.913 1.00 41.67 B

ATOM 6423 N GLY B 190 -38.519 -7.556-101.599 1.00 41.14 B
ATOM 6424 CA GLY B 190 -39.022 -6.786-100.477 1.00 40.66 B
ATOM 6425 C GLY B 190 -38.062 -6.391 -99.370 1.00 40.19 B
ATOM 6426 O GLY B 190 -38.406 -5.538 -98.552 1.00 40.46 B
ATOM 6427 N PHE B 191 -36.869 -6.980 -99.326 1.00 39.41 B
ATOM 6428 CA PHE B 191 -35.913 -6.650 -98.265 1.00 39.16 B
ATOM 6429 CB PHE B 191 -35.064 -7.871 -97.919 1.00 37.34 B
ATOM 6430 CG PHE B 191 -35.846 -9.141 -97.778 1.00 36.52 B
ATOM 6431 CD1 PHE B 191 -36.155 -9.909 -98.894 1.00 36.27 B
ATOM 6432 CD2 PHE B 191 -36.234 -9.597 -96.526 1.00 37.00 B
ATOM 6433 CE1 PHE B 191 -36.830 -11.111 -98.773 1.00 35.30 B
ATOM 6434 CE2 PHE B 191 -36.914 -10.805 -96.393 1.00 36.88 B
ATOM 6435 CZ PHE B 191 -37.210 -11.562 -97.525 1.00 35.73 B
ATOM 6436 C PHE B 191 -34.979 -5.474 -98.596 1.00 39.60 B
ATOM 6437 O PHE B 191 -34.722 -5.185 -99.765 1.00 40.10 B
ATOM 6438 N THR B 192 -34.469 -4.805 -97.561 1.00 39.43 B
ATOM 6439 CA THR B 192 -33.562 -3.677 -97.761 1.00 39.58 B
ATOM 6440 CB THR B 192 -33.189 -3.014 -96.418 1.00 39.81 B
ATOM 6441 OG1 THR B 192 -34.284 -2.215 -95.970 1.00 40.57 B
ATOM 6442 CG2 THR B 192 -31.951 -2.126 -96.565 1.00 40.02 B
ATOM 6443 C THR B 192 -32.279 -4.101 -98.465 1.00 39.75 B
ATOM 6444 O THR B 192 -31.788 -3.394 -99.349 1.00 40.51 B
ATOM 6445 N ASP B 193 -31.738 -5.248 -98.066 1.00 38.79 B
ATOM 6446 CA ASP B 193 -30.516 -5.768 -98.662 1.00 38.64 B
ATOM 6447 CB ASP B 193 -29.300 -5.043 -98.088 1.00 40.83 B
ATOM 6448 CG ASP B 193 -29.242 -5.086 -96.575 1.00 43.65 B
ATOM 6449 OD1 ASP B 193 -28.943 -6.169 -95.999 1.00 44.15 B
ATOM 6450 OD2 ASP B 193 -29.497 -4.020 -95.968 1.00 45.51 B
ATOM 6451 C ASP B 193 -30.405 -7.267 -98.415 1.00 38.55 B
ATOM 6452 O ASP B 193 -31.216 -7.836 -97.680 1.00 38.71 B
ATOM 6453 N THR B 194 -29.419 -7.915 -99.032 1.00 37.22 B
ATOM 6454 CA THR B 194 -29.271 -9.355 -98.852 1.00 35.62 B
ATOM 6455 CB THR B 194 -27.979 -9.887 -99.498 1.00 34.98 B
ATOM 6456 OG1 THR B 194 -28.003 -9.610-100.898 1.00 34.57 B

ATOM 6457 CG2 THR B 194 -27.862 -11.399 -99.301 1.00 34.21 B
ATOM 6458 C THR B 194 -29.251 -9.682 -97.369 1.00 34.80 B
ATOM 6459 O THR B 194 -29.856 -10.659 -96.934 1.00 33.93 B
ATOM 6460 N GLY B 195 -28.564 -8.847 -96.597 1.00 33.67 B
ATOM 6461 CA GLY B 195 -28.470 -9.067 -95.168 1.00 33.04 B
ATOM 6462 C GLY B 195 -29.797 -9.344 -94.494 1.00 32.84 B
ATOM 6463 O GLY B 195 -29.929 -10.276 -93.703 1.00 31.58 B
ATOM 6464 N ALA B 196 -30.797 -8.537 -94.819 1.00 33.00 B
ATOM 6465 CA ALA B 196 -32.109 -8.684 -94.213 1.00 32.24 B
ATOM 6466 CB ALA B 196 -32.977 -7.503 -94.570 1.00 32.31 B
ATOM 6467 C ALA B 196 -32.816 -9.968 -94.584 1.00 31.89 B
ATOM 6468 O ALA B 196 -33.599 -10.483 -93.793 1.00 31.33 B
ATOM 6469 N TYR B 197 -32.505 -10.566 -95.709 1.00 32.56 B
ATOM 6470 CA TYR B 197 -33.135 -11.780 -96.153 1.00 33.18 B
ATOM 6471 CB TYR B 197 -32.936 -12.070 -97.642 1.00 34.14 B
ATOM 6472 CG TYR B 197 -33.461 -13.439 -98.123 1.00 36.36 B
ATOM 6473 CD1 TYR B 197 -34.754 -13.744 -98.125 1.00 36.44 B
ATOM 6474 CE1 TYR B 197 -35.157 -14.935 -98.521 1.00 35.85 B
ATOM 6475 CD2 TYR B 197 -32.623 -14.407 -98.587 1.00 36.83 B
ATOM 6476 CE2 TYR B 197 -33.063 -15.585 -98.950 1.00 35.86 B
ATOM 6477 CZ TYR B 197 -34.313 -15.835 -98.910 1.00 35.59 B
ATOM 6478 OH TYR B 197 -34.721 -17.042 -99.281 1.00 36.67 B
ATOM 6479 C TYR B 197 -32.562 -12.845 -95.381 1.00 34.09 B
ATOM 6480 O TYR B 197 -33.222 -13.683 -94.922 1.00 35.63 B
ATOM 6481 N TRP B 198 -31.287 -12.842 -95.245 1.00 33.00 B
ATOM 6482 CA TRP B 198 -30.622 -13.894 -94.493 1.00 32.25 B
ATOM 6483 CB TRP B 198 -29.110 -13.656 -94.507 1.00 32.05 B
ATOM 6484 CG TRP B 198 -28.447 -14.031 -95.790 1.00 31.14 B
ATOM 6485 CD2 TRP B 198 -27.037 -14.135 -96.029 1.00 30.39 B
ATOM 6486 CE2 TRP B 198 -26.868 -14.478 -97.388 1.00 30.02 B
ATOM 6487 CE3 TRP B 198 -25.900 -13.970 -95.227 1.00 29.21 B
ATOM 6488 CD1 TRP B 198 -29.057 -14.311 -96.977 1.00 31.77 B
ATOM 6489 NE1 TRP B 198 -28.117 -14.581 -97.944 1.00 30.04 B
ATOM 6490 CZ2 TRP B 198 -25.612 -14.656 -97.965 1.00 30.26 B

ATOM 6491 CZ3 TRP B 198 -24.643 -14.147 -95.802 1.00 29.09 B
ATOM 6492 CH2 TRP B 198 -24.512 -14.487 -97.160 1.00 30.14 B
ATOM 6493 C TRP B 198 -31.140 -13.990 -93.042 1.00 31.82 B
ATOM 6494 O TRP B 198 -31.522 -15.065 -92.574 1.00 30.97 B
ATOM 6495 N ARG B 199 -31.161 -12.858 -92.342 1.00 31.66 B
ATOM 6496 CA ARG B 199 -31.626 -12.819 -90.954 1.00 31.94 B
ATOM 6497 CB ARG B 199 -31.486 -11.401 -90.373 1.00 29.67 B
ATOM 6498 CG ARG B 199 -30.057 -10.882 -90.289 1.00 28.31 B
ATOM 6499 CD ARG B 199 -29.983 -9.575 -89.519 1.00 28.29 B
ATOM 6500 NE ARG B 199 -30.568 -8.442 -90.230 1.00 27.75 B
ATOM 6501 CZ ARG B 199 -29.909 -7.681 -91.096 1.00 27.19 B
ATOM 6502 NH1 ARG B 199 -30.520 -6.664 -91.694 1.00 26.48 B
ATOM 6503 NH2 ARG B 199 -28.634 -7.933 -91.363 1.00 27.27 B
ATOM 6504 C ARG B 199 -33.078 -13.277 -90.820 1.00 33.00 B
ATOM 6505 O ARG B 199 -33.416 -14.023 -89.902 1.00 33.95 B
ATOM 6506 N SER B 200 -33.929 -12.843 -91.746 1.00 34.43 B
ATOM 6507 CA SER B 200 -35.349 -13.186 -91.719 1.00 35.08 B
ATOM 6508 CB SER B 200 -36.054 -12.635 -92.961 1.00 35.45 B
ATOM 6509 OG SER B 200 -35.913 -13.512 -94.065 1.00 36.25 B
ATOM 6510 C SER B 200 -35.661 -14.675 -91.591 1.00 35.18 B
ATOM 6511 O SER B 200 -36.807 -15.031 -91.354 1.00 34.04 B
ATOM 6512 N TRP B 201 -34.663 -15.542 -91.750 1.00 36.20 B
ATOM 6513 CA TRP B 201 -34.903 -16.983 -91.627 1.00 37.86 B
ATOM 6514 CB TRP B 201 -33.722 -17.803 -92.143 1.00 38.05 B
ATOM 6515 CG TRP B 201 -33.521 -17.746 -93.585 1.00 38.87 B
ATOM 6516 CD2 TRP B 201 -32.269 -17.766 -94.260 1.00 39.87 B
ATOM 6517 CE2 TRP B 201 -32.542 -17.773 -95.645 1.00 40.25 B
ATOM 6518 CE3 TRP B 201 -30.936 -17.781 -93.831 1.00 40.79 B
ATOM 6519 CD1 TRP B 201 -34.482 -17.738 -94.551 1.00 40.00 B
ATOM 6520 NE1 TRP B 201 -33.904 -17.757 -95.795 1.00 40.01 B
ATOM 6521 CZ2 TRP B 201 -31.532 -17.793 -96.605 1.00 40.89 B
ATOM 6522 CZ3 TRP B 201 -29.931 -17.801 -94.787 1.00 41.80 B
ATOM 6523 CH2 TRP B 201 -30.239 -17.806 -96.160 1.00 42.01 B
ATOM 6524 C TRP B 201 -35.153 -17.409 -90.188 1.00 38.61 B

ATOM 6525 O TRP B 201 -35.530 -18.551 -89.922 1.00 39.72 B
ATOM 6526 N TYR B 202 -34.922 -16.497 -89.256 1.00 39.16 B
ATOM 6527 CA TYR B 202 -35.130 -16.813 -87.860 1.00 40.18 B
ATOM 6528 CB TYR B 202 -33.932 -16.346 -87.041 1.00 39.68 B
ATOM 6529 CG TYR B 202 -32.645 -17.016 -87.446 1.00 38.95 B
ATOM 6530 CD1 TYR B 202 -31.819 -16.449 -88.413 1.00 37.89 B
ATOM 6531 CE1 TYR B 202 -30.646 -17.072 -88.805 1.00 38.09 B
ATOM 6532 CD2 TYR B 202 -32.263 -18.235 -86.879 1.00 38.68 B
ATOM 6533 CE2 TYR B 202 -31.095 -18.870 -87.266 1.00 38.11 B
ATOM 6534 CZ TYR B 202 -30.292 -18.279 -88.228 1.00 38.47 B
ATOM 6535 OH TYR B 202 -29.124 -18.885 -88.605 1.00 39.79 B
ATOM 6536 C TYR B 202 -36.425 -16.215 -87.318 1.00 41.53 B
ATOM 6537 O TYR B 202 -36.768 -16.416 -86.150 1.00 42.44 B
ATOM 6538 N ASN B 203 -37.141 -15.492 -88.174 1.00 42.63 B
ATOM 6539 CA ASN B 203 -38.412 -14.887 -87.801 1.00 43.66 B
ATOM 6540 CB ASN B 203 -39.557 -15.891 -87.978 1.00 46.12 B
ATOM 6541 CG ASN B 203 -39.639 -16.459 -89.399 1.00 49.37 B
ATOM 6542 OD1 ASN B 203 -40.622 -17.114 -89.759 1.00 52.01 B
ATOM 6543 ND2 ASN B 203 -38.602 -16.224 -90.203 1.00 50.79 B
ATOM 6544 C ASN B 203 -38.453 -14.385 -86.373 1.00 43.57 B
ATOM 6545 O ASN B 203 -39.097 -14.989 -85.508 1.00 43.53 B
ATOM 6546 N SER B 204 -37.752 -13.283 -86.133 1.00 42.83 B
ATOM 6547 CA SER B 204 -37.688 -12.673 -84.814 1.00 41.81 B
ATOM 6548 CB SER B 204 -36.568 -13.367 -84.029 1.00 43.12 B
ATOM 6549 OG SER B 204 -36.252 -12.662 -82.839 1.00 43.97 B
ATOM 6550 C SER B 204 -37.374 -11.196 -84.965 1.00 40.55 B
ATOM 6551 O SER B 204 -36.304 -10.827 -85.448 1.00 40.94 B
ATOM 6552 N PRO B 205 -38.304 -10.325 -84.554 1.00 39.19 B
ATOM 6553 CD PRO B 205 -39.613 -10.630 -83.959 1.00 38.10 B
ATOM 6554 CA PRO B 205 -38.104 -8.874 -84.657 1.00 38.58 B
ATOM 6555 CB PRO B 205 -39.441 -8.298 -84.191 1.00 37.69 B
ATOM 6556 CG PRO B 205 -40.412 -9.430 -84.369 1.00 37.85 B
ATOM 6557 C PRO B 205 -36.978 -8.434 -83.744 1.00 38.32 B
ATOM 6558 O PRO B 205 -36.622 -7.263 -83.703 1.00 39.81 B

ATOM 6559 N THR B 206 -36.421 -9.400 -83.024 1.00 38.03 B
ATOM 6560 CA THR B 206 -35.373 -9.145 -82.050 1.00 37.88 B
ATOM 6561 CB THR B 206 -35.898 -9.462 -80.627 1.00 36.74 B
ATOM 6562 OG1 THR B 206 -36.626 -10.699 -80.658 1.00 35.80 B
ATOM 6563 CG2 THR B 206 -36.812 -8.349 -80.118 1.00 35.96 B
ATOM 6564 C THR B 206 -34.078 -9.924 -82.259 1.00 38.21 B
ATOM 6565 O THR B 206 -33.137 -9.785 -81.474 1.00 39.10 B
ATOM 6566 N PHE B 207 -34.020 -10.736 -83.308 1.00 37.36 B
ATOM 6567 CA PHE B 207 -32.835 -11.548 -83.572 1.00 36.22 B
ATOM 6568 CB PHE B 207 -32.844 -12.026 -85.025 1.00 33.23 B
ATOM 6569 CG PHE B 207 -31.783 -13.039 -85.335 1.00 31.17 B
ATOM 6570 CD1 PHE B 207 -31.678 -14.202 -84.591 1.00 30.77 B
ATOM 6571 CD2 PHE B 207 -30.894 -12.838 -86.379 1.00 31.77 B
ATOM 6572 CE1 PHE B 207 -30.706 -15.147 -84.881 1.00 30.69 B
ATOM 6573 CE2 PHE B 207 -29.916 -13.786 -86.677 1.00 31.30 B
ATOM 6574 CZ PHE B 207 -29.826 -14.939 -85.925 1.00 30.78 B
ATOM 6575 C PHE B 207 -31.486 -10.884 -83.256 1.00 36.80 B
ATOM 6576 O PHE B 207 -30.686 -11.426 -82.492 1.00 36.56 B
ATOM 6577 N GLU B 208 -31.256 -9.695 -83.749 1.00 37.54 B
ATOM 6578 CA GLU B 208 -29.992 -9.049 -83.584 1.00 39.43 B
ATOM 6579 CB GLU B 208 -29.908 -7.836 -84.484 1.00 40.68 B
ATOM 6580 CG GLU B 208 -29.213 -8.009 -85.822 1.00 42.09 B
ATOM 6581 CD GLU B 208 -29.380 -6.835 -86.731 1.00 43.81 B
ATOM 6582 OE1 GLU B 208 -28.443 -6.065 -86.871 1.00 45.01 B
ATOM 6583 OE2 GLU B 208 -30.456 -6.677 -87.311 1.00 43.27 B
ATOM 6584 C GLU B 208 -29.775 -8.649 -82.170 1.00 40.19 B
ATOM 6585 O GLU B 208 -28.686 -8.735 -81.702 1.00 40.28 B
ATOM 6586 N ASP B 209 -30.815 -8.178 -81.489 1.00 40.82 B
ATOM 6587 CA ASP B 209 -30.739 -7.821 -80.079 1.00 40.77 B
ATOM 6588 CB ASP B 209 -31.986 -7.054 -79.641 1.00 43.28 B
ATOM 6589 CG ASP B 209 -31.907 -5.579 -79.982 1.00 46.34 B
ATOM 6590 OD1 ASP B 209 -32.879 -4.854 -79.677 1.00 48.43 B
ATOM 6591 OD2 ASP B 209 -30.875 -5.140 -80.547 1.00 46.31 B
ATOM 6592 C ASP B 209 -30.571 -9.071 -79.225 1.00 38.98 B

ATOM 6593 O ASP B 209 -29.816 -9.058 -78.261 1.00 39.16 B
ATOM 6594 N ASP B 210 -31.265 -10.151 -79.573 1.00 37.37 B
ATOM 6595 CA ASP B 210 -31.138 -11.391 -78.818 1.00 36.62 B
ATOM 6596 CB ASP B 210 -32.123 -12.444 -79.332 1.00 37.49 B
ATOM 6597 CG ASP B 210 -33.587 -12.061 -79.079 1.00 39.88 B
ATOM 6598 OD1 ASP B 210 -33.859 -11.339 -78.095 1.00 39.31 B
ATOM 6599 OD2 ASP B 210 -34.476 -12.499 -79.849 1.00 40.56 B
ATOM 6600 C ASP B 210 -29.703 -11.934 -78.879 1.00 36.08 B
ATOM 6601 O ASP B 210 -29.190 -12.451 -77.891 1.00 35.99 B
ATOM 6602 N LEU B 211 -29.052 -11.813 -80.029 1.00 35.62 B
ATOM 6603 CA LEU B 211 -27.680 -12.290 -80.169 1.00 36.04 B
ATOM 6604 CB LEU B 211 -27.296 -12.406 -81.643 1.00 37.00 B
ATOM 6605 CG LEU B 211 -27.922 -13.485 -82.528 1.00 35.90 B
ATOM 6606 CD1 LEU B 211 -27.620 -13.132 -83.976 1.00 34.48 B
ATOM 6607 CD2 LEU B 211 -27.382 -14.872 -82.167 1.00 33.46 B
ATOM 6608 C LEU B 211 -26.683 -11.368 -79.477 1.00 36.87 B
ATOM 6609 O LEU B 211 -25.595 -11.796 -79.108 1.00 35.98 B
ATOM 6610 N GLU B 212 -27.036 -10.094 -79.331 1.00 39.18 B
ATOM 6611 CA GLU B 212 -26.143 -9.151 -78.658 1.00 40.45 B
ATOM 6612 CB GLU B 212 -26.628 -7.705 -78.852 1.00 42.04 B
ATOM 6613 CG GLU B 212 -25.745 -6.666 -78.163 1.00 48.37 B
ATOM 6614 CD GLU B 212 -25.378 -5.474 -79.060 1.00 53.52 B
ATOM 6615 OE1 GLU B 212 -24.810 -5.711 -80.153 1.00 56.77 B
ATOM 6616 OE2 GLU B 212 -25.642 -4.302 -78.674 1.00 54.88 B
ATOM 6617 C GLU B 212 -26.104 -9.517 -77.171 1.00 39.50 B
ATOM 6618 O GLU B 212 -25.032 -9.677 -76.594 1.00 39.49 B
ATOM 6619 N HIS B 213 -27.288 -9.666 -76.580 1.00 38.88 B
ATOM 6620 CA HIS B 213 -27.466 -10.038 -75.176 1.00 39.24 B
ATOM 6621 CB HIS B 213 -28.980 -10.139 -74.882 1.00 43.25 B
ATOM 6622 CG HIS B 213 -29.335 -10.486 -73.458 1.00 47.80 B
ATOM 6623 CD2 HIS B 213 -29.975 -9.767 -72.499 1.00 48.56 B
ATOM 6624 ND1 HIS B 213 -29.094 -11.728 -72.900 1.00 48.92 B
ATOM 6625 CE1 HIS B 213 -29.570 -11.760 -71.666 1.00 47.69 B
ATOM 6626 NE2 HIS B 213 -30.109 -10.583 -71.398 1.00 48.16 B

ATOM 6627 C HIS B 213 -26.774 -11.384 -74.953 1.00 37.53 B
ATOM 6628 O HIS B 213 -25.937 -11.537 -74.064 1.00 37.10 B
ATOM 6629 N LEU B 214 -27.117 -12.353 -75.789 1.00 35.78 B
ATOM 6630 CA LEU B 214 -26.557 -13.694 -75.703 1.00 33.70 B
ATOM 6631 CB LEU B 214 -27.016 -14.513 -76.904 1.00 33.63 B
ATOM 6632 CG LEU B 214 -27.573 -15.894 -76.585 1.00 33.44 B
ATOM 6633 CD1 LEU B 214 -28.120 -16.529 -77.856 1.00 33.30 B
ATOM 6634 CD2 LEU B 214 -26.483 -16.742 -75.962 1.00 33.97 B
ATOM 6635 C LEU B 214 -25.041 -13.713 -75.640 1.00 32.47 B
ATOM 6636 O LEU B 214 -24.452 -14.500 -74.895 1.00 32.09 B
ATOM 6637 N TYR B 215 -24.407 -12.854 -76.432 1.00 31.65 B
ATOM 6638 CA TYR B 215 -22.951 -12.819 -76.453 1.00 31.04 B
ATOM 6639 CB TYR B 215 -22.420 -12.111 -77.710 1.00 29.26 B
ATOM 6640 CG TYR B 215 -20.919 -12.238 -77.837 1.00 26.68 B
ATOM 6641 CD1 TYR B 215 -20.326 -13.471 -78.106 1.00 26.92 B
ATOM 6642 CE1 TYR B 215 -18.936 -13.627 -78.089 1.00 26.11 B
ATOM 6643 CD2 TYR B 215 -20.083 -11.157 -77.568 1.00 24.96 B
ATOM 6644 CE2 TYR B 215 -18.698 -11.297 -77.549 1.00 23.59 B
ATOM 6645 CZ TYR B 215 -18.128 -12.536 -77.804 1.00 25.37 B
ATOM 6646 OH TYR B 215 -16.759 -12.688 -77.726 1.00 24.01 B
ATOM 6647 C TYR B 215 -22.416 -12.134 -75.204 1.00 31.50 B
ATOM 6648 O TYR B 215 -21.306 -12.445 -74.750 1.00 31.83 B
ATOM 6649 N GLN B 216 -23.209 -11.208 -74.655 1.00 31.21 B
ATOM 6650 CA GLN B 216 -22.845 -10.483 -73.436 1.00 30.57 B
ATOM 6651 CB GLN B 216 -24.015 -9.621 -72.950 1.00 32.51 B
ATOM 6652 CG GLN B 216 -24.266 -8.317 -73.688 1.00 36.06 B
ATOM 6653 CD GLN B 216 -23.292 -7.212 -73.294 1.00 40.39 B
ATOM 6654 OE1 GLN B 216 -23.049 -6.976 -72.107 1.00 43.78 B
ATOM 6655 NE2 GLN B 216 -22.742 -6.513 -74.290 1.00 42.11 B
ATOM 6656 C GLN B 216 -22.524 -11.520 -72.357 1.00 29.90 B
ATOM 6657 O GLN B 216 -21.517 -11.419 -71.651 1.00 28.79 B
ATOM 6658 N GLN B 217 -23.395 -12.520 -72.244 1.00 28.48 B
ATOM 6659 CA GLN B 217 -23.240 -13.580 -71.265 1.00 27.84 B
ATOM 6660 CB GLN B 217 -24.441 -14.494 -71.286 1.00 28.43 B

ATOM 6661 CG GLN B 217 -25.720 -13.838 -70.914 1.00 31.93 B
ATOM 6662 CD GLN B 217 -26.849 -14.835 -70.889 1.00 35.29 B
ATOM 6663 OE1 GLN B 217 -26.775 -15.847 -70.194 1.00 36.05 B
ATOM 6664 NE2 GLN B 217 -27.904 -14.563 -71.653 1.00 38.08 B
ATOM 6665 C GLN B 217 -22.012 -14.437 -71.474 1.00 28.33 B
ATOM 6666 O GLN B 217 -21.269 -14.712 -70.534 1.00 30.83 B
ATOM 6667 N LEU B 218 -21.796 -14.884 -72.702 1.00 26.83 B
ATOM 6668 CA LEU B 218 -20.653 -15.740 -72.960 1.00 24.72 B
ATOM 6669 CB LEU B 218 -20.897 -16.565 -74.230 1.00 28.13 B
ATOM 6670 CG LEU B 218 -22.214 -17.319 -74.453 1.00 28.53 B
ATOM 6671 CD1 LEU B 218 -22.191 -17.965 -75.826 1.00 28.31 B
ATOM 6672 CD2 LEU B 218 -22.414 -18.377 -73.390 1.00 29.24 B
ATOM 6673 C LEU B 218 -19.302 -15.029 -73.071 1.00 22.06 B
ATOM 6674 O LEU B 218 -18.280 -15.662 -72.846 1.00 20.21 B
ATOM 6675 N GLU B 219 -19.282 -13.735 -73.403 1.00 19.93 B
ATOM 6676 CA GLU B 219 -18.001 -13.022 -73.562 1.00 18.46 B
ATOM 6677 CB GLU B 219 -18.207 -11.518 -73.746 1.00 19.49 B
ATOM 6678 CG GLU B 219 -16.883 -10.761 -73.843 1.00 23.30 B
ATOM 6679 CD GLU B 219 -17.024 -9.332 -74.373 1.00 29.00 B
ATOM 6680 OE1 GLU B 219 -18.027 -8.652 -74.043 1.00 30.52 B
ATOM 6681 OE2 GLU B 219 -16.115 -8.877 -75.111 1.00 31.10 B
ATOM 6682 C GLU B 219 -16.967 -13.243 -72.468 1.00 16.95 B
ATOM 6683 O GLU B 219 -15.777 -13.310 -72.734 1.00 14.27 B
ATOM 6684 N PRO B 220 -17.409 -13.322 -71.209 1.00 18.05 B
ATOM 6685 CD PRO B 220 -18.756 -13.023 -70.687 1.00 17.90 B
ATOM 6686 CA PRO B 220 -16.463 -13.546 -70.113 1.00 17.73 B
ATOM 6687 CB PRO B 220 -17.375 -13.655 -68.902 1.00 17.18 B
ATOM 6688 CG PRO B 220 -18.473 -12.711 -69.243 1.00 17.43 B
ATOM 6689 C PRO B 220 -15.697 -14.842 -70.365 1.00 17.41 B
ATOM 6690 O PRO B 220 -14.480 -14.897 -70.217 1.00 17.73 B
ATOM 6691 N LEU B 221 -16.436 -15.884 -70.738 1.00 16.39 B
ATOM 6692 CA LEU B 221 -15.867 -17.194 -71.039 1.00 15.39 B
ATOM 6693 CB LEU B 221 -16.903 -18.091 -71.717 1.00 15.95 B
ATOM 6694 CG LEU B 221 -17.746 -19.063 -70.900 1.00 14.81 B

ATOM 6695 CD1 LEU B 221 -16.812 -20.045 -70.228 1.00 17.62 B
ATOM 6696 CD2 LEU B 221 -18.589 -18.324 -69.882 1.00 15.20 B
ATOM 6697 C LEU B 221 -14.682 -17.053 -71.973 1.00 15.16 B
ATOM 6698 O LEU B 221 -13.594 -17.545 -71.686 1.00 15.77 B
ATOM 6699 N TYR B 222 -14.897 -16.379 -73.097 1.00 14.56 B
ATOM 6700 CA TYR B 222 -13.831 -16.195 -74.065 1.00 14.22 B
ATOM 6701 CB TYR B 222 -14.339 -15.440 -75.306 1.00 13.46 B
ATOM 6702 CG TYR B 222 -13.325 -15.417 -76.422 1.00 13.47 B
ATOM 6703 CD1 TYR B 222 -12.894 -16.602 -77.014 1.00 14.59 B
ATOM 6704 CE1 TYR B 222 -11.890 -16.606 -77.971 1.00 16.41 B
ATOM 6705 CD2 TYR B 222 -12.729 -14.231 -76.828 1.00 12.82 B
ATOM 6706 CE2 TYR B 222 -11.727 -14.224 -77.786 1.00 14.95 B
ATOM 6707 CZ TYR B 222 -11.311 -15.414 -78.353 1.00 16.92 B
ATOM 6708 OH TYR B 222 -10.327 -15.418 -79.313 1.00 18.74 B
ATOM 6709 C TYR B 222 -12.647 -15.462 -73.448 1.00 13.96 B
ATOM 6710 O TYR B 222 -11.525 -15.957 -73.463 1.00 13.57 B
ATOM 6711 N LEU B 223 -12.906 -14.291 -72.883 1.00 14.43 B
ATOM 6712 CA LEU B 223 -11.846 -13.499 -72.283 1.00 16.42 B
ATOM 6713 CB LEU B 223 -12.421 -12.279 -71.558 1.00 15.35 B
ATOM 6714 CG LEU B 223 -13.233 -11.312 -72.415 1.00 16.60 B
ATOM 6715 CD1 LEU B 223 -13.558 -10.085 -71.588 1.00 17.31 B
ATOM 6716 CD2 LEU B 223 -12.454 -10.931 -73.672 1.00 16.82 B
ATOM 6717 C LEU B 223 -10.975 -14.297 -71.322 1.00 17.23 B
ATOM 6718 O LEU B 223 -9.765 -14.067 -71.250 1.00 17.39 B
ATOM 6719 N ASN B 224 -11.576 -15.231 -70.589 1.00 17.70 B
ATOM 6720 CA ASN B 224 -10.797 -16.028 -69.657 1.00 19.46 B
ATOM 6721 CB ASN B 224 -11.687 -16.632 -68.567 1.00 19.39 B
ATOM 6722 CG ASN B 224 -11.872 -15.686 -67.379 1.00 22.54 B
ATOM 6723 OD1 ASN B 224 -10.904 -15.285 -66.716 1.00 21.26 B
ATOM 6724 ND2 ASN B 224 -13.115 -15.323 -67.109 1.00 23.94 B
ATOM 6725 C ASN B 224 -9.985 -17.105 -70.367 1.00 20.04 B
ATOM 6726 O ASN B 224 -8.826 -17.336 -70.010 1.00 21.39 B
ATOM 6727 N LEU B 225 -10.567 -17.755 -71.377 1.00 19.22 B
ATOM 6728 CA LEU B 225 -9.828 -18.776 -72.115 1.00 19.05 B

ATOM 6729 CB LEU B 225 -10.746 -19.538 -73.077 1.00 17.14 B
ATOM 6730 CG LEU B 225 -10.133 -20.637 -73.961 1.00 15.90 B
ATOM 6731 CD1 LEU B 225 -9.499 -21.709 -73.114 1.00 14.94 B
ATOM 6732 CD2 LEU B 225 -11.212 -21.251 -74.839 1.00 15.69 B
ATOM 6733 C LEU B 225 -8.733 -18.048 -72.895 1.00 20.51 B
ATOM 6734 O LEU B 225 -7.602 -18.528 -73.006 1.00 21.11 B
ATOM 6735 N HIS B 226 -9.052 -16.937 -73.522 1.00 20.72 B
ATOM 6736 CA HIS B 226 -8.094 -16.065 -74.175 1.00 22.02 B
ATOM 6737 CB HIS B 226 -8.821 -14.889 -74.842 1.00 21.22 B
ATOM 6738 CG HIS B 226 -7.942 -13.917 -75.565 1.00 21.61 B
ATOM 6739 CD2 HIS B 226 -7.655 -13.791 -76.861 1.00 21.38 B
ATOM 6740 ND1 HIS B 226 -7.288 -12.898 -74.948 1.00 22.44 B
ATOM 6741 CE1 HIS B 226 -6.598 -12.220 -75.824 1.00 22.02 B
ATOM 6742 NE2 HIS B 226 -6.806 -12.742 -76.993 1.00 22.78 B
ATOM 6743 C HIS B 226 -6.899 -15.618 -73.388 1.00 22.98 B
ATOM 6744 O HIS B 226 -5.840 -15.762 -73.834 1.00 23.84 B
ATOM 6745 N ALA B 227 -7.066 -14.978 -72.258 1.00 23.29 B
ATOM 6746 CA ALA B 227 -5.927 -14.575 -71.444 1.00 22.27 B
ATOM 6747 CB ALA B 227 -6.400 -13.874 -70.210 1.00 22.66 B
ATOM 6748 C ALA B 227 -5.112 -15.797 -71.059 1.00 22.27 B
ATOM 6749 O ALA B 227 -3.874 -15.760 -71.084 1.00 21.04 B
ATOM 6750 N PHE B 228 -5.812 -16.880 -70.712 1.00 22.63 B
ATOM 6751 CA PHE B 228 -5.155 -18.115 -70.306 1.00 22.45 B
ATOM 6752 CB PHE B 228 -6.163 -19.185 -69.923 1.00 22.79 B
ATOM 6753 CG PHE B 228 -5.520 -20.454 -69.410 1.00 24.39 B
ATOM 6754 CD1 PHE B 228 -4.843 -20.461 -68.194 1.00 23.41 B
ATOM 6755 CD2 PHE B 228 -5.576 -21.643 -70.157 1.00 25.34 B
ATOM 6756 CE1 PHE B 228 -4.234 -21.624 -67.731 1.00 23.30 B
ATOM 6757 CE2 PHE B 228 -4.967 -22.816 -69.701 1.00 22.88 B
ATOM 6758 CZ PHE B 228 -4.296 -22.807 -68.489 1.00 22.61 B
ATOM 6759 C PHE B 228 -4.253 -18.678 -71.377 1.00 22.02 B
ATOM 6760 O PHE B 228 -3.134 -19.079 -71.092 1.00 21.51 B
ATOM 6761 N VAL B 229 -4.743 -18.724 -72.609 1.00 22.59 B
ATOM 6762 CA VAL B 229 -3.947 -19.235 -73.722 1.00 22.91 B

ATOM 6763 CB VAL B 229 -4.822 -19.470 -74.974 1.00 23.63 B
ATOM 6764 CG1 VAL B 229 -3.966 -19.920 -76.140 1.00 21.53 B
ATOM 6765 CG2 VAL B 229 -5.884 -20.525 -74.659 1.00 26.20 B
ATOM 6766 C VAL B 229 -2.809 -18.283 -74.089 1.00 22.16 B
ATOM 6767 O VAL B 229 -1.693 -18.737 -74.369 1.00 21.48 B
ATOM 6768 N ARG B 230 -3.083 -16.973 -74.083 1.00 21.06 B
ATOM 6769 CA ARG B 230 -2.071 -15.983 -74.432 1.00 20.67 B
ATOM 6770 CB ARG B 230 -2.615 -14.571 -74.251 1.00 20.76 B
ATOM 6771 CG ARG B 230 -1.617 -13.464 -74.593 1.00 22.09 B
ATOM 6772 CD ARG B 230 -2.286 -12.098 -74.554 1.00 23.42 B
ATOM 6773 NE ARG B 230 -2.971 -11.878 -73.282 1.00 26.06 B
ATOM 6774 CZ ARG B 230 -3.820 -10.886 -73.036 1.00 25.34 B
ATOM 6775 NH1 ARG B 230 -4.110 -10.000 -73.967 1.00 24.93 B
ATOM 6776 NH2 ARG B 230 -4.383 -10.788 -71.848 1.00 27.59 B
ATOM 6777 C ARG B 230 -0.844 -16.192 -73.559 1.00 20.86 B
ATOM 6778 O ARG B 230 0.278 -16.299 -74.066 1.00 20.03 B
ATOM 6779 N ARG B 231 -1.066 -16.268 -72.248 1.00 21.67 B
ATOM 6780 CA ARG B 231 0.019 -16.484 -71.294 1.00 21.51 B
ATOM 6781 CB ARG B 231 -0.553 -16.672 -69.881 1.00 21.39 B
ATOM 6782 CG ARG B 231 0.450 -17.225 -68.870 1.00 21.72 B
ATOM 6783 CD ARG B 231 1.579 -16.250 -68.587 1.00 22.79 B
ATOM 6784 NE ARG B 231 1.388 -15.571 -67.310 1.00 25.85 B
ATOM 6785 CZ ARG B 231 2.318 -15.489 -66.360 1.00 28.16 B
ATOM 6786 NH1 ARG B 231 2.051 -14.859 -65.229 1.00 28.48 B
ATOM 6787 NH2 ARG B 231 3.519 -16.031 -66.535 1.00 27.57 B
ATOM 6788 C ARG B 231 -0.825 -17.720 -71.709 1.00 21.35 B
ATOM 6789 O ARG B 231 2.044 -17.774 -71.542 1.00 21.43 B
ATOM 6790 N ALA B 232 0.136 -18.715 -72.254 1.00 20.76 B
ATOM 6791 CA ALA B 232 0.802 -19.932 -72.690 1.00 20.23 B
ATOM 6792 CB ALA B 232 -0.218 -21.023 -72.974 1.00 20.20 B
ATOM 6793 C ALA B 232 1.622 -19.647 -73.939 1.00 20.04 B
ATOM 6794 O ALA B 232 2.760 -20.103 -74.056 1.00 19.26 B
ATOM 6795 N LEU B 233 1.054 -18.892 -74.873 1.00 19.63 B
ATOM 6796 CA LEU B 233 1.786 -18.582 -76.090 1.00 21.10 B

ATOM 6797 CB LEU B 233 0.873 -17.874 -77.097 1.00 21.92 B
ATOM 6798 CG LEU B 233 -0.255 -18.721 -77.710 1.00 21.31 B
ATOM 6799 CD1 LEU B 233 -1.187 -17.842 -78.524 1.00 20.30 B
ATOM 6800 CD2 LEU B 233 0.339 -19.820 -78.567 1.00 19.80 B
ATOM 6801 C LEU B 233 3.004 -17.725 -75.750 1.00 22.39 B
ATOM 6802 O LEU B 233 4.049 -17.849 -76.386 1.00 21.88 B
ATOM 6803 N HIS B 234 2.869 -16.868 -74.738 1.00 24.08 B
ATOM 6804 CA HIS B 234 3.973 -16.005 -74.299 1.00 25.31 B
ATOM 6805 CB HIS B 234 3.502 -15.044 -73.186 1.00 26.17 B
ATOM 6806 CG HIS B 234 4.584 -14.156 -72.633 1.00 28.56 B
ATOM 6807 CD2 HIS B 234 4.848 -12.840 -72.832 1.00 28.59 B
ATOM 6808 ND1 HIS B 234 5.565 -14.614 -71.778 1.00 30.42 B
ATOM 6809 CE1 HIS B 234 6.387 -13.623 -71.477 1.00 30.15 B
ATOM 6810 NE2 HIS B 234 5.975 -12.536 -72.104 1.00 28.10 B
ATOM 6811 C HIS B 234 5.117 -16.877 -73.786 1.00 26.21 B
ATOM 6812 O HIS B 234 6.287 -16.646 -74.093 1.00 25.87 B
ATOM 6813 N ARG B 235 4.767 -17.890 -73.011 1.00 27.16 B
ATOM 6814 CA ARG B 235 5.754 -18.793 -72.456 1.00 29.03 B
ATOM 6815 CB ARG B 235 5.043 -19.828 -71.586 1.00 30.09 B
ATOM 6816 CG ARG B 235 5.832 -20.326 -70.390 1.00 32.57 B
ATOM 6817 CD ARG B 235 5.022 -20.114 -69.102 1.00 34.97 B
ATOM 6818 NE ARG B 235 3.617 -20.512 -69.243 1.00 36.36 B
ATOM 6819 CZ ARG B 235 2.685 -20.366 -68.296 1.00 36.83 B
ATOM 6820 NH1 ARG B 235 2.990 -19.825 -67.111 1.00 35.93 B
ATOM 6821 NH2 ARG B 235 1.435 -20.761 -68.535 1.00 35.62 B
ATOM 6822 C ARG B 235 6.560 -19.477 -73.577 1.00 30.15 B
ATOM 6823 O ARG B 235 7.784 -19.603 -73.479 1.00 30.63 B
ATOM 6824 N ARG B 236 5.909 -19.906 -74.638 1.00 31.31 B
ATOM 6825 CA ARG B 236 6.548 -20.536 -75.807 1.00 31.43 B
ATOM 6826 CB ARG B 236 5.609 -21.521 -76.445 1.00 31.09 B
ATOM 6827 CG ARG B 236 5.661 -21.683 -77.868 1.00 31.43 B
ATOM 6828 CD ARG B 236 6.548 -22.761 -78.336 1.00 32.54 B
ATOM 6829 NE ARG B 236 6.061 -24.073 -78.041 1.00 34.07 B
ATOM 6830 CZ ARG B 236 6.575 -25.162 -78.513 1.00 32.33 B

ATOM 6831 NH1 ARG B 236 7.577 -25.076 -79.312 1.00 29.15 B
ATOM 6832 NH2 ARG B 236 6.081 -26.325 -78.185 1.00 31.45 B
ATOM 6833 C ARG B 236 7.205 -19.678 -76.837 1.00 31.48 B
ATOM 6834 O ARG B 236 8.304 -19.946 -77.206 1.00 31.93 B
ATOM 6835 N TYR B 237 6.562 -18.613 -77.264 1.00 30.56 B
ATOM 6836 CA TYR B 237 7.156 -17.754 -78.284 1.00 29.73 B
ATOM 6837 CB TYR B 237 6.081 -17.226 -79.240 1.00 28.59 B
ATOM 6838 CG TYR B 237 5.357 -18.320 -79.987 1.00 28.00 B
ATOM 6839 CD1 TYR B 237 4.018 -18.593 -79.729 1.00 29.08 B
ATOM 6840 CE1 TYR B 237 3.350 -19.613 -80.397 1.00 31.20 B
ATOM 6841 CD2 TYR B 237 6.017 -19.096 -80.934 1.00 28.30 B
ATOM 6842 CE2 TYR B 237 5.364 -20.126 -81.614 1.00 29.20 B
ATOM 6843 CZ TYR B 237 4.028 -20.380 -81.342 1.00 30.81 B
ATOM 6844 OH TYR B 237 3.366 -21.392 -82.010 1.00 30.34 B
ATOM 6845 C TYR B 237 7.983 -16.597 -77.750 1.00 29.62 B
ATOM 6846 O TYR B 237 8.791 -16.032 -78.474 1.00 28.77 B
ATOM 6847 N GLY B 238 7.781 -16.231 -76.493 1.00 30.50 B
ATOM 6848 CA GLY B 238 8.573 -15.146 -75.936 1.00 30.96 B
ATOM 6849 C GLY B 238 8.024 -13.734 -75.985 1.00 30.45 B
ATOM 6850 O GLY B 238 7.215 -13.376 -76.831 1.00 30.03 B
ATOM 6851 N ASP B 239 8.508 -12.922 -75.059 1.00 32.37 B
ATOM 6852 CA ASP B 239 8.089 -11.535 -74.923 1.00 34.39 B
ATOM 6853 CB ASP B 239 8.952 -10.856 -73.857 1.00 35.83 B
ATOM 6854 CG ASP B 239 8.254 -9.669 -73.232 1.00 38.01 B
ATOM 6855 OD1 ASP B 239 7.146 -9.875 -72.692 1.00 39.77 B
ATOM 6856 OD2 ASP B 239 8.793 -8.540 -73.280 1.00 39.71 B
ATOM 6857 C ASP B 239 8.119 -10.687 -76.207 1.00 33.63 B
ATOM 6858 O ASP B 239 7.479 -9.639 -76.278 1.00 32.08 B
ATOM 6859 N ARG B 240 8.732 -11.181 -77.251 1.00 33.23 B
ATOM 6860 CA ARG B 240 8.861 -10.442 -78.459 1.00 32.47 B
ATOM 6861 CB ARG B 240 9.966 -10.987 -79.262 1.00 34.01 B
ATOM 6862 CG ARG B 240 10.199 -10.122 -80.379 1.00 38.24 B
ATOM 6863 CD ARG B 240 11.533 -10.254 -80.957 1.00 41.40 B
ATOM 6864 NE ARG B 240 11.984 -9.061 -81.630 1.00 42.59 B

ATOM 6865 CZ ARG B 240 12.127 -8.991 -82.920 1.00 44.09 B
ATOM 6866 NH1 ARG B 240 11.851 -10.033 -83.655 1.00 43.55 B
ATOM 6867 NH2 ARG B 240 12.536 -7.880 -83.483 1.00 43.90 B
ATOM 6868 C ARG B 240 7.696 -10.513 -79.322 1.00 31.55 B
ATOM 6869 O ARG B 240 7.355 -9.577 -79.937 1.00 30.43 B
ATOM 6870 N TYR B 241 7.118 -11.678 -79.405 1.00 30.27 B
ATOM 6871 CA TYR B 241 5.972 -11.905 -80.276 1.00 28.18 B
ATOM 6872 CB TYR B 241 6.199 -13.167 -81.100 1.00 29.74 B
ATOM 6873 CG TYR B 241 7.397 -13.079 -81.991 1.00 31.46 B
ATOM 6874 CD1 TYR B 241 8.491 -13.897 -81.782 1.00 32.92 B
ATOM 6875 CE1 TYR B 241 9.621 -13.807 -82.588 1.00 36.73 B
ATOM 6876 CD2 TYR B 241 7.452 -12.153 -83.036 1.00 33.91 B
ATOM 6877 CE2 TYR B 241 8.581 -12.046 -83.849 1.00 35.38 B
ATOM 6878 CZ TYR B 241 9.662 -12.882 -83.618 1.00 36.91 B
ATOM 6879 OH TYR B 241 10.785 -12.821 -84.408 1.00 38.75 B
ATOM 6880 C TYR B 241 4.600 -11.987 -79.631 1.00 27.03 B
ATOM 6881 O TYR B 241 3.590 -12.088 -80.325 1.00 27.79 B
ATOM 6882 N ILE B 242 4.543 -11.973 -78.312 1.00 25.27 B
ATOM 6883 CA ILE B 242 3.253 -12.021 -77.651 1.00 23.95 B
ATOM 6884 CB ILE B 242 3.076 -13.334 -76.855 1.00 22.69 B
ATOM 6885 CG2 ILE B 242 1.748 -13.329 -76.131 1.00 22.47 B
ATOM 6886 CG1 ILE B 242 3.130 -14.539 -77.794 1.00 21.86 B
ATOM 6887 CD1 ILE B 242 1.899 -14.702 -78.661 1.00 22.55 B
ATOM 6888 C ILE B 242 3.179 -10.845 -76.696 1.00 23.43 B
ATOM 6889 O ILE B 242 4.153 -10.537 -76.021 1.00 24.17 B
ATOM 6890 N ASN B 243 2.049 -10.153 -76.663 1.00 23.08 B
ATOM 6891 CA ASN B 243 1.919 -9.042 -75.727 1.00 22.44 B
ATOM 6892 CB ASN B 243 1.521 -7.742 -76.424 1.00 22.04 B
ATOM 6893 CG ASN B 243 1.353 -6.594 -75.449 1.00 22.02 B
ATOM 6894 OD1 ASN B 243 0.648 -6.713 -74.446 1.00 22.51 B
ATOM 6895 ND2 ASN B 243 2.002 -5.475 -75.736 1.00 22.16 B
ATOM 6896 C ASN B 243 0.845 -9.430 -74.729 1.00 22.08 B
ATOM 6897 O ASN B 243 -0.326 -9.611 -75.098 1.00 22.03 B
ATOM 6898 N LEU B 244 1.257 -9.561 -73.469 1.00 21.01 B

ATOM 6899 CA LEU B 244 0.358 -9.960 -72.392 1.00 20.38 B
ATOM 6900 CB LEU B 244 1.155 -10.181 -71.108 1.00 18.30 B
ATOM 6901 CG LEU B 244 2.049 -11.417 -71.181 1.00 16.14 B
ATOM 6902 CD1 LEU B 244 3.085 -11.410 -70.076 1.00 16.27 B
ATOM 6903 CD2 LEU B 244 1.160 -12.643 -71.106 1.00 15.25 B
ATOM 6904 C LEU B 244 -0.771 -8.987 -72.157 1.00 20.70 B
ATOM 6905 O LEU B 244 -1.719 -9.291 -71.440 1.00 20.34 B
ATOM 6906 N ARG B 245 -0.680 -7.874 -72.794 1.00 22.95 B
ATOM 6907 CA ARG B 245 -1.689 -6.898 -72.663 1.00 26.00 B
ATOM 6908 CB ARG B 245 -1.100 -5.743 -71.973 1.00 27.86 B
ATOM 6909 CG ARG B 245 -1.544 -5.539 -70.588 1.00 31.18 B
ATOM 6910 CD ARG B 245 -0.481 -5.572 -69.604 1.00 35.24 B
ATOM 6911 NE ARG B 245 0.623 -4.739 -69.975 1.00 40.23 B
ATOM 6912 CZ ARG B 245 0.963 -3.664 -69.337 1.00 42.55 B
ATOM 6913 NH1 ARG B 245 0.271 -3.299 -68.303 1.00 44.34 B
ATOM 6914 NH2 ARG B 245 1.994 -2.956 -69.707 1.00 43.15 B
ATOM 6915 C ARG B 245 -2.208 -6.460 -73.964 1.00 26.90 B
ATOM 6916 O ARG B 245 -3.005 -5.651 -73.999 1.00 27.65 B
ATOM 6917 N GLY B 246 -1.789 -7.070 -75.049 1.00 27.24 B
ATOM 6918 CA GLY B 246 -2.246 -6.766 -76.394 1.00 25.95 B
ATOM 6919 C GLY B 246 -2.988 -7.944 -76.979 1.00 24.24 B
ATOM 6920 O GLY B 246 -3.137 -8.949 -76.298 1.00 24.92 B
ATOM 6921 N PRO B 247 -3.477 -7.854 -78.227 1.00 22.68 B
ATOM 6922 CD PRO B 247 -3.479 -6.678 -79.119 1.00 21.66 B
ATOM 6923 CA PRO B 247 -4.201 -8.971 -78.843 1.00 20.46 B
ATOM 6924 CB PRO B 247 -4.923 -8.313 -80.010 1.00 19.56 B
ATOM 6925 CG PRO B 247 -3.962 -7.269 -80.432 1.00 21.20 B
ATOM 6926 C PRO B 247 -3.234 -10.050 -79.286 1.00 19.37 B
ATOM 6927 O PRO B 247 -2.023 -9.841 -79.316 1.00 18.26 B
ATOM 6928 N ILE B 248 -3.765 -11.212 -79.625 1.00 19.87 B
ATOM 6929 CA ILE B 248 -2.909 -12.310 -80.057 1.00 19.37 B
ATOM 6930 CB ILE B 248 -3.523 -13.678 -79.672 1.00 17.70 B
ATOM 6931 CG2 ILE B 248 -2.547 -14.788 -79.979 1.00 17.20 B
ATOM 6932 CG1 ILE B 248 -3.874 -13.702 -78.191 1.00 18.35 B

ATOM 6933 CD1 ILE B 248 -4.509 -14.999 -77.749 1.00 17.39 B
ATOM 6934 C ILE B 248 -2.675 -12.323 -81.565 1.00 18.82 B
ATOM 6935 O ILE B 248 -3.570 -12.005 -82.342 1.00 19.02 B
ATOM 6936 N PRO B 249 -1.456 -12.674 -81.997 1.00 19.42 B
ATOM 6937 CD PRO B 249 -0.233 -12.765 -81.182 1.00 20.56 B
ATOM 6938 CA PRO B 249 -1.131 -12.740 -83.426 1.00 20.44 B
ATOM 6939 CB PRO B 249 0.334 -13.145 -83.420 1.00 21.40 B
ATOM 6940 CG PRO B 249 0.847 -12.464 -82.183 1.00 21.16 B
ATOM 6941 C PRO B 249 -2.023 -13.822 -84.043 1.00 20.41 B
ATOM 6942 O PRO B 249 -1.970 -14.976 -83.626 1.00 20.15 B
ATOM 6943 N ALA B 250 -2.824 -13.443 -85.036 1.00 20.31 B
ATOM 6944 CA ALA B 250 -3.780 -14.346 -85.696 1.00 19.16 B
ATOM 6945 CB ALA B 250 -4.484 -13.596 -86.825 1.00 18.60 B
ATOM 6946 C ALA B 250 -3.319 -15.710 -86.214 1.00 18.37 B
ATOM 6947 O ALA B 250 -4.155 -16.536 -86.560 1.00 19.30 B
ATOM 6948 N HIS B 251 -2.022 -15.971 -86.255 1.00 17.40 B
ATOM 6949 CA HIS B 251 -1.555 -17.248 -86.769 1.00 18.91 B
ATOM 6950 CB HIS B 251 -0.506 -16.986 -87.835 1.00 18.35 B
ATOM 6951 CG HIS B 251 0.744 -16.371 -87.298 1.00 18.22 B
ATOM 6952 CD2 HIS B 251 2.026 -16.805 -87.300 1.00 18.71 B
ATOM 6953 ND1 HIS B 251 0.751 -15.169 -86.635 1.00 19.23 B
ATOM 6954 CE1 HIS B 251 1.982 -14.887 -86.248 1.00 19.78 B
ATOM 6955 NE2 HIS B 251 2.776 -15.864 -86.640 1.00 18.50 B
ATOM 6956 C HIS B 251 -0.961 -18.213 -85.741 1.00 20.76 B
ATOM 6957 O HIS B 251 -0.272 -19.167 -86.113 1.00 22.64 B
ATOM 6958 N LEU B 252 -1.218 -17.989 -84.458 1.00 21.14 B
ATOM 6959 CA LEU B 252 -0.642 -18.847 -83.429 1.00 19.87 B
ATOM 6960 CB LEU B 252 0.027 -17.991 -82.369 1.00 20.54 B
ATOM 6961 CG LEU B 252 1.005 -16.997 -82.981 1.00 21.73 B
ATOM 6962 CD1 LEU B 252 1.535 -16.075 -81.904 1.00 24.85 B
ATOM 6963 CD2 LEU B 252 2.137 -17.751 -83.656 1.00 21.93 B
ATOM 6964 C LEU B 252 -1.616 -19.775 -82.763 1.00 18.66 B
ATOM 6965 O LEU B 252 -1.207 -20.667 -82.035 1.00 17.04 B
ATOM 6966 N LEU B 253 -2.903 -19.578 -83.013 1.00 19.25 B

ATOM 6967 CA LEU B 253 -3.916 -20.414 -82.394 1.00 19.58 B
ATOM 6968 CB LEU B 253 -5.223 -19.635 -82.255 1.00 20.54 B
ATOM 6969 CG LEU B 253 -5.249 -18.512 -81.204 1.00 20.58 B
ATOM 6970 CD1 LEU B 253 -4.605 -18.997 -79.925 1.00 20.51 B
ATOM 6971 CD2 LEU B 253 -4.502 -17.310 -81.703 1.00 21.84 B
ATOM 6972 C LEU B 253 -4.170 -21.745 -83.090 1.00 20.20 B
ATOM 6973 O LEU B 253 -5.237 -22.334 -82.948 1.00 20.57 B
ATOM 6974 N GLY B 254 -3.181 -22.219 -83.839 1.00 21.11 B
ATOM 6975 CA GLY B 254 -3.299 -23.500 -84.516 1.00 22.14 B
ATOM 6976 C GLY B 254 -4.409 -23.686 -85.540 1.00 23.50 B
ATOM 6977 O GLY B 254 -4.887 -24.806 -85.736 1.00 24.00 B
ATOM 6978 N ASP B 255 -4.812 -22.601 -86.197 1.00 23.64 B
ATOM 6979 CA ASP B 255 -5.855 -22.641 -87.213 1.00 23.22 B
ATOM 6980 CB ASP B 255 -7.240 -22.710 -86.574 1.00 24.00 B
ATOM 6981 CG ASP B 255 -8.365 -22.596 -87.600 1.00 27.63 B
ATOM 6982 OD1 ASP B 255 -8.363 -21.614 -88.376 1.00 28.48 B
ATOM 6983 OD2 ASP B 255 -9.258 -23.475 -87.639 1.00 28.83 B
ATOM 6984 C ASP B 255 -5.748 -21.381 -88.054 1.00 23.59 B
ATOM 6985 O ASP B 255 -5.600 -20.287 -87.518 1.00 24.69 B
ATOM 6986 N MET B 256 -5.833 -21.551 -89.372 1.00 23.63 B
ATOM 6987 CA MET B 256 -5.737 -20.449 -90.336 1.00 22.67 B
ATOM 6988 CB MET B 256 -6.225 -20.929 -91.715 1.00 21.60 B
ATOM 6989 CG MET B 256 -6.044 -19.938 -92.855 1.00 18.93 B
ATOM 6990 SD MET B 256 -4.338 -19.351 -93.031 1.00 20.97 B
ATOM 6991 CE MET B 256 -3.478 -20.835 -93.442 1.00 18.41 B
ATOM 6992 C MET B 256 -6.513 -19.203 -89.927 1.00 22.47 B
ATOM 6993 O MET B 256 -6.025 -18.079 -90.066 1.00 20.92 B
ATOM 6994 N TRP B 257 -7.715 -19.417 -89.406 1.00 23.06 B
ATOM 6995 CA TRP B 257 -8.590 -18.330 -88.996 1.00 24.82 B
ATOM 6996 CB TRP B 257 -9.978 -18.598 -89.557 1.00 25.20 B
ATOM 6997 CG TRP B 257 -9.947 -18.801 -91.024 1.00 27.53 B
ATOM 6998 CD2 TRP B 257 -9.763 -20.043 -91.710 1.00 29.46 B
ATOM 6999 CE2 TRP B 257 -9.760 -19.760 -93.094 1.00 29.76 B
ATOM 7000 CE3 TRP B 257 -9.602 -21.370 -91.293 1.00 30.37 B

ATOM 7001 CD1 TRP B 257 -10.040 -17.839 -91.990 1.00 28.93 B
ATOM 7002 NE1 TRP B 257 -9.928 -18.407 -93.237 1.00 29.83 B
ATOM 7003 CZ2 TRP B 257 -9.601 -20.759 -94.059 1.00 29.66 B
ATOM 7004 CZ3 TRP B 257 -9.443 -22.360 -92.255 1.00 28.48 B
ATOM 7005 CH2 TRP B 257 -9.445 -22.047 -93.618 1.00 28.72 B
ATOM 7006 C TRP B 257 -8.679 -18.086 -87.489 1.00 24.55 B
ATOM 7007 O TRP B 257 -9.361 -17.159 -87.050 1.00 24.08 B
ATOM 7008 N ALA B 258 -7.984 -18.909 -86.711 1.00 24.08 B
ATOM 7009 CA ALA B 258 -8.008 -18.795 -85.260 1.00 23.69 B
ATOM 7010 CB ALA B 258 -7.474 -17.437 -84.842 1.00 22.34 B
ATOM 7011 C ALA B 258 -9.442 -18.971 -84.765 1.00 23.31 B
ATOM 7012 O ALA B 258 -9.874 -18.282 -83.854 1.00 23.14 B
ATOM 7013 N GLN B 259 -10.176 -19.901 -85.357 1.00 23.73 B
ATOM 7014 CA GLN B 259 -11.565 -20.088 -84.975 1.00 25.42 B
ATOM 7015 CB GLN B 259 -12.433 -20.220 -86.234 1.00 27.91 B
ATOM 7016 CG GLN B 259 -12.263 -21.499 -87.038 1.00 30.22 B
ATOM 7017 CD GLN B 259 -12.819 -21.349 -88.444 1.00 33.44 B
ATOM 7018 OE1 GLN B 259 -12.125 -20.865 -89.343 1.00 36.51 B
ATOM 7019 NE2 GLN B 259 -14.080 -21.741 -88.639 1.00 32.96 B
ATOM 7020 C GLN B 259 -11.826 -21.245 -84.017 1.00 25.57 B
ATOM 7021 O GLN B 259 -12.933 -21.390 -83.484 1.00 25.13 B
ATOM 7022 N SER B 260 -10.809 -22.077 -83.823 1.00 25.46 B
ATOM 7023 CA SER B 260 -10.882 -23.197 -82.894 1.00 27.10 B
ATOM 7024 CB SER B 260 -11.503 -24.433 -83.549 1.00 24.95 B
ATOM 7025 OG SER B 260 -10.688 -24.928 -84.584 1.00 28.64 B
ATOM 7026 C SER B 260 -9.426 -23.430 -82.494 1.00 28.21 B
ATOM 7027 O SER B 260 -8.534 -23.470 -83.342 1.00 28.47 B
ATOM 7028 N TRP B 261 -9.183 -23.558 -81.195 1.00 29.86 B
ATOM 7029 CA TRP B 261 -7.824 -23.717 -80.696 1.00 31.13 B
ATOM 7030 CB TRP B 261 -7.579 -22.673 -79.596 1.00 30.79 B
ATOM 7031 CG TRP B 261 -7.980 -21.251 -79.985 1.00 29.47 B
ATOM 7032 CD2 TRP B 261 -7.965 -20.097 -79.137 1.00 28.29 B
ATOM 7033 CE2 TRP B 261 -8.357 -18.993 -79.925 1.00 27.16 B
ATOM 7034 CE3 TRP B 261 -7.657 -19.889 -77.787 1.00 27.38 B

ATOM 7035 CD1 TRP B 261 -8.373 -20.806 -81.220 1.00 28.11 B
ATOM 7036 NE1 TRP B 261 -8.600 -19.454 -81.190 1.00 26.68 B
ATOM 7037 CZ2 TRP B 261 -8.448 -17.703 -79.410 1.00 26.96 B
ATOM 7038 CZ3 TRP B 261 -7.748 -18.611 -77.276 1.00 27.41 B
ATOM 7039 CH2 TRP B 261 -8.142 -17.530 -78.088 1.00 27.30 B
ATOM 7040 C TRP B 261 -7.397 -25.097 -80.182 1.00 31.99 B
ATOM 7041 O TRP B 261 -6.308 -25.224 -79.616 1.00 31.88 B
ATOM 7042 N GLU B 262 -8.223 -26.126 -80.381 1.00 32.78 B
ATOM 7043 CA GLU B 262 -7.873 -27.457 -79.893 1.00 34.30 B
ATOM 7044 CB GLU B 262 -8.999 -28.464 -80.153 1.00 36.35 B
ATOM 7045 CG GLU B 262 -9.251 -28.815 -81.599 1.00 42.20 B
ATOM 7046 CD GLU B 262 -9.882 -27.674 -82.365 1.00 47.50 B
ATOM 7047 OE1 GLU B 262 -9.177 -26.664 -82.600 1.00 50.53 B
ATOM 7048 OE2 GLU B 262 -11.083 -27.783 -82.727 1.00 49.30 B
ATOM 7049 C GLU B 262 -6.564 -28.002 -80.452 1.00 33.85 B
ATOM 7050 O GLU B 262 -5.992 -28.937 -79.891 1.00 34.16 B
ATOM 7051 N ASN B 263 -6.083 -27.415 -81.543 1.00 33.98 B
ATOM 7052 CA ASN B 263 -4.831 -27.857 -82.150 1.00 34.54 B
ATOM 7053 CB ASN B 263 -4.761 -27.441 -83.622 1.00 35.87 B
ATOM 7054 CG ASN B 263 -5.538 -28.367 -84.521 1.00 37.79 B
ATOM 7055 OD1 ASN B 263 -5.178 -29.528 -84.692 1.00 39.16 B
ATOM 7056 ND2 ASN B 263 -6.620 -27.862 -85.098 1.00 40.36 B
ATOM 7057 C ASN B 263 -3.598 -27.341 -81.425 1.00 34.03 B
ATOM 7058 O ASN B 263 -2.479 -27.603 -81.844 1.00 33.21 B
ATOM 7059 N ILE B 264 -3.819 -26.794 -80.308 1.00 34.70 B
ATOM 7060 CA ILE B 264 -2.743 -26.212 -79.659 1.00 36.56 B
ATOM 7061 CB ILE B 264 -2.894 -24.861 -79.912 1.00 37.19 B
ATOM 7062 CG2 ILE B 264 -2.985 -24.163 -78.757 1.00 38.17 B
ATOM 7063 CG1 ILE B 264 -1.753 -24.379 -80.653 1.00 37.64 B
ATOM 7064 CD1 ILE B 264 -1.432 -23.227 -80.167 1.00 39.01 B
ATOM 7065 C ILE B 264 -2.918 -26.562 -78.230 1.00 36.94 B
ATOM 7066 O ILE B 264 -2.483 -25.932 -77.377 1.00 36.97 B
ATOM 7067 N TYR B 265 -3.609 -27.653 -78.041 1.00 37.21 B
ATOM 7068 CA TYR B 265 -3.930 -28.245 -76.757 1.00 36.40 B

ATOM 7069 CB TYR B 265 -4.763 -29.512 -76.980 1.00 36.14 B
ATOM 7070 CG TYR B 265 -5.110 -30.246 -75.711 1.00 37.26 B
ATOM 7071 CD1 TYR B 265 -6.010 -29.703 -74.788 1.00 37.55 B
ATOM 7072 CE1 TYR B 265 -6.281 -30.355 -73.575 1.00 37.58 B
ATOM 7073 CD2 TYR B 265 -4.491 -31.462 -75.397 1.00 37.08 B
ATOM 7074 CE2 TYR B 265 -4.750 -32.117 -74.193 1.00 37.28 B
ATOM 7075 CZ TYR B 265 -5.643 -31.559 -73.289 1.00 36.96 B
ATOM 7076 OH TYR B 265 -5.890 -32.203 -72.107 1.00 36.45 B
ATOM 7077 C TYR B 265 -2.643 -28.576 -76.001 1.00 36.26 B
ATOM 7078 O TYR B 265 -2.509 -28.259 -74.818 1.00 36.16 B
ATOM 7079 N ASP B 266 -1.689 -29.188 -76.694 1.00 35.99 B
ATOM 7080 CA ASP B 266 -0.420 -29.567 -76.078 1.00 37.23 B
ATOM 7081 CB ASP B 266 0.428 -30.394 -77.059 1.00 39.84 B
ATOM 7082 CG ASP B 266 -0.841 -29.604 -78.301 1.00 43.75 B
ATOM 7083 OD1 ASP B 266 -0.063 -29.178 -79.056 1.00 46.15 B
ATOM 7084 OD2 ASP B 266 2.065 -29.408 -78.529 1.00 43.83 B
ATOM 7085 C ASP B 266 0.417 -28.400 -75.535 1.00 36.31 B
ATOM 7086 O ASP B 266 1.518 -28.609 -75.023 1.00 36.63 B
ATOM 7087 N MET B 267 -0.090 -27.177 -75.637 1.00 35.12 B
ATOM 7088 CA MET B 267 0.647 -26.028 -75.130 1.00 34.41 B
ATOM 7089 CB MET B 267 0.855 -24.979 -76.210 1.00 34.18 B
ATOM 7090 CG MET B 267 1.494 -25.484 -77.466 1.00 36.61 B
ATOM 7091 SD MET B 267 1.928 -24.091 -78.523 1.00 37.28 B
ATOM 7092 CE MET B 267 3.725 -24.245 -78.528 1.00 34.54 B
ATOM 7093 C MET B 267 -0.108 -25.370 -73.998 1.00 34.79 B
ATOM 7094 O MET B 267 0.429 -24.498 -73.320 1.00 36.35 B
ATOM 7095 N VAL B 268 -1.356 -25.774 -73.800 1.00 33.26 B
ATOM 7096 CA VAL B 268 -2.162 -25.178 -72.755 1.00 32.39 B
ATOM 7097 CB VAL B 268 -3.324 -24.387 -73.365 1.00 31.12 B
ATOM 7098 CG1 VAL B 268 -2.781 -23.229 -74.165 1.00 29.64 B
ATOM 7099 CG2 VAL B 268 -4.161 -25.285 -74.237 1.00 29.68 B
ATOM 7100 C VAL B 268 -2.711 -26.186 -71.757 1.00 33.71 B
ATOM 7101 O VAL B 268 -3.064 -25.831 -70.632 1.00 33.28 B
ATOM 7102 N VAL B 269 -2.773 -27.446 -72.171 1.00 35.08 B

ATOM 7103 CA VAL B 269 -3.287 -28.495 -71.300 1.00 35.68 B
ATOM 7104 CB VAL B 269 -2.841 -29.913 -71.781 1.00 35.61 B
ATOM 7105 CG1 VAL B 269 -1.334 -29.978 -71.942 1.00 35.03 B
ATOM 7106 CG2 VAL B 269 -3.307 -30.963 -70.791 1.00 35.51 B
ATOM 7107 C VAL B 269 -2.821 -28.260 -69.871 1.00 35.58 B
ATOM 7108 O VAL B 269 -1.629 -28.294 -69.578 1.00 34.66 B
ATOM 7109 N PRO B 270 -3.773 -27.985 -68.968 1.00 36.56 B
ATOM 7110 CD PRO B 270 -5.199 -27.827 -69.304 1.00 36.13 B
ATOM 7111 CA PRO B 270 -3.551 -27.727 -67.544 1.00 38.85 B
ATOM 7112 CB PRO B 270 -4.960 -27.764 -66.974 1.00 37.80 B
ATOM 7113 CG PRO B 270 -5.750 -27.135 -68.078 1.00 37.04 B
ATOM 7114 C PRO B 270 -2.624 -28.727 -66.864 1.00 41.69 B
ATOM 7115 O PRO B 270 -1.534 -28.365 -66.419 1.00 42.89 B
ATOM 7116 N PHE B 271 -3.051 -29.984 -66.787 1.00 44.18 B
ATOM 7117 CA PHE B 271 -2.245 -31.016 -66.144 1.00 45.80 B
ATOM 7118 CB PHE B 271 -3.070 -31.708 -65.070 1.00 44.56 B
ATOM 7119 CG PHE B 271 -3.789 -30.750 -64.180 1.00 43.49 B
ATOM 7120 CD1 PHE B 271 -5.166 -30.617 -64.249 1.00 43.20 B
ATOM 7121 CD2 PHE B 271 -3.089 -29.949 -63.298 1.00 42.12 B
ATOM 7122 CE1 PHE B 271 -5.831 -29.700 -63.452 1.00 41.69 B
ATOM 7123 CE2 PHE B 271 -3.748 -29.037 -62.507 1.00 41.07 B
ATOM 7124 CZ PHE B 271 -5.123 -28.913 -62.583 1.00 40.95 B
ATOM 7125 C PHE B 271 -1.734 -32.018 -67.156 1.00 47.68 B
ATOM 7126 O PHE B 271 -2.415 -32.993 -67.487 1.00 47.80 B
ATOM 7127 N PRO B 272 -0.517 -31.781 -67.662 1.00 49.60 B
ATOM 7128 CD PRO B 272 0.295 -30.616 -67.280 1.00 49.61 B
ATOM 7129 CA PRO B 272 0.196 -32.591 -68.651 1.00 52.19 B
ATOM 7130 CB PRO B 272 1.525 -31.853 -68.812 1.00 51.23 B
ATOM 7131 CG PRO B 272 1.175 -30.450 -68.488 1.00 50.69 B
ATOM 7132 C PRO B 272 0.403 -34.026 -68.191 1.00 54.54 B
ATOM 7133 O PRO B 272 0.378 -34.957 -69.005 1.00 54.80 B
ATOM 7134 N ASP B 273 0.608 -34.180 -66.882 1.00 56.81 B
ATOM 7135 CA ASP B 273 0.844 -35.477 -66.252 1.00 59.57 B
ATOM 7136 CB ASP B 273 0.689 -35.351 -64.730 1.00 60.95 B

ATOM 7137 CG ASP B 273 1.456 -36.427 -63.970 1.00 62.77 B
ATOM 7138 OD1 ASP B 273 2.706 -36.445 -64.066 1.00 64.05 B
ATOM 7139 OD2 ASP B 273 0.812 -37.253 -63.280 1.00 63.57 B
ATOM 7140 C ASP B 273 -0.116 -36.538 -66.791 1.00 61.06 B
ATOM 7141 O ASP B 273 0.317 -37.539 -67.380 1.00 61.20 B
ATOM 7142 N LYS B 274 -1.411 -36.318 -66.589 1.00 62.13 B
ATOM 7143 CA LYS B 274 -2.435 -37.140 -67.224 1.00 62.87 B
ATOM 7144 CB LYS B 274 -3.831 -36.674 -66.804 1.00 61.63 B
ATOM 7145 CG LYS B 274 -3.965 -36.375 -65.320 1.00 59.72 B
ATOM 7146 CD LYS B 274 -5.258 -36.943 -64.757 0.00 60.12 B
ATOM 7147 CE LYS B 274 -5.465 -38.384 -65.194 0.00 60.29 B
ATOM 7148 NZ LYS B 274 -6.546 -38.506 -66.211 0.00 59.93 B
ATOM 7149 C LYS B 274 -2.306 -37.105 -68.743 1.00 64.32 B
ATOM 7150 O LYS B 274 -2.020 -36.061 -69.327 1.00 65.21 B
ATOM 7151 N PRO B 275 -2.520 -38.254 -69.376 1.00 65.24 B
ATOM 7152 CD PRO B 275 -2.099 -39.438 -68.607 1.00 65.62 B
ATOM 7153 CA PRO B 275 -2.253 -38.404 -70.810 1.00 66.55 B
ATOM 7154 CB PRO B 275 -1.411 -39.679 -70.874 1.00 66.34 B
ATOM 7155 CG PRO B 275 -1.819 -40.456 -69.674 1.00 65.56 B
ATOM 7156 C PRO B 275 -3.540 -38.585 -71.610 1.00 67.38 B
ATOM 7157 O PRO B 275 -4.622 -38.654 -71.028 1.00 67.20 B
ATOM 7158 N ALA B 276 -3.415 -38.662 -72.931 1.00 68.18 B
ATOM 7159 CA ALA B 276 -3.859 -37.583 -73.805 1.00 68.57 B
ATOM 7160 CB ALA B 276 -2.999 -37.528 -75.059 1.00 68.32 B
ATOM 7161 C ALA B 276 -5.330 -37.743 -74.174 1.00 69.08 B
ATOM 7162 O ALA B 276 -5.852 -38.857 -74.213 1.00 68.14 B
ATOM 7163 N ALA B 277 -5.993 -36.623 -74.443 1.00 70.04 B
ATOM 7164 CA ALA B 277 -7.379 -36.644 -74.897 1.00 71.40 B
ATOM 7165 CB ALA B 277 -8.284 -35.986 -73.866 1.00 70.14 B
ATOM 7166 C ALA B 277 -7.526 -35.958 -76.251 1.00 72.83 B
ATOM 7167 O ALA B 277 -8.562 -35.364 -76.548 1.00 74.35 B
ATOM 7168 N ALA B 278 -6.482 -36.046 -77.069 1.00 73.67 B
ATOM 7169 CA ALA B 278 -6.648 -36.195 -78.510 1.00 74.27 B
ATOM 7170 CB ALA B 278 -5.743 -35.224 -79.252 1.00 74.17 B

ATOM 7171 C ALA B 278 -6.371 -37.628 -78.951 1.00 74.53 B
ATOM 7172 O ALA B 278 -5.247 -38.117 -78.834 1.00 74.53 B
ATOM 7173 N VAL B 279 -7.401 -38.296 -79.460 1.00 74.27 B
ATOM 7174 CA VAL B 279 -7.326 -39.725 -79.739 1.00 73.31 B
ATOM 7175 CB VAL B 279 -8.716 -40.384 -79.685 1.00 73.17 B
ATOM 7176 CG1 VAL B 279 -8.689 -41.740 -80.374 1.00 74.36 B
ATOM 7177 CG2 VAL B 279 -9.186 -40.520 -78.245 1.00 71.95 B
ATOM 7178 C VAL B 279 -6.701 -39.987 -81.106 1.00 73.12 B
ATOM 7179 O VAL B 279 -6.637 -41.129 -81.560 1.00 73.40 B
ATOM 7180 N THR B 280 -6.243 -38.922 -81.756 1.00 72.70 B
ATOM 7181 CA THR B 280 -5.780 -39.008 -83.135 1.00 70.80 B
ATOM 7182 CB THR B 280 -5.066 -37.707 -83.547 1.00 71.20 B
ATOM 7183 OG1 THR B 280 -6.015 -36.635 -83.601 1.00 71.26 B
ATOM 7184 CG2 THR B 280 -4.565 -37.804 -84.980 1.00 70.13 B
ATOM 7185 C THR B 280 -4.850 -40.200 -83.332 1.00 69.48 B
ATOM 7186 O THR B 280 -5.134 -41.097 -84.126 1.00 68.67 B
ATOM 7187 N SER B 281 -3.738 -40.204 -82.604 1.00 68.41 B
ATOM 7188 CA SER B 281 -2.711 -41.226 -82.779 1.00 67.77 B
ATOM 7189 CB SER B 281 -1.479 -40.893 -81.931 1.00 67.08 B
ATOM 7190 OG SER B 281 -1.840 -40.615 -80.596 1.00 68.17 B
ATOM 7191 C SER B 281 -3.226 -42.625 -82.442 1.00 67.28 B
ATOM 7192 O SER B 281 -2.719 -43.620 -82.960 1.00 66.75 B
ATOM 7193 N THR B 282 -4.231 -42.700 -81.575 1.00 67.56 B
ATOM 7194 CA THR B 282 -4.808 -43.986 -81.201 1.00 66.56 B
ATOM 7195 CB THR B 282 -5.818 -43.850 -80.029 1.00 67.21 B
ATOM 7196 OG1 THR B 282 -5.141 -43.381 -78.852 1.00 66.81 B
ATOM 7197 CG2 THR B 282 -6.473 -45.195 -79.731 1.00 67.35 B
ATOM 7198 C THR B 282 -5.539 -44.519 -82.424 1.00 65.98 B
ATOM 7199 O THR B 282 -5.660 -45.729 -82.606 1.00 65.78 B
ATOM 7200 N MET B 283 -6.022 -43.598 -83.258 1.00 65.18 B
ATOM 7201 CA MET B 283 -6.739 -43.956 -84.479 1.00 64.20 B
ATOM 7202 CB MET B 283 -7.462 -42.735 -85.064 1.00 63.25 B
ATOM 7203 CG MET B 283 -8.564 -42.156 -84.194 1.00 61.60 B
ATOM 7204 SD MET B 283 -9.358 -40.705 -84.933 1.00 59.65 B

ATOM 7205 CE MET B 283 -11.017 -41.304 -85.169 1.00 59.91 B
ATOM 7206 C MET B 283 -5.766 -44.503 -85.521 1.00 64.49 B
ATOM 7207 O MET B 283 -5.907 -45.637 -85.983 1.00 64.71 B
ATOM 7208 N LEU B 284 -4.781 -43.690 -85.889 1.00 63.88 B
ATOM 7209 CA LEU B 284 -3.792 -44.094 -86.878 1.00 63.34 B
ATOM 7210 CB LEU B 284 -2.687 -43.035 -87.003 1.00 62.89 B
ATOM 7211 CG LEU B 284 -3.033 -41.677 -87.625 1.00 62.80 B
ATOM 7212 CD1 LEU B 284 -1.790 -40.805 -87.651 1.00 62.34 B
ATOM 7213 CD2 LEU B 284 -3.572 -41.869 -89.037 1.00 63.36 B
ATOM 7214 C LEU B 284 -3.158 -45.443 -86.549 1.00 63.39 B
ATOM 7215 O LEU B 284 -2.931 -46.255 -87.445 1.00 63.72 B
ATOM 7216 N GLN B 285 -3.015 -45.749 -85.278 1.00 63.21 B
ATOM 7217 CA GLN B 285 -2.314 -46.939 -84.835 1.00 62.83 B
ATOM 7218 CB GLN B 285 -1.962 -46.838 -83.372 1.00 62.67 B
ATOM 7219 CG GLN B 285 -0.512 -46.829 -83.018 1.00 62.26 B
ATOM 7220 CD GLN B 285 -0.167 -45.889 -81.872 0.00 62.36 B
ATOM 7221 OE1 GLN B 285 0.531 -44.898 -82.053 0.00 62.34 B
ATOM 7222 NE2 GLN B 285 -0.657 -46.201 -80.695 0.00 62.34 B
ATOM 7223 C GLN B 285 -3.130 -48.157 -84.956 1.00 63.20 B
ATOM 7224 O GLN B 285 -2.742 -49.172 -84.474 1.00 63.50 B
ATOM 7225 N GLN B 286 -4.292 -48.048 -85.542 1.00 63.81 B
ATOM 7226 CA GLN B 286 -5.053 -49.237 -85.800 1.00 65.00 B
ATOM 7227 CB GLN B 286 -6.101 -49.544 -84.750 1.00 64.16 B
ATOM 7228 CG GLN B 286 -6.720 -48.396 -84.001 1.00 63.00 B
ATOM 7229 CD GLN B 286 -7.450 -48.838 -82.801 1.00 62.00 B
ATOM 7230 OE1 GLN B 286 -8.603 -49.156 -82.866 1.00 60.20 B
ATOM 7231 NE2 GLN B 286 -6.769 -48.866 -81.693 1.00 61.54 B
ATOM 7232 C GLN B 286 -5.698 -49.147 -87.118 1.00 66.60 B
ATOM 7233 O GLN B 286 -6.757 -49.697 -87.346 1.00 66.70 B
ATOM 7234 N GLY B 287 -5.051 -48.428 -88.030 1.00 67.72 B
ATOM 7235 CA GLY B 287 -5.440 -48.441 -89.428 1.00 68.48 B
ATOM 7236 C GLY B 287 -6.854 -47.940 -89.645 1.00 69.07 B
ATOM 7237 O GLY B 287 -7.611 -48.509 -90.431 1.00 69.61 B
ATOM 7238 N TRP B 288 -7.212 -46.869 -88.943 1.00 69.05 B

ATOM 7239 CA TRP B 288 -8.532 -46.267 -89.084 1.00 69.17 B
ATOM 7240 CB TRP B 288 -8.744 -45.184 -88.025 1.00 69.47 B
ATOM 7241 CG TRP B 288 -9.540 -45.648 -86.843 1.00 69.17 B
ATOM 7242 CD2 TRP B 288 -10.821 -45.162 -86.425 1.00 68.11 B
ATOM 7243 CE2 TRP B 288 -11.189 -45.883 -85.271 1.00 67.71 B
ATOM 7244 CE3 TRP B 288 -11.699 -44.187 -86.911 1.00 67.90 B
ATOM 7245 CD1 TRP B 288 -9.192 -46.619 -85.949 1.00 69.41 B
ATOM 7246 NE1 TRP B 288 -10.176 -46.767 -85.002 1.00 69.25 B
ATOM 7247 CZ2 TRP B 288 -12.389 -45.661 -84.600 1.00 66.69 B
ATOM 7248 CZ3 TRP B 288 -12.889 -43.968 -86.242 1.00 67.63 B
ATOM 7249 CH2 TRP B 288 -13.222 -44.701 -85.100 1.00 66.67 B
ATOM 7250 C TRP B 288 -8.727 -45.681 -90.479 1.00 69.05 B
ATOM 7251 O TRP B 288 -8.028 -44.748 -90.874 1.00 69.33 B
ATOM 7252 N ASN B 289 -9.827 -46.039 -91.106 1.00 68.68 B
ATOM 7253 CA ASN B 289 -10.122 -45.800 -92.508 1.00 67.30 B
ATOM 7254 CB ASN B 289 -11.088 -46.886 -92.960 1.00 67.20 B
ATOM 7255 CG ASN B 289 -10.628 -47.603 -94.130 1.00 67.35 B
ATOM 7256 OD1 ASN B 289 -11.407 -47.970 -94.945 1.00 67.97 B
ATOM 7257 ND2 ASN B 289 -9.354 -47.837 -94.218 1.00 67.51 B
ATOM 7258 C ASN B 289 -10.891 -44.562 -92.745 1.00 66.19 B
ATOM 7259 O ASN B 289 -11.754 -44.212 -92.008 1.00 66.48 B
ATOM 7260 N ALA B 290 -10.739 -43.990 -93.896 1.00 64.84 B
ATOM 7261 CA ALA B 290 -11.638 -42.882 -94.195 1.00 63.39 B
ATOM 7262 CB ALA B 290 -11.269 -42.243 -95.525 1.00 63.28 B
ATOM 7263 C ALA B 290 -13.093 -43.339 -94.207 1.00 62.02 B
ATOM 7264 O ALA B 290 -13.997 -42.573 -93.875 1.00 61.01 B
ATOM 7265 N THR B 291 -13.311 -44.592 -94.591 1.00 61.38 B
ATOM 7266 CA THR B 291 -14.659 -45.137 -94.702 1.00 60.32 B
ATOM 7267 CB THR B 291 -14.708 -46.241 -95.774 1.00 60.41 B
ATOM 7268 OG1 THR B 291 -13.980 -45.817 -96.933 1.00 59.55 B
ATOM 7269 CG2 THR B 291 -16.126 -46.414 -96.295 1.00 60.90 B
ATOM 7270 C THR B 291 -15.143 -45.685 -93.363 1.00 59.28 B
ATOM 7271 O THR B 291 -16.332 -45.627 -93.050 1.00 59.12 B
ATOM 7272 N HIS B 292 -14.213 -46.216 -92.577 1.00 58.15 B

ATOM 7273 CA HIS B 292 -14.542 -46.783 -91.272 1.00 56.88 B
ATOM 7274 CB HIS B 292 -13.306 -47.440 -90.644 1.00 58.47 B
ATOM 7275 CG HIS B 292 -13.590 -48.193 -89.377 1.00 59.90 B
ATOM 7276 CD2 HIS B 292 -13.101 -48.045 -88.121 1.00 60.26 B
ATOM 7277 ND1 HIS B 292 -14.471 -49.254 -89.322 1.00 60.90 B
ATOM 7278 CE1 HIS B 292 -14.516 -49.725 -88.088 1.00 61.17 B
ATOM 7279 NE2 HIS B 292 -13.694 -49.009 -87.339 1.00 60.99 B
ATOM 7280 C HIS B 292 -15.034 -45.646 -90.388 1.00 55.01 B
ATOM 7281 O HIS B 292 -15.935 -45.826 -89.567 1.00 54.04 B
ATOM 7282 N MET B 293 -14.443 -44.468 -90.570 1.00 53.31 B
ATOM 7283 CA MET B 293 -14.833 -43.294 -89.799 1.00 51.32 B
ATOM 7284 CB MET B 293 -13.961 -42.082 -90.179 1.00 50.39 B
ATOM 7285 CG MET B 293 -12.519 -42.162 -89.659 1.00 50.23 B
ATOM 7286 SD MET B 293 -11.416 -40.803 -90.150 1.00 50.22 B
ATOM 7287 CE MET B 293 -11.988 -39.528 -89.096 1.00 51.58 B
ATOM 7288 C MET B 293 -16.316 -42.986 -90.022 1.00 50.58 B
ATOM 7289 O MET B 293 -17.068 -42.835 -89.057 1.00 51.16 B
ATOM 7290 N PHE B 294 -16.742 -42.915 -91.283 1.00 49.52 B
ATOM 7291 CA PHE B 294 -18.145 -42.628 -91.597 1.00 48.60 B
ATOM 7292 CB PHE B 294 -18.345 -42.399 -93.099 1.00 47.08 B
ATOM 7293 CG PHE B 294 -17.818 -41.086 -93.594 1.00 44.74 B
ATOM 7294 CD1 PHE B 294 -16.475 -40.932 -93.900 1.00 44.44 B
ATOM 7295 CD2 PHE B 294 -18.668 -39.999 -93.752 1.00 43.81 B
ATOM 7296 CE1 PHE B 294 -15.990 -39.717 -94.354 1.00 44.73 B
ATOM 7297 CE2 PHE B 294 -18.190 -38.781 -94.204 1.00 43.84 B
ATOM 7298 CZ PHE B 294 -16.851 -38.639 -94.507 1.00 44.16 B
ATOM 7299 C PHE B 294 -19.103 -43.725 -91.141 1.00 48.75 B
ATOM 7300 O PHE B 294 -20.298 -43.477 -90.970 1.00 47.53 B
ATOM 7301 N ARG B 295 -18.569 -44.910 -90.907 1.00 49.32 B
ATOM 7302 CA ARG B 295 -19.372 -46.040 -90.469 1.00 50.26 B
ATOM 7303 CB ARG B 295 -18.893 -47.370 -91.043 1.00 50.60 B
ATOM 7304 CG ARG B 295 -19.365 -47.673 -92.461 1.00 52.42 B
ATOM 7305 CD ARG B 295 -20.343 -48.803 -92.664 1.00 54.07 B
ATOM 7306 NE ARG B 295 -20.704 -49.076 -94.063 1.00 56.47 B

ATOM 7307 CZ ARG B 295 -19.939 -49.672 -94.997 1.00 57.23 B
ATOM 7308 NH1 ARG B 295 -18.709 -50.071 -94.771 1.00 57.09 B
ATOM 7309 NH2 ARG B 295 -20.412 -49.849 -96.196 1.00 57.74 B
ATOM 7310 C ARG B 295 -19.439 -46.137 -89.003 1.00 50.16 B
ATOM 7311 O ARG B 295 -20.228 -46.868 -88.489 1.00 49.80 B
ATOM 7312 N VAL B 296 -18.608 -45.361 -88.337 1.00 51.02 B
ATOM 7313 CA VAL B 296 -18.615 -45.227 -86.881 1.00 51.29 B
ATOM 7314 CB VAL B 296 -17.257 -44.726 -86.355 1.00 50.60 B
ATOM 7315 CG1 VAL B 296 -17.367 -44.358 -84.887 1.00 49.32 B
ATOM 7316 CG2 VAL B 296 -16.208 -45.795 -86.549 1.00 50.75 B
ATOM 7317 C VAL B 296 -19.672 -44.186 -86.540 1.00 51.85 B
ATOM 7318 O VAL B 296 -20.403 -44.314 -85.555 1.00 52.22 B
ATOM 7319 N ALA B 297 -19.735 -43.146 -87.366 1.00 51.60 B
ATOM 7320 CA ALA B 297 -20.707 -42.085 -87.175 1.00 51.60 B
ATOM 7321 CB ALA B 297 -20.439 -40.938 -88.141 1.00 49.51 B
ATOM 7322 C ALA B 297 -22.075 -42.690 -87.434 1.00 51.83 B
ATOM 7323 O ALA B 297 -23.024 -42.437 -86.694 1.00 51.69 B
ATOM 7324 N GLU B 298 -22.174 -43.502 -88.482 1.00 52.66 B
ATOM 7325 CA GLU B 298 -23.442 -44.138 -88.808 1.00 54.12 B
ATOM 7326 CB GLU B 298 -23.312 -45.027 -90.039 1.00 55.63 B
ATOM 7327 CG GLU B 298 -24.563 -45.860 -90.305 1.00 56.50 B
ATOM 7328 CD GLU B 298 -24.530 -46.547 -91.651 1.00 57.39 B
ATOM 7329 OE1 GLU B 298 -23.608 -47.361 -91.894 1.00 57.90 B
ATOM 7330 OE2 GLU B 298 -25.432 -46.263 -92.468 1.00 58.40 B
ATOM 7331 C GLU B 298 -23.870 -44.985 -87.631 1.00 54.81 B
ATOM 7332 O GLU B 298 -25.013 -44.907 -87.174 1.00 54.55 B
ATOM 7333 N GLU B 299 -22.995 -45.826 -87.167 1.00 55.93 B
ATOM 7334 CA GLU B 299 -23.321 -46.625 -86.023 1.00 57.13 B
ATOM 7335 CB GLU B 299 -22.058 -47.159 -85.468 1.00 59.00 B
ATOM 7336 CG GLU B 299 -22.082 -47.394 -83.998 1.00 63.65 B
ATOM 7337 CD GLU B 299 -20.765 -47.086 -83.321 1.00 66.21 B
ATOM 7338 OE1 GLU B 299 -20.578 -45.954 -82.905 1.00 67.81 B
ATOM 7339 OE2 GLU B 299 -19.921 -47.966 -83.197 1.00 67.52 B
ATOM 7340 C GLU B 299 -24.025 -45.800 -84.995 1.00 56.38 B

ATOM 7341 O GLU B 299 -25.165 -45.986 -84.719 1.00 56.78 B
ATOM 7342 N PHE B 300 -23.346 -44.828 -84.455 1.00 54.34 B
ATOM 7343 CA PHE B 300 -23.951 -44.049 -83.388 1.00 51.53 B
ATOM 7344 CB PHE B 300 -23.119 -42.788 -83.125 1.00 50.38 B
ATOM 7345 CG PHE B 300 -23.412 -42.133 -81.804 1.00 48.99 B
ATOM 7346 CD1 PHE B 300 -22.516 -42.237 -80.751 1.00 48.84 B
ATOM 7347 CD2 PHE B 300 -24.595 -41.428 -81.606 1.00 48.25 B
ATOM 7348 CE1 PHE B 300 -22.796 -41.648 -79.522 1.00 48.35 B
ATOM 7349 CE2 PHE B 300 -24.885 -40.837 -80.382 1.00 46.80 B
ATOM 7350 CZ PHE B 300 -23.987 -40.946 -79.339 1.00 46.90 B
ATOM 7351 C PHE B 300 -25.392 -43.661 -83.727 1.00 50.66 B
ATOM 7352 O PHE B 300 -26.305 -43.918 -82.948 1.00 50.67 B
ATOM 7353 N PHE B 301 -25.595 -43.047 -84.889 1.00 49.87 B
ATOM 7354 CA PHE B 301 -26.928 -42.613 -85.314 1.00 49.03 B
ATOM 7355 CB PHE B 301 -26.888 -42.059 -86.734 1.00 48.30 B
ATOM 7356 CG PHE B 301 -26.547 -40.605 -86.822 1.00 46.96 B
ATOM 7357 CD1 PHE B 301 -25.234 -40.197 -87.028 1.00 46.04 B
ATOM 7358 CD2 PHE B 301 -27.548 -39.641 -86.749 1.00 46.47 B
ATOM 7359 CE1 PHE B 301 -24.922 -38.856 -87.167 1.00 44.67 B
ATOM 7360 CE2 PHE B 301 -27.246 -38.295 -86.887 1.00 45.55 B
ATOM 7361 CZ PHE B 301 -25.930 -37.903 -87.097 1.00 45.08 B
ATOM 7362 C PHE B 301 -28.008 -43.687 -85.277 1.00 48.85 B
ATOM 7363 O PHE B 301 -29.171 -43.397 -84.996 1.00 47.72 B
ATOM 7364 N THR B 302 -27.628 -44.920 -85.596 1.00 49.24 B
ATOM 7365 CA THR B 302 -28.576 -46.031 -85.619 1.00 50.05 B
ATOM 7366 CB THR B 302 -27.995 -47.250 -86.389 1.00 48.64 B
ATOM 7367 OG1 THR B 302 -26.667 -47.525 -85.938 1.00 48.59 B
ATOM 7368 CG2 THR B 302 -27.952 -46.967 -87.875 1.00 48.67 B
ATOM 7369 C THR B 302 -28.984 -46.464 -84.213 1.00 51.24 B
ATOM 7370 O THR B 302 -30.145 -46.803 -83.969 1.00 51.73 B
ATOM 7371 N SER B 303 -28.023 -46.435 -83.294 1.00 51.94 B
ATOM 7372 CA SER B 303 -28.248 -46.818 -81.906 1.00 52.64 B
ATOM 7373 CB SER B 303 -26.941 -46.690 -81.129 1.00 54.20 B
ATOM 7374 OG SER B 303 -25.901 -47.382 -81.813 1.00 57.91 B

ATOM 7375 C SER B 303 -29.340 -45.994 -81.233 1.00 52.02 B
ATOM 7376 O SER B 303 -29.926 -46.432 -80.250 1.00 52.06 B
ATOM 7377 N LEU B 304 -29.606 -44.802 -81.761 1.00 51.35 B
ATOM 7378 CA LEU B 304 -30.650 -43.932 -81.224 1.00 50.47 B
ATOM 7379 CB LEU B 304 -30.291 -42.468 -81.434 1.00 49.84 B
ATOM 7380 CG LEU B 304 -29.000 -42.012 -80.778 1.00 49.70 B
ATOM 7381 CD1 LEU B 304 -28.625 -40.639 -81.296 1.00 50.27 B
ATOM 7382 CD2 LEU B 304 -29.181 -42.017 -79.272 1.00 50.22 B
ATOM 7383 C LEU B 304 -31.898 -44.239 -82.011 1.00 50.40 B
ATOM 7384 O LEU B 304 -32.908 -43.548 -81.900 1.00 49.72 B
ATOM 7385 N GLU B 305 -31.801 -45.285 -82.821 1.00 51.01 B
ATOM 7386 CA GLU B 305 -32.890 -45.733 -83.672 1.00 51.68 B
ATOM 7387 CB GLU B 305 -34.049 -46.270 -82.833 1.00 52.20 B
ATOM 7388 CG GLU B 305 -33.868 -47.726 -82.451 1.00 52.80 B
ATOM 7389 CD GLU B 305 -35.041 -48.276 -81.671 1.00 54.06 B
ATOM 7390 OE1 GLU B 305 -35.197 -47.920 -80.486 1.00 54.47 B
ATOM 7391 OE2 GLU B 305 -35.818 -49.064 -82.250 1.00 55.72 B
ATOM 7392 C GLU B 305 -33.373 -44.664 -84.643 1.00 51.92 B
ATOM 7393 O GLU B 305 -34.556 -44.309 -84.691 1.00 51.00 B
ATOM 7394 N LEU B 306 -32.410 -44.149 -85.399 1.00 52.28 B
ATOM 7395 CA LEU B 306 -32.645 -43.168 -86.447 1.00 52.41 B
ATOM 7396 CB LEU B 306 -31.722 -41.960 -86.274 1.00 51.86 B
ATOM 7397 CG LEU B 306 -31.990 -41.020 -85.096 1.00 50.88 B
ATOM 7398 CD1 LEU B 306 -30.830 -40.065 -84.960 1.00 50.95 B
ATOM 7399 CD2 LEU B 306 -33.290 -40.261 -85.303 1.00 48.98 B
ATOM 7400 C LEU B 306 -32.230 -44.000 -87.664 1.00 52.75 B
ATOM 7401 O LEU B 306 -31.444 -44.947 -87.519 1.00 53.18 B
ATOM 7402 N SER B 307 -32.753 -43.686 -88.848 1.00 52.03 B
ATOM 7403 CA SER B 307 -32.405 -44.467 -90.037 1.00 50.10 B
ATOM 7404 CB SER B 307 -33.274 -44.052 -91.223 1.00 50.33 B
ATOM 7405 OG SER B 307 -33.229 -42.654 -91.426 1.00 50.38 B
ATOM 7406 C SER B 307 -30.932 -44.352 -90.409 1.00 48.48 B
ATOM 7407 O SER B 307 -30.283 -43.343 -90.120 1.00 46.77 B
ATOM 7408 N PRO B 308 -30.378 -45.407 -91.034 1.00 48.01 B

ATOM 7409 CD PRO B 308 -30.974 -46.749 -91.184 1.00 47.11 B
ATOM 7410 CA PRO B 308 -28.971 -45.420 -91.446 1.00 48.04 B
ATOM 7411 CB PRO B 308 -28.630 -46.906 -91.456 1.00 46.53 B
ATOM 7412 CG PRO B 308 -29.894 -47.509 -91.944 1.00 46.92 B
ATOM 7413 C PRO B 308 -28.763 -44.766 -92.810 1.00 48.45 B
ATOM 7414 O PRO B 308 -29.722 -44.399 -93.492 1.00 48.31 B
ATOM 7415 N MET B 309 -27.499 -44.632 -93.196 1.00 49.00 B
ATOM 7416 CA MET B 309 -27.130 -44.018 -94.461 1.00 50.21 B
ATOM 7417 CB MET B 309 -25.643 -43.658 -94.438 1.00 52.23 B
ATOM 7418 CG MET B 309 -25.239 -42.716 -93.306 1.00 54.16 B
ATOM 7419 SD MET B 309 -26.026 -41.079 -93.404 1.00 57.33 B
ATOM 7420 CE MET B 309 -27.391 -41.266 -92.227 1.00 56.32 B
ATOM 7421 C MET B 309 -27.415 -44.940 -95.638 1.00 50.62 B
ATOM 7422 O MET B 309 -26.839 -46.029 -95.724 1.00 51.08 B
ATOM 7423 N PRO B 310 -28.301 -44.509 -96.565 1.00 50.95 B
ATOM 7424 CD PRO B 310 -29.013 -43.229 -96.424 1.00 51.64 B
ATOM 7425 CA PRO B 310 -28.749 -45.199 -97.785 1.00 50.63 B
ATOM 7426 CB PRO B 310 -29.628 -44.161 -98.467 1.00 50.97 B
ATOM 7427 CG PRO B 310 -30.212 -43.436 -97.315 1.00 52.19 B
ATOM 7428 C PRO B 310 -27.632 -45.666 -98.708 1.00 50.75 B
ATOM 7429 O PRO B 310 -26.534 -45.118 -98.702 1.00 49.35 B
ATOM 7430 N PRO B 311 -27.905 -46.697 -99.521 1.00 52.26 B
ATOM 7431 CD PRO B 311 -29.074 -47.597 -99.509 1.00 52.62 B
ATOM 7432 CA PRO B 311 -26.875 -47.196 -100.435 1.00 53.26 B
ATOM 7433 CB PRO B 311 -27.575 -48.361 -101.131 1.00 52.93 B
ATOM 7434 CG PRO B 311 -28.490 -48.883 -100.062 1.00 52.28 B
ATOM 7435 C PRO B 311 -26.414 -46.118 -101.408 1.00 53.82 B
ATOM 7436 O PRO B 311 -25.224 -46.017 -101.711 1.00 53.65 B
ATOM 7437 N GLU B 312 -27.353 -45.309 -101.890 1.00 54.28 B
ATOM 7438 CA GLU B 312 -27.001 -44.248 -102.823 1.00 55.41 B
ATOM 7439 CB GLU B 312 -28.226 -43.412 -103.211 1.00 57.24 B
ATOM 7440 CG GLU B 312 -29.531 -43.769 -102.504 1.00 60.17 B
ATOM 7441 CD GLU B 312 -30.542 -44.445 -103.411 1.00 62.02 B
ATOM 7442 OE1 GLU B 312 -30.492 -45.688 -103.531 1.00 62.26 B

ATOM 7443 OE2 GLU B 312 -31.380 -43.729-104.003 1.00 63.75 B
ATOM 7444 C GLU B 312 -25.956 -43.352-102.186 1.00 55.14 B
ATOM 7445 O GLU B 312 -25.107 -42.788-102.881 1.00 55.72 B
ATOM 7446 N PHE B 313 -26.026 -43.229-100.862 1.00 54.81 B
ATOM 7447 CA PHE B 313 -25.084 -42.415-100.098 1.00 54.20 B
ATOM 7448 CB PHE B 313 -25.501 -42.366 -98.619 1.00 53.56 B
ATOM 7449 CG PHE B 313 -24.461 -41.755 -97.705 1.00 53.96 B
ATOM 7450 CD1 PHE B 313 -24.287 -40.368 -97.640 1.00 53.97 B
ATOM 7451 CD2 PHE B 313 -23.629 -42.572 -96.934 1.00 53.22 B
ATOM 7452 CE1 PHE B 313 -23.298 -39.805 -96.825 1.00 53.34 B
ATOM 7453 CE2 PHE B 313 -22.640 -42.024 -96.117 1.00 52.89 B
ATOM 7454 CZ PHE B 313 -22.472 -40.635 -96.063 1.00 53.40 B
ATOM 7455 C PHE B 313 -23.669 -42.992-100.224 1.00 54.08 B
ATOM 7456 O PHE B 313 -22.724 -42.270-100.543 1.00 54.19 B
ATOM 7457 N TRP B 314 -23.526 -44.292 -99.978 1.00 53.44 B
ATOM 7458 CA TRP B 314 -22.227 -44.941-100.064 1.00 52.83 B
ATOM 7459 CB TRP B 314 -22.295 -46.332 -99.432 1.00 52.29 B
ATOM 7460 CG TRP B 314 -22.616 -46.255 -97.975 1.00 52.93 B
ATOM 7461 CD2 TRP B 314 -21.684 -46.026 -96.909 1.00 53.40 B
ATOM 7462 CE2 TRP B 314 -22.436 -45.871 -95.720 1.00 52.89 B
ATOM 7463 CE3 TRP B 314 -20.285 -45.927 -96.844 1.00 52.73 B
ATOM 7464 CD1 TRP B 314 -23.861 -46.242 -97.404 1.00 52.32 B
ATOM 7465 NE1 TRP B 314 -23.760 -46.010 -96.048 1.00 52.62 B
ATOM 7466 CZ2 TRP B 314 -21.835 -45.621 -94.484 1.00 52.10 B
ATOM 7467 CZ3 TRP B 314 -19.690 -45.679 -95.617 1.00 51.83 B
ATOM 7468 CH2 TRP B 314 -20.465 -45.528 -94.451 1.00 51.78 B
ATOM 7469 C TRP B 314 -21.762 -45.032-101.503 1.00 53.55 B
ATOM 7470 O TRP B 314 -20.566 -45.041-101.780 1.00 53.48 B
ATOM 7471 N GLU B 315 -22.713 -45.061-102.416 1.00 54.70 B
ATOM 7472 CA GLU B 315 -22.417 -45.177-103.839 1.00 55.43 B
ATOM 7473 CB GLU B 315 -23.671 -45.586-104.614 1.00 58.77 B
ATOM 7474 CG GLU B 315 -23.599 -46.978-105.222 1.00 63.61 B
ATOM 7475 CD GLU B 315 -24.781 -47.844-104.834 1.00 65.26 B
ATOM 7476 OE1 GLU B 315 -24.557 -48.969-104.339 1.00 65.06 B

ATOM 7477 OE2 GLU B 315 -25.934 -47.402-105.026 1.00 67.31 B
ATOM 7478 C GLU B 315 -21.860 -43.871-104.395 1.00 53.88 B
ATOM 7479 O GLU B 315 -20.832 -43.890-105.098 1.00 52.60 B
ATOM 7480 N GLY B 316 -22.517 -42.754-104.136 1.00 52.87 B
ATOM 7481 CA GLY B 316 -22.074 -41.474-104.671 1.00 52.06 B
ATOM 7482 C GLY B 316 -21.190 -40.543-103.845 1.00 50.71 B
ATOM 7483 O GLY B 316 -20.387 -39.795-104.400 1.00 50.69 B
ATOM 7484 N SER B 317 -21.332 -40.574-102.529 1.00 49.78 B
ATOM 7485 CA SER B 317 -20.550 -39.709-101.654 1.00 48.80 B
ATOM 7486 CB SER B 317 -20.873 -40.064-100.190 1.00 49.55 B
ATOM 7487 OG SER B 317 -20.389 -39.105 -99.261 1.00 51.22 B
ATOM 7488 C SER B 317 -19.034 -39.791-101.914 1.00 47.89 B
ATOM 7489 O SER B 317 -18.486 -40.867-102.137 1.00 46.70 B
ATOM 7490 N MET B 318 -18.371 -38.637-101.910 1.00 47.79 B
ATOM 7491 CA MET B 318 -16.919 -38.562-102.101 1.00 48.09 B
ATOM 7492 CB MET B 318 -16.541 -37.320-102.927 1.00 47.90 B
ATOM 7493 CG MET B 318 -15.030 -37.128-103.104 1.00 48.25 B
ATOM 7494 SD MET B 318 -14.528 -35.545-103.831 1.00 49.77 B
ATOM 7495 CE MET B 318 -14.076 -34.605-102.388 1.00 49.10 B
ATOM 7496 C MET B 318 -16.319 -38.445-100.696 1.00 48.19 B
ATOM 7497 O MET B 318 -16.215 -37.349-100.156 1.00 48.60 B
ATOM 7498 N LEU B 319 -15.914 -39.568-100.112 1.00 48.43 B
ATOM 7499 CA LEU B 319 -15.379 -39.567 -98.755 1.00 48.44 B
ATOM 7500 CB LEU B 319 -15.832 -40.837 -98.033 1.00 46.97 B
ATOM 7501 CG LEU B 319 -17.301 -41.230 -98.235 1.00 45.66 B
ATOM 7502 CD1 LEU B 319 -17.577 -42.521 -97.493 1.00 44.48 B
ATOM 7503 CD2 LEU B 319 -18.227 -40.119 -97.760 1.00 43.43 B
ATOM 7504 C LEU B 319 -13.868 -39.426 -98.628 1.00 49.96 B
ATOM 7505 O LEU B 319 -13.345 -39.448 -97.522 1.00 50.38 B
ATOM 7506 N GLU B 320 -13.151 -39.179 -99.706 1.00 52.33 B
ATOM 7507 CA GLU B 320 -11.690 -39.134 -99.675 1.00 54.83 B
ATOM 7508 CB GLU B 320 -11.158 -40.470-100.084 1.00 55.60 B
ATOM 7509 CG GLU B 320 -10.435 -41.310 -99.068 1.00 58.16 B
ATOM 7510 CD GLU B 320 -10.738 -42.777 -99.237 1.00 59.94 B

ATOM 7511 OE1 GLU B 320 -11.724 -43.106 -99.884 1.00 61.71 B
ATOM 7512 OE2 GLU B 320 -9.991 -43.603 -98.729 1.00 60.61 B
ATOM 7513 C GLU B 320 -11.289 -38.185-100.760 1.00 56.11 B
ATOM 7514 O GLU B 320 -12.080 -37.927-101.591 1.00 56.81 B
ATOM 7515 N LYS B 321 -10.064 -37.678-100.771 1.00 57.23 B
ATOM 7516 CA LYS B 321 -9.570 -36.774-101.812 1.00 58.16 B
ATOM 7517 CB LYS B 321 -8.406 -35.925-101.289 1.00 58.03 B
ATOM 7518 CG LYS B 321 -7.825 -34.958-102.314 1.00 57.91 B
ATOM 7519 CD LYS B 321 -6.819 -33.998-101.685 1.00 58.23 B
ATOM 7520 CE LYS B 321 -6.193 -33.079-102.725 1.00 59.06 B
ATOM 7521 NZ LYS B 321 -5.283 -32.080-102.106 1.00 58.96 B
ATOM 7522 C LYS B 321 -9.120 -37.610-103.008 1.00 58.96 B
ATOM 7523 O LYS B 321 -8.317 -38.536-102.860 1.00 59.67 B
ATOM 7524 N PRO B 322 -9.635 -37.293-104.208 1.00 59.46 B
ATOM 7525 CD PRO B 322 -10.491 -36.125-104.489 1.00 59.56 B
ATOM 7526 CA PRO B 322 -9.306 -38.005-105.448 1.00 59.46 B
ATOM 7527 CB PRO B 322 -9.776 -37.041-106.525 1.00 59.49 B
ATOM 7528 CG PRO B 322 -10.981 -36.415-105.884 1.00 59.86 B
ATOM 7529 C PRO B 322 -7.830 -38.373-105.598 1.00 59.89 B
ATOM 7530 O PRO B 322 -6.940 -37.625-105.185 1.00 59.41 B
ATOM 7531 N ALA B 323 -7.586 -39.539-106.191 1.00 60.58 B
ATOM 7532 CA ALA B 323 -6.230 -40.035-106.412 1.00 60.84 B
ATOM 7533 CB ALA B 323 -6.239 -41.569-106.488 1.00 61.04 B
ATOM 7534 C ALA B 323 -5.690 -39.445-107.711 1.00 60.86 B
ATOM 7535 O ALA B 323 -4.539 -39.003-107.777 1.00 60.40 B
ATOM 7536 N ASP B 324 -6.545 -39.440-108.734 1.00 60.62 B
ATOM 7537 CA ASP B 324 -6.209 -38.910-110.050 1.00 59.84 B
ATOM 7538 CB ASP B 324 -7.375 -39.140-111.018 1.00 59.77 B
ATOM 7539 CG ASP B 324 -8.681 -38.545-110.517 1.00 60.20 B
ATOM 7540 OD1 ASP B 324 -8.715 -37.315-110.302 1.00 60.26 B
ATOM 7541 OD2 ASP B 324 -9.667 -39.301-110.341 1.00 59.27 B
ATOM 7542 C ASP B 324 -5.864 -37.422-109.982 1.00 59.85 B
ATOM 7543 O ASP B 324 -5.447 -36.825-110.972 1.00 59.68 B
ATOM 7544 N GLY B 325 -6.053 -36.827-108.809 1.00 60.28 B

ATOM 7545 CA GLY B 325 -5.727 -35.426-108.618 1.00 60.00 B
ATOM 7546 C GLY B 325 -6.557 -34.396-109.354 1.00 59.96 B
ATOM 7547 O GLY B 325 -6.014 -33.371-109.772 1.00 61.00 B
ATOM 7548 N ARG B 326 -7.856 -34.647-109.520 1.00 58.60 B
ATOM 7549 CA ARG B 326 -8.737 -33.688-110.192 1.00 57.47 B
ATOM 7550 CB ARG B 326 -9.953 -34.408-110.798 1.00 55.76 B
ATOM 7551 CG ARG B 326 -10.698 -35.377-109.866 1.00 55.90 B
ATOM 7552 CD ARG B 326 -11.919 -36.009-110.564 1.00 55.13 B
ATOM 7553 NE ARG B 326 -12.199 -37.389-110.145 1.00 54.79 B
ATOM 7554 CZ ARG B 326 -13.028 -37.736-109.164 1.00 54.54 B
ATOM 7555 NH1 ARG B 326 -13.676 -36.808-108.478 1.00 53.78 B
ATOM 7556 NH2 ARG B 326 -13.215 -39.016-108.871 1.00 54.53 B
ATOM 7557 C ARG B 326 -9.195 -32.619-109.189 1.00 57.84 B
ATOM 7558 O ARG B 326 -9.927 -32.915-108.248 1.00 58.57 B
ATOM 7559 N GLU B 327 -8.828 -31.391-109.424 1.00 57.58 B
ATOM 7560 CA GLU B 327 -9.151 -30.416-108.463 1.00 57.99 B
ATOM 7561 CB GLU B 327 -8.996 -29.053-109.051 1.00 59.13 B
ATOM 7562 CG GLU B 327 -7.596 -28.780-109.540 1.00 61.73 B
ATOM 7563 CD GLU B 327 -6.680 -28.108-108.533 1.00 62.98 B
ATOM 7564 OE1 GLU B 327 -6.505 -26.907-108.613 1.00 63.20 B
ATOM 7565 OE2 GLU B 327 -6.093 -28.779-107.688 1.00 63.72 B
ATOM 7566 C GLU B 327 -10.530 -30.673-107.961 1.00 57.50 B
ATOM 7567 O GLU B 327 -11.343 -31.154-108.659 1.00 57.30 B
ATOM 7568 N VAL B 328 -10.754 -30.398-106.684 1.00 57.00 B
ATOM 7569 CA VAL B 328 -12.094 -30.443-106.090 1.00 55.19 B
ATOM 7570 CB VAL B 328 -12.460 -31.831-105.508 1.00 53.91 B
ATOM 7571 CG1 VAL B 328 -12.448 -32.876-106.594 1.00 54.28 B
ATOM 7572 CG2 VAL B 328 -11.506 -32.189-104.373 1.00 52.61 B
ATOM 7573 C VAL B 328 -12.206 -29.482-104.930 1.00 54.64 B
ATOM 7574 O VAL B 328 -11.205 -28.972-104.429 1.00 55.42 B
ATOM 7575 N VAL B 329 -13.446 -29.243-104.520 1.00 53.30 B
ATOM 7576 CA VAL B 329 -13.736 -28.391-103.380 1.00 52.31 B
ATOM 7577 CB VAL B 329 -15.174 -27.825-103.459 1.00 51.65 B
ATOM 7578 CG1 VAL B 329 -15.491 -27.015-102.225 1.00 50.64 B

ATOM 7579 CG2 VAL B 329 -15.323 -26.972-104.699 1.00 51.33 B
ATOM 7580 C VAL B 329 -13.627 -29.367-102.207 1.00 52.54 B
ATOM 7581 O VAL B 329 -14.526 -30.189-101.991 1.00 52.36 B
ATOM 7582 N CYS B 330 -12.513 -29.299-101.476 1.00 51.68 B
ATOM 7583 CA CYS B 330 -12.281 -30.186-100.339 1.00 50.73 B
ATOM 7584 C CYS B 330 -13.086 -29.867 -99.073 1.00 49.82 B
ATOM 7585 O CYS B 330 -13.197 -30.711 -98.177 1.00 49.21 B
ATOM 7586 CB CYS B 330 -10.793 -30.214 -99.991 1.00 51.73 B
ATOM 7587 SG CYS B 330 -9.879 -31.608-100.722 1.00 56.85 B
ATOM 7588 N HIS B 331 -13.677 -28.722 -99.015 1.00 48.53 B
ATOM 7589 CA HIS B 331 -14.384 -28.426 -97.857 1.00 47.51 B
ATOM 7590 CB HIS B 331 -15.081 -27.156 -98.028 1.00 47.42 B
ATOM 7591 CG HIS B 331 -15.269 -26.421 -96.761 1.00 48.71 B
ATOM 7592 CD2 HIS B 331 -14.379 -25.859 -95.937 1.00 49.23 B
ATOM 7593 ND1 HIS B 331 -16.496 -26.179 -96.217 1.00 49.51 B
ATOM 7594 CE1 HIS B 331 -16.352 -25.488 -95.116 1.00 50.21 B
ATOM 7595 NE2 HIS B 331 -15.075 -25.282 -94.925 1.00 50.01 B
ATOM 7596 C HIS B 331 -15.419 -29.410 -97.700 1.00 46.60 B
ATOM 7597 O HIS B 331 -16.098 -29.664 -98.597 1.00 47.48 B
ATOM 7598 N ALA B 332 -15.619 -29.888 -96.497 1.00 44.75 B
ATOM 7599 CA ALA B 332 -16.676 -30.834 -96.132 1.00 42.81 B
ATOM 7600 CB ALA B 332 -16.539 -31.213 -94.665 1.00 43.46 B
ATOM 7601 C ALA B 332 -18.090 -30.321 -96.408 1.00 41.54 B
ATOM 7602 O ALA B 332 -18.446 -29.222 -95.992 1.00 41.71 B
ATOM 7603 N SER B 333 -18.896 -31.140 -97.086 1.00 39.95 B
ATOM 7604 CA SER B 333 -20.257 -30.753 -97.430 1.00 39.34 B
ATOM 7605 CB SER B 333 -20.259 -30.102 -98.810 1.00 40.07 B
ATOM 7606 OG SER B 333 -19.181 -29.192 -98.943 1.00 43.13 B
ATOM 7607 C SER B 333 -21.255 -31.916 -97.426 1.00 38.72 B
ATOM 7608 O SER B 333 -20.891 -33.061 -97.680 1.00 38.19 B
ATOM 7609 N ALA B 334 -22.517 -31.596 -97.142 1.00 37.76 B
ATOM 7610 CA ALA B 334 -23.603 -32.570 -97.109 1.00 37.28 B
ATOM 7611 CB ALA B 334 -24.260 -32.577 -95.740 1.00 36.47 B
ATOM 7612 C ALA B 334 -24.609 -32.155 -98.175 1.00 37.54 B

ATOM 7613 O ALA B 334 -25.140 -31.048 -98.145 1.00 37.40 B
ATOM 7614 N TRP B 335 -24.886 -33.062 -99.106 1.00 38.33 B
ATOM 7615 CA TRP B 335 -25.784 -32.766 -100.214 1.00 38.41 B
ATOM 7616 CB TRP B 335 -25.072 -33.078 -101.528 1.00 36.68 B
ATOM 7617 CG TRP B 335 -23.803 -32.344 -101.716 1.00 34.64 B
ATOM 7618 CD2 TRP B 335 -23.491 -31.434 -102.776 1.00 33.48 B
ATOM 7619 CE2 TRP B 335 -22.163 -31.004 -102.579 1.00 32.92 B
ATOM 7620 CE3 TRP B 335 -24.204 -30.942 -103.879 1.00 31.95 B
ATOM 7621 CD1 TRP B 335 -22.690 -32.425 -100.937 1.00 34.18 B
ATOM 7622 NE1 TRP B 335 -21.698 -31.622 -101.447 1.00 33.45 B
ATOM 7623 CZ2 TRP B 335 -21.531 -30.105 -103.446 1.00 30.94 B
ATOM 7624 CZ3 TRP B 335 -23.573 -30.049 -104.738 1.00 29.75 B
ATOM 7625 CH2 TRP B 335 -22.252 -29.643 -104.515 1.00 29.66 B
ATOM 7626 C TRP B 335 -27.152 -33.430 -100.255 1.00 39.18 B
ATOM 7627 O TRP B 335 -27.277 -34.650 -100.156 1.00 39.16 B
ATOM 7628 N ASP B 336 -28.174 -32.606 -100.439 1.00 39.43 B
ATOM 7629 CA ASP B 336 -29.536 -33.097 -100.551 1.00 40.41 B
ATOM 7630 CB ASP B 336 -30.440 -32.406 -99.530 1.00 41.21 B
ATOM 7631 CG ASP B 336 -31.906 -32.718 -99.739 1.00 40.90 B
ATOM 7632 OD1 ASP B 336 -32.222 -33.821 -100.238 1.00 41.13 B
ATOM 7633 OD2 ASP B 336 -32.741 -31.858 -99.390 1.00 40.89 B
ATOM 7634 C ASP B 336 -30.034 -32.826 -101.971 1.00 40.33 B
ATOM 7635 O ASP B 336 -30.460 -31.710 -102.286 1.00 39.58 B
ATOM 7636 N PHE B 337 -29.964 -33.854 -102.820 1.00 40.17 B
ATOM 7637 CA PHE B 337 -30.391 -33.765 -104.211 1.00 39.82 B
ATOM 7638 CB PHE B 337 -29.944 -35.007 -104.977 1.00 39.12 B
ATOM 7639 CG PHE B 337 -28.462 -35.079 -105.214 1.00 41.00 B
ATOM 7640 CD1 PHE B 337 -27.590 -35.400 -104.183 1.00 41.73 B
ATOM 7641 CD2 PHE B 337 -27.934 -34.845 -106.486 1.00 41.52 B
ATOM 7642 CE1 PHE B 337 -26.202 -35.492 -104.415 1.00 42.84 B
ATOM 7643 CE2 PHE B 337 -26.551 -34.932 -106.730 1.00 41.63 B
ATOM 7644 CZ PHE B 337 -25.686 -35.258 -105.694 1.00 42.07 B
ATOM 7645 C PHE B 337 -31.894 -33.561 -104.421 1.00 40.14 B
ATOM 7646 O PHE B 337 -32.381 -33.664 -105.544 1.00 40.24 B

ATOM 7647 N TYR B 338 -32.623 -33.269-103.348 1.00 40.23 B
ATOM 7648 CA TYR B 338 -34.064 -33.033-103.428 1.00 40.46 B
ATOM 7649 CB TYR B 338 -34.339 -31.613-103.920 1.00 40.63 B
ATOM 7650 CG TYR B 338 -34.168 -30.569-102.852 1.00 42.58 B
ATOM 7651 CD1 TYR B 338 -32.909 -30.059-102.535 1.00 42.35 B
ATOM 7652 CE1 TYR B 338 -32.751 -29.118-101.523 1.00 44.95 B
ATOM 7653 CD2 TYR B 338 -35.268 -30.114-102.129 1.00 44.11 B
ATOM 7654 CE2 TYR B 338 -35.126 -29.181-101.116 1.00 45.97 B
ATOM 7655 CZ TYR B 338 -33.867 -28.682-100.812 1.00 46.67 B
ATOM 7656 OH TYR B 338 -33.741 -27.755 -99.787 1.00 49.64 B
ATOM 7657 C TYR B 338 -34.865 -34.005-104.284 1.00 40.55 B
ATOM 7658 O TYR B 338 -35.784 -33.595-104.988 1.00 39.91 B
ATOM 7659 N ASN B 339 -34.524 -35.288-104.214 1.00 41.22 B
ATOM 7660 CA ASN B 339 -35.222 -36.316-104.978 1.00 40.28 B
ATOM 7661 CB ASN B 339 -34.327 -36.842-106.101 1.00 39.19 B
ATOM 7662 CG ASN B 339 -33.367 -37.923-105.630 1.00 40.19 B
ATOM 7663 OD1 ASN B 339 -32.890 -37.901-104.495 1.00 41.09 B
ATOM 7664 ND2 ASN B 339 -33.067 -38.869-106.511 1.00 40.47 B
ATOM 7665 C ASN B 339 -35.622 -37.473-104.065 1.00 40.95 B
ATOM 7666 O ASN B 339 -35.956 -38.549-104.545 1.00 42.00 B
ATOM 7667 N ARG B 340 -35.569 -37.247-102.751 1.00 40.55 B
ATOM 7668 CA ARG B 340 -35.928 -38.263-101.756 1.00 38.61 B
ATOM 7669 CB ARG B 340 -37.418 -38.598-101.850 1.00 37.99 B
ATOM 7670 CG ARG B 340 -38.348 -37.486-101.432 1.00 38.78 B
ATOM 7671 CD ARG B 340 -39.765 -37.719-101.942 1.00 39.23 B
ATOM 7672 NE ARG B 340 -39.840 -37.605-103.397 1.00 40.32 B
ATOM 7673 CZ ARG B 340 -39.741 -38.620-104.254 1.00 40.18 B
ATOM 7674 NH1 ARG B 340 -39.568 -39.865-103.828 1.00 41.25 B
ATOM 7675 NH2 ARG B 340 -39.803 -38.389-105.556 1.00 41.21 B
ATOM 7676 C ARG B 340 -35.141 -39.559-101.876 1.00 38.04 B
ATOM 7677 O ARG B 340 -35.444 -40.525-101.185 1.00 39.27 B
ATOM 7678 N ALA B 341 -34.135 -39.600-102.741 1.00 37.34 B
ATOM 7679 CA ALA B 341 -33.373 -40.830-102.902 1.00 37.80 B
ATOM 7680 CB ALA B 341 -33.865 -41.595-104.134 1.00 37.33 B

ATOM 7681 C ALA B 341 -31.872 -40.638-102.983 1.00 38.56 B
ATOM 7682 O ALA B 341 -31.129 -41.608-102.932 1.00 38.15 B
ATOM 7683 N ASP B 342 -31.416 -39.399-103.121 1.00 40.06 B
ATOM 7684 CA ASP B 342 -29.979 -39.154-103.190 1.00 41.24 B
ATOM 7685 CB ASP B 342 -29.578 -38.709-104.592 1.00 44.15 B
ATOM 7686 CG ASP B 342 -28.754 -39.755-105.313 1.00 48.05 B
ATOM 7687 OD1 ASP B 342 -27.670 -40.140-104.800 1.00 49.49 B
ATOM 7688 OD2 ASP B 342 -29.203 -40.195-106.394 1.00 50.22 B
ATOM 7689 C ASP B 342 -29.459 -38.150-102.170 1.00 40.07 B
ATOM 7690 O ASP B 342 -29.879 -36.990-102.144 1.00 39.33 B
ATOM 7691 N PHE B 343 -28.548 -38.621-101.320 1.00 39.08 B
ATOM 7692 CA PHE B 343 -27.927 -37.798-100.287 1.00 37.96 B
ATOM 7693 CB PHE B 343 -28.572 -38.005 -98.915 1.00 35.15 B
ATOM 7694 CG PHE B 343 -30.049 -38.169 -98.948 1.00 32.00 B
ATOM 7695 CD1 PHE B 343 -30.615 -39.398 -99.233 1.00 31.15 B
ATOM 7696 CD2 PHE B 343 -30.877 -37.100 -98.692 1.00 30.96 B
ATOM 7697 CE1 PHE B 343 -31.986 -39.559 -99.248 1.00 30.27 B
ATOM 7698 CE2 PHE B 343 -32.248 -37.255 -98.705 1.00 30.76 B
ATOM 7699 CZ PHE B 343 -32.802 -38.485 -98.988 1.00 30.63 B
ATOM 7700 C PHE B 343 -26.485 -38.248-100.189 1.00 38.67 B
ATOM 7701 O PHE B 343 -26.216 -39.438-100.022 1.00 37.95 B
ATOM 7702 N ARG B 344 -25.558 -37.303-100.284 1.00 39.83 B
ATOM 7703 CA ARG B 344 -24.148 -37.640-100.201 1.00 41.22 B
ATOM 7704 CB ARG B 344 -23.547 -37.733-101.606 1.00 42.87 B
ATOM 7705 CG ARG B 344 -24.269 -38.719-102.513 1.00 44.21 B
ATOM 7706 CD ARG B 344 -23.709 -38.691-103.915 1.00 43.81 B
ATOM 7707 NE ARG B 344 -24.775 -38.760-104.906 1.00 44.99 B
ATOM 7708 CZ ARG B 344 -24.606 -38.495-106.198 1.00 45.22 B
ATOM 7709 NH1 ARG B 344 -23.405 -38.148-106.656 1.00 44.57 B
ATOM 7710 NH2 ARG B 344 -25.646 -38.548-107.026 1.00 44.88 B
ATOM 7711 C ARG B 344 -23.389 -36.621 -99.375 1.00 40.59 B
ATOM 7712 O ARG B 344 -23.950 -35.634 -98.913 1.00 39.89 B
ATOM 7713 N ILE B 345 -22.103 -36.881 -99.193 1.00 40.09 B
ATOM 7714 CA ILE B 345 -21.239 -36.004 -98.429 1.00 39.84 B

ATOM 7715 CB ILE B 345 -20.988 -36.572 -96.996 1.00 39.20 B
ATOM 7716 CG2 ILE B 345 -19.737 -35.954 -96.382 1.00 37.70 B
ATOM 7717 CG1 ILE B 345 -22.212 -36.327 -96.105 1.00 38.01 B
ATOM 7718 CD1 ILE B 345 -22.082 -36.915 -94.712 1.00 35.06 B
ATOM 7719 C ILE B 345 -19.912 -35.890 -99.161 1.00 41.09 B
ATOM 7720 O ILE B 345 -19.270 -36.895 -99.448 1.00 40.89 B
ATOM 7721 N LYS B 346 -19.532 -34.698 -99.543 1.00 42.17 B
ATOM 7722 CA LYS B 346 -18.241 -34.408 -100.084 1.00 42.62 B
ATOM 7723 CB LYS B 346 -18.412 -33.216 -100.966 1.00 43.14 B
ATOM 7724 CG LYS B 346 -17.478 -33.017 -102.093 1.00 41.36 B
ATOM 7725 CD LYS B 346 -17.645 -31.641 -102.644 1.00 40.12 B
ATOM 7726 CE LYS B 346 -16.908 -30.643 -101.809 1.00 40.19 B
ATOM 7727 NZ LYS B 346 -17.817 -29.758 -101.032 1.00 40.18 B
ATOM 7728 C LYS B 346 -17.350 -33.982 -98.991 1.00 42.92 B
ATOM 7729 O LYS B 346 -17.640 -33.042 -98.354 1.00 42.56 B
ATOM 7730 N GLN B 347 -16.254 -34.673 -98.773 1.00 43.33 B
ATOM 7731 CA GLN B 347 -15.298 -34.289 -97.739 1.00 44.46 B
ATOM 7732 CB GLN B 347 -15.906 -34.548 -96.360 1.00 44.80 B
ATOM 7733 CG GLN B 347 -15.047 -34.105 -95.183 1.00 44.06 B
ATOM 7734 CD GLN B 347 -15.372 -34.878 -93.917 1.00 42.39 B
ATOM 7735 OE1 GLN B 347 -16.525 -35.221 -93.669 1.00 41.94 B
ATOM 7736 NE2 GLN B 347 -14.356 -35.149 -93.108 1.00 40.77 B
ATOM 7737 C GLN B 347 -13.991 -35.063 -97.863 1.00 45.51 B
ATOM 7738 O GLN B 347 -13.984 -36.289 -97.772 1.00 45.42 B
ATOM 7739 N CYS B 348 -12.890 -34.341 -98.063 1.00 47.24 B
ATOM 7740 CA CYS B 348 -11.572 -34.958 -98.193 1.00 48.99 B
ATOM 7741 C CYS B 348 -11.118 -35.454 -96.818 1.00 48.98 B
ATOM 7742 O CYS B 348 -10.122 -34.984 -96.274 1.00 50.46 B
ATOM 7743 CB CYS B 348 -10.568 -33.940 -98.769 1.00 50.32 B
ATOM 7744 SG CYS B 348 -11.070 -33.243 -100.389 1.00 55.08 B
ATOM 7745 N THR B 349 -11.860 -36.414 -96.272 1.00 48.36 B
ATOM 7746 CA THR B 349 -11.598 -36.986 -94.948 1.00 48.03 B
ATOM 7747 CB THR B 349 -12.613 -38.116 -94.624 1.00 47.41 B
ATOM 7748 OG1 THR B 349 -13.931 -37.569 -94.543 1.00 47.68 B

ATOM 7749 CG2 THR B 349 -12.281 -38.780 -93.305 1.00 46.30 B
ATOM 7750 C THR B 349 -10.200 -37.534 -94.656 1.00 48.19 B
ATOM 7751 O THR B 349 -9.771 -38.512 -95.258 1.00 47.84 B
ATOM 7752 N ALA B 350 -9.505 -36.896 -93.715 1.00 48.96 B
ATOM 7753 CA ALA B 350 -8.178 -37.336 -93.284 1.00 49.73 B
ATOM 7754 CB ALA B 350 -7.247 -36.143 -93.110 1.00 48.06 B
ATOM 7755 C ALA B 350 -8.410 -38.042 -91.940 1.00 50.47 B
ATOM 7756 O ALA B 350 -9.534 -38.042 -91.427 1.00 50.70 B
ATOM 7757 N VAL B 351 -7.379 -38.650 -91.362 1.00 50.83 B
ATOM 7758 CA VAL B 351 -7.578 -39.345 -90.094 1.00 51.04 B
ATOM 7759 CB VAL B 351 -6.838 -40.698 -90.073 1.00 50.51 B
ATOM 7760 CG1 VAL B 351 -7.245 -41.486 -88.839 1.00 49.37 B
ATOM 7761 CG2 VAL B 351 -7.154 -41.485 -91.331 1.00 50.03 B
ATOM 7762 C VAL B 351 -7.130 -38.512 -88.892 1.00 52.13 B
ATOM 7763 O VAL B 351 -5.961 -38.551 -88.502 1.00 52.31 B
ATOM 7764 N THR B 352 -8.080 -37.765 -88.321 1.00 53.15 B
ATOM 7765 CA THR B 352 -7.861 -36.899 -87.154 1.00 52.83 B
ATOM 7766 CB THR B 352 -7.609 -35.426 -87.563 1.00 53.24 B
ATOM 7767 OG1 THR B 352 -6.632 -35.375 -88.608 1.00 53.73 B
ATOM 7768 CG2 THR B 352 -7.100 -34.606 -86.357 1.00 54.03 B
ATOM 7769 C THR B 352 -9.127 -36.911 -86.302 1.00 52.77 B
ATOM 7770 O THR B 352 -10.203 -37.244 -86.796 1.00 52.27 B
ATOM 7771 N MET B 353 -9.008 -36.541 -85.028 1.00 52.71 B
ATOM 7772 CA MET B 353 -10.178 -36.513 -84.165 1.00 53.00 B
ATOM 7773 CB MET B 353 -9.789 -36.292 -82.702 1.00 54.58 B
ATOM 7774 CG MET B 353 -10.969 -36.446 -81.742 1.00 57.20 B
ATOM 7775 SD MET B 353 -10.547 -36.211 -79.998 1.00 61.27 B
ATOM 7776 CE MET B 353 -10.489 -34.369 -79.905 1.00 61.02 B
ATOM 7777 C MET B 353 -11.096 -35.392 -84.636 1.00 52.59 B
ATOM 7778 O MET B 353 -12.305 -35.578 -84.747 1.00 53.03 B
ATOM 7779 N ASP B 354 -10.564 -34.230 -84.896 1.00 52.62 B
ATOM 7780 CA ASP B 354 -11.327 -33.143 -85.480 1.00 52.72 B
ATOM 7781 CB ASP B 354 -10.393 -32.078 -86.034 1.00 55.53 B
ATOM 7782 CG ASP B 354 -10.377 -30.801 -85.232 1.00 58.02 B

ATOM 7783 OD1 ASP B 354 -11.422 -30.364 -84.754 1.00 59.94 B
ATOM 7784 OD2 ASP B 354 -9.350 -30.159 -85.023 1.00 58.55 B
ATOM 7785 C ASP B 354 -12.113 -33.613 -86.620 1.00 51.55 B
ATOM 7786 O ASP B 354 -13.224 -33.248 -86.798 1.00 50.70 B
ATOM 7787 N GLN B 355 -11.470 -34.367 -87.462 1.00 50.62 B
ATOM 7788 CA GLN B 355 -12.107 -34.880 -88.670 1.00 48.86 B
ATOM 7789 CB GLN B 355 -11.112 -35.730 -89.471 1.00 49.55 B
ATOM 7790 CG GLN B 355 -10.183 -34.950 -90.405 1.00 48.73 B
ATOM 7791 CD GLN B 355 -10.927 -34.304 -91.562 1.00 47.85 B
ATOM 7792 OE1 GLN B 355 -11.744 -34.944 -92.225 1.00 47.10 B
ATOM 7793 NE2 GLN B 355 -10.642 -33.035 -91.814 1.00 47.53 B
ATOM 7794 C GLN B 355 -13.331 -35.723 -88.319 1.00 47.48 B
ATOM 7795 O GLN B 355 -14.432 -35.457 -88.811 1.00 47.14 B
ATOM 7796 N LEU B 356 -13.130 -36.738 -87.472 1.00 45.22 B
ATOM 7797 CA LEU B 356 -14.206 -37.628 -87.045 1.00 43.28 B
ATOM 7798 CB LEU B 356 -13.715 -38.570 -85.939 1.00 42.93 B
ATOM 7799 CG LEU B 356 -14.746 -39.379 -85.134 1.00 42.21 B
ATOM 7800 CD1 LEU B 356 -15.718 -40.110 -86.050 1.00 41.77 B
ATOM 7801 CD2 LEU B 356 -14.010 -40.360 -84.247 1.00 39.91 B
ATOM 7802 C LEU B 356 -15.403 -36.827 -86.560 1.00 43.03 B
ATOM 7803 O LEU B 356 -16.545 -37.190 -86.839 1.00 42.79 B
ATOM 7804 N SER B 357 -15.147 -35.736 -85.840 1.00 43.00 B
ATOM 7805 CA SER B 357 -16.240 -34.899 -85.344 1.00 42.84 B
ATOM 7806 CB SER B 357 -15.749 -33.889 -84.298 1.00 41.32 B
ATOM 7807 OG SER B 357 -14.952 -32.888 -84.884 1.00 41.25 B
ATOM 7808 C SER B 357 -16.884 -34.172 -86.517 1.00 42.32 B
ATOM 7809 O SER B 357 -18.069 -33.844 -86.475 1.00 42.22 B
ATOM 7810 N THR B 358 -16.099 -33.922 -87.563 1.00 41.87 B
ATOM 7811 CA THR B 358 -16.630 -33.269 -88.754 1.00 41.49 B
ATOM 7812 CB THR B 358 -15.508 -32.748 -89.681 1.00 42.55 B
ATOM 7813 OG1 THR B 358 -14.920 -31.571 -89.106 1.00 43.06 B
ATOM 7814 CG2 THR B 358 -16.072 -32.397 -91.060 1.00 43.37 B
ATOM 7815 C THR B 358 -17.484 -34.290 -89.502 1.00 40.22 B
ATOM 7816 O THR B 358 -18.438 -33.932 -90.208 1.00 38.78 B

ATOM 7817 N VAL B 359 -17.143 -35.566 -89.332 1.00 39.17 B
ATOM 7818 CA VAL B 359 -17.899 -36.632 -89.968 1.00 37.65 B
ATOM 7819 CB VAL B 359 -17.164 -37.988 -89.887 1.00 36.86 B
ATOM 7820 CG1 VAL B 359 -18.058 -39.101 -90.409 1.00 35.07 B
ATOM 7821 CG2 VAL B 359 -15.888 -37.933 -90.716 1.00 36.04 B
ATOM 7822 C VAL B 359 -19.240 -36.717 -89.256 1.00 36.75 B
ATOM 7823 O VAL B 359 -20.258 -37.047 -89.864 1.00 36.67 B
ATOM 7824 N HIS B 360 -19.248 -36.403 -87.968 1.00 35.66 B
ATOM 7825 CA HIS B 360 -20.495 -36.431 -87.227 1.00 35.59 B
ATOM 7826 CB HIS B 360 -20.237 -36.430 -85.716 1.00 35.44 B
ATOM 7827 CG HIS B 360 -19.956 -37.789 -85.151 1.00 37.13 B
ATOM 7828 CD2 HIS B 360 -20.748 -38.649 -84.466 1.00 37.32 B
ATOM 7829 ND1 HIS B 360 -18.747 -38.433 -85.316 1.00 38.05 B
ATOM 7830 CE1 HIS B 360 -18.809 -39.630 -84.760 1.00 38.18 B
ATOM 7831 NE2 HIS B 360 -20.013 -39.786 -84.238 1.00 37.11 B
ATOM 7832 C HIS B 360 -21.332 -35.223 -87.627 1.00 35.53 B
ATOM 7833 O HIS B 360 -22.529 -35.353 -87.884 1.00 34.02 B
ATOM 7834 N HIS B 361 -20.689 -34.055 -87.692 1.00 35.39 B
ATOM 7835 CA HIS B 361 -21.374 -32.813 -88.065 1.00 36.07 B
ATOM 7836 CB HIS B 361 -20.407 -31.611 -88.083 1.00 34.57 B
ATOM 7837 CG HIS B 361 -20.980 -30.390 -88.744 1.00 33.94 B
ATOM 7838 CD2 HIS B 361 -20.791 -29.879 -89.986 1.00 33.04 B
ATOM 7839 ND1 HIS B 361 -21.941 -29.599 -88.152 1.00 34.05 B
ATOM 7840 CE1 HIS B 361 -22.323 -28.659 -88.999 1.00 32.43 B
ATOM 7841 NE2 HIS B 361 -21.641 -28.809 -90.120 1.00 32.36 B
ATOM 7842 C HIS B 361 -22.013 -32.936 -89.442 1.00 37.15 B
ATOM 7843 O HIS B 361 -23.169 -32.533 -89.648 1.00 36.55 B
ATOM 7844 N GLU B 362 -21.251 -33.481 -90.388 1.00 37.82 B
ATOM 7845 CA GLU B 362 -21.750 -33.642 -91.741 1.00 37.63 B
ATOM 7846 CB GLU B 362 -20.620 -34.071 -92.679 1.00 37.48 B
ATOM 7847 CG GLU B 362 -19.564 -32.988 -92.938 1.00 38.67 B
ATOM 7848 CD GLU B 362 -20.144 -31.688 -93.497 1.00 40.27 B
ATOM 7849 OE1 GLU B 362 -21.361 -31.626 -93.762 1.00 40.26 B
ATOM 7850 OE2 GLU B 362 -19.378 -30.715 -93.668 1.00 41.69 B

ATOM 7851 C GLU B 362 -22.904 -34.634 -91.799 1.00 36.65 B
ATOM 7852 O GLU B 362 -23.937 -34.353 -92.403 1.00 35.99 B
ATOM 7853 N MET B 363 -22.745 -35.779 -91.151 1.00 36.10 B
ATOM 7854 CA MET B 363 -23.796 -36.788 -91.159 1.00 37.12 B
ATOM 7855 CB MET B 363 -23.300 -38.061 -90.481 1.00 37.28 B
ATOM 7856 CG MET B 363 -24.150 -39.268 -90.781 1.00 36.50 B
ATOM 7857 SD MET B 363 -23.229 -40.757 -90.441 1.00 39.20 B
ATOM 7858 CE MET B 363 -22.155 -40.863 -91.871 1.00 36.09 B
ATOM 7859 C MET B 363 -25.069 -36.289 -90.479 1.00 37.07 B
ATOM 7860 O MET B 363 -26.184 -36.695 -90.829 1.00 35.55 B
ATOM 7861 N GLY B 364 -24.899 -35.405 -89.504 1.00 36.86 B
ATOM 7862 CA GLY B 364 -26.045 -34.863 -88.807 1.00 36.56 B
ATOM 7863 C GLY B 364 -26.924 -34.182 -89.822 1.00 36.35 B
ATOM 7864 O GLY B 364 -28.153 -34.198 -89.715 1.00 36.56 B
ATOM 7865 N HIS B 365 -26.282 -33.575 -90.817 1.00 36.08 B
ATOM 7866 CA HIS B 365 -26.999 -32.893 -91.888 1.00 35.44 B
ATOM 7867 CB HIS B 365 -26.015 -32.204 -92.837 1.00 35.41 B
ATOM 7868 CG HIS B 365 -25.542 -30.869 -92.360 1.00 34.10 B
ATOM 7869 CD2 HIS B 365 -24.295 -30.384 -92.161 1.00 35.30 B
ATOM 7870 ND1 HIS B 365 -26.405 -29.838 -92.063 1.00 33.27 B
ATOM 7871 CE1 HIS B 365 -25.710 -28.773 -91.704 1.00 33.87 B
ATOM 7872 NE2 HIS B 365 -24.427 -29.077 -91.755 1.00 35.56 B
ATOM 7873 C HIS B 365 -27.826 -33.918 -92.661 1.00 34.95 B
ATOM 7874 O HIS B 365 -29.026 -33.729 -92.865 1.00 33.11 B
ATOM 7875 N ILE B 366 -27.176 -35.004 -93.081 1.00 34.78 B
ATOM 7876 CA ILE B 366 -27.859 -36.057 -93.828 1.00 34.88 B
ATOM 7877 CB ILE B 366 -26.951 -37.287 -94.083 1.00 33.53 B
ATOM 7878 CG2 ILE B 366 -27.712 -38.331 -94.877 1.00 31.26 B
ATOM 7879 CG1 ILE B 366 -25.691 -36.871 -94.842 1.00 33.82 B
ATOM 7880 CD1 ILE B 366 -25.963 -36.164 -96.153 1.00 36.40 B
ATOM 7881 C ILE B 366 -29.076 -36.535 -93.055 1.00 35.80 B
ATOM 7882 O ILE B 366 -30.214 -36.418 -93.526 1.00 35.32 B
ATOM 7883 N GLN B 367 -28.832 -37.069 -91.863 1.00 35.78 B
ATOM 7884 CA GLN B 367 -29.915 -37.572 -91.042 1.00 35.89 B

ATOM 7885 CB GLN B 367 -29.447 -37.753 -89.602 1.00 35.75 B
ATOM 7886 CG GLN B 367 -30.490 -38.410 -88.737 1.00 34.68 B
ATOM 7887 CD GLN B 367 -30.886 -39.779 -89.254 1.00 34.23 B
ATOM 7888 OE1 GLN B 367 -32.067 -40.108 -89.316 1.00 33.60 B
ATOM 7889 NE2 GLN B 367 -29.895 -40.590 -89.613 1.00 33.57 B
ATOM 7890 C GLN B 367 -31.108 -36.625 -91.081 1.00 36.31 B
ATOM 7891 O GLN B 367 -32.260 -37.058 -91.142 1.00 36.08 B
ATOM 7892 N TYR B 368 -30.827 -35.327 -91.061 1.00 35.61 B
ATOM 7893 CA TYR B 368 -31.885 -34.333 -91.072 1.00 35.53 B
ATOM 7894 CB TYR B 368 -31.286 -32.945 -90.800 1.00 33.33 B
ATOM 7895 CG TYR B 368 -32.213 -31.954 -90.117 1.00 30.75 B
ATOM 7896 CD1 TYR B 368 -31.701 -30.867 -89.409 1.00 30.09 B
ATOM 7897 CE1 TYR B 368 -32.544 -29.943 -88.785 1.00 30.19 B
ATOM 7898 CD2 TYR B 368 -33.593 -32.091 -90.186 1.00 30.23 B
ATOM 7899 CE2 TYR B 368 -34.444 -31.171 -89.568 1.00 31.20 B
ATOM 7900 CZ TYR B 368 -33.916 -30.101 -88.870 1.00 30.28 B
ATOM 7901 OH TYR B 368 -34.765 -29.192 -88.274 1.00 28.20 B
ATOM 7902 C TYR B 368 -32.595 -34.389 -92.424 1.00 36.63 B
ATOM 7903 O TYR B 368 -33.810 -34.214 -92.508 1.00 37.60 B
ATOM 7904 N TYR B 369 -31.830 -34.655 -93.478 1.00 37.29 B
ATOM 7905 CA TYR B 369 -32.382 -34.746 -94.835 1.00 38.81 B
ATOM 7906 CB TYR B 369 -31.249 -34.866 -95.872 1.00 37.68 B
ATOM 7907 CG TYR B 369 -30.342 -33.654 -96.027 1.00 35.62 B
ATOM 7908 CD1 TYR B 369 -29.005 -33.814 -96.400 1.00 33.84 B
ATOM 7909 CE1 TYR B 369 -28.163 -32.718 -96.577 1.00 34.80 B
ATOM 7910 CD2 TYR B 369 -30.822 -32.354 -95.837 1.00 36.28 B
ATOM 7911 CE2 TYR B 369 -29.987 -31.247 -96.017 1.00 36.72 B
ATOM 7912 CZ TYR B 369 -28.657 -31.441 -96.385 1.00 36.26 B
ATOM 7913 OH TYR B 369 -27.819 -30.364 -96.550 1.00 35.15 B
ATOM 7914 C TYR B 369 -33.289 -35.982 -94.948 1.00 39.52 B
ATOM 7915 O TYR B 369 -34.400 -35.924 -95.497 1.00 39.48 B
ATOM 7916 N LEU B 370 -32.790 -37.103 -94.432 1.00 39.34 B
ATOM 7917 CA LEU B 370 -33.522 -38.361 -94.455 1.00 39.14 B
ATOM 7918 CB LEU B 370 -32.659 -39.472 -93.852 1.00 37.05 B

ATOM 7919 CG LEU B 370 -31.326 -39.734 -94.559 1.00 37.87 B
ATOM 7920 CD1 LEU B 370 -30.421 -40.607 -93.706 1.00 36.65 B
ATOM 7921 CD2 LEU B 370 -31.595 -40.390 -95.892 1.00 37.66 B
ATOM 7922 C LEU B 370 -34.850 -38.281 -93.694 1.00 40.34 B
ATOM 7923 O LEU B 370 -35.824 -38.923 -94.080 1.00 42.91 B
ATOM 7924 N GLN B 371 -34.895 -37.492 -92.624 1.00 40.39 B
ATOM 7925 CA GLN B 371 -36.099 -37.377 -91.807 1.00 39.90 B
ATOM 7926 CB GLN B 371 -35.737 -36.891 -90.402 1.00 40.24 B
ATOM 7927 CG GLN B 371 -35.011 -37.899 -89.541 1.00 39.24 B
ATOM 7928 CD GLN B 371 -35.797 -39.179 -89.373 1.00 38.72 B
ATOM 7929 OE1 GLN B 371 -37.029 -39.162 -89.338 1.00 38.57 B
ATOM 7930 NE2 GLN B 371 -35.088 -40.298 -89.252 1.00 37.67 B
ATOM 7931 C GLN B 371 -37.208 -36.491 -92.350 1.00 40.74 B
ATOM 7932 O GLN B 371 -38.372 -36.704 -92.020 1.00 40.15 B
ATOM 7933 N TYR B 372 -36.869 -35.487 -93.155 1.00 42.06 B
ATOM 7934 CA TYR B 372 -37.916 -34.614 -93.678 1.00 43.42 B
ATOM 7935 CB TYR B 372 -37.697 -33.153 -93.247 1.00 44.77 B
ATOM 7936 CG TYR B 372 -36.402 -32.500 -93.692 1.00 47.30 B
ATOM 7937 CD1 TYR B 372 -35.856 -32.756 -94.952 1.00 48.21 B
ATOM 7938 CE1 TYR B 372 -34.709 -32.099 -95.394 1.00 49.24 B
ATOM 7939 CD2 TYR B 372 -35.760 -31.564 -92.875 1.00 48.16 B
ATOM 7940 CE2 TYR B 372 -34.612 -30.897 -93.306 1.00 50.30 B
ATOM 7941 CZ TYR B 372 -34.089 -31.169 -94.570 1.00 50.31 B
ATOM 7942 OH TYR B 372 -32.958 -30.511 -95.014 1.00 49.28 B
ATOM 7943 C TYR B 372 -38.102 -34.677 -95.183 1.00 43.97 B
ATOM 7944 O TYR B 372 -38.630 -33.737 -95.783 1.00 45.25 B
ATOM 7945 N LYS B 373 -37.660 -35.773 -95.792 1.00 43.70 B
ATOM 7946 CA LYS B 373 -37.879 -35.998 -97.215 1.00 43.23 B
ATOM 7947 CB LYS B 373 -37.059 -37.195 -97.700 1.00 42.00 B
ATOM 7948 CG LYS B 373 -37.527 -38.531 -97.148 1.00 41.78 B
ATOM 7949 CD LYS B 373 -36.625 -39.665 -97.606 1.00 41.47 B
ATOM 7950 CE LYS B 373 -37.218 -41.019 -97.254 1.00 41.29 B
ATOM 7951 NZ LYS B 373 -36.506 -42.133 -97.940 1.00 42.46 B
ATOM 7952 C LYS B 373 -39.358 -36.225 -97.502 1.00 43.81 B

ATOM 7953 O LYS B 373 -39.780 -36.253 -98.658 1.00 42.96 B
ATOM 7954 N ASP B 374 -40.125 -36.383 -96.418 1.00 44.89 B
ATOM 7955 CA ASP B 374 -41.543 -36.698 -96.547 1.00 45.72 B
ATOM 7956 CB ASP B 374 -42.072 -37.307 -95.247 1.00 50.29 B
ATOM 7957 CG ASP B 374 -41.255 -36.898 -94.037 1.00 54.94 B
ATOM 7958 OD1 ASP B 374 -40.274 -37.601 -93.715 1.00 57.98 B
ATOM 7959 OD2 ASP B 374 -41.517 -35.890 -93.349 1.00 56.59 B
ATOM 7960 C ASP B 374 -42.348 -35.454 -96.907 1.00 44.57 B
ATOM 7961 O ASP B 374 -43.542 -35.537 -97.194 1.00 44.78 B
ATOM 7962 N LEU B 375 -41.700 -34.304 -96.909 1.00 43.75 B
ATOM 7963 CA LEU B 375 -42.392 -33.022 -96.967 1.00 43.18 B
ATOM 7964 CB LEU B 375 -41.822 -32.059 -95.924 1.00 43.93 B
ATOM 7965 CG LEU B 375 -41.922 -32.502 -94.464 1.00 43.40 B
ATOM 7966 CD1 LEU B 375 -41.219 -31.510 -93.551 1.00 43.20 B
ATOM 7967 CD2 LEU B 375 -43.376 -32.677 -94.053 1.00 42.22 B
ATOM 7968 C LEU B 375 -42.295 -32.406 -98.358 1.00 42.31 B
ATOM 7969 O LEU B 375 -41.587 -32.917 -99.226 1.00 41.25 B
ATOM 7970 N PRO B 376 -43.011 -31.306 -98.564 1.00 41.93 B
ATOM 7971 CD PRO B 376 -44.143 -30.820 -97.757 1.00 41.84 B
ATOM 7972 CA PRO B 376 -42.923 -30.555 -99.814 1.00 41.94 B
ATOM 7973 CB PRO B 376 -43.972 -29.460 -99.635 1.00 41.05 B
ATOM 7974 CG PRO B 376 -44.996 -30.108 -98.788 1.00 39.97 B
ATOM 7975 C PRO B 376 -41.513 -29.976 -99.910 1.00 42.83 B
ATOM 7976 O PRO B 376 -40.923 -29.575 -98.904 1.00 43.52 B
ATOM 7977 N VAL B 377 -40.971 -29.951 -101.118 1.00 43.42 B
ATOM 7978 CA VAL B 377 -39.637 -29.417 -101.352 1.00 42.85 B
ATOM 7979 CB VAL B 377 -39.457 -29.102 -102.867 1.00 42.25 B
ATOM 7980 CG1 VAL B 377 -38.385 -28.066 -103.081 1.00 40.79 B
ATOM 7981 CG2 VAL B 377 -39.102 -30.375 -103.605 1.00 41.25 B
ATOM 7982 C VAL B 377 -39.391 -28.159 -100.512 1.00 42.64 B
ATOM 7983 O VAL B 377 -38.471 -28.110 -99.697 1.00 41.88 B
ATOM 7984 N SER B 378 -40.240 -27.158 -100.710 1.00 42.92 B
ATOM 7985 CA SER B 378 -40.134 -25.881 -100.017 1.00 43.99 B
ATOM 7986 CB SER B 378 -41.408 -25.071 -100.243 1.00 44.82 B

ATOM 7987 OG SER B 378 -41.825 -25.139-101.593 1.00 46.48 B
ATOM 7988 C SER B 378 -39.865 -25.956 -98.515 1.00 44.48 B
ATOM 7989 O SER B 378 -39.292 -25.021 -97.948 1.00 45.94 B
ATOM 7990 N LEU B 379 -40.270 -27.050 -97.867 1.00 44.44 B
ATOM 7991 CA LEU B 379 -40.092 -27.187 -96.417 1.00 43.62 B
ATOM 7992 CB LEU B 379 -41.403 -27.634 -95.765 1.00 42.99 B
ATOM 7993 CG LEU B 379 -42.676 -26.839 -96.058 1.00 42.39 B
ATOM 7994 CD1 LEU B 379 -43.833 -27.486 -95.330 1.00 42.42 B
ATOM 7995 CD2 LEU B 379 -42.520 -25.399 -95.619 1.00 42.42 B
ATOM 7996 C LEU B 379 -38.978 -28.123 -95.953 1.00 43.61 B
ATOM 7997 O LEU B 379 -38.704 -28.210 -94.759 1.00 43.23 B
ATOM 7998 N ARG B 380 -38.346 -28.833 -96.882 1.00 44.36 B
ATOM 7999 CA ARG B 380 -37.268 -29.750 -96.515 1.00 45.51 B
ATOM 8000 CB ARG B 380 -36.940 -30.680 -97.690 1.00 46.28 B
ATOM 8001 CG ARG B 380 -38.131 -31.446 -98.259 1.00 46.60 B
ATOM 8002 CD ARG B 380 -37.686 -32.192 -99.506 1.00 49.86 B
ATOM 8003 NE ARG B 380 -38.767 -32.890-100.205 1.00 49.98 B
ATOM 8004 CZ ARG B 380 -38.577 -33.672-101.267 1.00 49.40 B
ATOM 8005 NH1 ARG B 380 -37.355 -33.858-101.756 1.00 48.74 B
ATOM 8006 NH2 ARG B 380 -39.607 -34.280-101.834 1.00 50.58 B
ATOM 8007 C ARG B 380 -36.024 -28.949 -96.103 1.00 45.62 B
ATOM 8008 O ARG B 380 -34.983 -28.987 -96.768 1.00 45.57 B
ATOM 8009 N ARG B 381 -36.187 -28.225 -94.982 1.00 46.21 B
ATOM 8010 CA ARG B 381 -35.227 -27.299 -94.430 1.00 46.18 B
ATOM 8011 CB ARG B 381 -35.667 -25.929 -94.840 1.00 47.90 B
ATOM 8012 CG ARG B 381 -35.321 -25.611 -96.168 1.00 51.14 B
ATOM 8013 CD ARG B 381 -36.101 -24.582 -96.765 1.00 55.54 B
ATOM 8014 NE ARG B 381 -35.286 -23.970 -97.775 1.00 60.36 B
ATOM 8015 CZ ARG B 381 -35.740 -23.491 -98.906 1.00 63.00 B
ATOM 8016 NH1 ARG B 381 -37.029 -23.582 -99.212 1.00 65.04 B
ATOM 8017 NH2 ARG B 381 -34.903 -22.881 -99.715 1.00 63.70 B
ATOM 8018 C ARG B 381 -35.136 -27.353 -92.904 1.00 44.61 B
ATOM 8019 O ARG B 381 -36.087 -27.655 -92.304 1.00 45.51 B
ATOM 8020 N GLY B 382 -34.039 -27.029 -92.280 1.00 42.73 B

ATOM 8021 CA GLY B 382 -33.985 -27.060 -90.826 1.00 39.59 B
ATOM 8022 C GLY B 382 -34.989 -26.103 -90.210 1.00 37.27 B
ATOM 8023 O GLY B 382 -35.435 -25.175 -90.883 1.00 36.50 B
ATOM 8024 N ALA B 383 -35.358 -26.326 -88.949 1.00 35.17 B
ATOM 8025 CA ALA B 383 -36.317 -25.453 -88.277 1.00 33.93 B
ATOM 8026 CB ALA B 383 -36.274 -25.686 -86.773 1.00 34.84 B
ATOM 8027 C ALA B 383 -35.903 -24.029 -88.611 1.00 33.19 B
ATOM 8028 O ALA B 383 -36.733 -23.155 -88.862 1.00 33.18 B
ATOM 8029 N ASN B 384 -34.592 -23.824 -88.586 1.00 32.47 B
ATOM 8030 CA ASN B 384 -33.945 -22.572 -88.939 1.00 31.49 B
ATOM 8031 CB ASN B 384 -34.046 -21.508 -87.823 1.00 31.83 B
ATOM 8032 CG ASN B 384 -33.178 -21.805 -86.600 1.00 31.57 B
ATOM 8033 OD1 ASN B 384 -31.983 -22.084 -86.706 1.00 31.17 B
ATOM 8034 ND2 ASN B 384 -33.785 -21.703 -85.424 1.00 29.03 B
ATOM 8035 C ASN B 384 -32.515 -23.025 -89.199 1.00 30.83 B
ATOM 8036 O ASN B 384 -32.057 -24.012 -88.610 1.00 29.95 B
ATOM 8037 N PRO B 385 -31.795 -22.327 -90.089 1.00 30.19 B
ATOM 8038 CD PRO B 385 -32.129 -20.975 -90.571 1.00 28.82 B
ATOM 8039 CA PRO B 385 -30.409 -22.682 -90.433 1.00 30.78 B
ATOM 8040 CB PRO B 385 -29.851 -21.380 -90.993 1.00 29.22 B
ATOM 8041 CG PRO B 385 -31.063 -20.736 -91.605 1.00 29.85 B
ATOM 8042 C PRO B 385 -29.567 -23.235 -89.278 1.00 31.97 B
ATOM 8043 O PRO B 385 -28.767 -24.158 -89.461 1.00 33.09 B
ATOM 8044 N GLY B 386 -29.756 -22.671 -88.090 1.00 32.06 B
ATOM 8045 CA GLY B 386 -29.003 -23.112 -86.937 1.00 31.34 B
ATOM 8046 C GLY B 386 -29.221 -24.573 -86.613 1.00 32.26 B
ATOM 8047 O GLY B 386 -28.255 -25.322 -86.512 1.00 33.49 B
ATOM 8048 N PHE B 387 -30.480 -24.979 -86.449 1.00 31.80 B
ATOM 8049 CA PHE B 387 -30.811 -26.361 -86.120 1.00 30.19 B
ATOM 8050 CB PHE B 387 -32.277 -26.644 -86.407 1.00 30.94 B
ATOM 8051 CG PHE B 387 -33.211 -26.138 -85.357 1.00 31.33 B
ATOM 8052 CD1 PHE B 387 -33.280 -24.779 -85.056 1.00 31.56 B
ATOM 8053 CD2 PHE B 387 -34.049 -27.019 -84.678 1.00 30.81 B
ATOM 8054 CE1 PHE B 387 -34.180 -24.297 -84.090 1.00 31.84 B

ATOM 8055 CE2 PHE B 387 -34.950 -26.552 -83.715 1.00 32.51 B
ATOM 8056 CZ PHE B 387 -35.014 -25.182 -83.422 1.00 32.19 B
ATOM 8057 C PHE B 387 -29.979 -27.350 -86.900 1.00 29.69 B
ATOM 8058 O PHE B 387 -29.555 -28.369 -86.364 1.00 29.89 B
ATOM 8059 N HIS B 388 -29.749 -27.042 -88.170 1.00 29.45 B
ATOM 8060 CA HIS B 388 -28.985 -27.909 -89.048 1.00 29.14 B
ATOM 8061 CB HIS B 388 -28.997 -27.340 -90.467 1.00 30.29 B
ATOM 8062 CG HIS B 388 -29.666 -28.234 -91.467 1.00 31.65 B
ATOM 8063 CD2 HIS B 388 -30.875 -28.148 -92.070 1.00 32.74 B
ATOM 8064 ND1 HIS B 388 -29.102 -29.413 -91.910 1.00 32.33 B
ATOM 8065 CE1 HIS B 388 -29.936 -30.016 -92.738 1.00 32.85 B
ATOM 8066 NE2 HIS B 388 -31.020 -29.270 -92.852 1.00 33.89 B
ATOM 8067 C HIS B 388 -27.554 -28.143 -88.595 1.00 29.12 B
ATOM 8068 O HIS B 388 -27.150 -29.273 -88.340 1.00 28.63 B
ATOM 8069 N GLU B 389 -26.782 -27.072 -88.496 1.00 31.06 B
ATOM 8070 CA GLU B 389 -25.389 -27.198 -88.085 1.00 33.28 B
ATOM 8071 CB GLU B 389 -24.717 -25.816 -88.055 1.00 33.98 B
ATOM 8072 CG GLU B 389 -24.884 -24.964 -89.313 1.00 34.34 B
ATOM 8073 CD GLU B 389 -24.489 -25.695 -90.589 1.00 34.65 B
ATOM 8074 OE1 GLU B 389 -23.594 -26.564 -90.525 1.00 33.95 B
ATOM 8075 OE2 GLU B 389 -25.070 -25.388 -91.657 1.00 34.05 B
ATOM 8076 C GLU B 389 -25.292 -27.846 -86.699 1.00 33.87 B
ATOM 8077 O GLU B 389 -24.255 -28.405 -86.328 1.00 34.67 B
ATOM 8078 N ALA B 390 -26.387 -27.774 -85.948 1.00 33.59 B
ATOM 8079 CA ALA B 390 -26.451 -28.305 -84.593 1.00 33.27 B
ATOM 8080 CB ALA B 390 -27.590 -27.629 -83.841 1.00 33.24 B
ATOM 8081 C ALA B 390 -26.580 -29.825 -84.474 1.00 33.42 B
ATOM 8082 O ALA B 390 -25.790 -30.463 -83.775 1.00 34.03 B
ATOM 8083 N ILE B 391 -27.571 -30.406 -85.141 1.00 32.15 B
ATOM 8084 CA ILE B 391 -27.777 -31.849 -85.070 1.00 31.57 B
ATOM 8085 CB ILE B 391 -28.489 -32.370 -86.331 1.00 29.33 B
ATOM 8086 CG2 ILE B 391 -28.648 -33.872 -86.266 1.00 27.16 B
ATOM 8087 CG1 ILE B 391 -29.856 -31.707 -86.456 1.00 28.54 B
ATOM 8088 CD1 ILE B 391 -30.742 -31.900 -85.262 1.00 29.51 B

ATOM 8089 C ILE B 391 -26.500 -32.668 -84.857 1.00 32.49 B
ATOM 8090 O ILE B 391 -26.333 -33.314 -83.827 1.00 32.78 B
ATOM 8091 N GLY B 392 -25.592 -32.620 -85.819 1.00 33.11 B
ATOM 8092 CA GLY B 392 -24.371 -33.394 -85.707 1.00 33.77 B
ATOM 8093 C GLY B 392 -23.514 -33.170 -84.482 1.00 34.47 B
ATOM 8094 O GLY B 392 -22.998 -34.129 -83.920 1.00 35.20 B
ATOM 8095 N ASP B 393 -23.350 -31.916 -84.074 1.00 35.58 B
ATOM 8096 CA ASP B 393 -22.527 -31.577 -82.908 1.00 36.43 B
ATOM 8097 CB ASP B 393 -22.491 -30.048 -82.696 1.00 39.94 B
ATOM 8098 CG ASP B 393 -21.460 -29.333 -83.598 1.00 42.21 B
ATOM 8099 OD1 ASP B 393 -21.397 -29.628 -84.815 1.00 42.90 B
ATOM 8100 OD2 ASP B 393 -20.718 -28.457 -83.090 1.00 43.85 B
ATOM 8101 C ASP B 393 -23.016 -32.258 -81.635 1.00 34.84 B
ATOM 8102 O ASP B 393 -22.223 -32.833 -80.886 1.00 33.97 B
ATOM 8103 N VAL B 394 -24.322 -32.193 -81.398 1.00 33.65 B
ATOM 8104 CA VAL B 394 -24.921 -32.796 -80.208 1.00 33.15 B
ATOM 8105 CB VAL B 394 -26.464 -32.812 -80.306 1.00 31.92 B
ATOM 8106 CG1 VAL B 394 -27.064 -33.079 -78.953 1.00 31.72 B
ATOM 8107 CG2 VAL B 394 -26.967 -31.490 -80.840 1.00 31.85 B
ATOM 8108 C VAL B 394 -24.415 -34.227 -80.018 1.00 33.51 B
ATOM 8109 O VAL B 394 -23.945 -34.600 -78.940 1.00 34.14 B
ATOM 8110 N LEU B 395 -24.503 -35.030 -81.070 1.00 33.15 B
ATOM 8111 CA LEU B 395 -24.040 -36.406 -80.989 1.00 34.13 B
ATOM 8112 CB LEU B 395 -24.409 -37.167 -82.264 1.00 32.81 B
ATOM 8113 CG LEU B 395 -25.862 -37.654 -82.299 1.00 33.22 B
ATOM 8114 CD1 LEU B 395 -26.821 -36.483 -82.033 1.00 32.12 B
ATOM 8115 CD2 LEU B 395 -26.149 -38.320 -83.642 1.00 32.25 B
ATOM 8116 C LEU B 395 -22.542 -36.490 -80.751 1.00 34.72 B
ATOM 8117 O LEU B 395 -22.074 -37.346 -80.012 1.00 35.86 B
ATOM 8118 N ALA B 396 -21.789 -35.595 -81.373 1.00 34.95 B
ATOM 8119 CA ALA B 396 -20.341 -35.600 -81.224 1.00 35.37 B
ATOM 8120 CB ALA B 396 -19.712 -34.620 -82.199 1.00 36.51 B
ATOM 8121 C ALA B 396 -19.944 -35.253 -79.801 1.00 35.97 B
ATOM 8122 O ALA B 396 -18.858 -35.617 -79.346 1.00 35.69 B

ATOM 8123 N LEU B 397 -20.816 -34.539 -79.096 1.00 36.39 B
ATOM 8124 CA LEU B 397 -20.522 -34.190 -77.713 1.00 35.92 B
ATOM 8125 CB LEU B 397 -21.630 -33.302 -77.131 1.00 34.39 B
ATOM 8126 CG LEU B 397 -21.535 -31.842 -77.592 1.00 33.54 B
ATOM 8127 CD1 LEU B 397 -22.824 -31.108 -77.290 1.00 33.84 B
ATOM 8128 CD2 LEU B 397 -20.350 -31.162 -76.921 1.00 30.72 B
ATOM 8129 C LEU B 397 -20.375 -35.488 -76.923 1.00 35.53 B
ATOM 8130 O LEU B 397 -19.426 -35.633 -76.148 1.00 34.80 B
ATOM 8131 N SER B 398 -21.296 -36.433 -77.152 1.00 34.92 B
ATOM 8132 CA SER B 398 -21.274 -37.742 -76.482 1.00 34.20 B
ATOM 8133 CB SER B 398 -22.563 -38.527 -76.760 1.00 33.26 B
ATOM 8134 OG SER B 398 -23.706 -37.829 -76.305 1.00 33.23 B
ATOM 8135 C SER B 398 -20.082 -38.592 -76.917 1.00 34.17 B
ATOM 8136 O SER B 398 -19.536 -39.339 -76.123 1.00 35.15 B
ATOM 8137 N VAL B 399 -19.682 -38.485 -78.176 1.00 33.74 B
ATOM 8138 CA VAL B 399 -18.553 -39.259 -78.665 1.00 34.65 B
ATOM 8139 CB VAL B 399 -18.480 -39.236 -80.210 1.00 34.96 B
ATOM 8140 CG1 VAL B 399 -17.320 -40.091 -80.700 1.00 32.26 B
ATOM 8141 CG2 VAL B 399 -19.783 -39.730 -80.793 1.00 34.26 B
ATOM 8142 C VAL B 399 -17.255 -38.691 -78.105 1.00 36.11 B
ATOM 8143 O VAL B 399 -16.297 -39.426 -77.890 1.00 36.74 B
ATOM 8144 N SER B 400 -17.229 -37.380 -77.877 1.00 37.15 B
ATOM 8145 CA SER B 400 -16.050 -36.701 -77.337 1.00 38.24 B
ATOM 8146 CB SER B 400 -16.262 -35.185 -77.342 1.00 39.19 B
ATOM 8147 OG SER B 400 -16.483 -34.703 -78.655 1.00 42.21 B
ATOM 8148 C SER B 400 -15.717 -37.137 -75.911 1.00 38.84 B
ATOM 8149 O SER B 400 -14.568 -37.034 -75.485 1.00 39.06 B
ATOM 8150 N THR B 401 -16.722 -37.620 -75.179 1.00 38.97 B
ATOM 8151 CA THR B 401 -16.541 -38.051 -73.795 1.00 38.98 B
ATOM 8152 CB THR B 401 -17.877 -38.405 -73.131 1.00 39.57 B
ATOM 8153 OG1 THR B 401 -18.449 -39.534 -73.793 1.00 39.97 B
ATOM 8154 CG2 THR B 401 -18.840 -37.236 -73.210 1.00 40.49 B
ATOM 8155 C THR B 401 -15.613 -39.250 -73.656 1.00 39.07 B
ATOM 8156 O THR B 401 -15.698 -40.207 -74.425 1.00 37.94 B

ATOM 8157 N PRO B 402 -14.709 -39.202 -72.661 1.00 39.41 B
ATOM 8158 CD PRO B 402 -14.455 -38.015 -71.822 1.00 39.06 B
ATOM 8159 CA PRO B 402 -13.731 -40.246 -72.365 1.00 39.54 B
ATOM 8160 CB PRO B 402 -13.013 -39.698 -71.145 1.00 39.38 B
ATOM 8161 CG PRO B 402 -13.025 -38.228 -71.403 1.00 38.43 B
ATOM 8162 C PRO B 402 -14.362 -41.594 -72.103 1.00 40.96 B
ATOM 8163 O PRO B 402 -13.743 -42.622 -72.336 1.00 40.91 B
ATOM 8164 N ALA B 403 -15.595 -41.585 -71.612 1.00 43.30 B
ATOM 8165 CA ALA B 403 -16.312 -42.826 -71.323 1.00 45.67 B
ATOM 8166 CB ALA B 403 -17.517 -42.537 -70.419 1.00 44.99 B
ATOM 8167 C ALA B 403 -16.773 -43.535 -72.604 1.00 47.34 B
ATOM 8168 O ALA B 403 -16.868 -44.761 -72.642 1.00 49.23 B
ATOM 8169 N HIS B 404 -17.063 -42.764 -73.649 1.00 48.15 B
ATOM 8170 CA HIS B 404 -17.515 -43.330 -74.918 1.00 48.01 B
ATOM 8171 CB HIS B 404 -18.331 -42.298 -75.700 1.00 47.11 B
ATOM 8172 CG HIS B 404 -18.981 -42.852 -76.929 1.00 46.98 B
ATOM 8173 CD2 HIS B 404 -18.510 -43.020 -78.185 1.00 46.64 B
ATOM 8174 ND1 HIS B 404 -20.265 -43.356 -76.928 1.00 46.57 B
ATOM 8175 CE1 HIS B 404 -20.556 -43.810 -78.133 1.00 45.50 B
ATOM 8176 NE2 HIS B 404 -19.508 -43.621 -78.915 1.00 46.60 B
ATOM 8177 C HIS B 404 -16.320 -43.773 -75.765 1.00 48.78 B
ATOM 8178 O HIS B 404 -16.355 -44.815 -76.424 1.00 48.10 B
ATOM 8179 N LEU B 405 -15.262 -42.970 -75.746 1.00 50.71 B
ATOM 8180 CA LEU B 405 -14.025 -43.326 -76.430 1.00 52.11 B
ATOM 8181 CB LEU B 405 -12.935 -42.293 -76.140 1.00 52.18 B
ATOM 8182 CG LEU B 405 -13.247 -40.854 -76.557 1.00 52.22 B
ATOM 8183 CD1 LEU B 405 -11.996 -39.991 -76.492 1.00 52.69 B
ATOM 8184 CD2 LEU B 405 -13.857 -40.817 -77.950 1.00 51.58 B
ATOM 8185 C LEU B 405 -13.558 -44.717 -76.013 1.00 53.38 B
ATOM 8186 O LEU B 405 -13.453 -45.621 -76.841 1.00 55.04 B
ATOM 8187 N HIS B 406 -13.284 -44.880 -74.723 1.00 54.04 B
ATOM 8188 CA HIS B 406 -12.971 -46.190 -74.163 1.00 54.43 B
ATOM 8189 CB HIS B 406 -12.870 -46.110 -72.638 1.00 55.37 B
ATOM 8190 CG HIS B 406 -12.913 -47.444 -71.959 1.00 56.18 B

ATOM 8191 CD2 HIS B 406 -11.925 -48.220 -71.454 1.00 55.80 B
ATOM 8192 ND1 HIS B 406 -14.089 -48.128 -71.736 1.00 55.96 B
ATOM 8193 CE1 HIS B 406 -13.823 -49.268 -71.123 1.00 55.14 B
ATOM 8194 NE2 HIS B 406 -12.517 -49.348 -70.940 1.00 55.59 B
ATOM 8195 C HIS B 406 -14.010 -47.232 -74.565 1.00 54.21 B
ATOM 8196 O HIS B 406 -13.664 -48.323 -75.019 1.00 55.14 B
ATOM 8197 N LYS B 407 -15.282 -46.889 -74.395 1.00 53.11 B
ATOM 8198 CA LYS B 407 -16.372 -47.792 -74.746 1.00 52.89 B
ATOM 8199 CB LYS B 407 -17.725 -47.137 -74.459 1.00 52.30 B
ATOM 8200 CG LYS B 407 -18.913 -47.887 -75.039 1.00 52.12 B
ATOM 8201 CD LYS B 407 -20.223 -47.202 -74.687 1.00 54.02 B
ATOM 8202 CE LYS B 407 -20.444 -47.172 -73.183 1.00 54.97 B
ATOM 8203 NZ LYS B 407 -21.822 -46.730 -72.833 1.00 56.26 B
ATOM 8204 C LYS B 407 -16.291 -48.207 -76.211 1.00 53.47 B
ATOM 8205 O LYS B 407 -16.941 -49.164 -76.632 1.00 54.08 B
ATOM 8206 N ILE B 408 -15.489 -47.481 -76.983 1.00 53.98 B
ATOM 8207 CA ILE B 408 -14.986 -47.985 -78.256 1.00 54.61 B
ATOM 8208 CB ILE B 408 -15.451 -47.084 -79.414 1.00 53.82 B
ATOM 8209 CG2 ILE B 408 -16.880 -46.612 -79.181 1.00 53.15 B
ATOM 8210 CG1 ILE B 408 -14.508 -45.890 -79.574 1.00 52.78 B
ATOM 8211 CD1 ILE B 408 -15.066 -44.594 -79.029 0.00 53.05 B
ATOM 8212 C ILE B 408 -13.464 -48.084 -78.248 1.00 56.53 B
ATOM 8213 O ILE B 408 -12.847 -48.211 -77.191 1.00 57.22 B
ATOM 8214 N GLY B 409 -12.866 -48.026 -79.434 1.00 58.73 B
ATOM 8215 CA GLY B 409 -11.434 -47.826 -79.556 1.00 62.18 B
ATOM 8216 C GLY B 409 -10.943 -46.642 -78.748 1.00 64.57 B
ATOM 8217 O GLY B 409 -11.693 -45.701 -78.488 1.00 66.33 B
ATOM 8218 N ALA B 410 -9.676 -46.689 -78.350 1.00 65.87 B
ATOM 8219 CA ALA B 410 -8.811 -45.516 -78.406 1.00 66.73 B
ATOM 8220 CB ALA B 410 -9.148 -44.667 -79.621 1.00 66.14 B
ATOM 8221 C ALA B 410 -8.921 -44.689 -77.129 1.00 66.79 B
ATOM 8222 O ALA B 410 -8.393 -43.580 -77.049 1.00 67.27 B
ATOM 8223 N LEU B 411 -9.610 -45.236 -76.133 1.00 67.24 B
ATOM 8224 CA LEU B 411 -9.194 -45.090 -74.742 1.00 67.94 B

ATOM 8225 CB LEU B 411 -10.087 -44.068 -74.035 1.00 67.15 B
ATOM 8226 CG LEU B 411 -9.580 -42.628 -73.935 1.00 66.58 B
ATOM 8227 CD1 LEU B 411 -10.102 -41.970 -72.667 1.00 66.28 B
ATOM 8228 CD2 LEU B 411 -8.062 -42.587 -73.981 1.00 65.89 B
ATOM 8229 C LEU B 411 -9.324 -46.437 -74.042 1.00 68.71 B
ATOM 8230 O LEU B 411 -10.393 -47.048 -74.068 1.00 69.14 B
ATOM 8231 N ALA B 412 -8.249 -46.905 -73.414 1.00 68.64 B
ATOM 8232 CA ALA B 412 -8.349 -48.126 -72.649 1.00 68.61 B
ATOM 8233 CB ALA B 412 -7.290 -49.075 -73.042 1.00 67.36 B
ATOM 8234 C ALA B 412 -8.272 -47.858 -71.187 1.00 69.11 B
ATOM 8235 O ALA B 412 -8.622 -48.705 -70.398 1.00 69.97 B
ATOM 8236 N ALA B 413 -7.754 -46.677 -70.857 1.00 68.76 B
ATOM 8237 CA ALA B 413 -7.698 -46.082 -69.524 1.00 67.38 B
ATOM 8238 CB ALA B 413 -6.258 -45.660 -69.218 1.00 66.70 B
ATOM 8239 C ALA B 413 -8.643 -44.896 -69.288 1.00 66.59 B
ATOM 8240 O ALA B 413 -8.304 -43.757 -69.606 1.00 67.28 B
ATOM 8241 N VAL B 414 -9.823 -45.172 -68.729 1.00 65.48 B
ATOM 8242 CA VAL B 414 -10.807 -44.112 -68.403 1.00 64.80 B
ATOM 8243 CB VAL B 414 -12.281 -44.640 -68.415 1.00 64.22 B
ATOM 8244 CG1 VAL B 414 -13.222 -43.599 -69.034 1.00 62.37 B
ATOM 8245 CG2 VAL B 414 -12.357 -45.959 -69.140 1.00 63.93 B
ATOM 8246 C VAL B 414 -10.496 -43.646 -66.959 1.00 64.86 B
ATOM 8247 O VAL B 414 -10.886 -44.304 -65.986 1.00 64.66 B
ATOM 8248 N THR B 415 -9.800 -42.520 -66.841 1.00 64.32 B
ATOM 8249 CA THR B 415 -9.240 -42.095 -65.563 1.00 64.07 B
ATOM 8250 CB THR B 415 -8.439 -40.791 -65.733 1.00 63.36 B
ATOM 8251 OG1 THR B 415 -8.966 -40.043 -66.835 1.00 63.14 B
ATOM 8252 CG2 THR B 415 -7.013 -41.095 -66.167 1.00 62.11 B
ATOM 8253 C THR B 415 -10.334 -41.906 -64.517 1.00 64.21 B
ATOM 8254 O THR B 415 -10.311 -42.537 -63.461 1.00 65.14 B
ATOM 8255 N ASP B 416 -11.223 -40.998 -64.847 1.00 63.16 B
ATOM 8256 CA ASP B 416 -12.151 -40.480 -63.904 1.00 63.11 B
ATOM 8257 CB ASP B 416 -13.040 -41.589 -63.439 1.00 65.27 B
ATOM 8258 CG ASP B 416 -14.316 -41.110 -62.841 1.00 67.45 B

ATOM 8259 OD1 ASP B 416 -14.241 -40.601 -61.718 1.00 68.93 B
ATOM 8260 OD2 ASP B 416 -15.441 -41.228 -63.381 1.00 67.80 B
ATOM 8261 C ASP B 416 -11.473 -39.740 -62.774 1.00 61.63 B
ATOM 8262 O ASP B 416 -11.662 -40.055 -61.618 1.00 60.43 B
ATOM 8263 N ASP B 417 -10.720 -38.694 -63.153 1.00 60.27 B
ATOM 8264 CA ASP B 417 -9.953 -37.866 -62.230 1.00 57.78 B
ATOM 8265 CB ASP B 417 -8.592 -37.512 -62.833 1.00 58.92 B
ATOM 8266 CG ASP B 417 -7.524 -37.303 -61.777 1.00 61.40 B
ATOM 8267 OD1 ASP B 417 -7.883 -37.020 -60.615 1.00 63.58 B
ATOM 8268 OD2 ASP B 417 -6.303 -37.402 -62.016 1.00 63.21 B
ATOM 8269 C ASP B 417 -10.713 -36.594 -61.870 1.00 55.92 B
ATOM 8270 O ASP B 417 -11.852 -36.398 -62.295 1.00 55.91 B
ATOM 8271 N THR B 418 -10.076 -35.732 -61.084 1.00 53.72 B
ATOM 8272 CA THR B 418 -10.387 -34.292 -61.103 1.00 51.67 B
ATOM 8273 CB THR B 418 -10.082 -33.592 -59.757 1.00 51.43 B
ATOM 8274 OG1 THR B 418 -11.235 -33.652 -58.916 1.00 52.17 B
ATOM 8275 CG2 THR B 418 -9.713 -32.117 -59.981 1.00 50.49 B
ATOM 8276 C THR B 418 -9.606 -33.539 -62.159 1.00 50.69 B
ATOM 8277 O THR B 418 -10.177 -32.833 -62.986 1.00 49.81 B
ATOM 8278 N GLU B 419 -8.289 -33.675 -62.099 1.00 49.56 B
ATOM 8279 CA GLU B 419 -7.419 -32.996 -63.037 1.00 47.45 B
ATOM 8280 CB GLU B 419 -5.957 -33.303 -62.715 1.00 47.42 B
ATOM 8281 CG GLU B 419 -5.608 -33.106 -61.252 1.00 49.07 B
ATOM 8282 CD GLU B 419 -4.125 -32.869 -61.030 1.00 49.88 B
ATOM 8283 OE1 GLU B 419 -3.310 -33.424 -61.807 1.00 49.70 B
ATOM 8284 OE2 GLU B 419 -3.776 -32.139 -60.072 1.00 50.33 B
ATOM 8285 C GLU B 419 -7.728 -33.386 -64.469 1.00 45.96 B
ATOM 8286 O GLU B 419 -7.815 -32.523 -65.336 1.00 45.85 B
ATOM 8287 N SER B 420 -7.912 -34.680 -64.718 1.00 44.39 B
ATOM 8288 CA SER B 420 -8.190 -35.149 -66.071 1.00 42.54 B
ATOM 8289 CB SER B 420 -8.109 -36.669 -66.145 1.00 43.58 B
ATOM 8290 OG SER B 420 -9.167 -37.253 -65.417 1.00 48.67 B
ATOM 8291 C SER B 420 -9.540 -34.687 -66.594 1.00 40.79 B
ATOM 8292 O SER B 420 -9.792 -34.762 -67.791 1.00 41.97 B

ATOM 8293 N ASP B 421 -10.408 -34.213 -65.708 1.00 39.02 B
ATOM 8294 CA ASP B 421 -11.716 -33.720 -66.125 1.00 37.98 B
ATOM 8295 CB ASP B 421 -12.710 -33.800 -64.964 1.00 38.69 B
ATOM 8296 CG ASP B 421 -14.167 -33.683 -65.415 1.00 41.32 B
ATOM 8297 OD1 ASP B 421 -15.049 -33.502 -64.551 1.00 43.38 B
ATOM 8298 OD2 ASP B 421 -14.452 -33.784 -66.625 1.00 42.79 B
ATOM 8299 C ASP B 421 -11.529 -32.263 -66.572 1.00 37.76 B
ATOM 8300 O ASP B 421 -12.221 -31.769 -67.467 1.00 38.65 B
ATOM 8301 N ILE B 422 -10.583 -31.574 -65.940 1.00 36.46 B
ATOM 8302 CA ILE B 422 -10.283 -30.188 -66.291 1.00 34.58 B
ATOM 8303 CB ILE B 422 -9.232 -29.571 -65.330 1.00 34.16 B
ATOM 8304 CG2 ILE B 422 -8.661 -28.285 -65.923 1.00 33.96 B
ATOM 8305 CG1 ILE B 422 -9.858 -29.324 -63.954 1.00 33.00 B
ATOM 8306 CD1 ILE B 422 -11.071 -28.428 -63.973 1.00 30.76 B
ATOM 8307 C ILE B 422 -9.704 -30.195 -67.692 1.00 34.16 B
ATOM 8308 O ILE B 422 -10.070 -29.386 -68.534 1.00 34.58 B
ATOM 8309 N ASN B 423 -8.781 -31.116 -67.924 1.00 33.67 B
ATOM 8310 CA ASN B 423 -8.158 -31.242 -69.221 1.00 32.66 B
ATOM 8311 CB ASN B 423 -7.240 -32.467 -69.255 1.00 31.86 B
ATOM 8312 CG ASN B 423 -5.892 -32.205 -68.611 1.00 32.53 B
ATOM 8313 OD1 ASN B 423 -5.386 -31.089 -68.642 1.00 33.82 B
ATOM 8314 ND2 ASN B 423 -5.293 -33.243 -68.045 1.00 33.82 B
ATOM 8315 C ASN B 423 -9.242 -31.379 -70.277 1.00 32.53 B
ATOM 8316 O ASN B 423 -9.310 -30.590 -71.218 1.00 32.44 B
ATOM 8317 N TYR B 424 -10.095 -32.382 -70.110 1.00 32.47 B
ATOM 8318 CA TYR B 424 -11.164 -32.624 -71.061 1.00 32.77 B
ATOM 8319 CB TYR B 424 -12.157 -33.642 -70.510 1.00 32.96 B
ATOM 8320 CG TYR B 424 -13.330 -33.897 -71.429 1.00 33.46 B
ATOM 8321 CD1 TYR B 424 -13.153 -34.499 -72.672 1.00 34.65 B
ATOM 8322 CE1 TYR B 424 -14.232 -34.728 -73.526 1.00 35.49 B
ATOM 8323 CD2 TYR B 424 -14.617 -33.528 -71.058 1.00 34.70 B
ATOM 8324 CE2 TYR B 424 -15.704 -33.748 -71.901 1.00 36.24 B
ATOM 8325 CZ TYR B 424 -15.507 -34.348 -73.135 1.00 36.09 B
ATOM 8326 OH TYR B 424 -16.589 -34.546 -73.966 1.00 35.40 B

ATOM 8327 C TYR B 424 -11.893 -31.338 -71.371 1.00 32.58 B
ATOM 8328 O TYR B 424 -11.936 -30.891 -72.520 1.00 33.00 B
ATOM 8329 N LEU B 425 -12.456 -30.733 -70.336 1.00 32.47 B
ATOM 8330 CA LEU B 425 -13.203 -29.498 -70.509 1.00 32.64 B
ATOM 8331 CB LEU B 425 -13.710 -28.994 -69.154 1.00 31.77 B
ATOM 8332 CG LEU B 425 -14.831 -29.840 -68.553 1.00 30.52 B
ATOM 8333 CD1 LEU B 425 -15.266 -29.259 -67.221 1.00 31.46 B
ATOM 8334 CD2 LEU B 425 -16.002 -29.872 -69.521 1.00 30.78 B
ATOM 8335 C LEU B 425 -12.431 -28.401 -71.226 1.00 31.96 B
ATOM 8336 O LEU B 425 -12.978 -27.748 -72.109 1.00 31.59 B
ATOM 8337 N LEU B 426 -11.170 -28.187 -70.862 1.00 31.68 B
ATOM 8338 CA LEU B 426 -10.407 -27.152 -71.531 1.00 32.06 B
ATOM 8339 CB LEU B 426 -8.968 -27.064 -71.027 1.00 30.38 B
ATOM 8340 CG LEU B 426 -8.247 -25.960 -71.814 1.00 29.35 B
ATOM 8341 CD1 LEU B 426 -8.751 -24.610 -71.335 1.00 27.74 B
ATOM 8342 CD2 LEU B 426 -6.747 -26.052 -71.651 1.00 29.88 B
ATOM 8343 C LEU B 426 -10.383 -27.460 -73.017 1.00 33.75 B
ATOM 8344 O LEU B 426 -10.684 -26.583 -73.830 1.00 34.44 B
ATOM 8345 N LYS B 427 -10.127 -28.686 -73.391 1.00 34.34 B
ATOM 8346 CA LYS B 427 -10.115 -29.058 -74.769 1.00 34.20 B
ATOM 8347 CB LYS B 427 -9.816 -30.473 -74.924 1.00 34.34 B
ATOM 8348 CG LYS B 427 -9.218 -30.728 -76.210 1.00 37.42 B
ATOM 8349 CD LYS B 427 -8.912 -32.168 -76.420 1.00 40.30 B
ATOM 8350 CE LYS B 427 -9.720 -32.708 -77.537 1.00 41.48 B
ATOM 8351 NZ LYS B 427 -11.008 -33.369 -77.151 1.00 41.39 B
ATOM 8352 C LYS B 427 -11.363 -28.808 -75.426 1.00 34.07 B
ATOM 8353 O LYS B 427 -11.419 -28.328 -76.461 1.00 34.86 B
ATOM 8354 N MET B 428 -12.414 -29.143 -74.802 1.00 33.18 B
ATOM 8355 CA MET B 428 -13.721 -28.813 -75.353 1.00 33.12 B
ATOM 8356 CB MET B 428 -14.859 -29.351 -74.472 1.00 34.54 B
ATOM 8357 CG MET B 428 -15.100 -30.856 -74.554 1.00 36.71 B
ATOM 8358 SD MET B 428 -15.382 -31.481 -76.241 1.00 37.67 B
ATOM 8359 CE MET B 428 -17.028 -30.824 -76.575 1.00 35.75 B
ATOM 8360 C MET B 428 -13.836 -27.295 -75.451 1.00 32.29 B

ATOM 8361 O MET B 428 -14.429 -26.774 -76.388 1.00 33.05 B
ATOM 8362 N ALA B 429 -13.266 -26.588 -74.479 1.00 30.73 B
ATOM 8363 CA ALA B 429 -13.321 -25.131 -74.460 1.00 28.78 B
ATOM 8364 CB ALA B 429 -12.683 -24.603 -73.186 1.00 26.58 B
ATOM 8365 C ALA B 429 -12.599 -24.573 -75.680 1.00 28.67 B
ATOM 8366 O ALA B 429 -13.104 -23.676 -76.364 1.00 27.48 B
ATOM 8367 N LEU B 430 -11.418 -25.130 -75.937 1.00 28.44 B
ATOM 8368 CA LEU B 430 -10.571 -24.730 -77.047 1.00 28.94 B
ATOM 8369 CB LEU B 430 -9.262 -25.513 -77.023 1.00 26.51 B
ATOM 8370 CG LEU B 430 -8.217 -25.243 -75.948 1.00 24.70 B
ATOM 8371 CD1 LEU B 430 -6.987 -26.068 -76.265 1.00 22.69 B
ATOM 8372 CD2 LEU B 430 -7.860 -23.772 -75.917 1.00 24.52 B
ATOM 8373 C LEU B 430 -11.231 -24.960 -78.396 1.00 30.73 B
ATOM 8374 O LEU B 430 -10.827 -24.384 -79.404 1.00 31.10 B
ATOM 8375 N GLU B 431 -12.341 -25.621 -78.441 1.00 31.98 B
ATOM 8376 CA GLU B 431 -12.928 -25.928 -79.690 1.00 33.80 B
ATOM 8377 CB GLU B 431 -13.025 -27.405 -79.776 1.00 36.38 B
ATOM 8378 CG GLU B 431 -13.932 -27.995 -80.780 1.00 41.31 B
ATOM 8379 CD GLU B 431 -14.103 -29.438 -80.529 1.00 45.44 B
ATOM 8380 OE1 GLU B 431 -13.268 -30.011 -79.819 1.00 46.77 B
ATOM 8381 OE2 GLU B 431 -15.071 -29.984 -81.029 1.00 46.06 B
ATOM 8382 C GLU B 431 -14.248 -25.357 -79.748 1.00 33.95 B
ATOM 8383 O GLU B 431 -14.649 -24.884 -80.750 1.00 34.32 B
ATOM 8384 N LYS B 432 -14.955 -25.375 -78.637 1.00 34.39 B
ATOM 8385 CA LYS B 432 -16.256 -24.733 -78.577 1.00 33.67 B
ATOM 8386 CB LYS B 432 -17.161 -25.522 -77.630 1.00 33.70 B
ATOM 8387 CG LYS B 432 -17.309 -26.995 -78.007 1.00 33.41 B
ATOM 8388 CD LYS B 432 -18.036 -27.166 -79.322 1.00 33.36 B
ATOM 8389 CE LYS B 432 -18.136 -28.627 -79.687 1.00 32.93 B
ATOM 8390 NZ LYS B 432 -18.934 -28.805 -80.919 1.00 32.25 B
ATOM 8391 C LYS B 432 -16.242 -23.256 -78.180 1.00 32.87 B
ATOM 8392 O LYS B 432 -16.693 -22.401 -78.945 1.00 33.01 B
ATOM 8393 N ILE B 433 -15.717 -22.946 -77.001 1.00 31.30 B
ATOM 8394 CA ILE B 433 -15.724 -21.562 -76.563 1.00 30.51 B

ATOM 8395 CB ILE B 433 -15.300 -21.463 -75.083 1.00 30.83 B
ATOM 8396 CG2 ILE B 433 -15.023 -20.012 -74.689 1.00 31.63 B
ATOM 8397 CG1 ILE B 433 -16.430 -22.003 -74.207 1.00 28.93 B
ATOM 8398 CD1 ILE B 433 -16.029 -22.195 -72.780 1.00 29.82 B
ATOM 8399 C ILE B 433 -14.907 -20.623 -77.442 1.00 30.13 B
ATOM 8400 O ILE B 433 -15.382 -19.542 -77.783 1.00 31.81 B
ATOM 8401 N ALA B 434 -13.700 -21.019 -77.831 1.00 28.91 B
ATOM 8402 CA ALA B 434 -12.873 -20.161 -78.694 1.00 27.84 B
ATOM 8403 CB ALA B 434 -11.589 -20.907 -79.114 1.00 27.03 B
ATOM 8404 C ALA B 434 -13.609 -19.657 -79.951 1.00 26.74 B
ATOM 8405 O ALA B 434 -13.344 -18.550 -80.442 1.00 25.87 B
ATOM 8406 N PHE B 435 -14.537 -20.424 -80.476 1.00 26.07 B
ATOM 8407 CA PHE B 435 -15.224 -20.110 -81.707 1.00 26.73 B
ATOM 8408 CB PHE B 435 -16.100 -21.245 -82.124 1.00 26.38 B
ATOM 8409 CG PHE B 435 -16.776 -21.093 -83.488 1.00 25.49 B
ATOM 8410 CD1 PHE B 435 -16.206 -21.486 -84.582 1.00 23.32 B
ATOM 8411 CD2 PHE B 435 -18.014 -20.620 -83.608 1.00 25.92 B
ATOM 8412 CE1 PHE B 435 -16.805 -21.348 -85.657 1.00 24.18 B
ATOM 8413 CE2 PHE B 435 -18.557 -20.518 -84.724 1.00 25.71 B
ATOM 8414 CZ PHE B 435 -17.966 -20.864 -85.721 1.00 24.43 B
ATOM 8415 C PHE B 435 -16.059 -18.952 -81.652 1.00 27.35 B
ATOM 8416 O PHE B 435 -16.147 -18.286 -82.578 1.00 29.21 B
ATOM 8417 N LEU B 436 -16.709 -18.691 -80.569 1.00 26.16 B
ATOM 8418 CA LEU B 436 -17.946 -18.021 -80.590 1.00 26.66 B
ATOM 8419 CB LEU B 436 -18.569 -18.078 -79.236 1.00 26.56 B
ATOM 8420 CG LEU B 436 -18.902 -19.184 -78.302 1.00 27.76 B
ATOM 8421 CD1 LEU B 436 -18.732 -18.628 -77.040 1.00 27.07 B
ATOM 8422 CD2 LEU B 436 -20.272 -19.488 -78.399 1.00 27.64 B
ATOM 8423 C LEU B 436 -17.880 -16.605 -80.966 1.00 27.59 B
ATOM 8424 O LEU B 436 -18.763 -16.083 -81.567 1.00 26.27 B
ATOM 8425 N PRO B 437 -16.833 -15.947 -80.558 1.00 28.11 B
ATOM 8426 CD PRO B 437 -15.933 -16.212 -79.474 1.00 27.69 B
ATOM 8427 CA PRO B 437 -16.500 -14.654 -81.046 1.00 26.76 B
ATOM 8428 CB PRO B 437 -15.192 -14.427 -80.346 1.00 26.35 B

ATOM 8429 CG PRO B 437 -14.854 -15.477 -79.956 1.00 27.04 B
ATOM 8430 C PRO B 437 -16.378 -14.554 -82.509 1.00 25.69 B
ATOM 8431 O PRO B 437 -16.911 -13.678 -83.034 1.00 25.12 B
ATOM 8432 N PHE B 438 -15.673 -15.451 -83.126 1.00 24.48 B
ATOM 8433 CA PHE B 438 -15.571 -15.519 -84.591 1.00 24.62 B
ATOM 8434 CB PHE B 438 -14.496 -16.516 -85.023 1.00 24.68 B
ATOM 8435 CG PHE B 438 -14.337 -16.616 -86.521 1.00 25.78 B
ATOM 8436 CD1 PHE B 438 -13.934 -15.505 -87.269 1.00 26.23 B
ATOM 8437 CD2 PHE B 438 -14.594 -17.816 -87.186 1.00 25.79 B
ATOM 8438 CE1 PHE B 438 -13.785 -15.592 -88.667 1.00 26.18 B
ATOM 8439 CE2 PHE B 438 -14.452 -17.913 -88.584 1.00 25.77 B
ATOM 8440 CZ PHE B 438 -14.046 -16.798 -89.323 1.00 24.77 B
ATOM 8441 C PHE B 438 -16.865 -15.884 -85.319 1.00 24.39 B
ATOM 8442 O PHE B 438 -17.140 -15.369 -86.400 1.00 24.68 B
ATOM 8443 N GLY B 439 -17.641 -16.792 -84.743 1.00 23.17 B
ATOM 8444 CA GLY B 439 -18.885 -17.181 -85.374 1.00 23.61 B
ATOM 8445 C GLY B 439 -19.987 -16.139 -85.245 1.00 24.40 B
ATOM 8446 O GLY B 439 -21.056 -16.274 -85.845 1.00 26.18 B
ATOM 8447 N TYR B 440 -19.728 -15.100 -84.455 1.00 24.10 B
ATOM 8448 CA TYR B 440 -20.686 -14.019 -84.225 1.00 23.13 B
ATOM 8449 CB TYR B 440 -20.726 -13.688 -82.729 1.00 21.22 B
ATOM 8450 CG TYR B 440 -21.550 -12.480 -82.370 1.00 17.73 B
ATOM 8451 CD1 TYR B 440 -22.935 -12.562 -82.277 1.00 19.43 B
ATOM 8452 CE1 TYR B 440 -23.699 -11.449 -81.942 1.00 18.91 B
ATOM 8453 CD2 TYR B 440 -20.943 -11.253 -82.121 1.00 15.53 B
ATOM 8454 CE2 TYR B 440 -21.693 -10.135 -81.788 1.00 16.21 B
ATOM 8455 CZ TYR B 440 -23.070 -10.238 -81.702 1.00 18.05 B
ATOM 8456 OH TYR B 440 -23.831 -9.131 -81.401 1.00 20.17 B
ATOM 8457 C TYR B 440 -20.209 -12.797 -85.000 1.00 23.84 B
ATOM 8458 O TYR B 440 -20.986 -11.940 -85.418 1.00 25.03 B
ATOM 8459 N LEU B 441 -18.903 -12.745 -85.174 1.00 23.39 B
ATOM 8460 CA LEU B 441 -18.217 -11.670 -85.853 1.00 22.80 B
ATOM 8461 CB LEU B 441 -16.741 -11.818 -85.484 1.00 20.85 B
ATOM 8462 CG LEU B 441 -15.470 -11.530 -86.266 1.00 21.52 B

ATOM 8463 CD1 LEU B 441 -14.325 -12.121 -85.415 1.00 21.36 B
ATOM 8464 CD2 LEU B 441 -15.475 -12.151 -87.655 1.00 20.32 B
ATOM 8465 C LEU B 441 -18.462 -11.670 -87.364 1.00 23.57 B
ATOM 8466 O LEU B 441 -18.984 -10.694 -87.916 1.00 23.79 B
ATOM 8467 N VAL B 442 -18.130 -12.783 -88.015 1.00 23.68 B
ATOM 8468 CA VAL B 442 -18.274 -12.936 -89.465 1.00 23.91 B
ATOM 8469 CB VAL B 442 -18.218 -14.421 -89.882 1.00 21.83 B
ATOM 8470 CG1 VAL B 442 -18.404 -14.539 -91.383 1.00 19.80 B
ATOM 8471 CG2 VAL B 442 -16.897 -15.027 -89.479 1.00 19.93 B
ATOM 8472 C VAL B 442 -19.509 -12.332 -90.142 1.00 25.41 B
ATOM 8473 O VAL B 442 -19.392 -11.459 -91.012 1.00 25.68 B
ATOM 8474 N ASP B 443 -20.689 -12.798 -89.759 1.00 26.27 B
ATOM 8475 CA ASP B 443 -21.885 -12.293 -90.399 1.00 28.03 B
ATOM 8476 CB ASP B 443 -23.056 -13.231 -90.164 1.00 27.15 B
ATOM 8477 CG ASP B 443 -23.372 -14.061 -91.390 1.00 25.03 B
ATOM 8478 OD1 ASP B 443 -22.415 -14.441 -92.107 1.00 20.25 B
ATOM 8479 OD2 ASP B 443 -24.574 -14.327 -91.624 1.00 25.74 B
ATOM 8480 C ASP B 443 -22.292 -10.869 -90.093 1.00 29.99 B
ATOM 8481 O ASP B 443 -23.096 -10.292 -90.828 1.00 32.16 B
ATOM 8482 N GLN B 444 -21.777 -10.268 -89.031 1.00 31.06 B
ATOM 8483 CA GLN B 444 -22.184 -8.895 -88.848 1.00 32.30 B
ATOM 8484 CB GLN B 444 -22.254 -8.482 -87.381 1.00 35.51 B
ATOM 8485 CG GLN B 444 -21.193 -8.955 -86.445 1.00 38.94 B
ATOM 8486 CD GLN B 444 -21.491 -8.428 -85.049 1.00 42.08 B
ATOM 8487 OE1 GLN B 444 -20.770 -8.701 -84.088 1.00 45.76 B
ATOM 8488 NE2 GLN B 444 -22.567 -7.649 -84.939 1.00 42.37 B
ATOM 8489 C GLN B 444 -21.247 -8.027 -89.655 1.00 30.60 B
ATOM 8490 O GLN B 444 -21.441 -6.820 -89.790 1.00 29.99 B
ATOM 8491 N TRP B 445 -20.228 -8.672 -90.209 1.00 29.52 B
ATOM 8492 CA TRP B 445 -19.300 -7.977 -91.075 1.00 28.72 B
ATOM 8493 CB TRP B 445 -18.021 -8.792 -91.323 1.00 28.06 B
ATOM 8494 CG TRP B 445 -17.113 -8.169 -92.378 1.00 25.40 B
ATOM 8495 CD2 TRP B 445 -17.012 -8.552 -93.757 1.00 23.83 B
ATOM 8496 CE2 TRP B 445 -16.129 -7.645 -94.382 1.00 22.26 B

ATOM 8497 CE3 TRP B 445 -17.587 -9.570 -94.526 1.00 22.71 B
ATOM 8498 CD1 TRP B 445 -16.300 -7.075 -92.229 1.00 23.90 B
ATOM 8499 NE1 TRP B 445 -15.710 -6.754 -93.429 1.00 22.47 B
ATOM 8500 CZ2 TRP B 445 -15.807 -7.729 -95.736 1.00 21.86 B
ATOM 8501 CZ3 TRP B 445 -17.269 -9.652 -95.872 1.00 22.16 B
ATOM 8502 CH2 TRP B 445 -16.385 -8.736 -96.463 1.00 22.16 B
ATOM 8503 C TRP B 445 -20.101 -7.902 -92.368 1.00 28.46 B
ATOM 8504 O TRP B 445 -20.326 -6.807 -92.903 1.00 30.49 B
ATOM 8505 N ARG B 446 -20.557 -9.066 -92.841 1.00 25.27 B
ATOM 8506 CA ARG B 446 -21.321 -9.144 -94.084 1.00 24.20 B
ATOM 8507 CB ARG B 446 -21.588 -10.600 -94.484 1.00 24.70 B
ATOM 8508 CG ARG B 446 -20.389 -11.284 -95.134 1.00 25.19 B
ATOM 8509 CD ARG B 446 -20.743 -12.588 -95.832 1.00 23.67 B
ATOM 8510 NE ARG B 446 -21.308 -13.572 -94.920 1.00 23.27 B
ATOM 8511 CZ ARG B 446 -21.157 -14.884 -95.057 1.00 23.25 B
ATOM 8512 NH1 ARG B 446 -20.453 -15.375 -96.066 1.00 24.27 B
ATOM 8513 NH2 ARG B 446 -21.709 -15.707 -94.182 1.00 24.50 B
ATOM 8514 C ARG B 446 -22.632 -8.376 -94.113 1.00 23.65 B
ATOM 8515 O ARG B 446 -23.069 -7.946 -95.179 1.00 23.61 B
ATOM 8516 N TRP B 447 -23.279 -8.206 -92.967 1.00 23.36 B
ATOM 8517 CA TRP B 447 -24.524 -7.455 -92.979 1.00 23.46 B
ATOM 8518 CB TRP B 447 -25.261 -7.569 -91.633 1.00 26.04 B
ATOM 8519 CG TRP B 447 -25.692 -8.947 -91.276 1.00 29.13 B
ATOM 8520 CD2 TRP B 447 -26.036 -9.424 -89.970 1.00 31.29 B
ATOM 8521 CE2 TRP B 447 -26.369 -10.800 -90.099 1.00 32.36 B
ATOM 8522 CE3 TRP B 447 -26.096 -8.828 -88.703 1.00 31.85 B
ATOM 8523 CD1 TRP B 447 -25.830 -10.014 -92.120 1.00 30.54 B
ATOM 8524 NE1 TRP B 447 -26.236 -11.136 -91.420 1.00 32.00 B
ATOM 8525 CZ2 TRP B 447 -26.750 -11.585 -89.013 1.00 33.66 B
ATOM 8526 CZ3 TRP B 447 -26.476 -9.603 -87.618 1.00 32.67 B
ATOM 8527 CH2 TRP B 447 -26.799 -10.972 -87.779 1.00 35.35 B
ATOM 8528 C TRP B 447 -24.162 -6.006 -93.246 1.00 21.05 B
ATOM 8529 O TRP B 447 -24.925 -5.261 -93.836 1.00 18.57 B
ATOM 8530 N GLY B 448 -22.974 -5.623 -92.801 1.00 20.70 B

ATOM 8531 CA GLY B 448 -22.521 -4.261 -92.980 1.00 21.65 B
ATOM 8532 C GLY B 448 -22.168 -3.979 -94.421 1.00 22.15 B
ATOM 8533 O GLY B 448 -22.321 -2.843 -94.903 1.00 21.52 B
ATOM 8534 N VAL B 449 -21.674 -5.015 -95.099 1.00 21.84 B
ATOM 8535 CA VAL B 449 -21.312 -4.918 -96.507 1.00 19.92 B
ATOM 8536 CB VAL B 449 -20.458 -6.115 -96.940 1.00 20.08 B
ATOM 8537 CG1 VAL B 449 -20.309 -6.130 -98.439 1.00 22.16 B
ATOM 8538 CG2 VAL B 449 -19.088 -6.016 -96.297 1.00 20.38 B
ATOM 8539 C VAL B 449 -22.604 -4.871 -97.309 1.00 18.18 B
ATOM 8540 O VAL B 449 -22.807 -3.963 -98.098 1.00 17.89 B
ATOM 8541 N PHE B 450 -23.484 -5.834 -97.086 1.00 16.88 B
ATOM 8542 CA PHE B 450 -24.761 -5.862 -97.769 1.00 18.09 B
ATOM 8543 CB PHE B 450 -25.573 -7.076 -97.304 1.00 20.16 B
ATOM 8544 CG PHE B 450 -25.095 -8.387 -97.869 1.00 22.38 B
ATOM 8545 CD1 PHE B 450 -25.191 -9.557 -97.121 1.00 24.07 B
ATOM 8546 CD2 PHE B 450 -24.583 -8.463 -99.158 1.00 23.27 B
ATOM 8547 CE1 PHE B 450 -24.785 -10.789 -97.649 1.00 24.89 B
ATOM 8548 CE2 PHE B 450 -24.173 -9.689 -99.700 1.00 24.36 B
ATOM 8549 CZ PHE B 450 -24.278 -10.857 -98.940 1.00 25.26 B
ATOM 8550 C PHE B 450 -25.557 -4.575 -97.498 1.00 18.70 B
ATOM 8551 O PHE B 450 -26.367 -4.157 -98.324 1.00 17.84 B
ATOM 8552 N SER B 451 -25.319 -3.938 -96.352 1.00 19.43 B
ATOM 8553 CA SER B 451 -26.057 -2.718 -95.995 1.00 20.57 B
ATOM 8554 CB SER B 451 -26.245 -2.608 -94.472 1.00 21.82 B
ATOM 8555 OG SER B 451 -25.053 -2.215 -93.793 1.00 24.55 B
ATOM 8556 C SER B 451 -25.417 -1.435 -96.494 1.00 20.82 B
ATOM 8557 O SER B 451 -26.065 -0.388 -96.522 1.00 20.31 B
ATOM 8558 N GLY B 452 -24.143 -1.513 -96.865 1.00 21.44 B
ATOM 8559 CA GLY B 452 -23.445 -0.340 -97.360 1.00 23.20 B
ATOM 8560 C GLY B 452 -22.622 0.399 -96.326 1.00 24.32 B
ATOM 8561 O GLY B 452 -21.875 1.303 -96.665 1.00 23.91 B
ATOM 8562 N ARG B 453 -22.544 -0.108 -95.160 1.00 27.69 B
ATOM 8563 CA ARG B 453 -22.002 0.642 -94.125 1.00 30.64 B
ATOM 8564 CB ARG B 453 -22.665 0.115 -92.907 1.00 33.81 B

ATOM 8565 CG ARG B 453 -23.550 1.107 -92.281 1.00 42.43 B
ATOM 8566 CD ARG B 453 -24.988 0.774 -92.178 1.00 48.75 B
ATOM 8567 NE ARG B 453 -25.882 1.918 -92.403 1.00 55.12 B
ATOM 8568 CZ ARG B 453 -27.147 1.998 -91.985 1.00 57.28 B
ATOM 8569 NH1 ARG B 453 -27.694 1.023 -91.283 1.00 58.14 B
ATOM 8570 NH2 ARG B 453 -27.868 3.071 -92.256 1.00 58.44 B
ATOM 8571 C ARG B 453 -20.556 0.338 -94.122 1.00 30.53 B
ATOM 8572 O ARG B 453 -19.747 1.097 -93.657 1.00 30.17 B
ATOM 8573 N THR B 454 -20.243 -0.823 -94.666 1.00 29.17 B
ATOM 8574 CA THR B 454 -18.877 -1.253 -94.901 1.00 27.15 B
ATOM 8575 CB THR B 454 -18.543 -2.622 -94.256 1.00 27.92 B
ATOM 8576 OG1 THR B 454 -18.682 -2.545 -92.828 1.00 26.76 B
ATOM 8577 CG2 THR B 454 -17.106 -3.031 -94.613 1.00 26.81 B
ATOM 8578 C THR B 454 -18.783 -1.400 -96.415 1.00 25.34 B
ATOM 8579 O THR B 454 -19.153 -2.444 -96.970 1.00 26.30 B
ATOM 8580 N PRO B 455 -18.337 -0.333 -97.108 1.00 23.15 B
ATOM 8581 CD PRO B 455 -18.204 1.022 -96.541 1.00 22.07 B
ATOM 8582 CA PRO B 455 -18.176 -0.303 -98.569 1.00 22.07 B
ATOM 8583 CB PRO B 455 -18.157 1.195 -98.876 1.00 23.09 B
ATOM 8584 CG PRO B 455 -17.537 1.780 -97.652 1.00 22.15 B
ATOM 8585 C PRO B 455 -16.877 -1.010 -98.972 1.00 20.35 B
ATOM 8586 O PRO B 455 -16.135 -1.476 -98.121 1.00 20.93 B
ATOM 8587 N PRO B 456 -16.583 -1.116 -100.269 1.00 19.21 B
ATOM 8588 CD PRO B 456 -17.385 -1.047 -101.502 1.00 18.22 B
ATOM 8589 CA PRO B 456 -15.314 -1.815 -100.502 1.00 18.34 B
ATOM 8590 CB PRO B 456 -15.286 -1.979 -102.019 1.00 17.40 B
ATOM 8591 CG PRO B 456 -16.742 -2.109 -102.351 1.00 17.86 B
ATOM 8592 C PRO B 456 -14.102 -1.049 -99.971 1.00 17.22 B
ATOM 8593 O PRO B 456 -13.054 -1.628 -99.698 1.00 16.88 B
ATOM 8594 N SER B 457 -14.255 0.256 -99.800 1.00 16.23 B
ATOM 8595 CA SER B 457 -13.143 1.067 -99.335 1.00 16.87 B
ATOM 8596 CB SER B 457 -13.432 2.553 -99.584 1.00 17.26 B
ATOM 8597 OG SER B 457 -14.314 3.088 -98.620 1.00 17.14 B
ATOM 8598 C SER B 457 -12.751 0.851 -97.873 1.00 16.89 B

ATOM 8599 O SER B 457 -11.804 1.472 -97.387 1.00 16.07 B
ATOM 8600 N ARG B 458 -13.472 -0.034 -97.184 1.00 18.68 B
ATOM 8601 CA ARG B 458 -13.214 -0.349 -95.769 1.00 18.78 B
ATOM 8602 CB ARG B 458 -14.170 0.445 -94.860 1.00 18.27 B
ATOM 8603 CG ARG B 458 -13.701 1.852 -94.522 1.00 18.64 B
ATOM 8604 CD ARG B 458 -14.594 2.553 -93.488 1.00 19.11 B
ATOM 8605 NE ARG B 458 -15.447 3.564 -94.102 1.00 19.51 B
ATOM 8606 CZ ARG B 458 -16.775 3.510 -94.099 1.00 19.29 B
ATOM 8607 NH1 ARG B 458 -17.396 2.486 -93.499 1.00 19.58 B
ATOM 8608 NH2 ARG B 458 -17.477 4.451 -94.714 1.00 16.67 B
ATOM 8609 C ARG B 458 -13.361 -1.838 -95.453 1.00 17.98 B
ATOM 8610 O ARG B 458 -13.552 -2.211 -94.304 1.00 19.01 B
ATOM 8611 N TYR B 459 -13.263 -2.685 -96.471 1.00 17.73 B
ATOM 8612 CA TYR B 459 -13.426 -4.126 -96.285 1.00 17.73 B
ATOM 8613 CB TYR B 459 -13.215 -4.884 -97.613 1.00 15.83 B
ATOM 8614 CG TYR B 459 -14.449 -5.049 -98.489 1.00 15.35 B
ATOM 8615 CD1 TYR B 459 -14.413 -5.854 -99.632 1.00 14.78 B
ATOM 8616 CE1 TYR B 459 -15.534 -6.011 -100.452 1.00 11.68 B
ATOM 8617 CD2 TYR B 459 -15.648 -4.404 -98.189 1.00 15.38 B
ATOM 8618 CE2 TYR B 459 -16.766 -4.561 -98.998 1.00 14.73 B
ATOM 8619 CZ TYR B 459 -16.696 -5.367 -100.124 1.00 12.89 B
ATOM 8620 OH TYR B 459 -17.804 -5.534 -100.905 1.00 15.83 B
ATOM 8621 C TYR B 459 -12.528 -4.741 -95.214 1.00 19.51 B
ATOM 8622 O TYR B 459 -13.005 -5.482 -94.360 1.00 21.54 B
ATOM 8623 N ASN B 460 -11.235 -4.433 -95.261 1.00 20.41 B
ATOM 8624 CA ASN B 460 -10.272 -4.987 -94.316 1.00 20.66 B
ATOM 8625 CB ASN B 460 -8.890 -5.060 -94.972 1.00 21.56 B
ATOM 8626 CG ASN B 460 -8.292 -6.449 -94.906 1.00 23.55 B
ATOM 8627 OD1 ASN B 460 -8.959 -7.435 -95.232 1.00 24.47 B
ATOM 8628 ND2 ASN B 460 -7.030 -6.539 -94.485 1.00 24.05 B
ATOM 8629 C ASN B 460 -10.186 -4.190 -93.018 1.00 20.59 B
ATOM 8630 O ASN B 460 -9.805 -4.721 -91.969 1.00 20.60 B
ATOM 8631 N PHE B 461 -10.544 -2.914 -93.104 1.00 19.60 B
ATOM 8632 CA PHE B 461 -10.536 -2.012 -91.965 1.00 17.93 B

ATOM 8633 CB PHE B 461 -10.840 -0.601 -92.455 1.00 16.91 B
ATOM 8634 CG PHE B 461 -10.981 0.425 -91.365 1.00 15.14 B
ATOM 8635 CD1 PHE B 461 -9.934 0.688 -90.498 1.00 13.26 B
ATOM 8636 CD2 PHE B 461 -12.141 1.198 -91.274 1.00 13.51 B
ATOM 8637 CE1 PHE B 461 -10.040 1.711 -89.570 1.00 14.48 B
ATOM 8638 CE2 PHE B 461 -12.250 2.215 -90.352 1.00 12.09 B
ATOM 8639 CZ PHE B 461 -11.200 2.476 -89.499 1.00 12.70 B
ATOM 8640 C PHE B 461 -11.588 -2.467 -90.961 1.00 18.59 B
ATOM 8641 O PHE B 461 -11.287 -2.592 -89.773 1.00 21.01 B
ATOM 8642 N ASP B 462 -12.812 -2.726 -91.433 1.00 16.77 B
ATOM 8643 CA ASP B 462 -13.894 -3.168 -90.553 1.00 16.58 B
ATOM 8644 CB ASP B 462 -15.266 -2.859 -91.166 1.00 17.50 B
ATOM 8645 CG ASP B 462 -15.624 -1.389 -91.078 1.00 19.26 B
ATOM 8646 OD1 ASP B 462 -15.047 -0.714 -90.201 1.00 21.52 B
ATOM 8647 OD2 ASP B 462 -16.477 -0.905 -91.856 1.00 19.22 B
ATOM 8648 C ASP B 462 -13.820 -4.651 -90.194 1.00 16.12 B
ATOM 8649 O ASP B 462 -14.519 -5.104 -89.286 1.00 16.54 B
ATOM 8650 N TRP B 463 -12.982 -5.400 -90.908 1.00 15.01 B
ATOM 8651 CA TRP B 463 -12.807 -6.818 -90.643 1.00 14.27 B
ATOM 8652 CB TRP B 463 -12.048 -7.491 -91.797 1.00 11.57 B
ATOM 8653 CG TRP B 463 -11.729 -8.982 -91.640 1.00 10.09 B
ATOM 8654 CD2 TRP B 463 -12.665 -10.076 -91.544 1.00 10.60 B
ATOM 8655 CE2 TRP B 463 -11.905 -11.277 -91.476 1.00 10.60 B
ATOM 8656 CE3 TRP B 463 -14.067 -10.161 -91.511 1.00 9.32 B
ATOM 8657 CD1 TRP B 463 -10.477 -9.556 -91.623 1.00 9.82 B
ATOM 8658 NE1 TRP B 463 -10.579 -10.933 -91.525 1.00 11.70 B
ATOM 8659 CZ2 TRP B 463 -12.503 -12.533 -91.375 1.00 9.15 B
ATOM 8660 CZ3 TRP B 463 -14.655 -11.415 -91.414 1.00 8.60 B
ATOM 8661 CH2 TRP B 463 -13.873 -12.581 -91.347 1.00 9.28 B
ATOM 8662 C TRP B 463 -11.989 -6.855 -89.370 1.00 16.24 B
ATOM 8663 O TRP B 463 -12.422 -7.397 -88.364 1.00 17.20 B
ATOM 8664 N TRP B 464 -10.813 -6.244 -89.399 1.00 18.19 B
ATOM 8665 CA TRP B 464 -9.966 -6.242 -88.220 1.00 19.18 B
ATOM 8666 CB TRP B 464 -8.548 -5.803 -88.599 1.00 19.70 B

ATOM 8667 CG TRP B 464 -7.912 -6.801 -89.531 1.00 23.27 B
ATOM 8668 CD2 TRP B 464 -7.404 -8.096 -89.175 1.00 25.14 B
ATOM 8669 CE2 TRP B 464 -7.081 -8.763 -90.374 1.00 25.16 B
ATOM 8670 CE3 TRP B 464 -7.203 -8.759 -87.957 1.00 27.31 B
ATOM 8671 CD1 TRP B 464 -7.861 -6.740 -90.899 1.00 24.34 B
ATOM 8672 NE1 TRP B 464 -7.367 -7.915 -91.410 1.00 24.93 B
ATOM 8673 CZ2 TRP B 464 -6.570 -10.058 -90.392 1.00 27.42 B
ATOM 8674 CZ3 TRP B 464 -6.695 -10.052 -87.975 1.00 28.30 B
ATOM 8675 CH2 TRP B 464 -6.384 -10.686 -89.187 1.00 28.31 B
ATOM 8676 C TRP B 464 -10.548 -5.441 -87.034 1.00 19.89 B
ATOM 8677 O TRP B 464 -10.185 -5.685 -85.881 1.00 21.25 B
ATOM 8678 N TYR B 465 -11.444 -4.488 -87.286 1.00 18.77 B
ATOM 8679 CA TYR B 465 -12.057 -3.805 -86.152 1.00 18.09 B
ATOM 8680 CB TYR B 465 -13.080 -2.744 -86.584 1.00 16.18 B
ATOM 8681 CG TYR B 465 -14.029 -2.321 -85.460 1.00 16.12 B
ATOM 8682 CD1 TYR B 465 -13.693 -1.292 -84.567 1.00 16.61 B
ATOM 8683 CE1 TYR B 465 -14.546 -0.937 -83.508 1.00 14.45 B
ATOM 8684 CD2 TYR B 465 -15.247 -2.983 -85.259 1.00 15.92 B
ATOM 8685 CE2 TYR B 465 -16.098 -2.635 -84.204 1.00 14.13 B
ATOM 8686 CZ TYR B 465 -15.739 -1.613 -83.340 1.00 14.01 B
ATOM 8687 OH TYR B 465 -16.586 -1.266 -82.322 1.00 12.33 B
ATOM 8688 C TYR B 465 -12.805 -4.943 -85.436 1.00 18.34 B
ATOM 8689 O TYR B 465 -12.672 -5.161 -84.230 1.00 18.67 B
ATOM 8690 N LEU B 466 -13.581 -5.686 -86.210 1.00 17.92 B
ATOM 8691 CA LEU B 466 -14.360 -6.785 -85.669 1.00 18.25 B
ATOM 8692 CB LEU B 466 -15.338 -7.294 -86.727 1.00 17.46 B
ATOM 8693 CG LEU B 466 -16.423 -6.290 -87.105 1.00 19.89 B
ATOM 8694 CD1 LEU B 466 -17.222 -6.784 -88.305 1.00 22.61 B
ATOM 8695 CD2 LEU B 466 -17.337 -6.093 -85.913 1.00 21.23 B
ATOM 8696 C LEU B 466 -13.528 -7.940 -85.159 1.00 18.12 B
ATOM 8697 O LEU B 466 -13.878 -8.552 -84.168 1.00 18.28 B
ATOM 8698 N ARG B 467 -12.433 -8.246 -85.838 1.00 18.78 B
ATOM 8699 CA ARG B 467 -11.595 -9.365 -85.435 1.00 19.65 B
ATOM 8700 CB ARG B 467 -10.566 -9.681 -86.527 1.00 19.79 B

ATOM 8701 CG ARG B 467 -11.183 -10.310 -87.778 1.00 20.18 B
ATOM 8702 CD ARG B 467 -11.227 -11.844 -87.702 1.00 21.02 B
ATOM 8703 NE ARG B 467 -9.918 -12.422 -88.018 1.00 20.67 B
ATOM 8704 CZ ARG B 467 -9.657 -13.724 -88.058 1.00 19.84 B
ATOM 8705 NH1 ARG B 467 -8.440 -14.152 -88.362 1.00 20.15 B
ATOM 8706 NH2 ARG B 467 -10.605 -14.604 -87.790 1.00 20.14 B
ATOM 8707 C ARG B 467 -10.914 -9.038 -84.134 1.00 20.66 B
ATOM 8708 O ARG B 467 -10.849 -9.870 -83.226 1.00 22.31 B
ATOM 8709 N THR B 468 -10.410 -7.816 -84.028 1.00 20.06 B
ATOM 8710 CA THR B 468 -9.765 -7.396 -82.793 1.00 19.25 B
ATOM 8711 CB THR B 468 -8.920 -6.130 -83.003 1.00 18.97 B
ATOM 8712 OG1 THR B 468 -7.785 -6.455 -83.810 1.00 20.37 B
ATOM 8713 CG2 THR B 468 -8.431 -5.580 -81.678 1.00 20.20 B
ATOM 8714 C THR B 468 -10.839 -7.136 -81.734 1.00 18.66 B
ATOM 8715 O THR B 468 -10.659 -7.489 -80.573 1.00 19.72 B
ATOM 8716 N LYS B 469 -11.959 -6.542 -82.135 1.00 17.16 B
ATOM 8717 CA LYS B 469 -13.027 -6.275 -81.192 1.00 16.25 B
ATOM 8718 CB LYS B 469 -14.200 -5.574 -81.856 1.00 17.67 B
ATOM 8719 CG LYS B 469 -15.408 -5.480 -80.934 1.00 17.48 B
ATOM 8720 CD LYS B 469 -16.443 -4.535 -81.481 1.00 18.67 B
ATOM 8721 CE LYS B 469 -17.688 -4.530 -80.636 1.00 17.41 B
ATOM 8722 NZ LYS B 469 -18.599 -3.425 -81.030 1.00 18.25 B
ATOM 8723 C LYS B 469 -13.558 -7.507 -80.497 1.00 15.81 B
ATOM 8724 O LYS B 469 -13.819 -7.460 -79.306 1.00 17.45 B
ATOM 8725 N TYR B 470 -13.735 -8.603 -81.228 1.00 15.96 B
ATOM 8726 CA TYR B 470 -14.257 -9.823 -80.628 1.00 16.18 B
ATOM 8727 CB TYR B 470 -15.362 -10.415 -81.493 1.00 15.45 B
ATOM 8728 CG TYR B 470 -16.609 -9.571 -81.498 1.00 16.75 B
ATOM 8729 CD1 TYR B 470 -16.775 -8.518 -82.413 1.00 16.27 B
ATOM 8730 CE1 TYR B 470 -17.926 -7.721 -82.386 1.00 15.73 B
ATOM 8731 CD2 TYR B 470 -17.620 -9.797 -80.563 1.00 16.37 B
ATOM 8732 CE2 TYR B 470 -18.757 -9.010 -80.526 1.00 15.85 B
ATOM 8733 CZ TYR B 470 -18.908 -7.981 -81.435 1.00 16.48 B
ATOM 8734 OH TYR B 470 -20.052 -7.231 -81.380 1.00 17.51 B

ATOM 8735 C TYR B 470 -13.247 -10.910 -80.288 1.00 17.10 B
ATOM 8736 O TYR B 470 -13.133 -11.296 -79.127 1.00 18.70 B
ATOM 8737 N GLN B 471 -12.513 -11.402 -81.277 1.00 16.61 B
ATOM 8738 CA GLN B 471 -11.542 -12.460 -81.024 1.00 17.46 B
ATOM 8739 CB GLN B 471 -11.029 -13.051 -82.328 1.00 17.33 B
ATOM 8740 CG GLN B 471 -11.949 -14.037 -82.989 1.00 19.52 B
ATOM 8741 CD GLN B 471 -11.330 -14.615 -84.242 1.00 18.60 B
ATOM 8742 OE1 GLN B 471 -11.063 -13.886 -85.188 1.00 20.90 B
ATOM 8743 NE2 GLN B 471 -11.082 -15.924 -84.251 1.00 17.36 B
ATOM 8744 C GLN B 471 -10.345 -11.984 -80.234 1.00 18.07 B
ATOM 8745 O GLN B 471 -9.675 -12.780 -79.572 1.00 18.71 B
ATOM 8746 N GLY B 472 -10.059 -10.689 -80.322 1.00 17.93 B
ATOM 8747 CA GLY B 472 -8.911 -10.158 -79.619 1.00 16.31 B
ATOM 8748 C GLY B 472 -7.626 -10.698 -80.202 1.00 16.98 B
ATOM 8749 O GLY B 472 -6.696 -11.081 -79.473 1.00 14.55 B
ATOM 8750 N ILE B 473 -7.588 -10.765 -81.531 1.00 17.15 B
ATOM 8751 CA ILE B 473 -6.401 -11.223 -82.237 1.00 18.19 B
ATOM 8752 CB ILE B 473 -6.626 -12.552 -82.961 1.00 16.74 B
ATOM 8753 CG2 ILE B 473 -7.034 -13.606 -81.960 1.00 16.70 B
ATOM 8754 CG1 ILE B 473 -7.669 -12.379 -84.061 1.00 16.85 B
ATOM 8755 CD1 ILE B 473 -7.782 -13.556 -84.980 1.00 16.24 B
ATOM 8756 C ILE B 473 -6.000 -10.172 -83.260 1.00 19.83 B
ATOM 8757 O ILE B 473 -6.749 -9.228 -83.524 1.00 20.01 B
ATOM 8758 N CYS B 474 -4.824 -10.338 -83.847 1.00 22.15 B
ATOM 8759 CA CYS B 474 -4.352 -9.365 -84.821 1.00 23.51 B
ATOM 8760 CB CYS B 474 -3.662 -8.231 -84.085 1.00 24.65 B
ATOM 8761 SG CYS B 474 -2.172 -8.808 -83.302 1.00 24.16 B
ATOM 8762 C CYS B 474 -3.388 -9.938 -85.868 1.00 23.71 B
ATOM 8763 O CYS B 474 -2.666 -10.903 -85.607 1.00 22.14 B
ATOM 8764 N PRO B 475 -3.367 -9.335 -87.071 1.00 25.06 B
ATOM 8765 CD PRO B 475 -4.237 -8.222 -87.496 1.00 26.16 B
ATOM 8766 CA PRO B 475 -2.498 -9.762 -88.172 1.00 25.42 B
ATOM 8767 CB PRO B 475 -2.925 -8.847 -89.323 1.00 26.73 B
ATOM 8768 CG PRO B 475 -3.460 -7.628 -88.630 1.00 26.83 B

ATOM 8769 C PRO B 475 -1.019 -9.637 -87.820 1.00 25.13 B
ATOM 8770 O PRO B 475 -0.560 -8.596 -87.358 1.00 23.86 B
ATOM 8771 N PRO B 476 -0.255 -10.711 -88.043 1.00 25.82 B
ATOM 8772 CD PRO B 476 -0.753 -11.974 -88.612 1.00 26.19 B
ATOM 8773 CA PRO B 476 1.181 -10.798 -87.767 1.00 26.10 B
ATOM 8774 CB PRO B 476 1.425 -12.294 -87.766 1.00 25.78 B
ATOM 8775 CG PRO B 476 0.520 -12.746 -88.861 1.00 26.77 B
ATOM 8776 C PRO B 476 2.049 -10.078 -88.796 1.00 25.59 B
ATOM 8777 O PRO B 476 3.277 -10.199 -88.788 1.00 24.57 B
ATOM 8778 N VAL B 477 1.386 -9.319 -89.664 1.00 24.80 B
ATOM 8779 CA VAL B 477 2.030 -8.580 -90.738 1.00 23.37 B
ATOM 8780 CB VAL B 477 2.239 -9.532 -91.953 1.00 22.93 B
ATOM 8781 CG1 VAL B 477 0.972 -9.605 -92.797 1.00 21.82 B
ATOM 8782 CG2 VAL B 477 3.419 -9.083 -92.776 1.00 25.00 B
ATOM 8783 C VAL B 477 1.083 -7.416 -91.103 1.00 22.54 B
ATOM 8784 O VAL B 477 -0.132 -7.584 -91.064 1.00 22.63 B
ATOM 8785 N THR B 478 1.617 -6.246 -91.446 1.00 21.26 B
ATOM 8786 CA THR B 478 0.757 -5.114 -91.790 1.00 20.56 B
ATOM 8787 CB THR B 478 1.567 -3.915 -92.264 1.00 19.69 B
ATOM 8788 OG1 THR B 478 2.478 -3.498 -91.240 1.00 20.10 B
ATOM 8789 CG2 THR B 478 0.643 -2.779 -92.578 1.00 20.39 B
ATOM 8790 C THR B 478 -0.237 -5.471 -92.887 1.00 21.13 B
ATOM 8791 O THR B 478 0.078 -6.266 -93.768 1.00 21.45 B
ATOM 8792 N ARG B 479 -1.429 -4.879 -92.844 1.00 21.30 B
ATOM 8793 CA ARG B 479 -2.469 -5.169 -93.833 1.00 22.53 B
ATOM 8794 CB ARG B 479 -3.507 -6.119 -93.242 1.00 21.09 B
ATOM 8795 CG ARG B 479 -2.939 -7.246 -92.433 1.00 21.52 B
ATOM 8796 CD ARG B 479 -2.159 -8.158 -93.320 1.00 22.82 B
ATOM 8797 NE ARG B 479 -3.017 -8.801 -94.307 1.00 23.15 B
ATOM 8798 CZ ARG B 479 -2.573 -9.326 -95.439 1.00 22.20 B
ATOM 8799 NH1 ARG B 479 -1.283 -9.280 -95.734 1.00 22.80 B
ATOM 8800 NH2 ARG B 479 -3.419 -9.904 -96.268 1.00 21.59 B
ATOM 8801 C ARG B 479 -3.214 -3.924 -94.272 1.00 24.19 B
ATOM 8802 O ARG B 479 -3.797 -3.245 -93.441 1.00 26.76 B

ATOM 8803 N ASN B 480 -3.322 -3.722 -95.581 1.00 25.97 B
ATOM 8804 CA ASN B 480 -3.849 -2.552 -96.292 1.00 25.71 B
ATOM 8805 CB ASN B 480 -2.987 -2.064 -97.511 1.00 27.10 B
ATOM 8806 CG ASN B 480 -1.450 -2.240 -97.377 1.00 31.00 B
ATOM 8807 OD1 ASN B 480 -0.846 -1.783 -96.464 1.00 31.78 B
ATOM 8808 ND2 ASN B 480 -0.831 -2.830 -98.383 1.00 31.48 B
ATOM 8809 C ASN B 480 -5.209 -2.847 -96.832 1.00 25.18 B
ATOM 8810 O ASN B 480 -5.593 -3.926 -96.867 1.00 24.72 B
ATOM 8811 N GLU B 481 -5.941 -1.857 -97.262 1.00 24.32 B
ATOM 8812 CA GLU B 481 -7.182 -2.106 -97.963 1.00 23.20 B
ATOM 8813 CB GLU B 481 -7.984 -0.815 -98.046 1.00 22.02 B
ATOM 8814 CG GLU B 481 -9.483 -1.047 -98.003 1.00 24.43 B
ATOM 8815 CD GLU B 481 -9.960 -1.589 -96.665 1.00 25.83 B
ATOM 8816 OE1 GLU B 481 -9.774 -0.894 -95.641 1.00 28.10 B
ATOM 8817 OE2 GLU B 481 -10.525 -2.703 -96.635 1.00 26.85 B
ATOM 8818 C GLU B 481 -7.052 -2.745 -99.344 1.00 22.87 B
ATOM 8819 O GLU B 481 -8.052 -2.910 -100.039 1.00 23.55 B
ATOM 8820 N THR B 482 -5.836 -3.098 -99.757 1.00 21.93 B
ATOM 8821 CA THR B 482 -5.692 -3.762 -101.046 1.00 22.72 B
ATOM 8822 CB THR B 482 -4.319 -3.466 -101.756 1.00 24.82 B
ATOM 8823 OG1 THR B 482 -3.336 -4.436 -101.366 1.00 26.37 B
ATOM 8824 CG2 THR B 482 -3.821 -2.073 -101.415 1.00 25.89 B
ATOM 8825 C THR B 482 -5.818 -5.255 -100.722 1.00 22.02 B
ATOM 8826 O THR B 482 -5.803 -6.114 -101.607 1.00 21.43 B
ATOM 8827 N HIS B 483 -5.946 -5.537 -99.425 1.00 22.24 B
ATOM 8828 CA HIS B 483 -6.115 -6.897 -98.921 1.00 21.10 B
ATOM 8829 CB HIS B 483 -5.382 -7.099 -97.600 1.00 20.30 B
ATOM 8830 CG HIS B 483 -3.897 -6.985 -97.709 1.00 19.96 B
ATOM 8831 CD2 HIS B 483 -3.021 -7.541 -98.574 1.00 19.51 B
ATOM 8832 ND1 HIS B 483 -3.143 -6.236 -96.831 1.00 21.39 B
ATOM 8833 CE1 HIS B 483 -1.866 -6.337 -97.149 1.00 19.71 B
ATOM 8834 NE2 HIS B 483 -1.765 -7.124 -98.203 1.00 20.36 B
ATOM 8835 C HIS B 483 -7.591 -7.168 -98.700 1.00 20.82 B
ATOM 8836 O HIS B 483 -8.414 -6.246 -98.582 1.00 19.58 B

ATOM 8837 N PHE B 484 -7.914 -8.452 -98.649 1.00 20.63 B
ATOM 8838 CA PHE B 484 -9.283 -8.888 -98.462 1.00 22.09 B
ATOM 8839 CB PHE B 484 -9.949 -9.143 -99.813 1.00 23.48 B
ATOM 8840 CG PHE B 484 -11.427 -9.392 -99.721 1.00 25.70 B
ATOM 8841 CD1 PHE B 484 -12.031 -10.371 -100.514 1.00 25.87 B
ATOM 8842 CD2 PHE B 484 -12.215 -8.654 -98.842 1.00 25.94 B
ATOM 8843 CE1 PHE B 484 -13.390 -10.614 -100.436 1.00 25.02 B
ATOM 8844 CE2 PHE B 484 -13.577 -8.890 -98.755 1.00 25.65 B
ATOM 8845 CZ PHE B 484 -14.166 -9.875 -99.556 1.00 26.07 B
ATOM 8846 C PHE B 484 -9.219 -10.173 -97.664 1.00 22.37 B
ATOM 8847 O PHE B 484 -9.484 -11.263 -98.181 1.00 22.88 B
ATOM 8848 N ASP B 485 -8.864 -10.031 -96.394 1.00 21.94 B
ATOM 8849 CA ASP B 485 -8.735 -11.169 -95.515 1.00 21.40 B
ATOM 8850 CB ASP B 485 -8.019 -10.727 -94.240 1.00 19.72 B
ATOM 8851 CG ASP B 485 -6.603 -10.220 -94.517 1.00 20.20 B
ATOM 8852 OD1 ASP B 485 -5.857 -10.899 -95.251 1.00 20.06 B
ATOM 8853 OD2 ASP B 485 -6.222 -9.153 -93.996 1.00 19.08 B
ATOM 8854 C ASP B 485 -10.055 -11.884 -95.213 1.00 21.78 B
ATOM 8855 O ASP B 485 -10.051 -13.075 -94.914 1.00 22.24 B
ATOM 8856 N ALA B 486 -11.177 -11.171 -95.313 1.00 21.98 B
ATOM 8857 CA ALA B 486 -12.483 -11.781 -95.061 1.00 21.13 B
ATOM 8858 CB ALA B 486 -13.576 -10.727 -95.036 1.00 18.95 B
ATOM 8859 C ALA B 486 -12.758 -12.755 -96.182 1.00 21.87 B
ATOM 8860 O ALA B 486 -13.482 -13.732 -96.020 1.00 22.07 B
ATOM 8861 N GLY B 487 -12.169 -12.485 -97.336 1.00 21.75 B
ATOM 8862 CA GLY B 487 -12.400 -13.349 -98.469 1.00 21.28 B
ATOM 8863 C GLY B 487 -11.616 -14.639 -98.428 1.00 20.50 B
ATOM 8864 O GLY B 487 -11.822 -15.512 -99.279 1.00 20.85 B
ATOM 8865 N ALA B 488 -10.726 -14.774 -97.452 1.00 18.63 B
ATOM 8866 CA ALA B 488 -9.919 -15.980 -97.348 1.00 18.60 B
ATOM 8867 CB ALA B 488 -8.598 -15.663 -96.705 1.00 18.11 B
ATOM 8868 C ALA B 488 -10.616 -17.066 -96.568 1.00 19.71 B
ATOM 8869 O ALA B 488 -10.044 -18.118 -96.325 1.00 20.53 B
ATOM 8870 N LYS B 489 -11.848 -16.821 -96.215 1.00 20.05 B

ATOM 8871 CA LYS B 489 -12.738 -17.794 -95.660 1.00 20.64 B
ATOM 8872 CB LYS B 489 -12.983 -17.504 -94.187 1.00 19.40 B
ATOM 8873 CG LYS B 489 -14.229 -18.019 -93.532 1.00 17.90 B
ATOM 8874 CD LYS B 489 -14.047 -18.833 -92.380 1.00 18.48 B
ATOM 8875 CE LYS B 489 -13.915 -20.182 -92.790 1.00 21.87 B
ATOM 8876 NZ LYS B 489 -14.291 -21.167 -91.883 1.00 21.19 B
ATOM 8877 C LYS B 489 -13.904 -18.449 -96.378 1.00 21.80 B
ATOM 8878 O LYS B 489 -14.787 -17.881 -96.919 1.00 22.40 B
ATOM 8879 N PHE B 490 -13.870 -19.724 -96.401 1.00 21.47 B
ATOM 8880 CA PHE B 490 -14.584 -20.382 -97.377 1.00 21.35 B
ATOM 8881 CB PHE B 490 -14.895 -21.719 -96.917 1.00 20.27 B
ATOM 8882 CG PHE B 490 -15.621 -22.521 -97.871 1.00 23.32 B
ATOM 8883 CD1 PHE B 490 -14.998 -23.211 -98.802 1.00 23.37 B
ATOM 8884 CD2 PHE B 490 -16.941 -22.661 -97.786 1.00 23.45 B
ATOM 8885 CE1 PHE B 490 -15.669 -23.901 -99.599 1.00 22.06 B
ATOM 8886 CE2 PHE B 490 -17.563 -23.389 -98.580 1.00 23.18 B
ATOM 8887 CZ PHE B 490 -16.931 -23.980 -99.496 1.00 22.06 B
ATOM 8888 C PHE B 490 -15.772 -19.642 -97.619 1.00 21.74 B
ATOM 8889 O PHE B 490 -16.114 -19.438 -98.690 1.00 21.15 B
ATOM 8890 N HIS B 491 -16.424 -19.208 -96.600 1.00 21.62 B
ATOM 8891 CA HIS B 491 -17.835 -19.155 -96.596 1.00 22.36 B
ATOM 8892 CB HIS B 491 -18.325 -19.198 -95.180 1.00 20.39 B
ATOM 8893 CG HIS B 491 -18.344 -20.544 -94.544 1.00 19.17 B
ATOM 8894 CD2 HIS B 491 -17.348 -21.337 -94.161 1.00 18.04 B
ATOM 8895 ND1 HIS B 491 -19.475 -21.223 -94.272 1.00 20.26 B
ATOM 8896 CE1 HIS B 491 -19.180 -22.365 -93.726 1.00 18.44 B
ATOM 8897 NE2 HIS B 491 -17.890 -22.456 -93.641 1.00 18.14 B
ATOM 8898 C HIS B 491 -18.172 -17.845 -97.104 1.00 24.01 B
ATOM 8899 O HIS B 491 -19.274 -17.544 -97.303 1.00 24.28 B
ATOM 8900 N VAL B 492 -17.189 -16.999 -97.258 1.00 23.52 B
ATOM 8901 CA VAL B 492 -17.409 -15.691 -97.867 1.00 22.10 B
ATOM 8902 CB VAL B 492 -16.302 -14.689 -97.488 1.00 21.73 B
ATOM 8903 CG1 VAL B 492 -16.542 -13.357 -98.182 1.00 18.00 B
ATOM 8904 CG2 VAL B 492 -16.286 -14.496 -95.988 1.00 21.35 B

ATOM 8905 C VAL B 492 -17.517 -15.798 -99.387 1.00 22.71 B
ATOM 8906 O VAL B 492 -18.548 -15.440 -99.955 1.00 23.17 B
ATOM 8907 N PRO B 493 -16.460 -16.287-100.071 1.00 23.25 B
ATOM 8908 CD PRO B 493 -15.116 -16.652 -99.583 1.00 22.12 B
ATOM 8909 CA PRO B 493 -16.533 -16.409-101.536 1.00 22.87 B
ATOM 8910 CB PRO B 493 -15.108 -16.767-101.935 1.00 21.86 B
ATOM 8911 CG PRO B 493 -14.590 -17.494-100.722 1.00 23.02 B
ATOM 8912 C PRO B 493 -17.527 -17.465-101.977 1.00 22.92 B
ATOM 8913 O PRO B 493 -17.880 -17.543-103.145 1.00 23.58 B
ATOM 8914 N ASN B 494 -17.973 -18.288-101.041 1.00 23.61 B
ATOM 8915 CA ASN B 494 -18.941 -19.322-101.369 1.00 24.59 B
ATOM 8916 CB ASN B 494 -18.523 -20.660-100.780 1.00 25.90 B
ATOM 8917 CG ASN B 494 -17.454 -21.339-101.611 1.00 28.15 B
ATOM 8918 OD1 ASN B 494 -17.702 -22.364-102.237 1.00 28.68 B
ATOM 8919 ND2 ASN B 494 -16.256 -20.760-101.629 1.00 29.03 B
ATOM 8920 C ASN B 494 -20.325 -18.950-100.894 1.00 25.20 B
ATOM 8921 O ASN B 494 -21.213 -19.801-100.797 1.00 24.64 B
ATOM 8922 N VAL B 495 -20.486 -17.666-100.588 1.00 25.60 B
ATOM 8923 CA VAL B 495 -21.756 -17.118-100.148 1.00 25.05 B
ATOM 8924 CB VAL B 495 -22.595 -16.758-101.388 1.00 24.04 B
ATOM 8925 CG1 VAL B 495 -23.841 -15.989-100.984 1.00 23.51 B
ATOM 8926 CG2 VAL B 495 -21.737 -15.968-102.366 1.00 22.54 B
ATOM 8927 C VAL B 495 -22.570 -18.033 -99.227 1.00 24.79 B
ATOM 8928 O VAL B 495 -23.694 -18.394 -99.549 1.00 25.44 B
ATOM 8929 N THR B 496 -22.010 -18.419 -98.087 1.00 24.50 B
ATOM 8930 CA THR B 496 -22.742 -19.273 -97.145 1.00 23.61 B
ATOM 8931 CB THR B 496 -21.984 -20.553 -96.857 1.00 22.45 B
ATOM 8932 OG1 THR B 496 -21.520 -21.100 -98.085 1.00 25.04 B
ATOM 8933 CG2 THR B 496 -22.880 -21.554 -96.183 1.00 21.60 B
ATOM 8934 C THR B 496 -22.915 -18.526 -95.827 1.00 22.98 B
ATOM 8935 O THR B 496 -21.935 -18.232 -95.142 1.00 23.15 B
ATOM 8936 N PRO B 497 -24.161 -18.207 -95.451 1.00 22.30 B
ATOM 8937 CD PRO B 497 -25.445 -18.577 -96.069 1.00 21.40 B
ATOM 8938 CA PRO B 497 -24.365 -17.484 -94.189 1.00 23.27 B

ATOM 8939 CB PRO B 497 -25.865 -17.600 -93.964 1.00 23.19 B
ATOM 8940 CG PRO B 497 -26.409 -17.644 -95.378 1.00 22.55 B
ATOM 8941 C PRO B 497 -23.539 -18.111 -93.063 1.00 25.01 B
ATOM 8942 O PRO B 497 -23.178 -19.295 -93.131 1.00 25.35 B
ATOM 8943 N TYR B 498 -23.240 -17.321 -92.032 1.00 25.00 B
ATOM 8944 CA TYR B 498 -22.414 -17.824 -90.943 1.00 23.81 B
ATOM 8945 CB TYR B 498 -21.086 -17.068 -90.925 1.00 22.78 B
ATOM 8946 CG TYR B 498 -19.898 -17.879 -90.450 1.00 22.73 B
ATOM 8947 CD1 TYR B 498 -19.266 -18.801 -91.295 1.00 21.12 B
ATOM 8948 CE1 TYR B 498 -18.144 -19.528 -90.869 1.00 20.25 B
ATOM 8949 CD2 TYR B 498 -19.382 -17.707 -89.158 1.00 22.01 B
ATOM 8950 CE2 TYR B 498 -18.263 -18.434 -88.722 1.00 21.56 B
ATOM 8951 CZ TYR B 498 -17.652 -19.336 -89.582 1.00 21.57 B
ATOM 8952 OH TYR B 498 -16.552 -20.034 -89.148 1.00 22.26 B
ATOM 8953 C TYR B 498 -23.056 -17.757 -89.561 1.00 24.01 B
ATOM 8954 O TYR B 498 -22.755 -18.601 -88.702 1.00 24.31 B
ATOM 8955 N ILE B 499 -23.941 -16.781 -89.340 1.00 22.84 B
ATOM 8956 CA ILE B 499 -24.585 -16.642 -88.031 1.00 23.11 B
ATOM 8957 CB ILE B 499 -25.601 -15.481 -88.002 1.00 22.86 B
ATOM 8958 CG2 ILE B 499 -26.820 -15.821 -88.845 1.00 23.17 B
ATOM 8959 CG1 ILE B 499 -26.021 -15.200 -86.559 1.00 21.43 B
ATOM 8960 CD1 ILE B 499 -24.868 -14.897 -85.628 1.00 20.48 B
ATOM 8961 C ILE B 499 -25.300 -17.920 -87.626 1.00 24.18 B
ATOM 8962 O ILE B 499 -25.733 -18.085 -86.488 1.00 25.30 B
ATOM 8963 N ARG B 500 -25.426 -18.826 -88.578 1.00 24.83 B
ATOM 8964 CA ARG B 500 -26.055 -20.095 -88.323 1.00 24.62 B
ATOM 8965 CB ARG B 500 -26.276 -20.834 -89.646 1.00 24.42 B
ATOM 8966 CG ARG B 500 -25.026 -20.982 -90.503 1.00 24.62 B
ATOM 8967 CD ARG B 500 -25.352 -21.660 -91.826 1.00 25.42 B
ATOM 8968 NE ARG B 500 -26.329 -20.909 -92.617 1.00 25.62 B
ATOM 8969 CZ ARG B 500 -26.855 -21.354 -93.756 1.00 24.71 B
ATOM 8970 NH1 ARG B 500 -26.486 -22.540 -94.221 1.00 23.36 B
ATOM 8971 NH2 ARG B 500 -27.744 -20.628 -94.425 1.00 21.83 B
ATOM 8972 C ARG B 500 -25.133 -20.891 -87.401 1.00 25.51 B

ATOM 8973 O ARG B 500 -25.610 -21.584 -86.516 1.00 27.23 B
ATOM 8974 N TYR B 501 -23.816 -20.775 -87.588 1.00 26.27 B
ATOM 8975 CA TYR B 501 -22.866 -21.516 -86.751 1.00 27.17 B
ATOM 8976 CB TYR B 501 -21.469 -21.517 -87.372 1.00 29.69 B
ATOM 8977 CG TYR B 501 -21.440 -22.217 -88.706 1.00 32.58 B
ATOM 8978 CD1 TYR B 501 -21.578 -21.491 -89.905 1.00 34.13 B
ATOM 8979 CE1 TYR B 501 -21.636 -22.140 -91.140 1.00 36.12 B
ATOM 8980 CD2 TYR B 501 -21.358 -23.610 -88.777 1.00 32.78 B
ATOM 8981 CE2 TYR B 501 -21.423 -24.270 -90.000 1.00 35.09 B
ATOM 8982 CZ TYR B 501 -21.562 -23.529 -91.181 1.00 36.82 B
ATOM 8983 OH TYR B 501 -21.644 -24.180 -92.395 1.00 37.64 B
ATOM 8984 C TYR B 501 -22.772 -21.002 -85.331 1.00 26.67 B
ATOM 8985 O TYR B 501 -22.426 -21.751 -84.418 1.00 25.07 B
ATOM 8986 N PHE B 502 -23.052 -19.721 -85.134 1.00 26.31 B
ATOM 8987 CA PHE B 502 -23.007 -19.187 -83.785 1.00 26.26 B
ATOM 8988 CB PHE B 502 -23.084 -17.664 -83.804 1.00 25.65 B
ATOM 8989 CG PHE B 502 -23.148 -17.043 -82.438 1.00 25.31 B
ATOM 8990 CD1 PHE B 502 -22.041 -17.062 -81.595 1.00 24.73 B
ATOM 8991 CD2 PHE B 502 -24.312 -16.421 -82.001 1.00 24.37 B
ATOM 8992 CE1 PHE B 502 -22.092 -16.467 -80.335 1.00 24.78 B
ATOM 8993 CE2 PHE B 502 -24.376 -15.825 -80.748 1.00 23.30 B
ATOM 8994 CZ PHE B 502 -23.267 -15.845 -79.912 1.00 23.63 B
ATOM 8995 C PHE B 502 -24.230 -19.777 -83.088 1.00 26.78 B
ATOM 8996 O PHE B 502 -24.110 -20.481 -82.077 1.00 26.67 B
ATOM 8997 N VAL B 503 -25.408 -19.507 -83.643 1.00 26.29 B
ATOM 8998 CA VAL B 503 -26.637 -20.039 -83.072 1.00 26.30 B
ATOM 8999 CB VAL B 503 -27.806 -19.929 -84.074 1.00 23.68 B
ATOM 9000 CG1 VAL B 503 -29.043 -20.555 -83.494 1.00 23.24 B
ATOM 9001 CG2 VAL B 503 -28.067 -18.477 -84.409 1.00 23.32 B
ATOM 9002 C VAL B 503 -26.412 -21.514 -82.729 1.00 27.65 B
ATOM 9003 O VAL B 503 -26.726 -21.972 -81.626 1.00 28.51 B
ATOM 9004 N SER B 504 -25.829 -22.232 -83.682 1.00 28.76 B
ATOM 9005 CA SER B 504 -25.545 -23.653 -83.555 1.00 30.49 B
ATOM 9006 CB SER B 504 -24.798 -24.144 -84.798 1.00 30.73 B

ATOM 9007 OG SER B 504 -24.229 -25.429 -84.583 1.00 31.27 B
ATOM 9008 C SER B 504 -24.757 -24.068 -82.320 1.00 31.92 B
ATOM 9009 O SER B 504 -25.110 -25.044 -81.650 1.00 33.11 B
ATOM 9010 N PHE B 505 -23.677 -23.354 -82.024 1.00 32.41 B
ATOM 9011 CA PHE B 505 -22.864 -23.715 -80.871 1.00 32.35 B
ATOM 9012 CB PHE B 505 -21.556 -22.913 -80.868 1.00 30.52 B
ATOM 9013 CG PHE B 505 -20.462 -23.546 -81.689 1.00 30.14 B
ATOM 9014 CD1 PHE B 505 -20.740 -24.098 -82.938 1.00 29.65 B
ATOM 9015 CD2 PHE B 505 -19.158 -23.604 -81.214 1.00 29.74 B
ATOM 9016 CE1 PHE B 505 -19.746 -24.695 -83.690 1.00 29.40 B
ATOM 9017 CE2 PHE B 505 -18.155 -24.202 -81.969 1.00 28.79 B
ATOM 9018 CZ PHE B 505 -18.452 -24.747 -83.205 1.00 29.32 B
ATOM 9019 C PHE B 505 -23.636 -23.517 -79.575 1.00 33.20 B
ATOM 9020 O PHE B 505 -23.523 -24.317 -78.645 1.00 33.67 B
ATOM 9021 N VAL B 506 -24.450 -22.471 -79.523 1.00 32.94 B
ATOM 9022 CA VAL B 506 -25.205 -22.209 -78.319 1.00 31.30 B
ATOM 9023 CB VAL B 506 -25.749 -20.760 -78.292 1.00 30.43 B
ATOM 9024 CG1 VAL B 506 -26.647 -20.554 -77.077 1.00 29.18 B
ATOM 9025 CG2 VAL B 506 -24.573 -19.773 -78.251 1.00 29.59 B
ATOM 9026 C VAL B 506 -26.336 -23.195 -78.132 1.00 31.57 B
ATOM 9027 O VAL B 506 -26.363 -23.901 -77.133 1.00 33.83 B
ATOM 9028 N LEU B 507 -27.259 -23.291 -79.080 1.00 31.35 B
ATOM 9029 CA LEU B 507 -28.367 -24.214 -78.857 1.00 31.44 B
ATOM 9030 CB LEU B 507 -29.581 -23.856 -79.733 1.00 32.09 B
ATOM 9031 CG LEU B 507 -29.914 -24.714 -80.951 1.00 31.67 B
ATOM 9032 CD1 LEU B 507 -31.365 -24.532 -81.365 1.00 30.43 B
ATOM 9033 CD2 LEU B 507 -28.975 -24.335 -82.057 1.00 33.01 B
ATOM 9034 C LEU B 507 -28.013 -25.685 -79.016 1.00 29.73 B
ATOM 9035 O LEU B 507 -28.886 -26.544 -78.978 1.00 28.54 B
ATOM 9036 N GLN B 508 -26.735 -25.990 -79.174 1.00 28.50 B
ATOM 9037 CA GLN B 508 -26.370 -27.386 -79.309 1.00 29.62 B
ATOM 9038 CB GLN B 508 -25.032 -27.513 -80.050 1.00 30.13 B
ATOM 9039 CG GLN B 508 -23.796 -27.915 -79.267 1.00 31.07 B
ATOM 9040 CD GLN B 508 -22.530 -27.798 -80.130 1.00 33.43 B

ATOM 9041 OE1 GLN B 508 -21.446 -28.272 -79.753 1.00 33.59 B
ATOM 9042 NE2 GLN B 508 -22.664 -27.147 -81.293 1.00 33.69 B
ATOM 9043 C GLN B 508 -26.348 -28.015 -77.919 1.00 30.92 B
ATOM 9044 O GLN B 508 -26.604 -29.209 -77.756 1.00 31.60 B
ATOM 9045 N PHE B 509 -26.089 -27.196 -76.903 1.00 31.55 B
ATOM 9046 CA PHE B 509 -26.081 -27.685 -75.534 1.00 30.07 B
ATOM 9047 CB PHE B 509 -25.179 -26.816 -74.675 1.00 28.78 B
ATOM 9048 CG PHE B 509 -23.753 -26.873 -75.095 1.00 27.60 B
ATOM 9049 CD1 PHE B 509 -23.269 -26.014 -76.073 1.00 27.04 B
ATOM 9050 CD2 PHE B 509 -22.909 -27.841 -74.576 1.00 26.98 B
ATOM 9051 CE1 PHE B 509 -21.961 -26.119 -76.534 1.00 26.34 B
ATOM 9052 CE2 PHE B 509 -21.603 -27.956 -75.029 1.00 27.35 B
ATOM 9053 CZ PHE B 509 -21.126 -27.093 -76.012 1.00 27.04 B
ATOM 9054 C PHE B 509 -27.498 -27.728 -74.975 1.00 29.77 B
ATOM 9055 O PHE B 509 -27.766 -28.422 -74.000 1.00 30.21 B
ATOM 9056 N GLN B 510 -28.406 -26.982 -75.594 1.00 29.21 B
ATOM 9057 CA GLN B 510 -29.792 -27.000 -75.166 1.00 29.10 B
ATOM 9058 CB GLN B 510 -30.609 -25.948 -75.881 1.00 26.61 B
ATOM 9059 CG GLN B 510 -30.077 -24.563 -75.810 1.00 26.49 B
ATOM 9060 CD GLN B 510 -31.208 -23.597 -75.671 1.00 28.48 B
ATOM 9061 OE1 GLN B 510 -31.091 -22.420 -76.000 1.00 29.13 B
ATOM 9062 NE2 GLN B 510 -32.332 -24.094 -75.159 1.00 29.89 B
ATOM 9063 C GLN B 510 -30.313 -28.356 -75.600 1.00 30.51 B
ATOM 9064 O GLN B 510 -31.130 -28.975 -74.915 1.00 31.71 B
ATOM 9065 N PHE B 511 -29.849 -28.794 -76.769 1.00 30.16 B
ATOM 9066 CA PHE B 511 -30.241 -30.081 -77.314 1.00 30.02 B
ATOM 9067 CB PHE B 511 -29.707 -30.262 -78.735 1.00 31.23 B
ATOM 9068 CG PHE B 511 -30.529 -29.585 -79.802 1.00 31.79 B
ATOM 9069 CD1 PHE B 511 -31.645 -28.825 -79.476 1.00 32.31 B
ATOM 9070 CD2 PHE B 511 -30.159 -29.691 -81.141 1.00 32.28 B
ATOM 9071 CE1 PHE B 511 -32.379 -28.180 -80.471 1.00 33.17 B
ATOM 9072 CE2 PHE B 511 -30.880 -29.051 -82.137 1.00 32.71 B
ATOM 9073 CZ PHE B 511 -31.995 -28.292 -81.803 1.00 32.85 B
ATOM 9074 C PHE B 511 -29.632 -31.142 -76.429 1.00 29.75 B

ATOM 9075 O PHE B 511 -30.323 -32.016 -75.919 1.00 29.42 B
ATOM 9076 N HIS B 512 -28.324 -31.050 -76.242 1.00 29.58 B
ATOM 9077 CA HIS B 512 -27.617 -32.010 -75.412 1.00 30.58 B
ATOM 9078 CB HIS B 512 -26.176 -31.582 -75.224 1.00 28.52 B
ATOM 9079 CG HIS B 512 -25.311 -32.665 -74.680 1.00 27.19 B
ATOM 9080 CD2 HIS B 512 -24.229 -32.625 -73.870 1.00 27.89 B
ATOM 9081 ND1 HIS B 512 -25.487 -33.986 -75.025 1.00 27.84 B
ATOM 9082 CE1 HIS B 512 -24.545 -34.715 -74.454 1.00 29.63 B
ATOM 9083 NE2 HIS B 512 -23.767 -33.913 -73.747 1.00 29.02 B
ATOM 9084 C HIS B 512 -28.246 -32.213 -74.038 1.00 32.36 B
ATOM 9085 O HIS B 512 -28.419 -33.351 -73.592 1.00 32.03 B
ATOM 9086 N GLU B 513 -28.580 -31.117 -73.356 1.00 34.38 B
ATOM 9087 CA GLU B 513 -29.185 -31.241 -72.041 1.00 35.29 B
ATOM 9088 CB GLU B 513 -29.358 -29.880 -71.374 1.00 36.75 B
ATOM 9089 CG GLU B 513 -29.900 -29.989 -69.949 1.00 41.04 B
ATOM 9090 CD GLU B 513 -30.061 -28.634 -69.275 1.00 43.34 B
ATOM 9091 OE1 GLU B 513 -30.716 -27.761 -69.882 1.00 44.67 B
ATOM 9092 OE2 GLU B 513 -29.543 -28.441 -68.145 1.00 45.16 B
ATOM 9093 C GLU B 513 -30.537 -31.899 -72.201 1.00 34.57 B
ATOM 9094 O GLU B 513 -30.823 -32.920 -71.575 1.00 35.18 B
ATOM 9095 N ALA B 514 -31.360 -31.320 -73.062 1.00 33.27 B
ATOM 9096 CA ALA B 514 -32.687 -31.855 -73.301 1.00 32.96 B
ATOM 9097 CB ALA B 514 -33.369 -31.047 -74.405 1.00 33.50 B
ATOM 9098 C ALA B 514 -32.680 -33.351 -73.652 1.00 31.71 B
ATOM 9099 O ALA B 514 -33.626 -34.073 -73.353 1.00 30.08 B
ATOM 9100 N LEU B 515 -31.609 -33.812 -74.282 1.00 31.61 B
ATOM 9101 CA LEU B 515 -31.514 -35.210 -74.658 1.00 33.07 B
ATOM 9102 CB LEU B 515 -30.666 -35.370 -75.924 1.00 32.61 B
ATOM 9103 CG LEU B 515 -31.186 -34.706 -77.209 1.00 33.59 B
ATOM 9104 CD1 LEU B 515 -30.209 -34.983 -78.339 1.00 32.54 B
ATOM 9105 CD2 LEU B 515 -32.577 -35.225 -77.566 1.00 32.04 B
ATOM 9106 C LEU B 515 -30.934 -36.057 -73.535 1.00 35.01 B
ATOM 9107 O LEU B 515 -31.297 -37.223 -73.385 1.00 35.08 B
ATOM 9108 N CYS B 516 -30.033 -35.481 -72.741 1.00 37.20 B

ATOM 9109 CA CYS B 516 -29.444 -36.228 -71.633 1.00 38.92 B
ATOM 9110 C CYS B 516 -30.496 -36.464 -70.579 1.00 39.11 B
ATOM 9111 O CYS B 516 -30.500 -37.494 -69.912 1.00 38.07 B
ATOM 9112 CB CYS B 516 -28.270 -35.471 -71.028 1.00 39.97 B
ATOM 9113 SG CYS B 516 -26.866 -35.413 -72.176 1.00 43.37 B
ATOM 9114 N LYS B 517 -31.390 -35.494 -70.429 1.00 39.89 B
ATOM 9115 CA LYS B 517 -32.468 -35.611 -69.469 1.00 40.54 B
ATOM 9116 CB LYS B 517 -33.305 -34.333 -69.444 1.00 39.30 B
ATOM 9117 CG LYS B 517 -34.363 -34.354 -68.364 1.00 39.77 B
ATOM 9118 CD LYS B 517 -35.390 -33.252 -68.514 1.00 40.79 B
ATOM 9119 CE LYS B 517 -36.392 -33.322 -67.367 1.00 41.93 B
ATOM 9120 NZ LYS B 517 -37.554 -32.417 -67.563 1.00 42.63 B
ATOM 9121 C LYS B 517 -33.333 -36.784 -69.930 1.00 41.76 B
ATOM 9122 O LYS B 517 -33.444 -37.804 -69.242 1.00 42.14 B
ATOM 9123 N GLU B 518 -33.928 -36.635 -71.109 1.00 42.78 B
ATOM 9124 CA GLU B 518 -34.784 -37.664 -71.691 1.00 44.13 B
ATOM 9125 CB GLU B 518 -35.181 -37.261 -73.121 1.00 44.85 B
ATOM 9126 CG GLU B 518 -36.348 -38.048 -73.712 1.00 45.29 B
ATOM 9127 CD GLU B 518 -37.703 -37.577 -73.193 1.00 46.06 B
ATOM 9128 OE1 GLU B 518 -38.731 -38.178 -73.582 1.00 46.08 B
ATOM 9129 OE2 GLU B 518 -37.737 -36.602 -72.406 1.00 45.56 B
ATOM 9130 C GLU B 518 -34.091 -39.034 -71.716 1.00 44.53 B
ATOM 9131 O GLU B 518 -34.750 -40.072 -71.719 1.00 44.63 B
ATOM 9132 N ALA B 519 -32.763 -39.038 -71.748 1.00 44.67 B
ATOM 9133 CA ALA B 519 -32.017 -40.294 -71.766 1.00 45.08 B
ATOM 9134 CB ALA B 519 -30.615 -40.058 -72.308 1.00 45.73 B
ATOM 9135 C ALA B 519 -31.936 -40.913 -70.367 1.00 45.67 B
ATOM 9136 O ALA B 519 -31.295 -41.952 -70.168 1.00 44.44 B
ATOM 9137 N GLY B 520 -32.587 -40.261 -69.406 1.00 46.13 B
ATOM 9138 CA GLY B 520 -32.587 -40.746 -68.043 1.00 45.94 B
ATOM 9139 C GLY B 520 -31.226 -40.641 -67.400 1.00 46.09 B
ATOM 9140 O GLY B 520 -30.933 -41.348 -66.444 1.00 47.09 B
ATOM 9141 N TYR B 521 -30.380 -39.764 -67.922 1.00 45.72 B
ATOM 9142 CA TYR B 521 -29.045 -39.583 -67.363 1.00 45.05 B

ATOM 9143 CB TYR B 521 -28.123 -38.926 -68.387 1.00 44.64 B
ATOM 9144 CG TYR B 521 -26.781 -38.542 -67.815 1.00 44.61 B
ATOM 9145 CD1 TYR B 521 -25.803 -39.504 -67.573 1.00 43.93 B
ATOM 9146 CE1 TYR B 521 -24.570 -39.153 -67.027 1.00 44.61 B
ATOM 9147 CD2 TYR B 521 -26.497 -37.213 -67.493 1.00 45.06 B
ATOM 9148 CE2 TYR B 521 -25.268 -36.853 -66.940 1.00 45.30 B
ATOM 9149 CZ TYR B 521 -24.309 -37.825 -66.710 1.00 45.07 B
ATOM 9150 OH TYR B 521 -23.098 -37.470 -66.153 1.00 44.80 B
ATOM 9151 C TYR B 521 -29.056 -38.737 -66.086 1.00 44.42 B
ATOM 9152 O TYR B 521 -29.832 -37.784 -65.949 1.00 42.65 B
ATOM 9153 N ALA B 522 -28.178 -39.105 -65.159 1.00 44.29 B
ATOM 9154 CA ALA B 522 -28.043 -38.418 -63.882 1.00 44.69 B
ATOM 9155 CB ALA B 522 -28.689 -39.239 -62.770 1.00 43.82 B
ATOM 9156 C ALA B 522 -26.557 -38.237 -63.606 1.00 45.12 B
ATOM 9157 O ALA B 522 -25.839 -39.198 -63.312 1.00 46.18 B
ATOM 9158 N GLY B 523 -26.101 -36.993 -63.717 1.00 44.19 B
ATOM 9159 CA GLY B 523 -24.703 -36.687 -63.484 1.00 43.20 B
ATOM 9160 C GLY B 523 -24.335 -35.406 -64.198 1.00 42.05 B
ATOM 9161 O GLY B 523 -25.189 -34.803 -64.848 1.00 43.08 B
ATOM 9162 N PRO B 524 -23.072 -34.966 -64.110 1.00 40.59 B
ATOM 9163 CD PRO B 524 -21.956 -35.701 -63.491 1.00 40.63 B
ATOM 9164 CA PRO B 524 -22.595 -33.736 -64.758 1.00 39.16 B
ATOM 9165 CB PRO B 524 -21.091 -33.772 -64.503 1.00 40.63 B
ATOM 9166 CG PRO B 524 -20.967 -34.606 -63.253 1.00 41.18 B
ATOM 9167 C PRO B 524 -22.917 -33.741 -66.252 1.00 37.72 B
ATOM 9168 O PRO B 524 -22.592 -34.702 -66.950 1.00 38.10 B
ATOM 9169 N LEU B 525 -23.536 -32.671 -66.744 1.00 34.78 B
ATOM 9170 CA LEU B 525 -23.897 -32.588 -68.158 1.00 32.42 B
ATOM 9171 CB LEU B 525 -24.466 -31.211 -68.471 1.00 29.91 B
ATOM 9172 CG LEU B 525 -24.940 -31.039 -69.906 1.00 28.12 B
ATOM 9173 CD1 LEU B 525 -26.046 -32.026 -70.201 1.00 26.21 B
ATOM 9174 CD2 LEU B 525 -25.423 -29.620 -70.110 1.00 27.46 B
ATOM 9175 C LEU B 525 -22.768 -32.904 -69.152 1.00 33.07 B
ATOM 9176 O LEU B 525 -23.008 -33.528 -70.180 1.00 33.67 B

ATOM 9177 N HIS B 526 -21.546 -32.483 -68.842 1.00 33.51 B
ATOM 9178 CA HIS B 526 -20.404 -32.712 -69.720 1.00 32.83 B
ATOM 9179 CB HIS B 526 -19.246 -31.789 -69.336 1.00 31.13 B
ATOM 9180 CG HIS B 526 -18.605 -32.124 -68.023 1.00 30.45 B
ATOM 9181 CD2 HIS B 526 -17.429 -32.736 -67.738 1.00 30.42 B
ATOM 9182 ND1 HIS B 526 -19.182 -31.820 -66.809 1.00 29.05 B
ATOM 9183 CE1 HIS B 526 -18.389 -32.229 -65.834 1.00 29.84 B
ATOM 9184 NE2 HIS B 526 -17.319 -32.789 -66.371 1.00 28.52 B
ATOM 9185 C HIS B 526 -19.896 -34.150 -69.751 1.00 34.47 B
ATOM 9186 O HIS B 526 -18.989 -34.472 -70.518 1.00 34.99 B
ATOM 9187 N GLN B 527 -20.459 -35.012 -68.915 1.00 35.97 B
ATOM 9188 CA GLN B 527 -20.031 -36.406 -68.887 1.00 37.56 B
ATOM 9189 CB GLN B 527 -19.649 -36.826 -67.462 1.00 37.51 B
ATOM 9190 CG GLN B 527 -18.268 -36.349 -67.031 1.00 38.67 B
ATOM 9191 CD GLN B 527 -17.972 -36.617 -65.562 1.00 38.20 B
ATOM 9192 OE1 GLN B 527 -18.654 -36.109 -64.671 1.00 37.63 B
ATOM 9193 NE2 GLN B 527 -16.946 -37.414 -65.307 1.00 38.79 B
ATOM 9194 C GLN B 527 -21.132 -37.307 -69.425 1.00 37.97 B
ATOM 9195 O GLN B 527 -21.013 -38.527 -69.419 1.00 37.89 B
ATOM 9196 N CYS B 528 -22.203 -36.688 -69.901 1.00 39.00 B
ATOM 9197 CA CYS B 528 -23.329 -37.419 -70.448 1.00 39.94 B
ATOM 9198 C CYS B 528 -22.985 -38.034 -71.802 1.00 41.02 B
ATOM 9199 O CYS B 528 -22.122 -37.529 -72.519 1.00 42.11 B
ATOM 9200 CB CYS B 528 -24.524 -36.483 -70.579 1.00 40.12 B
ATOM 9201 SG CYS B 528 -25.772 -37.071 -71.751 1.00 39.79 B
ATOM 9202 N ASP B 529 -23.649 -39.119 -72.148 1.00 41.49 B
ATOM 9203 CA ASP B 529 -23.387 -39.901 -73.346 1.00 41.73 B
ATOM 9204 CB ASP B 529 -22.334 -40.949 -73.095 1.00 41.93 B
ATOM 9205 CG ASP B 529 -22.005 -41.752 -74.297 1.00 43.45 B
ATOM 9206 OD1 ASP B 529 -22.812 -41.881 -75.175 1.00 43.90 B
ATOM 9207 OD2 ASP B 529 -20.941 -42.297 -74.469 1.00 44.10 B
ATOM 9208 C ASP B 529 -24.636 -40.598 -73.709 1.00 41.00 B
ATOM 9209 O ASP B 529 -24.943 -41.558 -73.159 1.00 40.67 B
ATOM 9210 N VAL B 530 -25.358 -40.050 -74.681 1.00 41.16 B

ATOM 9211 CA VAL B 530 -26.695 -40.528 -75.007 1.00 42.10 B
ATOM 9212 CB VAL B 530 -27.625 -39.370 -75.413 1.00 41.83 B
ATOM 9213 CG1 VAL B 530 -26.966 -38.030 -75.119 1.00 42.47 B
ATOM 9214 CG2 VAL B 530 -27.998 -39.477 -76.883 1.00 42.04 B
ATOM 9215 C VAL B 530 -26.646 -41.546 -76.140 1.00 43.41 B
ATOM 9216 O VAL B 530 -27.640 -41.770 -76.830 1.00 43.67 B
ATOM 9217 N TYR B 531 -25.481 -42.159 -76.326 1.00 43.89 B
ATOM 9218 CA TYR B 531 -25.403 -43.472 -76.954 1.00 43.41 B
ATOM 9219 CB TYR B 531 -24.105 -44.180 -76.564 1.00 43.32 B
ATOM 9220 CG TYR B 531 -23.649 -45.214 -77.569 1.00 44.62 B
ATOM 9221 CD1 TYR B 531 -24.058 -45.149 -78.894 1.00 44.33 B
ATOM 9222 CE1 TYR B 531 -23.646 -46.091 -79.817 1.00 44.72 B
ATOM 9223 CD2 TYR B 531 -22.811 -46.255 -77.193 1.00 46.25 B
ATOM 9224 CE2 TYR B 531 -22.393 -47.202 -78.108 1.00 45.30 B
ATOM 9225 CZ TYR B 531 -22.812 -47.116 -79.419 1.00 45.39 B
ATOM 9226 OH TYR B 531 -22.400 -48.055 -80.335 1.00 45.06 B
ATOM 9227 C TYR B 531 -26.603 -44.330 -76.572 1.00 43.74 B
ATOM 9228 O TYR B 531 -26.868 -44.554 -75.390 1.00 44.88 B
ATOM 9229 N ARG B 532 -27.327 -44.806 -77.579 1.00 44.19 B
ATOM 9230 CA ARG B 532 -28.136 -46.010 -77.435 1.00 42.66 B
ATOM 9231 CB ARG B 532 -27.399 -47.052 -76.591 1.00 41.41 B
ATOM 9232 CG ARG B 532 -26.596 -48.055 -77.404 1.00 42.19 B
ATOM 9233 CD ARG B 532 -25.750 -48.998 -76.564 1.00 42.55 B
ATOM 9234 NE ARG B 532 -24.901 -49.854 -77.388 1.00 44.25 B
ATOM 9235 CZ ARG B 532 -23.822 -50.484 -76.944 1.00 44.06 B
ATOM 9236 NH1 ARG B 532 -23.453 -50.357 -75.677 1.00 43.47 B
ATOM 9237 NH2 ARG B 532 -23.109 -51.242 -77.765 1.00 43.70 B
ATOM 9238 C ARG B 532 -29.489 -45.692 -76.809 1.00 42.07 B
ATOM 9239 O ARG B 532 -30.374 -46.545 -76.760 1.00 41.79 B
ATOM 9240 N SER B 533 -29.646 -44.461 -76.332 1.00 42.65 B
ATOM 9241 CA SER B 533 -30.914 -44.028 -75.765 1.00 44.70 B
ATOM 9242 CB SER B 533 -30.776 -42.743 -74.955 1.00 45.18 B
ATOM 9243 OG SER B 533 -32.059 -42.348 -74.483 1.00 45.26 B
ATOM 9244 C SER B 533 -31.946 -43.801 -76.847 1.00 45.55 B

ATOM 9245 O SER B 533 -31.852 -42.858 -77.635 1.00 47.55 B
ATOM 9246 N THR B 534 -32.940 -44.672 -76.868 1.00 45.40 B
ATOM 9247 CA THR B 534 -34.005 -44.597 -77.838 1.00 45.28 B
ATOM 9248 CB THR B 534 -34.758 -45.927 -77.877 1.00 46.07 B
ATOM 9249 OG1 THR B 534 -35.357 -46.174 -76.599 1.00 47.88 B
ATOM 9250 CG2 THR B 534 -33.788 -47.064 -78.182 1.00 47.47 B
ATOM 9251 C THR B 534 -34.954 -43.465 -77.469 1.00 44.80 B
ATOM 9252 O THR B 534 -35.417 -42.726 -78.331 1.00 45.81 B
ATOM 9253 N ALA B 535 -35.229 -43.323 -76.178 1.00 44.74 B
ATOM 9254 CA ALA B 535 -36.131 -42.276 -75.701 1.00 45.42 B
ATOM 9255 CB ALA B 535 -36.157 -42.263 -74.168 1.00 45.33 B
ATOM 9256 C ALA B 535 -35.691 -40.913 -76.230 1.00 45.60 B
ATOM 9257 O ALA B 535 -36.518 -40.092 -76.642 1.00 45.53 B
ATOM 9258 N ALA B 536 -34.382 -40.680 -76.201 1.00 45.33 B
ATOM 9259 CA ALA B 536 -33.813 -39.431 -76.685 1.00 43.81 B
ATOM 9260 CB ALA B 536 -32.330 -39.364 -76.328 1.00 43.05 B
ATOM 9261 C ALA B 536 -33.994 -39.403 -78.199 1.00 42.79 B
ATOM 9262 O ALA B 536 -34.628 -38.491 -78.749 1.00 42.43 B
ATOM 9263 N GLY B 537 -33.432 -40.421 -78.853 1.00 40.60 B
ATOM 9264 CA GLY B 537 -33.508 -40.541 -80.297 1.00 38.20 B
ATOM 9265 C GLY B 537 -34.875 -40.192 -80.841 1.00 37.15 B
ATOM 9266 O GLY B 537 -34.992 -39.539 -81.872 1.00 38.07 B
ATOM 9267 N ALA B 538 -35.916 -40.625 -80.146 1.00 35.56 B
ATOM 9268 CA ALA B 538 -37.274 -40.347 -80.577 1.00 35.02 B
ATOM 9269 CB ALA B 538 -38.250 -41.122 -79.731 1.00 34.00 B
ATOM 9270 C ALA B 538 -37.567 -38.864 -80.460 1.00 35.84 B
ATOM 9271 O ALA B 538 -38.276 -38.293 -81.293 1.00 35.04 B
ATOM 9272 N LYS B 539 -37.008 -38.247 -79.420 1.00 36.90 B
ATOM 9273 CA LYS B 539 -37.229 -36.834 -79.158 1.00 37.61 B
ATOM 9274 CB LYS B 539 -36.785 -36.484 -77.748 1.00 37.68 B
ATOM 9275 CG LYS B 539 -37.325 -35.153 -77.290 1.00 38.82 B
ATOM 9276 CD LYS B 539 -37.022 -34.927 -75.846 1.00 37.41 B
ATOM 9277 CE LYS B 539 -37.849 -33.800 -75.321 1.00 37.90 B
ATOM 9278 NZ LYS B 539 -37.545 -33.648 -73.889 1.00 41.26 B

ATOM 9279 C LYS B 539 -36.514 -35.939 -80.145 1.00 38.60 B
ATOM 9280 O LYS B 539 -36.936 -34.803 -80.385 1.00 39.30 B
ATOM 9281 N LEU B 540 -35.422 -36.450 -80.704 1.00 38.46 B
ATOM 9282 CA LEU B 540 -34.658 -35.706 -81.689 1.00 38.51 B
ATOM 9283 CB LEU B 540 -33.263 -36.317 -81.827 1.00 37.68 B
ATOM 9284 CG LEU B 540 -32.168 -35.507 -82.526 1.00 36.73 B
ATOM 9285 CD1 LEU B 540 -30.876 -36.308 -82.542 1.00 34.95 B
ATOM 9286 CD2 LEU B 540 -32.587 -35.171 -83.928 1.00 37.09 B
ATOM 9287 C LEU B 540 -35.424 -35.847 -82.997 1.00 39.52 B
ATOM 9288 O LEU B 540 -35.719 -34.869 -83.680 1.00 38.79 B
ATOM 9289 N ARG B 541 -35.804 -37.036 -83.323 1.00 40.81 B
ATOM 9290 CA ARG B 541 -36.474 -37.257 -84.534 1.00 43.05 B
ATOM 9291 CB ARG B 541 -36.525 -38.707 -84.744 1.00 45.77 B
ATOM 9292 CG ARG B 541 -37.542 -39.157 -85.658 1.00 50.04 B
ATOM 9293 CD ARG B 541 -37.738 -40.620 -85.532 1.00 54.31 B
ATOM 9294 NE ARG B 541 -38.069 -41.293 -86.763 1.00 58.25 B
ATOM 9295 CZ ARG B 541 -39.269 -41.353 -87.265 1.00 60.29 B
ATOM 9296 NH1 ARG B 541 -40.273 -40.754 -86.653 1.00 61.29 B
ATOM 9297 NH2 ARG B 541 -39.456 -42.009 -88.387 1.00 60.44 B
ATOM 9298 C ARG B 541 -37.808 -36.696 -84.612 1.00 42.73 B
ATOM 9299 O ARG B 541 -38.425 -36.728 -85.608 1.00 42.92 B
ATOM 9300 N LYS B 542 -38.208 -36.008 -83.597 1.00 42.50 B
ATOM 9301 CA LYS B 542 -39.456 -35.347 -83.691 1.00 42.00 B
ATOM 9302 CB LYS B 542 -40.104 -35.262 -82.346 1.00 42.16 B
ATOM 9303 CG LYS B 542 -41.526 -34.959 -82.458 1.00 43.66 B
ATOM 9304 CD LYS B 542 -42.232 -35.144 -81.184 1.00 44.42 B
ATOM 9305 CE LYS B 542 -43.296 -36.227 -81.264 0.00 44.38 B
ATOM 9306 NZ LYS B 542 -43.121 -37.347 -80.320 0.00 44.44 B
ATOM 9307 C LYS B 542 -39.256 -34.009 -84.218 1.00 41.40 B
ATOM 9308 O LYS B 542 -40.162 -33.383 -84.678 1.00 39.89 B
ATOM 9309 N VAL B 543 -38.046 -33.535 -84.050 1.00 41.23 B
ATOM 9310 CA VAL B 543 -37.699 -32.222 -84.581 1.00 41.54 B
ATOM 9311 CB VAL B 543 -36.616 -31.513 -83.706 1.00 41.24 B
ATOM 9312 CG1 VAL B 543 -36.943 -31.701 -82.235 1.00 40.72 B

ATOM 9313 CG2 VAL B 543 -35.224 -32.041 -84.028 1.00 40.69 B
ATOM 9314 C VAL B 543 -37.194 -32.320 -86.015 1.00 42.22 B
ATOM 9315 O VAL B 543 -37.392 -31.398 -86.819 1.00 41.84 B
ATOM 9316 N LEU B 544 -36.537 -33.434 -86.334 1.00 41.99 B
ATOM 9317 CA LEU B 544 -36.025 -33.626 -87.682 1.00 41.18 B
ATOM 9318 CB LEU B 544 -35.145 -34.884 -87.755 1.00 40.00 B
ATOM 9319 CG LEU B 544 -33.866 -34.898 -86.903 1.00 38.85 B
ATOM 9320 CD1 LEU B 544 -33.027 -36.118 -87.248 1.00 37.50 B
ATOM 9321 CD2 LEU B 544 -33.057 -33.637 -87.143 1.00 38.14 B
ATOM 9322 C LEU B 544 -37.201 -33.736 -88.656 1.00 41.36 B
ATOM 9323 O LEU B 544 -37.219 -33.078 -89.693 1.00 41.57 B
ATOM 9324 N GLN B 545 -38.202 -34.486 -88.300 1.00 40.59 B
ATOM 9325 CA GLN B 545 -39.337 -34.684 -89.100 1.00 39.73 B
ATOM 9326 CB GLN B 545 -40.209 -35.706 -88.423 1.00 41.89 B
ATOM 9327 CG GLN B 545 -39.849 -37.136 -88.674 1.00 46.21 B
ATOM 9328 CD GLN B 545 -41.006 -38.128 -88.645 1.00 48.75 B
ATOM 9329 OE1 GLN B 545 -42.107 -37.847 -89.040 1.00 51.68 B
ATOM 9330 NE2 GLN B 545 -40.717 -39.302 -88.205 1.00 49.55 B
ATOM 9331 C GLN B 545 -40.146 -33.461 -89.275 1.00 38.06 B
ATOM 9332 O GLN B 545 -41.064 -33.457 -90.013 1.00 38.59 B
ATOM 9333 N ALA B 546 -39.883 -32.441 -88.513 1.00 35.44 B
ATOM 9334 CA ALA B 546 -40.639 -31.198 -88.575 1.00 34.68 B
ATOM 9335 CB ALA B 546 -40.498 -30.444 -87.275 1.00 34.17 B
ATOM 9336 C ALA B 546 -40.173 -30.324 -89.729 1.00 35.23 B
ATOM 9337 O ALA B 546 -40.903 -29.441 -90.189 1.00 34.52 B
ATOM 9338 N GLY B 547 -38.949 -30.572 -90.187 1.00 35.38 B
ATOM 9339 CA GLY B 547 -38.395 -29.794 -91.277 1.00 34.10 B
ATOM 9340 C GLY B 547 -38.598 -28.323 -91.005 1.00 34.70 B
ATOM 9341 O GLY B 547 -38.332 -27.857 -89.901 1.00 35.67 B
ATOM 9342 N SER B 548 -39.091 -27.602 -92.005 1.00 34.84 B
ATOM 9343 CA SER B 548 -39.333 -26.167 -91.907 1.00 34.96 B
ATOM 9344 CB SER B 548 -38.818 -25.481 -93.187 1.00 34.80 B
ATOM 9345 OG SER B 548 -39.393 -24.200 -93.389 1.00 34.71 B
ATOM 9346 C SER B 548 -40.818 -25.866 -91.706 1.00 35.15 B

ATOM 9347 O SER B 548 -41.233 -24.704 -91.669 1.00 34.34 B
ATOM 9348 N SER B 549 -41.608 -26.926 -91.558 1.00 36.34 B
ATOM 9349 CA SER B 549 -43.060 -26.813 -91.394 1.00 37.58 B
ATOM 9350 CB SER B 549 -43.666 -28.194 -91.156 1.00 36.22 B
ATOM 9351 OG SER B 549 -43.208 -28.741 -89.937 1.00 34.83 B
ATOM 9352 C SER B 549 -43.517 -25.882 -90.281 1.00 39.04 B
ATOM 9353 O SER B 549 -44.216 -24.894 -90.527 1.00 40.78 B
ATOM 9354 N ARG B 550 -43.126 -26.210 -89.055 1.00 39.83 B
ATOM 9355 CA ARG B 550 -43.503 -25.431 -87.877 1.00 40.30 B
ATOM 9356 CB ARG B 550 -43.785 -26.393 -86.711 1.00 41.73 B
ATOM 9357 CG ARG B 550 -45.120 -27.133 -86.788 1.00 42.48 B
ATOM 9358 CD ARG B 550 -45.097 -28.475 -86.034 1.00 44.37 B
ATOM 9359 NE ARG B 550 -44.605 -28.407 -84.652 1.00 45.71 B
ATOM 9360 CZ ARG B 550 -45.134 -27.652 -83.684 1.00 46.59 B
ATOM 9361 NH1 ARG B 550 -46.187 -26.874 -83.925 1.00 46.42 B
ATOM 9362 NH2 ARG B 550 -44.614 -27.682 -82.463 1.00 46.01 B
ATOM 9363 C ARG B 550 -42.438 -24.414 -87.450 1.00 39.32 B
ATOM 9364 O ARG B 550 -41.247 -24.611 -87.700 1.00 38.55 B
ATOM 9365 N PRO B 551 -42.864 -23.306 -86.807 1.00 38.36 B
ATOM 9366 CD PRO B 551 -44.272 -22.908 -86.616 1.00 37.54 B
ATOM 9367 CA PRO B 551 -41.963 -22.249 -86.326 1.00 38.49 B
ATOM 9368 CB PRO B 551 -42.912 -21.301 -85.603 1.00 36.89 B
ATOM 9369 CG PRO B 551 -44.163 -21.414 -86.407 1.00 36.45 B
ATOM 9370 C PRO B 551 -40.937 -22.869 -85.375 1.00 39.19 B
ATOM 9371 O PRO B 551 -41.317 -23.573 -84.438 1.00 39.93 B
ATOM 9372 N TRP B 552 -39.649 -22.610 -85.601 1.00 39.92 B
ATOM 9373 CA TRP B 552 -38.609 -23.203 -84.764 1.00 40.91 B
ATOM 9374 CB TRP B 552 -37.221 -22.657 -85.119 1.00 41.54 B
ATOM 9375 CG TRP B 552 -37.000 -21.210 -84.799 1.00 41.96 B
ATOM 9376 CD2 TRP B 552 -36.558 -20.663 -83.548 1.00 42.33 B
ATOM 9377 CE2 TRP B 552 -36.489 -19.260 -83.707 1.00 42.24 B
ATOM 9378 CE3 TRP B 552 -36.211 -21.222 -82.306 1.00 42.04 B
ATOM 9379 CD1 TRP B 552 -37.176 -20.151 -85.636 1.00 42.23 B
ATOM 9380 NE1 TRP B 552 -36.870 -18.975 -84.991 1.00 41.99 B

ATOM 9381 CZ2 TRP B 552 -36.092 -18.407 -82.670 1.00 41.35 B
ATOM 9382 CZ3 TRP B 552 -35.816 -20.371 -81.276 1.00 41.07 B
ATOM 9383 CH2 TRP B 552 -35.762 -18.981 -81.467 1.00 41.33 B
ATOM 9384 C TRP B 552 -38.849 -23.023 -83.272 1.00 41.60 B
ATOM 9385 O TRP B 552 -38.692 -23.972 -82.498 1.00 40.75 B
ATOM 9386 N GLN B 553 -39.231 -21.811 -82.867 1.00 41.74 B
ATOM 9387 CA GLN B 553 -39.477 -21.549 -81.459 1.00 41.46 B
ATOM 9388 CB GLN B 553 -40.053 -20.144 -81.246 1.00 41.48 B
ATOM 9389 CG GLN B 553 -40.756 -19.516 -82.440 1.00 43.02 B
ATOM 9390 CD GLN B 553 -39.816 -18.736 -83.351 1.00 42.89 B
ATOM 9391 OE1 GLN B 553 -39.133 -17.804 -82.916 1.00 41.39 B
ATOM 9392 NE2 GLN B 553 -39.787 -19.111 -84.627 1.00 43.95 B
ATOM 9393 C GLN B 553 -40.406 -22.598 -80.874 1.00 40.95 B
ATOM 9394 O GLN B 553 -40.186 -23.075 -79.766 1.00 41.42 B
ATOM 9395 N GLU B 554 -41.430 -22.979 -81.623 1.00 40.55 B
ATOM 9396 CA GLU B 554 -42.360 -23.989 -81.140 1.00 41.57 B
ATOM 9397 CB GLU B 554 -43.593 -24.071 -82.033 1.00 44.40 B
ATOM 9398 CG GLU B 554 -44.258 -22.733 -82.308 1.00 49.08 B
ATOM 9399 CD GLU B 554 -45.686 -22.883 -82.814 1.00 51.48 B
ATOM 9400 OE1 GLU B 554 -45.991 -23.924 -83.458 1.00 52.76 B
ATOM 9401 OE2 GLU B 554 -46.494 -21.949 -82.582 1.00 52.45 B
ATOM 9402 C GLU B 554 -41.705 -25.357 -81.096 1.00 41.33 B
ATOM 9403 O GLU B 554 -41.872 -26.099 -80.137 1.00 41.90 B
ATOM 9404 N VAL B 555 -40.964 -25.698 -82.142 1.00 40.65 B
ATOM 9405 CA VAL B 555 -40.303 -26.999 -82.200 1.00 40.46 B
ATOM 9406 CB VAL B 555 -39.546 -27.175 -83.546 1.00 39.82 B
ATOM 9407 CG1 VAL B 555 -38.969 -28.577 -83.651 1.00 37.64 B
ATOM 9408 CG2 VAL B 555 -40.490 -26.899 -84.707 1.00 38.94 B
ATOM 9409 C VAL B 555 -39.330 -27.158 -81.028 1.00 41.07 B
ATOM 9410 O VAL B 555 -39.159 -28.249 -80.485 1.00 40.66 B
ATOM 9411 N LEU B 556 -38.704 -26.051 -80.642 1.00 42.08 B
ATOM 9412 CA LEU B 556 -37.751 -26.035 -79.533 1.00 42.18 B
ATOM 9413 CB LEU B 556 -36.963 -24.720 -79.548 1.00 40.79 B
ATOM 9414 CG LEU B 556 -35.702 -24.591 -78.697 1.00 39.16 B

ATOM 9415 CD1 LEU B 556 -34.668 -25.624 -79.114 1.00 36.71 B
ATOM 9416 CD2 LEU B 556 -35.159 -23.184 -78.863 1.00 38.53 B
ATOM 9417 C LEU B 556 -38.490 -26.187 -78.197 1.00 42.32 B
ATOM 9418 O LEU B 556 -38.120 -27.013 -77.364 1.00 42.99 B
ATOM 9419 N LYS B 557 -39.536 -25.394 -77.997 1.00 41.86 B
ATOM 9420 CA LYS B 557 -40.301 -25.475 -76.764 1.00 42.72 B
ATOM 9421 CB LYS B 557 -41.511 -24.549 -76.833 1.00 42.86 B
ATOM 9422 CG LYS B 557 -42.187 -24.313 -75.501 1.00 41.90 B
ATOM 9423 CD LYS B 557 -43.100 -23.101 -75.590 1.00 43.98 B
ATOM 9424 CE LYS B 557 -43.600 -22.685 -74.215 1.00 45.14 B
ATOM 9425 NZ LYS B 557 -44.336 -21.387 -74.259 1.00 46.16 B
ATOM 9426 C LYS B 557 -40.760 -26.908 -76.526 1.00 43.36 B
ATOM 9427 O LYS B 557 -40.939 -27.328 -75.391 1.00 44.94 B
ATOM 9428 N ASP B 558 -40.940 -27.653 -77.610 1.00 43.75 B
ATOM 9429 CA ASP B 558 -41.377 -29.044 -77.554 1.00 43.67 B
ATOM 9430 CB ASP B 558 -41.906 -29.485 -78.922 1.00 45.68 B
ATOM 9431 CG ASP B 558 -43.327 -29.014 -79.200 1.00 47.53 B
ATOM 9432 OD1 ASP B 558 -43.693 -27.879 -78.818 1.00 47.92 B
ATOM 9433 OD2 ASP B 558 -44.079 -29.785 -79.832 1.00 48.33 B
ATOM 9434 C ASP B 558 -40.230 -29.965 -77.186 1.00 43.45 B
ATOM 9435 O ASP B 558 -40.417 -30.967 -76.509 1.00 43.98 B
ATOM 9436 N MET B 559 -39.037 -29.623 -77.645 1.00 43.65 B
ATOM 9437 CA MET B 559 -37.869 -30.452 -77.407 1.00 43.88 B
ATOM 9438 CB MET B 559 -36.921 -30.336 -78.596 1.00 42.76 B
ATOM 9439 CG MET B 559 -35.850 -31.392 -78.610 1.00 42.98 B
ATOM 9440 SD MET B 559 -34.292 -30.788 -79.293 1.00 43.98 B
ATOM 9441 CE MET B 559 -33.261 -32.319 -79.185 1.00 43.17 B
ATOM 9442 C MET B 559 -37.103 -30.142 -76.122 1.00 44.24 B
ATOM 9443 O MET B 559 -36.752 -31.041 -75.366 1.00 43.91 B
ATOM 9444 N VAL B 560 -36.837 -28.868 -75.878 1.00 44.67 B
ATOM 9445 CA VAL B 560 -36.090 -28.474 -74.700 1.00 44.60 B
ATOM 9446 CB VAL B 560 -35.014 -27.408 -75.067 1.00 46.65 B
ATOM 9447 CG1 VAL B 560 -34.134 -27.076 -73.842 1.00 48.47 B
ATOM 9448 CG2 VAL B 560 -34.151 -27.930 -76.221 1.00 46.35 B

ATOM 9449 C VAL B 560 -37.024 -27.921 -73.637 1.00 43.58 B
ATOM 9450 O VAL B 560 -36.671 -27.851 -72.464 1.00 43.72 B
ATOM 9451 N GLY B 561 -38.227 -27.543 -74.050 1.00 42.97 B
ATOM 9452 CA GLY B 561 -39.175 -26.989 -73.102 1.00 43.40 B
ATOM 9453 C GLY B 561 -38.984 -25.490 -72.960 1.00 43.70 B
ATOM 9454 O GLY B 561 -39.545 -24.842 -72.075 1.00 43.63 B
ATOM 9455 N LEU B 562 -38.185 -24.926 -73.849 1.00 44.34 B
ATOM 9456 CA LEU B 562 -37.938 -23.505 -73.796 1.00 44.94 B
ATOM 9457 CB LEU B 562 -36.482 -23.248 -73.417 1.00 45.28 B
ATOM 9458 CG LEU B 562 -36.195 -21.829 -72.930 1.00 43.60 B
ATOM 9459 CD1 LEU B 562 -36.964 -21.569 -71.644 1.00 41.74 B
ATOM 9460 CD2 LEU B 562 -34.698 -21.664 -72.727 1.00 43.26 B
ATOM 9461 C LEU B 562 -38.274 -22.830 -75.118 1.00 45.27 B
ATOM 9462 O LEU B 562 -38.055 -23.378 -76.193 1.00 46.05 B
ATOM 9463 N ASP B 563 -38.785 -21.615 -75.005 1.00 45.84 B
ATOM 9464 CA ASP B 563 -39.214 -20.806 -76.134 1.00 45.70 B
ATOM 9465 CB ASP B 563 -40.151 -19.724 -75.604 1.00 47.47 B
ATOM 9466 CG ASP B 563 -41.091 -19.204 -76.654 1.00 48.52 B
ATOM 9467 OD1 ASP B 563 -40.656 -19.056 -77.813 1.00 49.67 B
ATOM 9468 OD2 ASP B 563 -42.266 -18.930 -76.313 1.00 49.97 B
ATOM 9469 C ASP B 563 -38.108 -20.141 -76.966 1.00 45.48 B
ATOM 9470 O ASP B 563 -38.404 -19.454 -77.943 1.00 44.95 B
ATOM 9471 N ALA B 564 -36.843 -20.318 -76.594 1.00 44.65 B
ATOM 9472 CA ALA B 564 -35.780 -19.681 -77.363 1.00 43.57 B
ATOM 9473 CB ALA B 564 -35.876 -18.169 -77.218 1.00 41.57 B
ATOM 9474 C ALA B 564 -34.371 -20.140 -77.023 1.00 43.39 B
ATOM 9475 O ALA B 564 -34.174 -21.123 -76.307 1.00 42.91 B
ATOM 9476 N LEU B 565 -33.395 -19.421 -77.575 1.00 43.52 B
ATOM 9477 CA LEU B 565 -31.984 -19.704 -77.346 1.00 42.78 B
ATOM 9478 CB LEU B 565 -31.114 -18.885 -78.293 1.00 43.31 B
ATOM 9479 CG LEU B 565 -30.926 -19.410 -79.713 1.00 44.36 B
ATOM 9480 CD1 LEU B 565 -30.538 -18.247 -80.631 1.00 43.32 B
ATOM 9481 CD2 LEU B 565 -29.864 -20.513 -79.721 1.00 44.16 B
ATOM 9482 C LEU B 565 -31.639 -19.329 -75.917 1.00 42.36 B

ATOM 9483 O LEU B 565 -32.105 -18.310 -75.402 1.00 42.15 B
ATOM 9484 N ASP B 566 -30.747 -20.072 -75.292 1.00 41.59 B
ATOM 9485 CA ASP B 566 -30.422 -19.881 -73.892 1.00 40.71 B
ATOM 9486 CB ASP B 566 -31.421 -20.701 -73.106 1.00 43.28 B
ATOM 9487 CG ASP B 566 -31.583 -20.296 -71.680 1.00 45.99 B
ATOM 9488 OD1 ASP B 566 -31.676 -19.118 -71.370 1.00 47.94 B
ATOM 9489 OD2 ASP B 566 -31.697 -21.117 -70.790 1.00 46.40 B
ATOM 9490 C ASP B 566 -29.025 -20.373 -73.675 1.00 39.12 B
ATOM 9491 O ASP B 566 -28.688 -21.408 -74.166 1.00 38.39 B
ATOM 9492 N ALA B 567 -28.206 -19.604 -72.966 1.00 36.51 B
ATOM 9493 CA ALA B 567 -26.825 -19.959 -72.686 1.00 34.54 B
ATOM 9494 CB ALA B 567 -25.987 -18.701 -72.511 1.00 34.47 B
ATOM 9495 C ALA B 567 -26.694 -20.827 -71.456 1.00 32.42 B
ATOM 9496 O ALA B 567 -25.744 -21.588 -71.337 1.00 31.96 B
ATOM 9497 N ALA B 568 -27.654 -20.716 -70.549 1.00 30.75 B
ATOM 9498 CA ALA B 568 -27.613 -21.465 -69.307 1.00 30.06 B
ATOM 9499 CB ALA B 568 -29.004 -21.561 -68.717 1.00 30.45 B
ATOM 9500 C ALA B 568 -26.992 -22.850 -69.456 1.00 29.43 B
ATOM 9501 O ALA B 568 -26.057 -23.192 -68.729 1.00 30.56 B
ATOM 9502 N PRO B 569 -27.487 -23.661 -70.405 1.00 28.00 B
ATOM 9503 CD PRO B 569 -28.672 -23.498 -71.261 1.00 26.75 B
ATOM 9504 CA PRO B 569 -26.905 -24.996 -70.568 1.00 27.45 B
ATOM 9505 CB PRO B 569 -27.845 -25.668 -71.568 1.00 25.54 B
ATOM 9506 CG PRO B 569 -28.440 -24.537 -72.306 1.00 26.33 B
ATOM 9507 C PRO B 569 -25.439 -25.008 -71.004 1.00 27.80 B
ATOM 9508 O PRO B 569 -24.677 -25.886 -70.605 1.00 28.41 B
ATOM 9509 N LEU B 570 -25.038 -24.041 -71.821 1.00 27.61 B
ATOM 9510 CA LEU B 570 -23.645 -23.976 -72.249 1.00 27.21 B
ATOM 9511 CB LEU B 570 -23.431 -22.784 -73.201 1.00 27.74 B
ATOM 9512 CG LEU B 570 -22.006 -22.359 -73.597 1.00 27.63 B
ATOM 9513 CD1 LEU B 570 -21.243 -23.520 -74.124 1.00 28.50 B
ATOM 9514 CD2 LEU B 570 -22.056 -21.294 -74.658 1.00 29.91 B
ATOM 9515 C LEU B 570 -22.833 -23.797 -70.975 1.00 26.65 B
ATOM 9516 O LEU B 570 -21.963 -24.606 -70.655 1.00 26.01 B

ATOM 9517 N LEU B 571 -23.158 -22.726 -70.254 1.00 25.90 B
ATOM 9518 CA LEU B 571 -22.535 -22.355 -68.987 1.00 24.40 B
ATOM 9519 CB LEU B 571 -23.381 -21.293 -68.303 1.00 23.30 B
ATOM 9520 CG LEU B 571 -23.511 -19.988 -69.080 1.00 21.97 B
ATOM 9521 CD1 LEU B 571 -24.700 -19.192 -68.587 1.00 21.87 B
ATOM 9522 CD2 LEU B 571 -22.227 -19.211 -68.937 1.00 22.23 B
ATOM 9523 C LEU B 571 -22.449 -23.569 -68.094 1.00 25.57 B
ATOM 9524 O LEU B 571 -21.401 -23.863 -67.526 1.00 27.22 B
ATOM 9525 N LYS B 572 -23.557 -24.236 -67.853 1.00 25.43 B
ATOM 9526 CA LYS B 572 -23.571 -25.527 -67.214 1.00 25.99 B
ATOM 9527 CB LYS B 572 -24.914 -26.131 -67.286 1.00 27.30 B
ATOM 9528 CG LYS B 572 -25.717 -26.086 -66.030 1.00 29.46 B
ATOM 9529 CD LYS B 572 -27.086 -26.533 -66.200 1.00 31.79 B
ATOM 9530 CE LYS B 572 -27.006 -27.962 -66.490 1.00 34.66 B
ATOM 9531 NZ LYS B 572 -28.294 -28.650 -66.680 1.00 36.95 B
ATOM 9532 C LYS B 572 -22.684 -26.577 -67.672 1.00 25.73 B
ATOM 9533 O LYS B 572 -22.296 -27.407 -66.962 1.00 25.83 B
ATOM 9534 N TYR B 573 -22.449 -26.634 -68.934 1.00 26.33 B
ATOM 9535 CA TYR B 573 -21.550 -27.650 -69.478 1.00 26.13 B
ATOM 9536 CB TYR B 573 -21.688 -27.723 -71.006 1.00 25.57 B
ATOM 9537 CG TYR B 573 -20.822 -28.778 -71.681 1.00 23.23 B
ATOM 9538 CD1 TYR B 573 -21.383 -29.963 -72.167 1.00 22.27 B
ATOM 9539 CE1 TYR B 573 -20.599 -30.932 -72.785 1.00 22.02 B
ATOM 9540 CD2 TYR B 573 -19.451 -28.592 -71.833 1.00 21.37 B
ATOM 9541 CE2 TYR B 573 -18.662 -29.550 -72.445 1.00 22.44 B
ATOM 9542 CZ TYR B 573 -19.241 -30.721 -72.919 1.00 23.42 B
ATOM 9543 OH TYR B 573 -18.453 -31.689 -73.499 1.00 23.68 B
ATOM 9544 C TYR B 573 -20.098 -27.371 -69.135 1.00 26.89 B
ATOM 9545 O TYR B 573 -19.336 -28.298 -68.863 1.00 27.75 B
ATOM 9546 N PHE B 574 -19.713 -26.097 -69.150 1.00 27.60 B
ATOM 9547 CA PHE B 574 -18.325 -25.714 -68.874 1.00 28.47 B
ATOM 9548 CB PHE B 574 -17.906 -24.626 -69.868 1.00 26.52 B
ATOM 9549 CG PHE B 574 -17.858 -25.096 -71.290 1.00 24.98 B
ATOM 9550 CD1 PHE B 574 -18.891 -24.813 -72.166 1.00 23.79 B

ATOM 9551 CD2 PHE B 574 -16.769 -25.843 -71.751 1.00 24.23 B
ATOM 9552 CE1 PHE B 574 -18.838 -25.267 -73.473 1.00 24.25 B
ATOM 9553 CE2 PHE B 574 -16.712 -26.298 -73.051 1.00 22.92 B
ATOM 9554 CZ PHE B 574 -17.747 -26.010 -73.914 1.00 24.54 B
ATOM 9555 C PHE B 574 -17.954 -25.269 -67.445 1.00 29.90 B
ATOM 9556 O PHE B 574 -16.791 -24.969 -67.163 1.00 30.56 B
ATOM 9557 N GLN B 575 -18.868 -25.342 -66.517 1.00 31.22 B
ATOM 9558 CA GLN B 575 -18.659 -24.866 -65.181 1.00 32.04 B
ATOM 9559 CB GLN B 575 -19.728 -25.367 -64.342 1.00 33.24 B
ATOM 9560 CG GLN B 575 -20.474 -24.353 -63.678 1.00 35.80 B
ATOM 9561 CD GLN B 575 -21.736 -24.900 -63.205 1.00 38.18 B
ATOM 9562 OE1 GLN B 575 -22.764 -24.362 -63.446 1.00 39.54 B
ATOM 9563 NE2 GLN B 575 -21.670 -25.998 -62.592 1.00 37.30 B
ATOM 9564 C GLN B 575 -17.416 -25.158 -64.462 1.00 32.64 B
ATOM 9565 O GLN B 575 -16.845 -24.297 -63.921 1.00 32.42 B
ATOM 9566 N PRO B 576 -17.011 -26.384 -64.331 1.00 33.33 B
ATOM 9567 CD PRO B 576 -17.632 -27.675 -64.696 1.00 34.60 B
ATOM 9568 CA PRO B 576 -15.742 -26.596 -63.622 1.00 32.56 B
ATOM 9569 CB PRO B 576 -15.560 -28.123 -63.668 1.00 32.95 B
ATOM 9570 CG PRO B 576 -16.988 -28.640 -63.688 1.00 34.40 B
ATOM 9571 C PRO B 576 -14.550 -25.838 -64.206 1.00 31.21 B
ATOM 9572 O PRO B 576 -13.749 -25.281 -63.460 1.00 32.14 B
ATOM 9573 N VAL B 577 -14.430 -25.798 -65.529 1.00 29.24 B
ATOM 9574 CA VAL B 577 -13.304 -25.099 -66.134 1.00 27.81 B
ATOM 9575 CB VAL B 577 -12.926 -25.702 -67.520 1.00 27.99 B
ATOM 9576 CG1 VAL B 577 -13.809 -25.137 -68.614 1.00 27.21 B
ATOM 9577 CG2 VAL B 577 -11.458 -25.441 -67.809 1.00 28.79 B
ATOM 9578 C VAL B 577 -13.560 -23.600 -66.248 1.00 26.61 B
ATOM 9579 O VAL B 577 -12.615 -22.820 -66.320 1.00 26.68 B
ATOM 9580 N THR B 578 -14.829 -23.196 -66.258 1.00 25.36 B
ATOM 9581 CA THR B 578 -15.158 -21.772 -66.312 1.00 25.34 B
ATOM 9582 CB THR B 578 -16.674 -21.515 -66.222 1.00 24.71 B
ATOM 9583 OG1 THR B 578 -17.300 -21.853 -67.466 1.00 24.56 B
ATOM 9584 CG2 THR B 578 -16.948 -20.054 -65.884 1.00 23.51 B

ATOM 9585 C THR B 578 -14.530 -21.162 -65.070 1.00 25.97 B
ATOM 9586 O THR B 578 -13.907 -20.098 -65.116 1.00 26.41 B
ATOM 9587 N GLN B 579 -14.482 -21.911 -64.031 1.00 26.18 B
ATOM 9588 CA GLN B 579 -14.044 -21.419 -62.794 1.00 26.59 B
ATOM 9589 CB GLN B 579 -14.847 -22.022 -61.694 1.00 27.58 B
ATOM 9590 CG GLN B 579 -16.301 -22.007 -61.852 1.00 30.99 B
ATOM 9591 CD GLN B 579 -16.905 -20.703 -61.413 1.00 33.74 B
ATOM 9592 OE1 GLN B 579 -17.962 -20.309 -61.859 1.00 35.85 B
ATOM 9593 NE2 GLN B 579 -16.241 -20.050 -60.556 1.00 31.46 B
ATOM 9594 C GLN B 579 -12.675 -21.717 -62.516 1.00 25.93 B
ATOM 9595 O GLN B 579 -12.055 -21.015 -61.841 1.00 25.67 B
ATOM 9596 N TRP B 580 -12.209 -22.853 -62.949 1.00 25.70 B
ATOM 9597 CA TRP B 580 -10.791 -23.164 -62.834 1.00 24.46 B
ATOM 9598 CB TRP B 580 -10.510 -24.574 -63.328 1.00 23.68 B
ATOM 9599 CG TRP B 580 -9.074 -24.915 -63.227 1.00 23.87 B
ATOM 9600 CD2 TRP B 580 -8.101 -24.772 -64.259 1.00 25.39 B
ATOM 9601 CE2 TRP B 580 -6.849 -25.107 -63.699 1.00 24.59 B
ATOM 9602 CE3 TRP B 580 -8.163 -24.384 -65.606 1.00 25.83 B
ATOM 9603 CD1 TRP B 580 -8.402 -25.329 -62.119 1.00 23.44 B
ATOM 9604 NE1 TRP B 580 -7.065 -25.448 -62.390 1.00 23.02 B
ATOM 9605 CZ2 TRP B 580 -5.665 -25.067 -64.436 1.00 25.96 B
ATOM 9606 CZ3 TRP B 580 -6.988 -24.345 -66.342 1.00 26.76 B
ATOM 9607 CH2 TRP B 580 -5.753 -24.682 -65.752 1.00 27.14 B
ATOM 9608 C TRP B 580 -9.929 -22.170 -63.602 1.00 25.09 B
ATOM 9609 O TRP B 580 -8.832 -21.810 -63.157 1.00 24.52 B
ATOM 9610 N LEU B 581 -10.427 -21.726 -64.758 1.00 25.04 B
ATOM 9611 CA LEU B 581 -9.708 -20.749 -65.574 1.00 23.67 B
ATOM 9612 CB LEU B 581 -10.363 -20.622 -66.949 1.00 22.40 B
ATOM 9613 CG LEU B 581 -9.945 -21.660 -68.000 1.00 20.18 B
ATOM 9614 CD1 LEU B 581 -10.807 -21.511 -69.247 1.00 17.89 B
ATOM 9615 CD2 LEU B 581 -8.474 -21.475 -68.335 1.00 16.02 B
ATOM 9616 C LEU B 581 -9.701 -19.399 -64.872 1.00 23.50 B
ATOM 9617 O LEU B 581 -8.657 -18.773 -64.715 1.00 22.08 B
ATOM 9618 N GLN B 582 -10.881 -18.961 -64.454 1.00 24.25 B

ATOM 9619 CA GLN B 582 -11.024 -17.702 -63.742 1.00 25.06 B
ATOM 9620 CB GLN B 582 -12.451 -17.563 -63.209 1.00 23.63 B
ATOM 9621 CG GLN B 582 -13.410 -16.829 -64.119 1.00 22.21 B
ATOM 9622 CD GLN B 582 -14.721 -16.498 -63.428 1.00 22.21 B
ATOM 9623 OE1 GLN B 582 -15.636 -17.311 -63.388 1.00 23.34 B
ATOM 9624 NE2 GLN B 582 -14.807 -15.301 -62.866 1.00 22.51 B
ATOM 9625 C GLN B 582 -10.048 -17.613 -62.572 1.00 26.72 B
ATOM 9626 O GLN B 582 -9.348 -16.612 -62.403 1.00 27.27 B
ATOM 9627 N GLU B 583 -10.002 -18.663 -61.755 1.00 27.71 B
ATOM 9628 CA GLU B 583 -9.114 -18.674 -60.592 1.00 28.39 B
ATOM 9629 CB GLU B 583 -9.353 -19.928 -59.736 1.00 30.48 B
ATOM 9630 CG GLU B 583 -8.495 -19.966 -58.459 1.00 32.33 B
ATOM 9631 CD GLU B 583 -8.895 -18.917 -57.413 1.00 31.99 B
ATOM 9632 OE1 GLU B 583 -9.182 -17.753 -57.775 1.00 31.14 B
ATOM 9633 OE2 GLU B 583 -8.906 -19.258 -56.213 1.00 33.39 B
ATOM 9634 C GLU B 583 -7.644 -18.586 -60.987 1.00 27.72 B
ATOM 9635 O GLU B 583 -6.882 -17.849 -60.367 1.00 26.58 B
ATOM 9636 N GLN B 584 -7.252 -19.341 -62.013 1.00 27.45 B
ATOM 9637 CA GLN B 584 -5.875 -19.326 -62.506 1.00 27.16 B
ATOM 9638 CB GLN B 584 -5.723 -20.265 -63.704 1.00 27.17 B
ATOM 9639 CG GLN B 584 -5.950 -21.739 -63.398 1.00 30.15 B
ATOM 9640 CD GLN B 584 -4.877 -22.321 -62.500 1.00 30.46 B
ATOM 9641 OE1 GLN B 584 -3.684 -22.172 -62.771 1.00 30.92 B
ATOM 9642 NE2 GLN B 584 -5.293 -22.991 -61.428 1.00 29.21 B
ATOM 9643 C GLN B 584 -5.458 -17.922 -62.948 1.00 26.84 B
ATOM 9644 O GLN B 584 -4.437 -17.399 -62.497 1.00 27.79 B
ATOM 9645 N ASN B 585 -6.251 -17.314 -63.833 1.00 25.66 B
ATOM 9646 CA ASN B 585 -5.945 -15.991 -64.359 1.00 24.43 B
ATOM 9647 CB ASN B 585 -7.053 -15.521 -65.297 1.00 22.38 B
ATOM 9648 CG ASN B 585 -6.999 -16.204 -66.651 1.00 20.41 B
ATOM 9649 OD1 ASN B 585 -5.919 -16.536 -67.143 1.00 17.91 B
ATOM 9650 ND2 ASN B 585 -8.160 -16.400 -67.267 1.00 19.21 B
ATOM 9651 C ASN B 585 -5.686 -14.937 -63.303 1.00 25.42 B
ATOM 9652 O ASN B 585 -4.655 -14.270 -63.340 1.00 26.28 B

ATOM 9653 N GLN B 586 -6.614 -14.787 -62.361 1.00 26.48 B
ATOM 9654 CA GLN B 586 -6.467 -13.797 -61.292 1.00 26.83 B
ATOM 9655 CB GLN B 586 -7.742 -13.750 -60.433 1.00 28.87 B
ATOM 9656 CG GLN B 586 -7.651 -14.368 -59.034 1.00 34.27 B
ATOM 9657 CD GLN B 586 -6.966 -13.460 -58.001 1.00 37.68 B
ATOM 9658 OE1 GLN B 586 -7.127 -12.223 -58.033 1.00 38.87 B
ATOM 9659 NE2 GLN B 586 -6.217 -14.073 -57.062 1.00 37.34 B
ATOM 9660 C GLN B 586 -5.233 -14.076 -60.431 1.00 25.40 B
ATOM 9661 O GLN B 586 -4.493 -13.164 -60.080 1.00 23.71 B
ATOM 9662 N GLN B 587 -4.998 -15.338 -60.099 1.00 25.46 B
ATOM 9663 CA GLN B 587 -3.841 -15.681 -59.292 1.00 26.28 B
ATOM 9664 CB GLN B 587 -3.838 -17.174 -58.979 1.00 26.54 B
ATOM 9665 CG GLN B 587 -4.947 -17.560 -58.010 1.00 26.70 B
ATOM 9666 CD GLN B 587 -4.916 -19.024 -57.597 1.00 26.53 B
ATOM 9667 OE1 GLN B 587 -5.360 -19.377 -56.496 1.00 27.83 B
ATOM 9668 NE2 GLN B 587 -4.404 -19.885 -58.479 1.00 24.80 B
ATOM 9669 C GLN B 587 -2.561 -15.281 -60.003 1.00 26.44 B
ATOM 9670 O GLN B 587 -1.616 -14.799 -59.376 1.00 26.98 B
ATOM 9671 N ASN B 588 -2.534 -15.473 -61.317 1.00 26.11 B
ATOM 9672 CA ASN B 588 -1.365 -15.105 -62.104 1.00 25.50 B
ATOM 9673 CB ASN B 588 -1.303 -15.932 -63.371 1.00 26.23 B
ATOM 9674 CG ASN B 588 -0.952 -17.351 -63.089 1.00 28.58 B
ATOM 9675 OD1 ASN B 588 0.144 -17.643 -62.615 1.00 31.06 B
ATOM 9676 ND2 ASN B 588 -1.883 -18.255 -63.355 1.00 30.69 B
ATOM 9677 C ASN B 588 -1.405 -13.632 -62.456 1.00 24.58 B
ATOM 9678 O ASN B 588 -0.448 -13.089 -63.000 1.00 24.25 B
ATOM 9679 N GLY B 589 -2.515 -12.981 -62.143 1.00 23.99 B
ATOM 9680 CA GLY B 589 -2.616 -11.567 -62.430 1.00 24.70 B
ATOM 9681 C GLY B 589 -2.677 -11.246 -63.908 1.00 25.08 B
ATOM 9682 O GLY B 589 -2.027 -10.302 -64.377 1.00 23.78 B
ATOM 9683 N GLU B 590 -3.472 -11.973 -64.618 1.00 25.65 B
ATOM 9684 CA GLU B 590 -3.664 -11.711 -65.985 1.00 25.69 B
ATOM 9685 CB GLU B 590 -4.021 -12.974 -66.677 1.00 25.01 B
ATOM 9686 CG GLU B 590 -3.020 -13.293 -67.735 1.00 29.43 B

ATOM 9687 CD GLU B 590 -1.993 -14.198 -67.283 1.00 31.16 B
ATOM 9688 OE1 GLU B 590 -0.819 -13.877 -67.388 1.00 29.80 B
ATOM 9689 OE2 GLU B 590 -2.409 -15.224 -66.815 1.00 33.16 B
ATOM 9690 C GLU B 590 -4.614 -10.619 -66.256 1.00 24.63 B
ATOM 9691 O GLU B 590 -5.464 -10.386 -65.478 1.00 25.03 B
ATOM 9692 N VAL B 591 -4.460 -9.936 -67.370 1.00 22.84 B
ATOM 9693 CA VAL B 591 -5.381 -8.866 -67.704 1.00 20.75 B
ATOM 9694 CB VAL B 591 -4.671 -7.674 -68.404 1.00 21.13 B
ATOM 9695 CG1 VAL B 591 -5.689 -6.805 -69.140 1.00 19.57 B
ATOM 9696 CG2 VAL B 591 -3.929 -6.834 -67.385 1.00 20.67 B
ATOM 9697 C VAL B 591 -6.349 -9.492 -68.698 1.00 20.16 B
ATOM 9698 O VAL B 591 -5.929 -10.083 -69.685 1.00 18.31 B
ATOM 9699 N LEU B 592 -7.642 -9.397 -68.428 1.00 19.57 B
ATOM 9700 CA LEU B 592 -8.611 -9.947 -69.351 1.00 18.93 B
ATOM 9701 CB LEU B 592 -9.899 -10.318 -68.618 1.00 18.35 B
ATOM 9702 CG LEU B 592 -9.752 -11.371 -67.514 1.00 18.27 B
ATOM 9703 CD1 LEU B 592 -11.132 -11.804 -67.029 1.00 17.83 B
ATOM 9704 CD2 LEU B 592 -8.978 -12.570 -68.031 1.00 17.27 B
ATOM 9705 C LEU B 592 -8.879 -8.884 -70.405 1.00 19.04 B
ATOM 9706 O LEU B 592 -9.216 -7.744 -70.079 1.00 18.66 B
ATOM 9707 N GLY B 593 -8.708 -9.261 -71.671 1.00 18.75 B
ATOM 9708 CA GLY B 593 -8.925 -8.329 -72.760 1.00 17.22 B
ATOM 9709 C GLY B 593 -7.599 -7.900 -73.345 1.00 17.06 B
ATOM 9710 O GLY B 593 -6.572 -8.518 -73.075 1.00 16.47 B
ATOM 9711 N TRP B 594 -7.622 -6.833 -74.138 1.00 16.87 B
ATOM 9712 CA TRP B 594 -6.418 -6.311 -74.787 1.00 18.04 B
ATOM 9713 CB TRP B 594 -6.291 -6.909 -76.200 1.00 18.18 B
ATOM 9714 CG TRP B 594 -7.628 -7.129 -76.862 1.00 16.90 B
ATOM 9715 CD2 TRP B 594 -8.486 -8.263 -76.686 1.00 15.42 B
ATOM 9716 CE2 TRP B 594 -9.695 -7.983 -77.362 1.00 14.47 B
ATOM 9717 CE3 TRP B 594 -8.352 -9.486 -76.016 1.00 14.67 B
ATOM 9718 CD1 TRP B 594 -8.328 -6.237 -77.628 1.00 16.37 B
ATOM 9719 NE1 TRP B 594 -9.571 -6.742 -77.929 1.00 14.27 B
ATOM 9720 CZ2 TRP B 594 -10.768 -8.883 -77.384 1.00 14.61 B

ATOM 9721 CZ3 TRP B 594 -9.415 -10.378 -76.038 1.00 14.12 B
ATOM 9722 CH2 TRP B 594 -10.608 -10.072 -76.717 1.00 14.26 B
ATOM 9723 C TRP B 594 -6.475 -4.786 -74.847 1.00 18.19 B
ATOM 9724 O TRP B 594 -6.932 -4.205 -75.843 1.00 19.18 B
ATOM 9725 N PRO B 595 -6.029 -4.120 -73.757 1.00 18.25 B
ATOM 9726 CD PRO B 595 -5.561 -4.802 -72.536 1.00 18.33 B
ATOM 9727 CA PRO B 595 -5.981 -2.664 -73.572 1.00 17.09 B
ATOM 9728 CB PRO B 595 -5.440 -2.512 -72.155 1.00 16.64 B
ATOM 9729 CG PRO B 595 -5.816 -3.774 -71.493 1.00 17.15 B
ATOM 9730 C PRO B 595 -5.061 -2.014 -74.593 1.00 18.28 B
ATOM 9731 O PRO B 595 -5.303 -0.904 -75.041 1.00 18.74 B
ATOM 9732 N GLU B 596 -3.984 -2.703 -74.941 1.00 19.79 B
ATOM 9733 CA GLU B 596 -3.056 -2.179 -75.929 1.00 22.51 B
ATOM 9734 CB GLU B 596 -1.659 -2.721 -75.639 1.00 22.28 B
ATOM 9735 CG GLU B 596 -1.248 -2.525 -74.193 1.00 24.21 B
ATOM 9736 CD GLU B 596 0.267 -2.485 -73.999 1.00 27.43 B
ATOM 9737 OE1 GLU B 596 1.023 -2.894 -74.922 1.00 28.50 B
ATOM 9738 OE2 GLU B 596 0.704 -2.053 -72.908 1.00 28.14 B
ATOM 9739 C GLU B 596 -3.564 -2.611 -77.321 1.00 23.38 B
ATOM 9740 O GLU B 596 -2.839 -3.214 -78.121 1.00 23.92 B
ATOM 9741 N TYR B 597 -4.832 -2.287 -77.581 1.00 23.34 B
ATOM 9742 CA TYR B 597 -5.530 -2.636 -78.816 1.00 22.81 B
ATOM 9743 CB TYR B 597 -6.919 -1.977 -78.833 1.00 19.88 B
ATOM 9744 CG TYR B 597 -6.883 -0.469 -78.846 1.00 17.48 B
ATOM 9745 CD1 TYR B 597 -6.234 0.224 -79.864 1.00 17.68 B
ATOM 9746 CE1 TYR B 597 -6.177 1.617 -79.880 1.00 17.68 B
ATOM 9747 CD2 TYR B 597 -7.481 0.271 -77.834 1.00 18.31 B
ATOM 9748 CE2 TYR B 597 -7.432 1.673 -77.837 1.00 17.76 B
ATOM 9749 CZ TYR B 597 -6.780 2.337 -78.867 1.00 17.85 B
ATOM 9750 OH TYR B 597 -6.759 3.712 -78.915 1.00 17.22 B
ATOM 9751 C TYR B 597 -4.778 -2.261 -80.089 1.00 23.71 B
ATOM 9752 O TYR B 597 -5.179 -2.645 -81.193 1.00 23.86 B
ATOM 9753 N GLN B 598 -3.690 -1.519 -79.936 1.00 23.63 B
ATOM 9754 CA GLN B 598 -2.910 -1.079 -81.076 1.00 23.07 B

ATOM 9755 CB GLN B 598 -2.373 0.322 -80.796 1.00 23.68 B
ATOM 9756 CG GLN B 598 -2.858 1.385 -81.749 1.00 24.23 B
ATOM 9757 CD GLN B 598 -2.345 2.767 -81.400 1.00 25.47 B
ATOM 9758 OE1 GLN B 598 -1.172 3.064 -81.579 1.00 24.79 B
ATOM 9759 NE2 GLN B 598 -3.227 3.618 -80.891 1.00 24.38 B
ATOM 9760 C GLN B 598 -1.747 -1.989 -81.451 1.00 23.72 B
ATOM 9761 O GLN B 598 -1.359 -2.039 -82.606 1.00 25.21 B
ATOM 9762 N TRP B 599 -1.202 -2.710 -80.476 1.00 24.26 B
ATOM 9763 CA TRP B 599 -0.044 -3.588 -80.670 1.00 24.40 B
ATOM 9764 CB TRP B 599 0.274 -4.304 -79.359 1.00 22.35 B
ATOM 9765 CG TRP B 599 1.486 -5.152 -79.440 1.00 20.33 B
ATOM 9766 CD2 TRP B 599 1.525 -6.563 -79.654 1.00 19.86 B
ATOM 9767 CE2 TRP B 599 2.887 -6.933 -79.752 1.00 19.72 B
ATOM 9768 CE3 TRP B 599 0.543 -7.551 -79.778 1.00 18.62 B
ATOM 9769 CD1 TRP B 599 2.781 -4.733 -79.409 1.00 19.35 B
ATOM 9770 NE1 TRP B 599 3.632 -5.796 -79.596 1.00 19.14 B
ATOM 9771 CZ2 TRP B 599 3.290 -8.248 -79.967 1.00 19.46 B
ATOM 9772 CZ3 TRP B 599 0.945 -8.858 -79.993 1.00 20.74 B
ATOM 9773 CH2 TRP B 599 2.308 -9.196 -80.086 1.00 20.13 B
ATOM 9774 C TRP B 599 -0.081 -4.631 -81.795 1.00 26.19 B
ATOM 9775 O TRP B 599 -1.104 -5.272 -82.027 1.00 28.39 B
ATOM 9776 N HIS B 600 1.064 -4.802 -82.464 1.00 25.71 B
ATOM 9777 CA HIS B 600 1.253 -5.759 -83.557 1.00 24.44 B
ATOM 9778 CB HIS B 600 1.224 -5.056 -84.908 1.00 26.64 B
ATOM 9779 CG HIS B 600 -0.146 -4.687 -85.383 1.00 28.02 B
ATOM 9780 CD2 HIS B 600 -0.792 -4.972 -86.533 1.00 29.43 B
ATOM 9781 ND1 HIS B 600 -1.019 -3.929 -84.631 1.00 28.33 B
ATOM 9782 CE1 HIS B 600 -2.147 -3.772 -85.300 1.00 28.59 B
ATOM 9783 NE2 HIS B 600 -2.039 -4.393 -86.457 1.00 30.36 B
ATOM 9784 C HIS B 600 2.624 -6.389 -83.377 1.00 23.78 B
ATOM 9785 O HIS B 600 3.571 -5.715 -83.003 1.00 22.74 B
ATOM 9786 N PRO B 601 2.763 -7.691 -83.652 1.00 24.01 B
ATOM 9787 CD PRO B 601 1.863 -8.794 -84.035 1.00 22.66 B
ATOM 9788 CA PRO B 601 4.124 -8.177 -83.437 1.00 24.27 B

ATOM 9789 CB PRO B 601 3.938 -9.688 -83.387 1.00 22.37 B
ATOM 9790 CG PRO B 601 2.829 -9.901 -84.355 1.00 20.29 B
ATOM 9791 C PRO B 601 5.031 -7.730 -84.566 1.00 25.00 B
ATOM 9792 O PRO B 601 4.560 -7.406 -85.653 1.00 25.56 B
ATOM 9793 N PRO B 602 6.346 -7.678 -84.313 1.00 26.23 B
ATOM 9794 CD PRO B 602 7.038 -7.977 -83.050 1.00 26.69 B
ATOM 9795 CA PRO B 602 7.309 -7.274 -85.331 1.00 28.08 B
ATOM 9796 CB PRO B 602 8.544 -6.965 -84.507 1.00 26.37 B
ATOM 9797 CG PRO B 602 8.489 -8.028 -83.481 1.00 25.22 B
ATOM 9798 C PRO B 602 7.513 -8.481 -86.257 1.00 29.84 B
ATOM 9799 O PRO B 602 7.060 -9.592 -85.951 1.00 29.70 B
ATOM 9800 N LEU B 603 8.191 -8.256 -87.378 1.00 30.96 B
ATOM 9801 CA LEU B 603 8.566 -9.340 -88.277 1.00 32.53 B
ATOM 9802 CB LEU B 603 8.962 -8.786 -89.647 1.00 32.60 B
ATOM 9803 CG LEU B 603 7.841 -8.152 -90.473 1.00 32.92 B
ATOM 9804 CD1 LEU B 603 8.289 -7.930 -91.909 1.00 31.38 B
ATOM 9805 CD2 LEU B 603 6.587 -9.011 -90.424 1.00 33.31 B
ATOM 9806 C LEU B 603 9.707 -10.169 -87.697 1.00 34.94 B
ATOM 9807 O LEU B 603 10.660 -9.626 -87.140 1.00 34.98 B
ATOM 9808 N PRO B 604 9.602 -11.487 -87.833 1.00 37.94 B
ATOM 9809 CD PRO B 604 8.430 -12.144 -88.437 1.00 37.75 B
ATOM 9810 CA PRO B 604 10.781 -12.359 -87.823 1.00 40.78 B
ATOM 9811 CB PRO B 604 10.312 -13.584 -88.613 1.00 39.05 B
ATOM 9812 CG PRO B 604 8.834 -13.587 -88.459 1.00 38.81 B
ATOM 9813 C PRO B 604 11.976 -11.776 -88.571 1.00 45.17 B
ATOM 9814 O PRO B 604 11.800 -11.128 -89.603 1.00 47.41 B
ATOM 9815 N ASP B 605 13.176 -12.012 -88.052 1.00 48.56 B
ATOM 9816 CA ASP B 605 14.250 -11.028 -88.120 1.00 52.15 B
ATOM 9817 CB ASP B 605 15.521 -11.577 -87.469 1.00 53.76 B
ATOM 9818 CG ASP B 605 15.680 -11.127 -86.030 1.00 55.75 B
ATOM 9819 OD1 ASP B 605 15.880 -9.915 -85.804 1.00 56.60 B
ATOM 9820 OD2 ASP B 605 15.620 -11.913 -85.061 1.00 55.90 B
ATOM 9821 C ASP B 605 14.535 -10.622 -89.562 1.00 54.28 B
ATOM 9822 O ASP B 605 14.423 -9.450 -89.921 1.00 55.90 B

ATOM 9823 N ASN B 606 14.802 -11.655 -90.350 1.00 55.38 B
ATOM 9824 CA ASN B 606 14.935 -11.636 -91.801 1.00 57.31 B
ATOM 9825 CB ASN B 606 16.114 -12.503 -92.108 1.00 59.58 B
ATOM 9826 CG ASN B 606 17.330 -11.738 -92.454 1.00 62.57 B
ATOM 9827 OD1 ASN B 606 17.340 -10.505 -92.454 1.00 63.43 B
ATOM 9828 ND2 ASN B 606 18.384 -12.464 -92.788 1.00 62.93 B
ATOM 9829 C ASN B 606 13.793 -12.406 -92.418 1.00 57.54 B
ATOM 9830 O ASN B 606 13.657 -13.547 -92.115 1.00 59.03 B
ATOM 9831 N TYR B 607 12.987 -11.843 -93.301 1.00 56.40 B
ATOM 9832 CA TYR B 607 11.743 -12.517 -93.652 1.00 55.47 B
ATOM 9833 CB TYR B 607 10.591 -11.997 -92.790 1.00 50.00 B
ATOM 9834 CG TYR B 607 9.255 -12.633 -93.104 1.00 44.88 B
ATOM 9835 CD1 TYR B 607 8.169 -11.859 -93.487 1.00 42.99 B
ATOM 9836 CE1 TYR B 607 6.946 -12.436 -93.776 1.00 41.72 B
ATOM 9837 CD2 TYR B 607 9.082 -14.008 -93.018 1.00 42.40 B
ATOM 9838 CE2 TYR B 607 7.863 -14.594 -93.304 1.00 40.13 B
ATOM 9839 CZ TYR B 607 6.799 -13.804 -93.683 1.00 41.06 B
ATOM 9840 OH TYR B 607 5.584 -14.381 -93.969 1.00 40.79 B
ATOM 9841 C TYR B 607 11.415 -12.335 -95.130 1.00 57.83 B
ATOM 9842 O TYR B 607 10.882 -11.302 -95.535 1.00 58.43 B
ATOM 9843 N PRO B 608 11.737 -13.345 -95.931 1.00 60.05 B
ATOM 9844 CD PRO B 608 10.984 -13.247 -97.194 1.00 60.21 B
ATOM 9845 CA PRO B 608 11.812 -14.725 -95.440 1.00 62.31 B
ATOM 9846 CB PRO B 608 11.294 -15.543 -96.625 1.00 61.62 B
ATOM 9847 CG PRO B 608 10.381 -14.615 -97.344 1.00 61.39 B
ATOM 9848 C PRO B 608 13.244 -15.131 -95.109 1.00 65.10 B
ATOM 9849 O PRO B 608 13.697 -14.930 -93.982 1.00 65.94 B
ATOM 9850 N ALA B 609 13.944 -15.698 -96.086 1.00 67.44 B
ATOM 9851 CA ALA B 609 15.030 -16.630 -95.809 1.00 68.86 B
ATOM 9852 CB ALA B 609 16.348 -15.884 -95.671 1.00 67.85 B
ATOM 9853 C ALA B 609 14.747 -17.450 -94.554 1.00 70.14 B
ATOM 9854 O ALA B 609 15.575 -17.519 -93.647 1.00 69.73 B
ATOM 9855 N GLY B 610 13.572 -18.069 -94.511 1.00 71.84 B
ATOM 9856 CA GLY B 610 13.236 -18.994 -93.444 1.00 73.77 B

ATOM 9857 C GLY B 610 13.423 -20.442 -93.852 1.00 76.01 B
ATOM 9858 O GLY B 610 14.192 -20.746 -94.764 1.00 76.47 B
ATOM 9859 N ALA B 611 12.715 -21.339 -93.173 1.00 77.24 B
ATOM 9860 CA ALA B 611 12.774 -22.761 -93.490 1.00 78.25 B
ATOM 9861 CB ALA B 611 13.241 -23.554 -92.279 1.00 77.63 B
ATOM 9862 C ALA B 611 11.423 -23.274 -93.977 1.00 78.95 B
ATOM 9863 O ALA B 611 10.528 -23.549 -93.178 1.00 79.15 B
ATOM 9864 N ALA B 612 11.284 -23.401 -95.293 1.00 79.32 B
ATOM 9865 CA ALA B 612 10.615 -24.554 -95.885 1.00 79.35 B
ATOM 9866 CB ALA B 612 9.347 -24.121 -96.604 1.00 79.68 B
ATOM 9867 C ALA B 612 11.542 -25.299 -96.840 1.00 79.35 B
ATOM 9868 O ALA B 612 12.216 -26.251 -96.449 1.00 79.79 B
ATOM 9869 C1 NAG B 691 0.277 -2.189 -99.215 1.00 43.17 B
ATOM 9870 C2 NAG B 691 1.315 -1.293 -99.865 1.00 43.92 B
ATOM 9871 C3 NAG B 691 2.320 -2.149 -100.638 1.00 44.81 B
ATOM 9872 C4 NAG B 691 2.858 -3.317 -99.804 1.00 44.49 B
ATOM 9873 C5 NAG B 691 1.707 -4.076 -99.141 1.00 44.34 B
ATOM 9874 C6 NAG B 691 2.128 -5.187 -98.187 1.00 43.75 B
ATOM 9875 C7 NAG B 691 -0.649 -0.416 -100.996 1.00 43.93 B
ATOM 9876 C8 NAG B 691 -1.102 -1.212 -102.212 1.00 43.04 B
ATOM 9877 N2 NAG B 691 0.665 -0.346 -100.761 1.00 44.47 B
ATOM 9878 O3 NAG B 691 3.410 -1.342 -101.049 1.00 46.85 B
ATOM 9879 O4 NAG B 691 3.571 -4.198 -100.654 1.00 46.32 B
ATOM 9880 O5 NAG B 691 0.907 -3.160 -98.381 1.00 44.10 B
ATOM 9881 O6 NAG B 691 3.528 -5.432 -98.232 1.00 45.28 B
ATOM 9882 O7 NAG B 691 -1.488 0.132 -100.281 1.00 43.31 B
ATOM 9883 C1 NAG B 692 -14.686 -35.112 -114.529 1.00 71.34 B
ATOM 9884 C2 NAG B 692 -15.379 -36.430 -114.880 1.00 71.24 B
ATOM 9885 C3 NAG B 692 -14.720 -37.003 -116.142 1.00 71.03 B
ATOM 9886 C4 NAG B 692 -14.864 -35.962 -117.282 1.00 71.19 B
ATOM 9887 C5 NAG B 692 -14.311 -34.585 -116.859 1.00 71.66 B
ATOM 9888 C6 NAG B 692 -14.637 -33.506 -117.895 1.00 71.44 B
ATOM 9889 C7 NAG B 692 -14.418 -38.231 -113.524 1.00 69.41 B
ATOM 9890 C8 NAG B 692 -14.814 -39.696 -113.499 1.00 68.03 B

ATOM 9891 N2 NAG B 692 -15.394 -37.354-113.750 1.00 70.28 B
ATOM 9892 O3 NAG B 692 -15.370 -38.213-116.499 1.00 70.82 B
ATOM 9893 O4 NAG B 692 -14.182 -36.403-118.452 1.00 70.91 B
ATOM 9894 O5 NAG B 692 -14.897 -34.163-115.597 1.00 72.13 B
ATOM 9895 O6 NAG B 692 -14.203 -32.211-117.485 1.00 70.58 B
ATOM 9896 O7 NAG B 692 -13.248 -37.904-113.314 1.00 68.66 B
ATOM 9897 C1 NAG B 693 -43.251 -33.964-104.086 1.00 62.90 B
ATOM 9898 C2 NAG B 693 -44.231 -35.025-103.599 1.00 62.20 B
ATOM 9899 C3 NAG B 693 -43.661 -36.424-103.799 1.00 62.28 B
ATOM 9900 C4 NAG B 693 -43.137 -36.601-105.219 1.00 62.92 B
ATOM 9901 C5 NAG B 693 -42.226 -35.445-105.614 1.00 64.10 B
ATOM 9902 C6 NAG B 693 -41.767 -35.582-107.061 1.00 65.18 B
ATOM 9903 C7 NAG B 693 -45.045 -33.889-101.618 1.00 61.18 B
ATOM 9904 C8 NAG B 693 -45.039 -33.806-100.301 1.00 60.99 B
ATOM 9905 N2 NAG B 693 -44.295 -34.846-102.156 1.00 61.23 B
ATOM 9906 O3 NAG B 693 -44.682 -37.396-103.542 1.00 62.92 B
ATOM 9907 O4 NAG B 693 -42.413 -37.833-105.310 1.00 63.17 B
ATOM 9908 O5 NAG B 693 -42.923 -34.212-105.452 1.00 64.49 B
ATOM 9909 O6 NAG B 693 -42.910 -35.694-107.915 1.00 63.03 B
ATOM 9910 O7 NAG B 693 -45.713 -33.115-102.284 1.00 62.26 B
ATOM 9911 C1 NAG B 694 -43.235 -39.087-105.800 1.00 77.18 B
ATOM 9912 C2 NAG B 694 -42.507 -40.246-106.468 1.00 76.27 B
ATOM 9913 C3 NAG B 694 -43.211 -41.568-106.188 1.00 76.35 B
ATOM 9914 C4 NAG B 694 -43.500 -41.728-104.700 1.00 76.77 B
ATOM 9915 C5 NAG B 694 -44.169 -40.480-104.137 1.00 77.59 B
ATOM 9916 C6 NAG B 694 -44.390 -40.609-102.635 1.00 78.00 B
ATOM 9917 C7 NAG B 694 -41.659 -39.626-108.655 1.00 75.55 B
ATOM 9918 C8 NAG B 694 -41.913 -39.452-109.938 1.00 76.48 B
ATOM 9919 N2 NAG B 694 -42.677 -40.024-107.896 1.00 75.41 B
ATOM 9920 O3 NAG B 694 -42.386 -42.652-106.632 1.00 75.49 B
ATOM 9921 O4 NAG B 694 -44.355 -42.859-104.499 1.00 76.58 B
ATOM 9922 O5 NAG B 694 -43.352 -39.342-104.402 1.00 78.17 B
ATOM 9923 O6 NAG B 694 -44.639 -39.314-102.076 1.00 80.36 B
ATOM 9924 O7 NAG B 694 -40.540 -39.425-108.212 1.00 75.83 B

ATOM 9925 C1 NAG B 695 -15.056 -15.625-114.327 1.00102.82 B
ATOM 9926 C2 NAG B 695 -13.822 -16.427-114.722 1.00102.28 B
ATOM 9927 C3 NAG B 695 -13.157 -15.833-115.958 1.00102.34 B
ATOM 9928 C4 NAG B 695 -14.177 -15.589-117.062 1.00102.83 B
ATOM 9929 C5 NAG B 695 -15.391 -14.838-116.529 1.00103.38 B
ATOM 9930 C6 NAG B 695 -16.445 -14.660-117.616 1.00104.50 B
ATOM 9931 C7 NAG B 695 -12.581 -14.982-113.221 1.00100.46 B
ATOM 9932 C8 NAG B 695 -13.197 -13.989-113.832 1.00100.44 B
ATOM 9933 N2 NAG B 695 -12.871 -16.210-113.641 1.00101.46 B
ATOM 9934 O3 NAG B 695 -12.145 -16.728-116.432 1.00101.84 B
ATOM 9935 O4 NAG B 695 -13.570 -14.828-118.114 1.00103.62 B
ATOM 9936 O5 NAG B 695 -15.953 -15.560-115.434 1.00103.12 B
ATOM 9937 O6 NAG B 695 -17.063 -15.923-117.892 1.00106.19 B
ATOM 9938 O7 NAG B 695 -11.791 -14.759-112.318 1.00 99.71 B
ATOM 9939 C1 NAG B 696 4.809 -3.410-101.426 1.00 99.23 B
ATOM 9940 C2 NAG B 696 6.193 -2.782-101.313 1.00 98.89 B
ATOM 9941 C3 NAG B 696 7.191 -3.489-102.222 1.00 99.24 B
ATOM 9942 C4 NAG B 696 7.123 -5.000-102.037 1.00 99.51 B
ATOM 9943 C5 NAG B 696 5.683 -5.495-102.108 1.00 99.13 B
ATOM 9944 C6 NAG B 696 5.608 -6.995-101.848 1.00 98.84 B
ATOM 9945 C7 NAG B 696 6.718 -2.132 -99.037 1.00 95.91 B
ATOM 9946 C8 NAG B 696 7.129 -2.506 -97.839 1.00 95.12 B
ATOM 9947 N2 NAG B 696 6.634 -3.085 -99.960 1.00 97.48 B
ATOM 9948 O3 NAG B 696 8.514 -3.031-101.925 1.00 99.11 B
ATOM 9949 O4 NAG B 696 7.899 -5.641-103.055 1.00 99.81 B
ATOM 9950 O5 NAG B 696 4.895 -4.804-101.141 1.00 99.61 B
ATOM 9951 O6 NAG B 696 4.306 -7.476-102.203 1.00 97.80 B
ATOM 9952 O7 NAG B 696 6.436 -0.966 -99.258 1.00 95.04 B
ATOM 9953 C1 BMA B 901 -45.729 -43.920-104.673 1.00 87.09 B
ATOM 9954 C2 BMA B 901 -46.689 -44.687-103.759 1.00 87.10 B
ATOM 9955 O2 BMA B 901 -47.773 -45.203-104.532 1.00 87.95 B
ATOM 9956 C3 BMA B 901 -45.934 -45.842-103.095 1.00 86.35 B
ATOM 9957 O3 BMA B 901 -46.848 -46.652-102.357 1.00 85.45 B
ATOM 9958 C4 BMA B 901 -45.265 -46.681-104.188 1.00 85.90 B

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ATOM  9959  O4  BMA B 901     -44.434 -47.676-103.586  1.00 85.36      B
ATOM  9960  C5  BMA B 901     -44.411 -45.763-105.067  1.00 85.68      B
ATOM  9961  C6  BMA B 901     -43.709 -46.598-106.140  1.00 84.30      B
ATOM  9962  O6  BMA B 901     -42.907 -45.745-106.960  1.00 83.19      B
ATOM  9963  O5  BMA B 901     -45.238 -44.787-105.692  1.00 86.29      B
ATOM  9964  OH2 WAT C   1     -42.555 -15.868 -26.385  1.00 46.71      C
ATOM  9965  OH2 WAT C   2     -27.074 -20.507 -34.508  1.00  3.79      C
ATOM  9966  OH2 WAT C   3     -31.258 -23.723 -63.604  1.00 26.06      C
ATOM  9967  OH2 WAT C   4     -20.927  -1.643 -67.691  1.00 35.66      C
ATOM  9968  OH2 WAT C   5     -12.296  -8.010 -56.059  1.00 16.23      C
ATOM  9969  OH2 WAT C   6     -20.821 -26.907 -93.641  1.00 10.66      C
ATOM  9970  OH2 WAT C   7       5.209 -10.962 -87.126  1.00 13.46      C
ATOM  9971  OH2 WAT C   8     -28.559  -4.019 -89.096  1.00 30.54      C
ATOM  9972  OH2 WAT C   9     -28.159  -4.597 -82.039  1.00 26.21      C
ATOM  9973  OH2 WAT C  10       9.084 -22.778 -80.336  1.00 23.78      C
ATOM  9974  OH2 WAT C  11      -0.327 -10.826 -77.530  1.00 10.11      C
ATOM  9975  OH2 WAT C  12      -2.412 -29.863 -59.094  1.00 25.71      C
ATOM  9976  OH2 WAT C  13     -21.078 -35.073 -72.914  1.00 26.35      C
ATOM  9977  OH2 WAT C  14     -24.153 -61.605 -21.766  1.00 29.95      C
ATOM  9978  OH2 WAT C  15     -15.729  -5.831 -39.546  1.00  4.82      C
ATOM  9979  OH2 WAT C  16       0.009 -22.486 -42.770  1.00 36.51      C
ATOM  9980  OH2 WAT C  17     -31.079 -11.649 -34.159  1.00 12.10      C
ATOM  9981  OH2 WAT C  18      -3.943 -21.019 -48.526  1.00 35.31      C
ATOM  9982  OH2 WAT C  19     -21.340 -26.494-121.713  1.00 20.58      C
ATOM  9983  OH2 WAT C  20     -20.306 -14.241 -98.674  1.00 26.68      C
ATOM  9984  OH2 WAT C  21     -15.334   6.033 -98.213  1.00 52.85      C
ATOM  9985  OH2 WAT C  22      -2.098 -20.525 -60.189  1.00 27.00      C
ATOM  9986  OH2 WAT C  23     -25.274  -4.028 -82.766  1.00 23.14      C
ATOM  9987  OH2 WAT C  24     -27.630 -26.845 -32.171  1.00 22.67      C
ATOM  9988  OH2 WAT C  25     -27.653 -27.486 -95.856  1.00 13.72      C
END
```

TABLE B

REMARK coordinates from restrained individual B-factor refinement
REMARK refinement resolution: 500.0 - 2.8 A
REMARK starting r= 0.2978 free_r= 0.3142
REMARK final r= 0.2976 free_r= 0.3141
REMARK B rmsd for bonded mainchain atoms= 1.117 target= 1.5
REMARK B rmsd for bonded sidechain atoms= 1.364 target= 2.0
REMARK B rmsd for angle mainchain atoms= 1.929 target= 2.0
REMARK B rmsd for angle sidechain atoms= 2.209 target= 2.5
REMARK rweight= 0.1000 (with wa= 3.71302)
REMARK target= mlf steps= 30
REMARK sg= C222(1) a= 101.32 b= 210.9 c= 171.03 alpha= 90 beta= 90 gamma= 90
REMARK parameter file 1 : CNS_TOPPAR:protein_rep.param
REMARK parameter file 2 : CNS_TOPPAR:ion.param
REMARK parameter file 3 : ../lis.par
REMARK parameter file 4 : ../both.par
REMARK parameter file 5 : CNS_TOPPAR:water_rep.param
REMARK molecular structure file: gen.mtf
REMARK input coordinates: rig.pdb
REMARK reflection file= ../nlis_c2221_2.8.cv
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 2.8
REMARK B-factor correction applied to coordinate array B: -0.038
REMARK bulk solvent: density level= 0.355377 e/A^3, B-factor= 40.7967 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range: 45416 (100.0 %)
REMARK number of unobserved reflections (no entry or |F|=0): 5168 (11.4 %)
REMARK number of reflections rejected: 0 (0.0 %)
REMARK total number of reflections used: 40248 (88.6 %)
REMARK number of reflections in working set: 39216 (86.3 %)
REMARK number of reflections in test set: 1032 (2.3 %)
CRYST1 101.320 210.900 171.030 90.00 90.00 90.00 C 2 2 21

```
REMARK FILENAME="bind.pdb"
REMARK DATE:12-Sep-2005 10:12:45       created by user: hazel
REMARK VERSION:1.1
ATOM      1  CB  ALA A   1     -24.710 -36.906  -9.372  1.00 67.69      A
ATOM      2  C   ALA A   1     -25.445 -37.404  -7.068  1.00 67.77      A
ATOM      3  O   ALA A   1     -25.053 -37.915  -6.022  1.00 68.42      A
ATOM      4  N   ALA A   1     -23.174 -36.806  -7.433  1.00 67.30      A
ATOM      5  CA  ALA A   1     -24.547 -36.527  -7.897  1.00 67.68      A
ATOM      6  N   ASP A   2     -26.643 -37.602  -7.592  1.00 67.92      A
ATOM      7  CA  ASP A   2     -27.598 -38.514  -7.011  1.00 68.00      A
ATOM      8  CB  ASP A   2     -28.880 -38.508  -7.862  1.00 67.74      A
ATOM      9  CG  ASP A   2     -30.046 -39.203  -7.198  1.00 67.76      A
ATOM     10  OD1 ASP A   2     -30.172 -39.079  -5.960  1.00 68.05      A
ATOM     11  OD2 ASP A   2     -30.851 -39.839  -7.919  1.00 67.03      A
ATOM     12  C   ASP A   2     -26.770 -39.728  -7.397  1.00 68.13      A
ATOM     13  O   ASP A   2     -25.839 -39.614  -8.178  1.00 69.02      A
ATOM     14  N   PRO A   3     -27.060 -40.889  -6.825  1.00 67.93      A
ATOM     15  CD  PRO A   3     -27.503 -40.894  -5.426  1.00 67.99      A
ATOM     16  CA  PRO A   3     -26.341 -42.128  -7.151  1.00 67.92      A
ATOM     17  CB  PRO A   3     -26.221 -42.838  -5.800  1.00 68.08      A
ATOM     18  CG  PRO A   3     -27.388 -42.322  -5.040  1.00 68.34      A
ATOM     19  C   PRO A   3     -27.224 -42.869  -8.176  1.00 67.87      A
ATOM     20  O   PRO A   3     -26.754 -43.704  -8.961  1.00 67.92      A
ATOM     21  N   GLY A   4     -28.502 -42.485  -8.184  1.00 67.18      A
ATOM     22  CA  GLY A   4     -29.461 -43.042  -9.120  1.00 66.09      A
ATOM     23  C   GLY A   4     -29.229 -42.298 -10.424  1.00 65.02      A
ATOM     24  O   GLY A   4     -30.139 -42.097 -11.216  1.00 64.75      A
ATOM     25  N   LEU A   5     -27.994 -41.835 -10.607  1.00 63.70      A
ATOM     26  CA  LEU A   5     -27.582 -41.132 -11.829  1.00 61.45      A
ATOM     27  CB  LEU A   5     -27.487 -39.600 -11.658  1.00 61.02      A
ATOM     28  CG  LEU A   5     -28.829 -38.848 -11.567  1.00 61.08      A
ATOM     29  CD1 LEU A   5     -28.567 -37.362 -11.433  1.00 60.76      A
ATOM     30  CD2 LEU A   5     -29.707 -39.132 -12.791  1.00 61.12      A
ATOM     31  C   LEU A   5     -26.226 -41.694 -12.179  1.00 60.16      A
```

ATOM 32 O LEU A 5 -25.780 -41.593 -13.299 1.00 59.74 A
ATOM 33 N GLN A 6 -25.583 -42.322 -11.190 1.00 59.33 A
ATOM 34 CA GLN A 6 -24.259 -42.937 -11.405 1.00 59.05 A
ATOM 35 CB GLN A 6 -23.579 -43.227 -10.073 1.00 60.10 A
ATOM 36 CG GLN A 6 -22.315 -44.101 -10.151 1.00 61.12 A
ATOM 37 CD GLN A 6 -21.100 -43.518 -9.473 1.00 62.41 A
ATOM 38 OE1 GLN A 6 -20.073 -44.184 -9.360 1.00 62.75 A
ATOM 39 NE2 GLN A 6 -21.204 -42.275 -9.020 1.00 63.05 A
ATOM 40 C GLN A 6 -24.424 -44.192 -12.310 1.00 57.76 A
ATOM 41 O GLN A 6 -25.495 -44.805 -12.336 1.00 57.57 A
ATOM 42 N PRO A 7 -23.349 -44.629 -12.996 1.00 56.55 A
ATOM 43 CD PRO A 7 -21.948 -44.358 -12.618 1.00 56.96 A
ATOM 44 CA PRO A 7 -23.400 -45.783 -13.903 1.00 55.78 A
ATOM 45 CB PRO A 7 -21.950 -46.192 -14.015 1.00 55.94 A
ATOM 46 CG PRO A 7 -21.198 -44.988 -13.725 1.00 56.95 A
ATOM 47 C PRO A 7 -24.248 -47.024 -13.575 1.00 55.04 A
ATOM 48 O PRO A 7 -25.399 -47.175 -13.988 1.00 55.06 A
ATOM 49 N GLY A 8 -23.522 -47.980 -13.004 1.00 53.71 A
ATOM 50 CA GLY A 8 -24.008 -49.285 -12.593 1.00 51.44 A
ATOM 51 C GLY A 8 -22.810 -50.097 -12.988 1.00 50.04 A
ATOM 52 O GLY A 8 -21.732 -49.560 -13.177 1.00 49.79 A
ATOM 53 N ASN A 9 -23.021 -51.392 -13.099 1.00 48.96 A
ATOM 54 CA ASN A 9 -21.994 -52.233 -13.680 1.00 48.00 A
ATOM 55 CB ASN A 9 -21.157 -53.187 -12.816 1.00 48.74 A
ATOM 56 CG ASN A 9 -19.948 -53.770 -13.652 1.00 49.58 A
ATOM 57 OD1 ASN A 9 -20.080 -53.896 -14.864 1.00 48.62 A
ATOM 58 ND2 ASN A 9 -18.794 -54.046 -13.032 1.00 50.50 A
ATOM 59 C ASN A 9 -22.830 -53.005 -14.656 1.00 46.74 A
ATOM 60 O ASN A 9 -24.040 -53.176 -14.544 1.00 46.15 A
ATOM 61 N PHE A 10 -22.065 -53.344 -15.657 1.00 44.11 A
ATOM 62 CA PHE A 10 -22.490 -53.930 -16.868 1.00 40.45 A
ATOM 63 CB PHE A 10 -22.559 -52.749 -17.776 1.00 33.19 A
ATOM 64 CG PHE A 10 -23.765 -51.935 -17.575 1.00 26.81 A
ATOM 65 CD1 PHE A 10 -23.738 -50.582 -17.186 1.00 25.23 A

ATOM 66 CD2 PHE A 10 -24.967 -52.529 -17.877 1.00 24.20 A
ATOM 67 CE1 PHE A 10 -24.951 -49.829 -17.132 1.00 23.35 A
ATOM 68 CE2 PHE A 10 -26.159 -51.831 -17.835 1.00 22.99 A
ATOM 69 CZ PHE A 10 -26.176 -50.476 -17.470 1.00 20.95 A
ATOM 70 C PHE A 10 -21.475 -54.913 -17.417 1.00 42.07 A
ATOM 71 O PHE A 10 -20.340 -54.941 -16.981 1.00 41.83 A
ATOM 72 N SER A 11 -21.852 -55.611 -18.477 1.00 44.07 A
ATOM 73 CA SER A 11 -20.988 -56.628 -19.093 1.00 46.09 A
ATOM 74 CB SER A 11 -21.927 -57.671 -19.677 1.00 46.00 A
ATOM 75 OG SER A 11 -23.241 -57.432 -19.196 1.00 43.56 A
ATOM 76 C SER A 11 -19.878 -56.229 -20.130 1.00 47.52 A
ATOM 77 O SER A 11 -20.009 -55.275 -20.894 1.00 47.11 A
ATOM 78 N ALA A 12 -18.780 -56.986 -20.153 1.00 49.18 A
ATOM 79 CA ALA A 12 -17.648 -56.714 -21.058 1.00 51.23 A
ATOM 80 CB ALA A 12 -16.436 -57.524 -20.637 1.00 50.30 A
ATOM 81 C ALA A 12 -18.079 -57.146 -22.438 1.00 52.98 A
ATOM 82 O ALA A 12 -17.287 -57.221 -23.391 1.00 52.53 A
ATOM 83 N ASP A 13 -19.370 -57.439 -22.561 1.00 54.90 A
ATOM 84 CA ASP A 13 -19.904 -58.058 -23.769 1.00 55.91 A
ATOM 85 CB ASP A 13 -20.764 -59.272 -23.413 1.00 55.61 A
ATOM 86 CG ASP A 13 -19.935 -60.483 -23.034 1.00 56.24 A
ATOM 87 OD1 ASP A 13 -18.736 -60.518 -23.383 1.00 56.39 A
ATOM 88 OD2 ASP A 13 -20.395 -61.447 -22.387 1.00 55.80 A
ATOM 89 C ASP A 13 -20.718 -57.061 -24.588 1.00 56.67 A
ATOM 90 O ASP A 13 -21.233 -56.079 -24.054 1.00 56.74 A
ATOM 91 N GLU A 14 -20.828 -57.321 -25.887 1.00 57.39 A
ATOM 92 CA GLU A 14 -21.577 -56.447 -26.782 1.00 57.62 A
ATOM 93 CB GLU A 14 -21.494 -56.956 -28.222 1.00 56.85 A
ATOM 94 CG GLU A 14 -20.405 -56.296 -29.053 1.00 55.60 A
ATOM 95 CD GLU A 14 -20.654 -56.420 -30.543 1.00 54.28 A
ATOM 96 OE1 GLU A 14 -21.637 -55.828 -31.035 1.00 51.94 A
ATOM 97 OE2 GLU A 14 -19.865 -57.110 -31.223 1.00 53.73 A
ATOM 98 C GLU A 14 -23.035 -56.331 -26.350 1.00 59.03 A
ATOM 99 O GLU A 14 -23.608 -55.241 -26.350 1.00 58.05 A

ATOM 100 N ALA A 15 -23.631 -57.461 -25.984 1.00 60.30 A
ATOM 101 CA ALA A 15 -25.062 -57.520 -25.712 1.00 60.76 A
ATOM 102 CB ALA A 15 -25.545 -58.963 -25.719 1.00 60.85 A
ATOM 103 C ALA A 15 -25.400 -56.850 -24.384 1.00 60.99 A
ATOM 104 O ALA A 15 -26.528 -56.942 -23.899 1.00 60.97 A
ATOM 105 N GLY A 16 -24.414 -56.177 -23.801 1.00 61.61 A
ATOM 106 CA GLY A 16 -24.556 -55.612 -22.533 1.00 62.27 A
ATOM 107 C GLY A 16 -23.424 -54.625 -22.683 1.00 62.79 A
ATOM 108 O GLY A 16 -22.839 -54.377 -21.715 1.00 62.63 A
ATOM 109 N ALA A 17 -23.110 -54.087 -23.858 1.00 62.70 A
ATOM 110 CA ALA A 17 -22.156 -52.941 -23.906 1.00 61.93 A
ATOM 111 CB ALA A 17 -20.928 -53.040 -24.965 1.00 60.66 A
ATOM 112 C ALA A 17 -23.242 -52.108 -24.461 1.00 61.23 A
ATOM 113 O ALA A 17 -23.118 -50.933 -24.642 1.00 61.49 A
ATOM 114 N ALA A 18 -24.327 -52.803 -24.760 1.00 59.81 A
ATOM 115 CA ALA A 18 -25.509 -52.151 -25.254 1.00 58.21 A
ATOM 116 CB ALA A 18 -26.264 -52.991 -26.238 1.00 58.07 A
ATOM 117 C ALA A 18 -26.239 -52.164 -23.962 1.00 57.70 A
ATOM 118 O ALA A 18 -27.130 -51.390 -23.718 1.00 58.05 A
ATOM 119 N LEU A 19 -25.901 -53.109 -23.105 1.00 56.83 A
ATOM 120 CA LEU A 19 -26.707 -52.907 -21.991 1.00 57.00 A
ATOM 121 CB LEU A 19 -27.011 -54.098 -21.118 1.00 55.58 A
ATOM 122 CG LEU A 19 -28.492 -54.172 -21.675 1.00 54.83 A
ATOM 123 CD1 LEU A 19 -28.948 -55.517 -21.470 1.00 54.26 A
ATOM 124 CD2 LEU A 19 -29.591 -53.120 -21.182 1.00 53.17 A
ATOM 125 C LEU A 19 -26.073 -51.688 -21.375 1.00 57.37 A
ATOM 126 O LEU A 19 -26.780 -50.864 -20.868 1.00 58.02 A
ATOM 127 N PHE A 20 -24.777 -51.490 -21.369 1.00 56.49 A
ATOM 128 CA PHE A 20 -24.340 -50.220 -20.772 1.00 56.21 A
ATOM 129 CB PHE A 20 -22.885 -49.940 -21.231 1.00 56.25 A
ATOM 130 CG PHE A 20 -22.408 -48.547 -20.946 1.00 57.66 A
ATOM 131 CD1 PHE A 20 -21.068 -48.311 -20.788 1.00 57.81 A
ATOM 132 CD2 PHE A 20 -23.289 -47.480 -20.813 1.00 57.20 A
ATOM 133 CE1 PHE A 20 -20.625 -47.043 -20.499 1.00 58.41 A

ATOM 134 CE2 PHE A 20 -22.874 -46.235 -20.532 1.00 58.00 A
ATOM 135 CZ PHE A 20 -21.546 -45.992 -20.370 1.00 59.02 A
ATOM 136 C PHE A 20 -25.197 -48.917 -21.115 1.00 55.56 A
ATOM 137 O PHE A 20 -25.435 -47.996 -20.310 1.00 55.53 A
ATOM 138 N ALA A 21 -25.623 -48.851 -22.357 1.00 54.98 A
ATOM 139 CA ALA A 21 -26.259 -47.635 -22.903 1.00 54.22 A
ATOM 140 CB ALA A 21 -25.852 -47.567 -24.331 1.00 53.01 A
ATOM 141 C ALA A 21 -27.704 -47.165 -22.819 1.00 54.48 A
ATOM 142 O ALA A 21 -28.013 -45.943 -22.841 1.00 52.93 A
ATOM 143 N ALA A 22 -28.571 -48.152 -22.803 1.00 56.00 A
ATOM 144 CA ALA A 22 -29.977 -47.945 -22.741 1.00 57.26 A
ATOM 145 CB ALA A 22 -30.642 -49.311 -22.696 1.00 56.96 A
ATOM 146 C ALA A 22 -30.145 -47.184 -21.445 1.00 58.00 A
ATOM 147 O ALA A 22 -31.022 -46.327 -21.328 1.00 57.47 A
ATOM 148 N ALA A 23 -29.266 -47.492 -20.485 1.00 58.67 A
ATOM 149 CA ALA A 23 -29.297 -46.857 -19.155 1.00 58.69 A
ATOM 150 CB ALA A 23 -28.386 -47.639 -18.156 1.00 57.91 A
ATOM 151 C ALA A 23 -28.875 -45.385 -19.215 1.00 58.54 A
ATOM 152 O ALA A 23 -29.647 -44.476 -18.872 1.00 56.52 A
ATOM 153 N ALA A 24 -27.639 -45.175 -19.662 1.00 58.70 A
ATOM 154 CA ALA A 24 -27.063 -43.841 -19.801 1.00 58.13 A
ATOM 155 CB ALA A 24 -25.826 -43.901 -20.707 1.00 57.71 A
ATOM 156 C ALA A 24 -28.066 -42.842 -20.364 1.00 57.71 A
ATOM 157 O ALA A 24 -28.157 -41.706 -19.903 1.00 58.27 A
ATOM 158 N ASN A 25 -28.804 -43.287 -21.370 1.00 56.93 A
ATOM 159 CA ASN A 25 -29.791 -42.465 -22.030 1.00 57.15 A
ATOM 160 CB ASN A 25 -30.407 -43.255 -23.161 1.00 57.27 A
ATOM 161 CG ASN A 25 -31.630 -42.633 -23.655 1.00 56.94 A
ATOM 162 OD1 ASN A 25 -31.660 -41.598 -24.345 1.00 57.66 A
ATOM 163 ND2 ASN A 25 -32.673 -43.247 -23.279 1.00 55.67 A
ATOM 164 C ASN A 25 -30.881 -41.925 -21.121 1.00 57.64 A
ATOM 165 O ASN A 25 -31.237 -40.749 -21.184 1.00 56.82 A
ATOM 166 N ALA A 26 -31.394 -42.792 -20.259 1.00 59.06 A
ATOM 167 CA ALA A 26 -32.452 -42.405 -19.331 1.00 59.31 A

ATOM 168 CB ALA A 26 -33.017 -43.640 -18.654 1.00 60.17 A
ATOM 169 C ALA A 26 -31.941 -41.419 -18.284 1.00 58.79 A
ATOM 170 O ALA A 26 -32.627 -40.447 -17.944 1.00 57.60 A
ATOM 171 N SER A 27 -30.727 -41.668 -17.801 1.00 58.05 A
ATOM 172 CA SER A 27 -30.103 -40.825 -16.792 1.00 57.97 A
ATOM 173 CB SER A 27 -28.934 -41.575 -16.160 1.00 58.11 A
ATOM 174 OG SER A 27 -29.301 -42.906 -15.861 1.00 59.45 A
ATOM 175 C SER A 27 -29.595 -39.512 -17.390 1.00 57.80 A
ATOM 176 O SER A 27 -29.834 -38.418 -16.848 1.00 58.01 A
ATOM 177 N ALA A 28 -28.887 -39.641 -18.508 1.00 56.08 A
ATOM 178 CA ALA A 28 -28.320 -38.499 -19.194 1.00 53.61 A
ATOM 179 CB ALA A 28 -27.638 -38.935 -20.468 1.00 53.51 A
ATOM 180 C ALA A 28 -29.356 -37.463 -19.516 1.00 51.88 A
ATOM 181 O ALA A 28 -29.088 -36.281 -19.456 1.00 51.41 A
ATOM 182 N GLU A 29 -30.559 -37.866 -19.861 1.00 51.73 A
ATOM 183 CA GLU A 29 -31.452 -36.787 -20.189 1.00 53.31 A
ATOM 184 CB GLU A 29 -32.567 -37.214 -21.123 1.00 54.89 A
ATOM 185 CG GLU A 29 -32.673 -38.644 -21.518 1.00 56.81 A
ATOM 186 CD GLU A 29 -34.066 -38.886 -21.991 1.00 58.58 A
ATOM 187 OE1 GLU A 29 -34.386 -39.997 -22.454 1.00 58.69 A
ATOM 188 OE2 GLU A 29 -34.849 -37.913 -21.883 1.00 59.91 A
ATOM 189 C GLU A 29 -32.020 -36.022 -19.007 1.00 54.05 A
ATOM 190 O GLU A 29 -32.801 -35.086 -19.184 1.00 53.13 A
ATOM 191 N ALA A 30 -31.607 -36.407 -17.801 1.00 55.82 A
ATOM 192 CA ALA A 30 -32.033 -35.704 -16.588 1.00 56.01 A
ATOM 193 CB ALA A 30 -32.085 -36.672 -15.389 1.00 56.45 A
ATOM 194 C ALA A 30 -30.918 -34.694 -16.414 1.00 55.85 A
ATOM 195 O ALA A 30 -31.131 -33.483 -16.390 1.00 55.26 A
ATOM 196 N VAL A 31 -29.708 -35.222 -16.361 1.00 54.68 A
ATOM 197 CA VAL A 31 -28.545 -34.380 -16.216 1.00 54.97 A
ATOM 198 CB VAL A 31 -27.298 -35.235 -16.151 1.00 54.56 A
ATOM 199 CG1 VAL A 31 -26.260 -34.719 -17.141 1.00 54.88 A
ATOM 200 CG2 VAL A 31 -26.754 -35.202 -14.775 1.00 56.04 A
ATOM 201 C VAL A 31 -28.350 -33.341 -17.326 1.00 55.54 A

ATOM 202 O VAL A 31 -27.739 -32.288 -17.132 1.00 56.50 A
ATOM 203 N LEU A 32 -28.825 -33.666 -18.514 1.00 55.38 A
ATOM 204 CA LEU A 32 -28.692 -32.745 -19.628 1.00 54.61 A
ATOM 205 CB LEU A 32 -28.810 -33.477 -20.972 1.00 54.42 A
ATOM 206 CG LEU A 32 -27.543 -34.183 -21.461 1.00 54.23 A
ATOM 207 CD1 LEU A 32 -27.796 -34.862 -22.783 1.00 54.55 A
ATOM 208 CD2 LEU A 32 -26.438 -33.164 -21.613 1.00 54.71 A
ATOM 209 C LEU A 32 -29.764 -31.676 -19.516 1.00 54.45 A
ATOM 210 O LEU A 32 -29.491 -30.493 -19.705 1.00 54.37 A
ATOM 211 N PHE A 33 -30.979 -32.095 -19.188 1.00 54.39 A
ATOM 212 CA PHE A 33 -32.086 -31.161 -19.040 1.00 55.62 A
ATOM 213 CB PHE A 33 -33.343 -31.897 -18.576 1.00 53.45 A
ATOM 214 CG PHE A 33 -34.473 -30.983 -18.204 1.00 50.91 A
ATOM 215 CD1 PHE A 33 -35.424 -30.601 -19.140 1.00 50.80 A
ATOM 216 CD2 PHE A 33 -34.587 -30.508 -16.911 1.00 49.97 A
ATOM 217 CE1 PHE A 33 -36.481 -29.757 -18.790 1.00 50.71 A
ATOM 218 CE2 PHE A 33 -35.631 -29.667 -16.551 1.00 50.22 A
ATOM 219 CZ PHE A 33 -36.582 -29.290 -17.491 1.00 50.76 A
ATOM 220 C PHE A 33 -31.724 -30.103 -18.012 1.00 57.68 A
ATOM 221 O PHE A 33 -31.996 -28.909 -18.195 1.00 58.13 A
ATOM 222 N GLN A 34 -31.113 -30.554 -16.921 1.00 59.06 A
ATOM 223 CA GLN A 34 -30.718 -29.641 -15.851 1.00 60.03 A
ATOM 224 CB GLN A 34 -30.089 -30.412 -14.683 1.00 61.25 A
ATOM 225 CG GLN A 34 -28.834 -31.180 -15.024 1.00 63.54 A
ATOM 226 CD GLN A 34 -27.618 -30.683 -14.259 1.00 65.24 A
ATOM 227 OE1 GLN A 34 -27.752 -30.057 -13.206 1.00 66.46 A
ATOM 228 NE2 GLN A 34 -26.422 -30.972 -14.776 1.00 66.32 A
ATOM 229 C GLN A 34 -29.746 -28.571 -16.345 1.00 59.36 A
ATOM 230 O GLN A 34 -30.064 -27.374 -16.329 1.00 59.67 A
ATOM 231 N SER A 35 -28.574 -29.008 -16.798 1.00 57.45 A
ATOM 232 CA SER A 35 -27.557 -28.091 -17.288 1.00 55.94 A
ATOM 233 CB SER A 35 -26.396 -28.869 -17.909 1.00 56.33 A
ATOM 234 OG SER A 35 -26.497 -28.867 -19.317 1.00 58.75 A
ATOM 235 C SER A 35 -28.126 -27.138 -18.327 1.00 54.46 A

ATOM 236 O SER A 35 -27.733 -25.979 -18.396 1.00 54.01 A
ATOM 237 N VAL A 36 -29.053 -27.638 -19.134 1.00 53.29 A
ATOM 238 CA VAL A 36 -29.666 -26.838 -20.184 1.00 52.85 A
ATOM 239 CB VAL A 36 -30.372 -27.754 -21.208 1.00 53.55 A
ATOM 240 CG1 VAL A 36 -31.200 -26.919 -22.198 1.00 52.79 A
ATOM 241 CG2 VAL A 36 -29.318 -28.579 -21.955 1.00 52.86 A
ATOM 242 C VAL A 36 -30.651 -25.782 -19.682 1.00 52.27 A
ATOM 243 O VAL A 36 -30.616 -24.626 -20.115 1.00 51.72 A
ATOM 244 N ALA A 37 -31.530 -26.180 -18.771 1.00 51.90 A
ATOM 245 CA ALA A 37 -32.522 -25.267 -18.225 1.00 50.68 A
ATOM 246 CB ALA A 37 -33.518 -26.043 -17.372 1.00 51.42 A
ATOM 247 C ALA A 37 -31.824 -24.202 -17.396 1.00 48.73 A
ATOM 248 O ALA A 37 -32.297 -23.073 -17.288 1.00 47.93 A
ATOM 249 N ALA A 38 -30.688 -24.573 -16.820 1.00 46.99 A
ATOM 250 CA ALA A 38 -29.917 -23.649 -16.003 1.00 45.75 A
ATOM 251 CB ALA A 38 -28.735 -24.381 -15.352 1.00 45.32 A
ATOM 252 C ALA A 38 -29.421 -22.521 -16.897 1.00 44.93 A
ATOM 253 O ALA A 38 -29.572 -21.332 -16.585 1.00 45.15 A
ATOM 254 N SER A 39 -28.833 -22.906 -18.022 1.00 43.20 A
ATOM 255 CA SER A 39 -28.324 -21.936 -18.971 1.00 40.74 A
ATOM 256 CB SER A 39 -27.673 -22.653 -20.146 1.00 39.66 A
ATOM 257 OG SER A 39 -26.645 -23.515 -19.689 1.00 38.90 A
ATOM 258 C SER A 39 -29.483 -21.082 -19.452 1.00 40.23 A
ATOM 259 O SER A 39 -29.399 -19.859 -19.464 1.00 38.93 A
ATOM 260 N TRP A 40 -30.582 -21.727 -19.819 1.00 40.90 A
ATOM 261 CA TRP A 40 -31.734 -20.983 -20.303 1.00 42.94 A
ATOM 262 CB TRP A 40 -32.937 -21.907 -20.548 1.00 41.16 A
ATOM 263 CG TRP A 40 -34.174 -21.153 -20.994 1.00 39.70 A
ATOM 264 CD2 TRP A 40 -34.484 -20.701 -22.321 1.00 40.08 A
ATOM 265 CE2 TRP A 40 -35.701 -19.983 -22.247 1.00 40.58 A
ATOM 266 CE3 TRP A 40 -33.852 -20.827 -23.561 1.00 39.88 A
ATOM 267 CD1 TRP A 40 -35.181 -20.708 -20.202 1.00 39.94 A
ATOM 268 NE1 TRP A 40 -36.104 -20.004 -20.940 1.00 40.46 A
ATOM 269 CZ2 TRP A 40 -36.304 -19.393 -23.371 1.00 40.08 A

ATOM 270 CZ3 TRP A 40 -34.449 -20.241 -24.674 1.00 41.03 A
ATOM 271 CH2 TRP A 40 -35.666 -19.532 -24.568 1.00 40.77 A
ATOM 272 C TRP A 40 -32.138 -19.857 -19.366 1.00 45.21 A
ATOM 273 O TRP A 40 -32.740 -18.880 -19.803 1.00 44.61 A
ATOM 274 N ALA A 41 -31.804 -19.988 -18.084 1.00 48.17 A
ATOM 275 CA ALA A 41 -32.155 -18.958 -17.110 1.00 50.90 A
ATOM 276 CB ALA A 41 -32.299 -19.571 -15.729 1.00 51.19 A
ATOM 277 C ALA A 41 -31.094 -17.866 -17.092 1.00 52.43 A
ATOM 278 O ALA A 41 -31.397 -16.695 -16.841 1.00 52.32 A
ATOM 279 N HIS A 42 -29.852 -18.260 -17.368 1.00 53.67 A
ATOM 280 CA HIS A 42 -28.744 -17.314 -17.395 1.00 55.62 A
ATOM 281 CB HIS A 42 -27.396 -18.053 -17.326 1.00 57.10 A
ATOM 282 CG HIS A 42 -26.203 -17.141 -17.245 1.00 58.99 A
ATOM 283 CD2 HIS A 42 -26.108 -15.807 -17.024 1.00 59.33 A
ATOM 284 ND1 HIS A 42 -24.909 -17.596 -17.388 1.00 58.92 A
ATOM 285 CE1 HIS A 42 -24.070 -16.583 -17.260 1.00 58.60 A
ATOM 286 NE2 HIS A 42 -24.772 -15.486 -17.039 1.00 59.32 A
ATOM 287 C HIS A 42 -28.788 -16.456 -18.656 1.00 56.30 A
ATOM 288 O HIS A 42 -28.494 -15.266 -18.619 1.00 57.04 A
ATOM 289 N ASP A 43 -29.152 -17.067 -19.776 1.00 56.56 A
ATOM 290 CA ASP A 43 -29.216 -16.345 -21.037 1.00 56.37 A
ATOM 291 CB ASP A 43 -29.175 -17.329 -22.208 1.00 56.65 A
ATOM 292 CG ASP A 43 -27.809 -18.007 -22.369 1.00 57.12 A
ATOM 293 OD1 ASP A 43 -27.575 -18.671 -23.407 1.00 56.94 A
ATOM 294 OD2 ASP A 43 -26.959 -17.883 -21.460 1.00 58.56 A
ATOM 295 C ASP A 43 -30.467 -15.474 -21.099 1.00 56.87 A
ATOM 296 O ASP A 43 -30.425 -14.350 -21.597 1.00 56.10 A
ATOM 297 N THR A 44 -31.574 -15.991 -20.578 1.00 58.07 A
ATOM 298 CA THR A 44 -32.825 -15.247 -20.552 1.00 59.63 A
ATOM 299 CB THR A 44 -34.009 -16.165 -20.208 1.00 60.47 A
ATOM 300 OG1 THR A 44 -33.770 -16.790 -18.942 1.00 63.10 A
ATOM 301 CG2 THR A 44 -34.187 -17.227 -21.279 1.00 61.08 A
ATOM 302 C THR A 44 -32.659 -14.196 -19.460 1.00 59.55 A
ATOM 303 O THR A 44 -33.361 -13.184 -19.441 1.00 59.22 A

ATOM 304 N ASN A 45 -31.718 -14.448 -18.549 1.00 59.53 A
ATOM 305 CA ASN A 45 -31.437 -13.497 -17.468 1.00 59.47 A
ATOM 306 CB ASN A 45 -32.333 -13.734 -16.249 1.00 59.32 A
ATOM 307 CG ASN A 45 -32.507 -12.478 -15.410 1.00 58.99 A
ATOM 308 OD1 ASN A 45 -31.803 -11.484 -15.613 1.00 59.19 A
ATOM 309 ND2 ASN A 45 -33.444 -12.515 -14.467 1.00 58.59 A
ATOM 310 C ASN A 45 -29.988 -13.537 -17.012 1.00 59.07 A
ATOM 311 O ASN A 45 -29.539 -14.523 -16.429 1.00 59.02 A
ATOM 312 N ILE A 46 -29.401 -12.863 -17.583 1.00 58.87 A
ATOM 313 CA ILE A 46 -28.001 -12.779 -17.182 1.00 58.66 A
ATOM 314 CB ILE A 46 -27.198 -11.948 -18.200 1.00 57.77 A
ATOM 315 CG2 ILE A 46 -27.378 -10.461 -17.934 1.00 57.17 A
ATOM 316 CG1 ILE A 46 -25.718 -12.331 -18.151 1.00 56.18 A
ATOM 317 CD1 ILE A 46 -25.058 -12.392 -19.512 0.00 57.21 A
ATOM 318 C ILE A 46 -27.862 -12.177 -15.788 1.00 58.22 A
ATOM 319 O ILE A 46 -27.777 -10.959 -15.635 1.00 57.94 A
ATOM 320 N THR A 47 -27.693 -12.635 -14.469 1.00 57.81 A
ATOM 321 CA THR A 47 -27.526 -12.177 -13.089 1.00 56.85 A
ATOM 322 CB THR A 47 -28.834 -12.296 -12.249 1.00 56.77 A
ATOM 323 OG1 THR A 47 -29.087 -13.670 -11.924 1.00 57.04 A
ATOM 324 CG2 THR A 47 -30.014 -11.707 -13.003 1.00 57.24 A
ATOM 325 C THR A 47 -26.444 -13.040 -12.445 1.00 56.14 A
ATOM 326 O THR A 47 -26.157 -14.150 -12.907 1.00 55.58 A
ATOM 327 N ALA A 48 -25.835 -12.523 -11.386 1.00 55.00 A
ATOM 328 CA ALA A 48 -24.777 -13.255 -10.705 1.00 53.75 A
ATOM 329 CB ALA A 48 -24.202 -12.397 -9.591 1.00 54.35 A
ATOM 330 C ALA A 48 -25.305 -14.575 -10.145 1.00 52.50 A
ATOM 331 O ALA A 48 -24.610 -15.596 -10.139 1.00 50.97 A
ATOM 332 N ALA A 49 -26.550 -14.538 -9.680 1.00 51.55 A
ATOM 333 CA ALA A 49 -27.192 -15.716 -9.114 1.00 50.20 A
ATOM 334 CB ALA A 49 -28.566 -15.348 -8.547 1.00 50.91 A
ATOM 335 C ALA A 49 -27.336 -16.823 -10.153 1.00 48.88 A
ATOM 336 O ALA A 49 -26.943 -17.964 -9.903 1.00 48.42 A
ATOM 337 N ASN A 50 -27.892 -16.482 -11.317 1.00 47.09 A

ATOM 338 CA ASN A 50 -28.101 -17.457 -12.392 1.00 44.19 A
ATOM 339 CB ASN A 50 -28.880 -16.811 -13.546 1.00 43.82 A
ATOM 340 CG ASN A 50 -30.269 -16.321 -13.127 1.00 43.99 A
ATOM 341 OD1 ASN A 50 -31.038 -17.062 -12.530 1.00 44.25 A
ATOM 342 ND2 ASN A 50 -30.596 -15.075 -13.458 1.00 43.69 A
ATOM 343 C ASN A 50 -26.779 -18.026 -12.909 1.00 42.38 A
ATOM 344 O ASN A 50 -26.686 -19.215 -13.229 1.00 40.58 A
ATOM 345 N ALA A 51 -25.761 -17.170 -12.970 1.00 41.33 A
ATOM 346 CA ALA A 51 -24.444 -17.567 -13.446 1.00 40.48 A
ATOM 347 CB ALA A 51 -23.535 -16.361 -13.535 1.00 40.14 A
ATOM 348 C ALA A 51 -23.837 -18.586 -12.517 1.00 40.81 A
ATOM 349 O ALA A 51 -23.339 -19.624 -12.947 1.00 39.59 A
ATOM 350 N ARG A 52 -23.877 -18.267 -11.227 1.00 43.21 A
ATOM 351 CA ARG A 52 -23.326 -19.156 -10.207 1.00 44.52 A
ATOM 352 CB ARG A 52 -23.426 -18.468 -8.835 1.00 44.64 A
ATOM 353 CG ARG A 52 -23.279 -19.340 -7.599 1.00 45.72 A
ATOM 354 CD ARG A 52 -24.245 -18.779 -6.531 1.00 46.06 A
ATOM 355 NE ARG A 52 -25.208 -19.793 -6.082 1.00 47.42 A
ATOM 356 CZ ARG A 52 -26.533 -19.638 -5.980 1.00 47.04 A
ATOM 357 NH1 ARG A 52 -27.116 -18.485 -6.294 1.00 45.47 A
ATOM 358 NH2 ARG A 52 -27.280 -20.665 -5.573 1.00 46.47 A
ATOM 359 C ARG A 52 -24.075 -20.496 -10.276 1.00 45.11 A
ATOM 360 O ARG A 52 -23.454 -21.561 -10.248 1.00 44.68 A
ATOM 361 N ARG A 53 -25.399 -20.429 -10.365 1.00 45.26 A
ATOM 362 CA ARG A 53 -26.201 -21.588 -10.742 1.00 44.95 A
ATOM 363 CB ARG A 53 -27.632 -21.163 -11.076 1.00 45.64 A
ATOM 364 CG ARG A 53 -28.284 -20.292 -10.015 1.00 46.60 A
ATOM 365 CD ARG A 53 -29.796 -20.429 -9.943 1.00 47.86 A
ATOM 366 NE ARG A 53 -30.302 -20.203 -8.592 1.00 48.80 A
ATOM 367 CZ ARG A 53 -31.068 -21.060 -7.931 1.00 49.21 A
ATOM 368 NH1 ARG A 53 -31.422 -22.207 -8.494 1.00 47.38 A
ATOM 369 NH2 ARG A 53 -31.482 -20.772 -6.705 1.00 50.59 A
ATOM 370 C ARG A 53 -25.583 -22.323 -11.927 1.00 44.69 A
ATOM 371 O ARG A 53 -25.008 -23.401 -11.768 1.00 44.32 A

ATOM 372 N GLN A 54 -25.705 -21.735 -13.112 1.00 43.71 A
ATOM 373 CA GLN A 54 -25.246 -22.377 -14.338 1.00 43.15 A
ATOM 374 CB GLN A 54 -25.136 -21.354 -15.470 1.00 44.86 A
ATOM 375 CG GLN A 54 -23.883 -21.500 -16.318 1.00 44.60 A
ATOM 376 CD GLN A 54 -24.139 -22.246 -17.612 1.00 45.81 A
ATOM 377 OE1 GLN A 54 -24.994 -21.850 -18.404 1.00 47.57 A
ATOM 378 NE2 GLN A 54 -23.400 -23.328 -17.829 1.00 45.59 A
ATOM 379 C GLN A 54 -23.906 -23.073 -14.127 1.00 43.18 A
ATOM 380 O GLN A 54 -23.713 -24.212 -14.554 1.00 42.37 A
ATOM 381 N GLU A 55 -22.983 -22.382 -13.466 1.00 43.70 A
ATOM 382 CA GLU A 55 -21.657 -22.929 -13.205 1.00 44.28 A
ATOM 383 CB GLU A 55 -20.766 -21.880 -12.538 1.00 44.38 A
ATOM 384 CG GLU A 55 -20.582 -20.611 -13.356 1.00 44.72 A
ATOM 385 CD GLU A 55 -19.423 -19.766 -12.867 1.00 45.37 A
ATOM 386 OE1 GLU A 55 -18.326 -20.325 -12.653 1.00 44.50 A
ATOM 387 OE2 GLU A 55 -19.607 -18.542 -12.697 1.00 45.64 A
ATOM 388 C GLU A 55 -21.738 -24.178 -12.334 1.00 44.19 A
ATOM 389 O GLU A 55 -20.861 -25.041 -12.386 1.00 43.54 A
ATOM 390 N ALA A 56 -22.795 -24.268 -11.534 1.00 44.92 A
ATOM 391 CA ALA A 56 -23.006 -25.422 -10.669 1.00 45.61 A
ATOM 392 CB ALA A 56 -24.022 -25.082 -9.567 1.00 46.30 A
ATOM 393 C ALA A 56 -23.513 -26.584 -11.513 1.00 44.94 A
ATOM 394 O ALA A 56 -22.912 -27.660 -11.529 1.00 44.21 A
ATOM 395 N ALA A 57 -24.619 -26.349 -12.217 1.00 44.69 A
ATOM 396 CA ALA A 57 -25.231 -27.360 -13.082 1.00 45.11 A
ATOM 397 CB ALA A 57 -26.364 -26.727 -13.901 1.00 44.21 A
ATOM 398 C ALA A 57 -24.195 -27.999 -14.013 1.00 44.68 A
ATOM 399 O ALA A 57 -24.258 -29.200 -14.321 1.00 44.49 A
ATOM 400 N ALA A 58 -23.240 -27.185 -14.453 1.00 43.83 A
ATOM 401 CA ALA A 58 -22.178 -27.643 -15.336 1.00 43.50 A
ATOM 402 CB ALA A 58 -21.327 -26.469 -15.761 1.00 44.16 A
ATOM 403 C ALA A 58 -21.318 -28.667 -14.619 1.00 43.33 A
ATOM 404 O ALA A 58 -20.916 -29.684 -15.190 1.00 43.20 A
ATOM 405 N LEU A 59 -21.042 -28.382 -13.351 1.00 43.61 A

ATOM 406 CA LEU A 59 -20.225 -29.254 -12.516 1.00 42.95 A
ATOM 407 CB LEU A 59 -20.026 -28.614 -11.144 1.00 42.23 A
ATOM 408 CG LEU A 59 -18.585 -28.193 -10.875 1.00 40.98 A
ATOM 409 CD1 LEU A 59 -18.517 -27.382 -9.602 1.00 41.10 A
ATOM 410 CD2 LEU A 59 -17.712 -29.432 -10.795 1.00 40.04 A
ATOM 411 C LEU A 59 -20.828 -30.641 -12.369 1.00 42.48 A
ATOM 412 O LEU A 59 -20.101 -31.638 -12.291 1.00 41.67 A
ATOM 413 N ALA A 60 -22.155 -30.704 -12.336 1.00 41.90 A
ATOM 414 CA ALA A 60 -22.835 -31.981 -12.212 1.00 41.74 A
ATOM 415 CB ALA A 60 -24.329 -31.764 -11.969 1.00 42.35 A
ATOM 416 C ALA A 60 -22.609 -32.726 -13.512 1.00 41.64 A
ATOM 417 O ALA A 60 -22.096 -33.850 -13.515 1.00 40.27 A
ATOM 418 N SER A 61 -22.973 -32.083 -14.619 1.00 41.39 A
ATOM 419 CA SER A 61 -22.804 -32.686 -15.933 1.00 41.43 A
ATOM 420 CB SER A 61 -23.126 -31.676 -17.031 1.00 40.99 A
ATOM 421 OG SER A 61 -24.497 -31.315 -16.991 1.00 41.87 A
ATOM 422 C SER A 61 -21.381 -33.179 -16.087 1.00 41.70 A
ATOM 423 O SER A 61 -21.137 -34.334 -16.446 1.00 40.62 A
ATOM 424 N GLN A 62 -20.437 -32.296 -15.801 1.00 43.19 A
ATOM 425 CA GLN A 62 -19.064 -32.696 -15.913 1.00 45.73 A
ATOM 426 CB GLN A 62 -18.105 -31.612 -15.462 1.00 45.73 A
ATOM 427 CG GLN A 62 -18.117 -30.440 -16.408 1.00 46.55 A
ATOM 428 CD GLN A 62 -17.625 -29.162 -15.775 1.00 47.33 A
ATOM 429 OE1 GLN A 62 -18.177 -28.708 -14.783 1.00 47.41 A
ATOM 430 NE2 GLN A 62 -16.590 -28.567 -16.354 1.00 47.95 A
ATOM 431 C GLN A 62 -18.903 -33.888 -15.077 1.00 47.66 A
ATOM 432 O GLN A 62 -18.121 -34.761 -15.408 1.00 47.00 A
ATOM 433 N GLU A 63 -19.542 -34.036 -13.954 1.00 50.20 A
ATOM 434 CA GLU A 63 -19.062 -35.314 -13.679 1.00 52.62 A
ATOM 435 CB GLU A 63 -18.097 -35.289 -12.562 1.00 54.56 A
ATOM 436 CG GLU A 63 -17.685 -36.556 -11.958 1.00 58.03 A
ATOM 437 CD GLU A 63 -17.809 -36.278 -10.551 1.00 59.94 A
ATOM 438 OE1 GLU A 63 -18.970 -36.187 -10.101 1.00 61.15 A
ATOM 439 OE2 GLU A 63 -16.771 -36.029 -9.918 1.00 61.03 A

ATOM 440 C GLU A 63 -19.988 -36.479 -13.916 1.00 52.55 A
ATOM 441 O GLU A 63 -19.580 -37.634 -13.859 1.00 51.59 A
ATOM 442 N PHE A 64 -21.239 -36.196 -14.261 1.00 52.30 A
ATOM 443 CA PHE A 64 -22.094 -37.276 -14.717 1.00 52.64 A
ATOM 444 CB PHE A 64 -23.372 -36.700 -15.338 1.00 51.51 A
ATOM 445 CG PHE A 64 -24.255 -37.720 -15.978 1.00 51.78 A
ATOM 446 CD1 PHE A 64 -25.610 -37.526 -15.992 1.00 51.51 A
ATOM 447 CD2 PHE A 64 -23.759 -38.868 -16.557 1.00 51.98 A
ATOM 448 CE1 PHE A 64 -26.477 -38.444 -16.557 1.00 51.64 A
ATOM 449 CE2 PHE A 64 -24.633 -39.795 -17.130 1.00 51.76 A
ATOM 450 CZ PHE A 64 -25.986 -39.583 -17.125 1.00 51.57 A
ATOM 451 C PHE A 64 -21.206 -37.825 -15.908 1.00 53.72 A
ATOM 452 O PHE A 64 -20.912 -39.020 -16.017 1.00 53.78 A
ATOM 453 N ALA A 65 -20.768 -36.918 -16.791 1.00 55.26 A
ATOM 454 CA ALA A 65 -19.953 -37.254 -17.977 1.00 56.71 A
ATOM 455 CB ALA A 65 -19.560 -35.985 -18.737 1.00 57.10 A
ATOM 456 C ALA A 65 -18.707 -38.029 -17.645 1.00 57.69 A
ATOM 457 O ALA A 65 -18.242 -38.870 -18.424 1.00 57.84 A
ATOM 458 N GLU A 66 -18.133 -37.740 -16.495 1.00 58.63 A
ATOM 459 CA GLU A 66 -16.945 -38.484 -16.190 1.00 60.42 A
ATOM 460 CB GLU A 66 -16.161 -37.898 -15.061 1.00 60.86 A
ATOM 461 CG GLU A 66 -15.391 -39.036 -14.503 1.00 60.77 A
ATOM 462 CD GLU A 66 -14.405 -38.610 -13.554 1.00 61.20 A
ATOM 463 OE1 GLU A 66 -14.830 -37.967 -12.577 1.00 61.34 A
ATOM 464 OE2 GLU A 66 -13.222 -38.914 -13.799 1.00 60.91 A
ATOM 465 C GLU A 66 -17.247 -39.894 -15.770 1.00 61.16 A
ATOM 466 O GLU A 66 -16.520 -40.838 -16.099 1.00 61.30 A
ATOM 467 N ALA A 67 -18.300 -40.024 -14.987 1.00 61.73 A
ATOM 468 CA ALA A 67 -18.649 -41.326 -14.474 1.00 62.62 A
ATOM 469 CB ALA A 67 -19.872 -41.225 -13.620 1.00 63.91 A
ATOM 470 C ALA A 67 -18.860 -42.331 -15.580 1.00 63.11 A
ATOM 471 O ALA A 67 -18.136 -43.325 -15.671 1.00 62.48 A
ATOM 472 N TRP A 68 -19.843 -42.072 -16.432 1.00 63.76 A
ATOM 473 CA TRP A 68 -20.111 -42.983 -17.526 1.00 64.31 A

ATOM 474 CB TRP A 68 -21.397 -42.608 -18.236 1.00 65.74 A
ATOM 475 CG TRP A 68 -22.569 -42.629 -17.341 1.00 67.83 A
ATOM 476 CD2 TRP A 68 -23.587 -43.632 -17.283 1.00 68.47 A
ATOM 477 CE2 TRP A 68 -24.535 -43.208 -16.329 1.00 68.66 A
ATOM 478 CE3 TRP A 68 -23.790 -44.845 -17.944 1.00 68.37 A
ATOM 479 CD1 TRP A 68 -22.912 -41.684 -16.446 1.00 67.79 A
ATOM 480 NE1 TRP A 68 -24.099 -42.009 -15.833 1.00 68.45 A
ATOM 481 CZ2 TRP A 68 -25.675 -43.954 -16.019 1.00 68.62 A
ATOM 482 CZ3 TRP A 68 -24.917 -45.586 -17.640 1.00 68.90 A
ATOM 483 CH2 TRP A 68 -25.849 -45.138 -16.684 1.00 68.81 A
ATOM 484 C TRP A 68 -18.963 -42.943 -18.505 1.00 64.15 A
ATOM 485 O TRP A 68 -18.703 -43.917 -19.205 1.00 64.58 A
ATOM 486 N GLY A 69 -18.277 -41.807 -18.547 1.00 63.97 A
ATOM 487 CA GLY A 69 -17.160 -41.662 -19.450 1.00 63.77 A
ATOM 488 C GLY A 69 -16.124 -42.723 -19.165 1.00 64.10 A
ATOM 489 O GLY A 69 -15.940 -43.628 -19.961 1.00 64.16 A
ATOM 490 N ALA A 70 -15.469 -42.619 -18.013 1.00 64.64 A
ATOM 491 CA ALA A 70 -14.425 -43.562 -17.618 1.00 64.54 A
ATOM 492 CB ALA A 70 -13.756 -43.080 -16.336 1.00 64.03 A
ATOM 493 C ALA A 70 -14.932 -44.986 -17.444 1.00 64.69 A
ATOM 494 O ALA A 70 -14.146 -45.937 -17.442 1.00 64.25 A
ATOM 495 N ALA A 71 -16.242 -45.141 -17.290 1.00 65.27 A
ATOM 496 CA ALA A 71 -16.813 -46.473 -17.140 1.00 66.11 A
ATOM 497 CB ALA A 71 -18.196 -46.393 -16.494 1.00 66.33 A
ATOM 498 C ALA A 71 -16.912 -47.093 -18.524 1.00 66.37 A
ATOM 499 O ALA A 71 -16.369 -48.168 -18.774 1.00 67.22 A
ATOM 500 N ALA A 72 -17.609 -46.398 -19.422 1.00 65.42 A
ATOM 501 CA ALA A 72 -17.779 -46.854 -20.799 1.00 64.12 A
ATOM 502 CB ALA A 72 -18.294 -45.719 -21.660 1.00 63.27 A
ATOM 503 C ALA A 72 -16.461 -47.358 -21.369 1.00 63.86 A
ATOM 504 O ALA A 72 -16.423 -48.243 -22.218 1.00 63.68 A
ATOM 505 N LYS A 73 -15.375 -46.781 -20.880 1.00 63.50 A
ATOM 506 CA LYS A 73 -14.032 -47.118 -21.339 1.00 63.59 A
ATOM 507 CB LYS A 73 -13.214 -45.871 -21.371 1.00 63.67 A

ATOM 508 CG LYS A 73 -14.055 -44.659 -21.124 1.00 62.79 A
ATOM 509 CD LYS A 73 -13.241 -43.414 -21.217 1.00 61.89 A
ATOM 510 CE LYS A 73 -11.783 -43.760 -21.484 1.00 61.13 A
ATOM 511 NZ LYS A 73 -11.152 -42.709 -22.294 1.00 60.99 A
ATOM 512 C LYS A 73 -13.361 -48.096 -20.423 1.00 64.02 A
ATOM 513 O LYS A 73 -12.363 -48.731 -20.775 1.00 63.61 A
ATOM 514 N ALA A 74 -13.909 -48.176 -19.227 1.00 64.83 A
ATOM 515 CA ALA A 74 -13.391 -49.066 -18.232 1.00 66.77 A
ATOM 516 CB ALA A 74 -14.368 -49.130 -17.083 1.00 67.19 A
ATOM 517 C ALA A 74 -13.238 -50.452 -18.838 1.00 67.74 A
ATOM 518 O ALA A 74 -12.227 -51.134 -18.653 1.00 68.16 A
ATOM 519 N LEU A 75 -14.240 -50.816 -19.626 1.00 68.05 A
ATOM 520 CA LEU A 75 -14.325 -52.154 -20.179 1.00 67.79 A
ATOM 521 CB LEU A 75 -15.287 -52.909 -19.257 1.00 67.38 A
ATOM 522 CG LEU A 75 -16.724 -52.324 -19.259 1.00 67.76 A
ATOM 523 CD1 LEU A 75 -17.698 -53.326 -18.651 1.00 67.93 A
ATOM 524 CD2 LEU A 75 -16.836 -51.003 -18.496 1.00 67.00 A
ATOM 525 C LEU A 75 -14.840 -52.308 -21.616 1.00 67.97 A
ATOM 526 O LEU A 75 -14.935 -53.420 -22.148 1.00 68.25 A
ATOM 527 N TYR A 76 -15.205 -51.193 -22.217 1.00 67.63 A
ATOM 528 CA TYR A 76 -15.791 -51.196 -23.547 1.00 67.45 A
ATOM 529 CB TYR A 76 -17.101 -50.415 -23.482 1.00 66.43 A
ATOM 530 CG TYR A 76 -18.238 -51.161 -22.876 1.00 65.10 A
ATOM 531 CD1 TYR A 76 -19.424 -50.505 -22.570 1.00 65.04 A
ATOM 532 CE1 TYR A 76 -20.485 -51.185 -22.047 1.00 65.02 A
ATOM 533 CD2 TYR A 76 -18.150 -52.527 -22.641 1.00 63.96 A
ATOM 534 CE2 TYR A 76 -19.201 -53.209 -22.126 1.00 64.56 A
ATOM 535 CZ TYR A 76 -20.368 -52.535 -21.828 1.00 65.15 A
ATOM 536 OH TYR A 76 -21.438 -53.200 -21.317 1.00 65.27 A
ATOM 537 C TYR A 76 -14.916 -50.561 -24.605 1.00 67.64 A
ATOM 538 O TYR A 76 -15.378 -50.241 -25.704 1.00 67.98 A
ATOM 539 N GLU A 77 -13.654 -50.392 -24.277 1.00 67.24 A
ATOM 540 CA GLU A 77 -12.730 -49.715 -25.157 1.00 66.62 A
ATOM 541 CB GLU A 77 -11.813 -48.868 -24.281 1.00 66.19 A

ATOM 542 CG GLU A 77 -11.801 -47.398 -24.618 1.00 66.24 A
ATOM 543 CD GLU A 77 -10.442 -46.942 -25.127 1.00 66.51 A
ATOM 544 OE1 GLU A 77 -10.266 -45.720 -25.358 1.00 65.66 A
ATOM 545 OE2 GLU A 77 -9.552 -47.812 -25.295 1.00 65.68 A
ATOM 546 C GLU A 77 -11.865 -50.538 -26.104 1.00 66.11 A
ATOM 547 O GLU A 77 -11.779 -50.258 -27.306 1.00 66.92 A
ATOM 548 N PRO A 78 -11.190 -51.557 -25.567 1.00 65.04 A
ATOM 549 CD PRO A 78 -11.387 -52.066 -24.196 1.00 64.79 A
ATOM 550 CA PRO A 78 -10.301 -52.432 -26.332 1.00 64.64 A
ATOM 551 CB PRO A 78 -9.541 -53.156 -25.241 1.00 64.36 A
ATOM 552 CG PRO A 78 -10.623 -53.375 -24.210 1.00 64.57 A
ATOM 553 C PRO A 78 -10.995 -53.393 -27.274 1.00 64.83 A
ATOM 554 O PRO A 78 -10.340 -54.182 -27.946 1.00 65.36 A
ATOM 555 N ALA A 79 -12.315 -53.312 -27.331 1.00 64.54 A
ATOM 556 CA ALA A 79 -13.083 -54.219 -28.164 1.00 63.55 A
ATOM 557 CB ALA A 79 -13.742 -55.242 -27.268 1.00 62.91 A
ATOM 558 C ALA A 79 -14.134 -53.490 -29.010 1.00 63.17 A
ATOM 559 O ALA A 79 -14.581 -53.987 -30.061 1.00 64.10 A
ATOM 560 N ALA A 80 -14.529 -52.307 -28.549 1.00 61.97 A
ATOM 561 CA ALA A 80 -15.289 -51.378 -29.376 1.00 61.45 A
ATOM 562 CB ALA A 80 -15.519 -50.072 -28.632 1.00 60.88 A
ATOM 563 C ALA A 80 -14.586 -51.120 -30.705 1.00 61.99 A
ATOM 564 O ALA A 80 -13.396 -51.395 -30.852 1.00 62.53 A
ATOM 565 N ALA A 81 -15.331 -50.589 -31.669 1.00 61.92 A
ATOM 566 CA ALA A 81 -14.893 -50.582 -33.059 1.00 61.96 A
ATOM 567 CB ALA A 81 -13.378 -50.468 -33.137 1.00 61.75 A
ATOM 568 C ALA A 81 -15.000 -51.917 -33.788 1.00 61.56 A
ATOM 569 O ALA A 81 -14.546 -52.054 -34.924 1.00 62.16 A
ATOM 570 N ASN A 82 -15.604 -52.899 -33.127 1.00 60.14 A
ATOM 571 CA ASN A 82 -15.754 -54.231 -33.701 1.00 57.96 A
ATOM 572 CB ASN A 82 -14.841 -55.365 -33.231 1.00 56.73 A
ATOM 573 CG ASN A 82 -13.632 -55.549 -34.126 1.00 56.35 A
ATOM 574 OD1 ASN A 82 -13.505 -56.559 -34.819 1.00 56.37 A
ATOM 575 ND2 ASN A 82 -12.734 -54.571 -34.117 1.00 55.74 A

ATOM 576 C ASN A 82 -17.209 -54.566 -33.391 1.00 57.24 A
ATOM 577 O ASN A 82 -17.624 -55.721 -33.486 1.00 57.73 A
ATOM 578 N PHE A 83 -17.979 -53.548 -33.021 1.00 56.99 A
ATOM 579 CA PHE A 83 -19.376 -53.738 -32.657 1.00 57.23 A
ATOM 580 CB PHE A 83 -19.798 -52.596 -31.772 1.00 57.59 A
ATOM 581 CG PHE A 83 -19.390 -52.755 -30.338 1.00 57.94 A
ATOM 582 CD1 PHE A 83 -18.182 -53.387 -29.979 1.00 57.33 A
ATOM 583 CD2 PHE A 83 -20.186 -52.197 -29.339 1.00 57.07 A
ATOM 584 CE1 PHE A 83 -17.778 -53.448 -28.623 1.00 56.40 A
ATOM 585 CE2 PHE A 83 -19.804 -52.246 -28.006 1.00 55.90 A
ATOM 586 CZ PHE A 83 -18.599 -52.869 -27.637 1.00 56.11 A
ATOM 587 C PHE A 83 -20.350 -53.830 -33.818 1.00 57.13 A
ATOM 588 O PHE A 83 -20.619 -52.842 -34.498 1.00 57.07 A
ATOM 589 N THR A 84 -20.922 -55.005 -34.036 1.00 57.18 A
ATOM 590 CA THR A 84 -21.831 -55.160 -35.159 1.00 57.05 A
ATOM 591 CB THR A 84 -22.708 -56.388 -35.032 1.00 57.23 A
ATOM 592 OG1 THR A 84 -21.878 -57.530 -34.772 1.00 57.79 A
ATOM 593 CG2 THR A 84 -23.439 -56.603 -36.355 1.00 58.19 A
ATOM 594 C THR A 84 -22.712 -53.955 -35.381 1.00 57.07 A
ATOM 595 O THR A 84 -22.663 -53.356 -36.442 1.00 58.37 A
ATOM 596 N ASP A 85 -23.517 -53.593 -34.391 1.00 56.74 A
ATOM 597 CA ASP A 85 -24.419 -52.452 -34.516 1.00 56.22 A
ATOM 598 CB ASP A 85 -25.453 -52.538 -33.442 1.00 55.86 A
ATOM 599 CG ASP A 85 -26.417 -51.430 -33.518 1.00 56.41 A
ATOM 600 OD1 ASP A 85 -27.256 -51.316 -32.607 1.00 56.72 A
ATOM 601 OD2 ASP A 85 -26.309 -50.670 -34.530 1.00 56.73 A
ATOM 602 C ASP A 85 -23.678 -51.128 -34.354 1.00 56.73 A
ATOM 603 O ASP A 85 -23.998 -50.349 -33.475 1.00 57.21 A
ATOM 604 N PRO A 86 -22.797 -50.779 -35.305 1.00 56.57 A
ATOM 605 CD PRO A 86 -22.840 -50.853 -36.770 1.00 55.82 A
ATOM 606 CA PRO A 86 -22.185 -49.511 -34.947 1.00 56.23 A
ATOM 607 CB PRO A 86 -21.118 -49.323 -36.019 1.00 55.53 A
ATOM 608 CG PRO A 86 -21.438 -50.418 -37.095 1.00 55.37 A
ATOM 609 C PRO A 86 -23.081 -48.310 -34.808 1.00 55.86 A

ATOM 610 O PRO A 86 -22.620 -47.285 -34.309 1.00 56.01 A
ATOM 611 N GLN A 87 -24.334 -48.384 -35.245 1.00 55.30 A
ATOM 612 CA GLN A 87 -25.174 -47.215 -35.019 1.00 55.83 A
ATOM 613 CB GLN A 87 -26.599 -47.451 -35.414 1.00 55.96 A
ATOM 614 CG GLN A 87 -27.487 -46.516 -34.661 1.00 57.12 A
ATOM 615 CD GLN A 87 -28.879 -46.601 -35.140 1.00 59.30 A
ATOM 616 OE1 GLN A 87 -29.738 -45.793 -34.777 1.00 59.69 A
ATOM 617 NE2 GLN A 87 -29.133 -47.593 -35.980 1.00 60.49 A
ATOM 618 C GLN A 87 -25.120 -47.140 -33.498 1.00 56.90 A
ATOM 619 O GLN A 87 -25.775 -46.322 -32.850 1.00 57.65 A
ATOM 620 N ALA A 88 -24.313 -48.023 -32.918 1.00 57.05 A
ATOM 621 CA ALA A 88 -24.084 -48.021 -31.478 1.00 55.94 A
ATOM 622 CB ALA A 88 -24.544 -49.336 -30.867 1.00 55.95 A
ATOM 623 C ALA A 88 -22.622 -47.892 -31.064 1.00 55.63 A
ATOM 624 O ALA A 88 -22.310 -47.307 -30.026 1.00 57.66 A
ATOM 625 N ALA A 89 -21.730 -48.442 -31.881 1.00 54.36 A
ATOM 626 CA ALA A 89 -20.296 -48.313 -31.649 1.00 52.93 A
ATOM 627 CB ALA A 89 -19.534 -49.113 -32.694 1.00 51.44 A
ATOM 628 C ALA A 89 -20.015 -46.819 -31.532 1.00 52.73 A
ATOM 629 O ALA A 89 -19.021 -46.410 -30.931 1.00 52.78 A
ATOM 630 N ALA A 90 -20.895 -46.009 -32.110 1.00 51.52 A
ATOM 631 CA ALA A 90 -20.737 -44.560 -32.081 1.00 50.90 A
ATOM 632 CB ALA A 90 -20.946 -44.113 -33.519 1.00 51.86 A
ATOM 633 C ALA A 90 -21.658 -43.787 -31.142 1.00 50.84 A
ATOM 634 O ALA A 90 -21.851 -42.581 -31.300 1.00 51.24 A
ATOM 635 N ILE A 91 -22.223 -44.488 -30.165 1.00 50.53 A
ATOM 636 CA ILE A 91 -22.889 -43.848 -29.068 1.00 49.17 A
ATOM 637 CB ILE A 91 -24.122 -44.495 -28.494 1.00 46.88 A
ATOM 638 CG2 ILE A 91 -24.602 -43.543 -27.465 1.00 46.59 A
ATOM 639 CG1 ILE A 91 -25.269 -44.668 -29.478 1.00 44.52 A
ATOM 640 CD1 ILE A 91 -26.595 -44.187 -28.878 1.00 41.59 A
ATOM 641 C ILE A 91 -21.838 -44.120 -28.036 1.00 49.69 A
ATOM 642 O ILE A 91 -21.419 -43.207 -27.359 1.00 50.14 A
ATOM 643 N ILE A 92 -21.391 -45.374 -27.927 1.00 49.40 A

ATOM 644 CA ILE A 92 -20.332 -45.675 -26.955 1.00 50.37 A
ATOM 645 CB ILE A 92 -19.891 -47.171 -26.991 1.00 49.88 A
ATOM 646 CG2 ILE A 92 -18.549 -47.359 -26.284 1.00 49.82 A
ATOM 647 CG1 ILE A 92 -20.969 -48.035 -26.340 1.00 48.92 A
ATOM 648 CD1 ILE A 92 -20.564 -49.477 -26.134 0.00 49.37 A
ATOM 649 C ILE A 92 -19.121 -44.784 -27.247 1.00 51.04 A
ATOM 650 O ILE A 92 -18.445 -44.288 -26.333 1.00 52.42 A
ATOM 651 N GLY A 93 -18.872 -44.552 -28.527 1.00 50.70 A
ATOM 652 CA GLY A 93 -17.768 -43.695 -28.909 1.00 50.80 A
ATOM 653 C GLY A 93 -17.985 -42.235 -28.529 1.00 50.28 A
ATOM 654 O GLY A 93 -17.033 -41.472 -28.406 1.00 49.86 A
ATOM 655 N ALA A 94 -19.240 -41.845 -28.348 1.00 50.58 A
ATOM 656 CA ALA A 94 -19.570 -40.477 -27.982 1.00 51.89 A
ATOM 657 CB ALA A 94 -20.984 -40.151 -28.411 1.00 51.92 A
ATOM 658 C ALA A 94 -19.449 -40.334 -26.481 1.00 53.74 A
ATOM 659 O ALA A 94 -19.182 -39.252 -25.964 1.00 54.40 A
ATOM 660 N VAL A 95 -19.652 -41.443 -25.780 1.00 54.89 A
ATOM 661 CA VAL A 95 -19.582 -41.444 -24.328 1.00 54.72 A
ATOM 662 CB VAL A 95 -20.411 -42.604 -23.755 1.00 54.31 A
ATOM 663 CG1 VAL A 95 -20.288 -42.656 -22.245 1.00 54.24 A
ATOM 664 CG2 VAL A 95 -21.860 -42.412 -24.139 1.00 53.84 A
ATOM 665 C VAL A 95 -18.149 -41.524 -23.830 1.00 54.72 A
ATOM 666 O VAL A 95 -17.800 -40.924 -22.824 1.00 55.23 A
ATOM 667 N ARG A 96 -17.316 -42.256 -24.544 1.00 54.47 A
ATOM 668 CA ARG A 96 -15.931 -42.369 -24.146 1.00 54.87 A
ATOM 669 CB ARG A 96 -15.290 -43.474 -24.986 1.00 56.35 A
ATOM 670 CG ARG A 96 -13.835 -43.317 -25.170 1.00 58.18 A
ATOM 671 CD ARG A 96 -13.448 -43.578 -26.595 1.00 59.96 A
ATOM 672 NE ARG A 96 -12.054 -43.200 -26.744 1.00 61.83 A
ATOM 673 CZ ARG A 96 -11.609 -41.953 -26.609 1.00 62.57 A
ATOM 674 NH1 ARG A 96 -10.312 -41.697 -26.740 1.00 62.33 A
ATOM 675 NH2 ARG A 96 -12.460 -40.956 -26.381 1.00 62.36 A
ATOM 676 C ARG A 96 -15.139 -41.049 -24.250 1.00 54.38 A
ATOM 677 O ARG A 96 -13.950 -40.981 -23.937 1.00 54.27 A

ATOM 678 N THR A 97 -15.795 -39.989 -24.682 1.00 53.38 A
ATOM 679 CA THR A 97 -15.112 -38.713 -24.821 1.00 52.51 A
ATOM 680 CB THR A 97 -14.970 -38.465 -26.330 1.00 51.49 A
ATOM 681 OG1 THR A 97 -13.672 -38.901 -26.741 1.00 48.24 A
ATOM 682 CG2 THR A 97 -15.214 -37.056 -26.711 1.00 51.09 A
ATOM 683 C THR A 97 -15.872 -37.664 -23.989 1.00 53.04 A
ATOM 684 O THR A 97 -17.024 -37.322 -24.212 1.00 53.38 A
ATOM 685 N ALA A 98 -15.152 -37.247 -22.963 1.00 52.64 A
ATOM 686 CA ALA A 98 -15.628 -36.360 -21.902 1.00 52.55 A
ATOM 687 CB ALA A 98 -14.984 -36.808 -20.636 1.00 52.72 A
ATOM 688 C ALA A 98 -15.325 -34.906 -22.091 1.00 52.30 A
ATOM 689 O ALA A 98 -16.146 -33.985 -22.016 1.00 51.29 A
ATOM 690 N GLY A 99 -14.054 -34.741 -22.302 1.00 52.04 A
ATOM 691 CA GLY A 99 -13.580 -33.417 -22.546 1.00 52.22 A
ATOM 692 C GLY A 99 -12.863 -32.624 -21.529 1.00 52.13 A
ATOM 693 O GLY A 99 -11.639 -32.570 -21.511 1.00 51.86 A
ATOM 694 N SER A 100 -13.677 -31.908 -20.790 1.00 51.42 A
ATOM 695 CA SER A 100 -13.188 -31.055 -19.793 1.00 51.00 A
ATOM 696 CB SER A 100 -14.106 -29.838 -19.669 1.00 49.55 A
ATOM 697 OG SER A 100 -15.450 -30.147 -19.962 1.00 48.81 A
ATOM 698 C SER A 100 -13.298 -31.948 -18.624 1.00 51.43 A
ATOM 699 O SER A 100 -12.419 -31.957 -17.791 1.00 51.86 A
ATOM 700 N ALA A 101 -14.377 -32.725 -18.561 1.00 50.14 A
ATOM 701 CA ALA A 101 -14.533 -33.579 -17.393 1.00 47.82 A
ATOM 702 CB ALA A 101 -15.784 -34.417 -17.475 1.00 48.75 A
ATOM 703 C ALA A 101 -13.326 -34.465 -17.129 1.00 46.50 A
ATOM 704 O ALA A 101 -13.340 -35.278 -16.214 1.00 46.74 A
ATOM 705 N ASN A 102 -12.287 -34.332 -17.942 1.00 44.75 A
ATOM 706 CA ASN A 102 -11.060 -35.081 -17.691 1.00 43.44 A
ATOM 707 CB ASN A 102 -10.322 -35.473 -18.963 1.00 43.74 A
ATOM 708 CG ASN A 102 -11.210 -36.051 -19.987 1.00 44.01 A
ATOM 709 OD1 ASN A 102 -11.041 -37.203 -20.370 1.00 43.33 A
ATOM 710 ND2 ASN A 102 -12.166 -35.262 -20.460 1.00 43.75 A
ATOM 711 C ASN A 102 -10.196 -34.034 -17.053 1.00 42.22 A

ATOM 712 O ASN A 102 -8.977 -34.069 -17.188 1.00 41.27 A
ATOM 713 N LEU A 103 -10.836 -33.072 -16.405 1.00 40.62 A
ATOM 714 CA LEU A 103 -10.105 -31.972 -15.799 1.00 39.23 A
ATOM 715 CB LEU A 103 -10.599 -30.644 -16.351 1.00 39.37 A
ATOM 716 CG LEU A 103 -10.160 -30.028 -17.666 1.00 38.85 A
ATOM 717 CD1 LEU A 103 -10.861 -28.674 -17.773 1.00 37.90 A
ATOM 718 CD2 LEU A 103 -8.643 -29.815 -17.688 1.00 38.05 A
ATOM 719 C LEU A 103 -10.271 -31.935 -14.305 1.00 38.39 A
ATOM 720 O LEU A 103 -11.377 -31.967 -13.803 1.00 37.59 A
ATOM 721 N PRO A 104 -9.167 -31.856 -13.559 1.00 37.81 A
ATOM 722 CD PRO A 104 -7.749 -31.682 -13.904 1.00 37.24 A
ATOM 723 CA PRO A 104 -9.382 -31.816 -12.107 1.00 37.20 A
ATOM 724 CB PRO A 104 -7.988 -31.542 -11.554 1.00 36.88 A
ATOM 725 CG PRO A 104 -7.247 -30.932 -12.707 1.00 38.49 A
ATOM 726 C PRO A 104 -10.427 -30.755 -11.695 1.00 36.99 A
ATOM 727 O PRO A 104 -10.628 -29.751 -12.388 1.00 37.20 A
ATOM 728 N ALA A 105 -11.103 -31.010 -10.576 1.00 36.63 A
ATOM 729 CA ALA A 105 -12.160 -30.128 -10.058 1.00 36.46 A
ATOM 730 CB ALA A 105 -12.483 -30.497 -8.605 1.00 36.12 A
ATOM 731 C ALA A 105 -11.865 -28.628 -10.146 1.00 36.11 A
ATOM 732 O ALA A 105 -12.683 -27.855 -10.659 1.00 35.43 A
ATOM 733 N ALA A 106 -10.711 -28.213 -9.627 1.00 35.30 A
ATOM 734 CA ALA A 106 -10.350 -26.801 -9.652 1.00 33.85 A
ATOM 735 CB ALA A 106 -8.941 -26.616 -9.094 1.00 35.43 A
ATOM 736 C ALA A 106 -10.425 -26.249 -11.067 1.00 31.88 A
ATOM 737 O ALA A 106 -11.103 -25.257 -11.314 1.00 29.71 A
ATOM 738 N LYS A 107 -9.718 -26.904 -11.987 1.00 30.38 A
ATOM 739 CA LYS A 107 -9.685 -26.489 -13.391 1.00 27.56 A
ATOM 740 CB LYS A 107 -8.733 -27.392 -14.173 1.00 23.63 A
ATOM 741 CG LYS A 107 -7.260 -27.013 -13.994 1.00 19.92 A
ATOM 742 CD LYS A 107 -6.331 -28.075 -14.550 1.00 15.97 A
ATOM 743 CE LYS A 107 -4.924 -27.552 -14.654 1.00 15.18 A
ATOM 744 NZ LYS A 107 -3.996 -28.619 -15.053 1.00 18.14 A
ATOM 745 C LYS A 107 -11.058 -26.450 -14.062 1.00 27.92 A

ATOM 746 O LYS A 107 -11.311 -25.596 -14.916 1.00 29.42 A
ATOM 747 N ARG A 108 -11.945 -27.361 -13.677 1.00 28.11 A
ATOM 748 CA ARG A 108 -13.282 -27.387 -14.239 1.00 28.61 A
ATOM 749 CB ARG A 108 -14.038 -28.631 -13.764 1.00 29.33 A
ATOM 750 CG ARG A 108 -13.308 -29.938 -14.029 1.00 30.42 A
ATOM 751 CD ARG A 108 -14.231 -31.145 -13.885 1.00 31.06 A
ATOM 752 NE ARG A 108 -13.464 -32.382 -13.743 1.00 32.36 A
ATOM 753 CZ ARG A 108 -13.980 -33.562 -13.407 1.00 34.18 A
ATOM 754 NH1 ARG A 108 -15.279 -33.669 -13.182 1.00 34.81 A
ATOM 755 NH2 ARG A 108 -13.197 -34.634 -13.271 1.00 34.99 A
ATOM 756 C ARG A 108 -14.035 -26.132 -13.837 1.00 29.69 A
ATOM 757 O ARG A 108 -14.778 -25.579 -14.637 1.00 29.32 A
ATOM 758 N GLN A 109 -13.827 -25.679 -12.598 1.00 31.97 A
ATOM 759 CA GLN A 109 -14.497 -24.481 -12.084 1.00 33.04 A
ATOM 760 CB GLN A 109 -14.314 -24.389 -10.563 1.00 34.40 A
ATOM 761 CG GLN A 109 -14.951 -25.549 -9.805 1.00 35.10 A
ATOM 762 CD GLN A 109 -14.527 -25.611 -8.348 1.00 35.87 A
ATOM 763 OE1 GLN A 109 -13.336 -25.751 -8.037 1.00 35.46 A
ATOM 764 NE2 GLN A 109 -15.500 -25.510 -7.445 1.00 35.46 A
ATOM 765 C GLN A 109 -13.939 -23.251 -12.804 1.00 32.59 A
ATOM 766 O GLN A 109 -14.673 -22.322 -13.158 1.00 32.35 A
ATOM 767 N GLN A 110 -12.636 -23.281 -13.048 1.00 31.73 A
ATOM 768 CA GLN A 110 -11.978 -22.210 -13.767 1.00 31.34 A
ATOM 769 CB GLN A 110 -10.477 -22.507 -13.890 1.00 28.95 A
ATOM 770 CG GLN A 110 -9.702 -22.363 -12.603 1.00 27.87 A
ATOM 771 CD GLN A 110 -8.290 -22.880 -12.722 1.00 28.42 A
ATOM 772 OE1 GLN A 110 -7.683 -22.801 -13.780 1.00 28.48 A
ATOM 773 NE2 GLN A 110 -7.750 -23.401 -11.624 1.00 28.61 A
ATOM 774 C GLN A 110 -12.641 -22.227 -15.133 1.00 31.98 A
ATOM 775 O GLN A 110 -13.172 -21.221 -15.605 1.00 31.72 A
ATOM 776 N TYR A 111 -12.643 -23.403 -15.746 1.00 32.60 A
ATOM 777 CA TYR A 111 -13.248 -23.564 -17.058 1.00 34.12 A
ATOM 778 CB TYR A 111 -13.377 -25.053 -17.410 1.00 36.50 A
ATOM 779 CG TYR A 111 -13.714 -25.325 -18.864 1.00 39.65 A

ATOM 780 CD1 TYR A 111 -12.796 -25.051 -19.877 1.00 40.68 A
ATOM 781 CE1 TYR A 111 -13.106 -25.296 -21.219 1.00 42.04 A
ATOM 782 CD2 TYR A 111 -14.956 -25.853 -19.229 1.00 41.14 A
ATOM 783 CE2 TYR A 111 -15.277 -26.099 -20.566 1.00 41.83 A
ATOM 784 CZ TYR A 111 -14.350 -25.820 -21.553 1.00 41.79 A
ATOM 785 OH TYR A 111 -14.671 -26.066 -22.868 1.00 41.16 A
ATOM 786 C TYR A 111 -14.622 -22.896 -17.089 1.00 33.55 A
ATOM 787 O TYR A 111 -14.798 -21.839 -17.695 1.00 34.14 A
ATOM 788 N ASN A 112 -15.580 -23.494 -16.397 1.00 32.92 A
ATOM 789 CA ASN A 112 -16.939 -22.972 -16.369 1.00 32.95 A
ATOM 790 CB ASN A 112 -17.768 -23.774 -15.371 1.00 33.90 A
ATOM 791 CG ASN A 112 -17.565 -25.281 -15.520 1.00 34.83 A
ATOM 792 OD1 ASN A 112 -17.798 -25.857 -16.583 1.00 34.33 A
ATOM 793 ND2 ASN A 112 -17.131 -25.924 -14.447 1.00 35.16 A
ATOM 794 C ASN A 112 -17.033 -21.481 -16.053 1.00 33.18 A
ATOM 795 O ASN A 112 -17.943 -20.795 -16.525 1.00 32.20 A
ATOM 796 N ALA A 113 -16.098 -20.974 -15.254 1.00 33.47 A
ATOM 797 CA ALA A 113 -16.113 -19.553 -14.906 1.00 32.61 A
ATOM 798 CB ALA A 113 -15.066 -19.262 -13.838 1.00 32.78 A
ATOM 799 C ALA A 113 -15.837 -18.724 -16.160 1.00 31.41 A
ATOM 800 O ALA A 113 -16.593 -17.800 -16.502 1.00 32.12 A
ATOM 801 N LEU A 114 -14.746 -19.071 -16.839 1.00 27.83 A
ATOM 802 CA LEU A 114 -14.360 -18.388 -18.060 1.00 25.36 A
ATOM 803 CB LEU A 114 -13.221 -19.145 -18.729 1.00 20.78 A
ATOM 804 CG LEU A 114 -11.936 -19.084 -17.905 1.00 20.00 A
ATOM 805 CD1 LEU A 114 -10.921 -20.080 -18.403 1.00 17.84 A
ATOM 806 CD2 LEU A 114 -11.358 -17.682 -17.967 1.00 19.32 A
ATOM 807 C LEU A 114 -15.569 -18.301 -18.990 1.00 25.83 A
ATOM 808 O LEU A 114 -16.006 -17.211 -19.375 1.00 24.72 A
ATOM 809 N LEU A 115 -16.138 -19.456 -19.307 1.00 25.44 A
ATOM 810 CA LEU A 115 -17.282 -19.474 -20.191 1.00 25.09 A
ATOM 811 CB LEU A 115 -17.868 -20.892 -20.242 1.00 22.86 A
ATOM 812 CG LEU A 115 -16.707 -21.841 -20.559 1.00 22.27 A
ATOM 813 CD1 LEU A 115 -17.167 -23.220 -20.998 1.00 20.75 A

ATOM 814 CD2 LEU A 115 -15.920 -21.237 -21.701 1.00 23.17 A
ATOM 815 C LEU A 115 -18.301 -18.432 -19.762 1.00 26.31 A
ATOM 816 O LEU A 115 -18.549 -17.448 -20.453 1.00 26.64 A
ATOM 817 N SER A 116 -18.865 -18.631 -18.586 1.00 28.18 A
ATOM 818 CA SER A 116 -19.857 -17.708 -18.006 1.00 29.09 A
ATOM 819 CB SER A 116 -19.923 -17.912 -16.481 1.00 27.99 A
ATOM 820 OG SER A 116 -21.253 -17.850 -16.029 1.00 26.71 A
ATOM 821 C SER A 116 -19.522 -16.240 -18.235 1.00 29.71 A
ATOM 822 O SER A 116 -20.331 -15.389 -18.662 1.00 28.33 A
ATOM 823 N ASN A 117 -18.290 -15.961 -17.904 1.00 29.86 A
ATOM 824 CA ASN A 117 -17.807 -14.636 -18.008 1.00 30.30 A
ATOM 825 CB ASN A 117 -16.541 -14.643 -17.358 1.00 31.13 A
ATOM 826 CG ASN A 117 -16.675 -14.626 -15.950 1.00 30.57 A
ATOM 827 OD1 ASN A 117 -17.742 -14.704 -15.288 1.00 30.40 A
ATOM 828 ND2 ASN A 117 -15.554 -14.504 -15.431 1.00 28.88 A
ATOM 829 C ASN A 117 -17.677 -14.045 -19.365 1.00 29.08 A
ATOM 830 O ASN A 117 -18.263 -12.998 -19.629 1.00 28.16 A
ATOM 831 N MET A 118 -16.931 -14.728 -20.230 1.00 28.60 A
ATOM 832 CA MET A 118 -16.772 -14.274 -21.597 1.00 26.45 A
ATOM 833 CB MET A 118 -16.073 -15.340 -22.425 1.00 24.14 A
ATOM 834 CG MET A 118 -14.662 -15.604 -21.977 1.00 25.25 A
ATOM 835 SD MET A 118 -13.642 -16.513 -23.180 1.00 25.34 A
ATOM 836 CE MET A 118 -14.302 -18.087 -23.099 1.00 25.54 A
ATOM 837 C MET A 118 -18.123 -13.946 -22.215 1.00 26.89 A
ATOM 838 O MET A 118 -18.306 -12.871 -22.777 1.00 27.45 A
ATOM 839 N SER A 119 -19.077 -14.857 -22.102 1.00 27.48 A
ATOM 840 CA SER A 119 -20.390 -14.610 -22.675 1.00 30.58 A
ATOM 841 CB SER A 119 -21.296 -15.824 -22.475 1.00 32.63 A
ATOM 842 OG SER A 119 -21.704 -15.921 -21.126 1.00 37.97 A
ATOM 843 C SER A 119 -21.033 -13.392 -22.028 1.00 30.62 A
ATOM 844 O SER A 119 -21.890 -12.736 -22.626 1.00 31.15 A
ATOM 845 N ARG A 120 -20.615 -13.101 -20.800 1.00 30.91 A
ATOM 846 CA ARG A 120 -21.159 -11.972 -20.058 1.00 30.98 A
ATOM 847 CB ARG A 120 -20.944 -12.166 -18.550 1.00 30.70 A

ATOM 848 CG ARG A 120 -21.749 -11.203 -17.663 1.00 29.32 A
ATOM 849 CD ARG A 120 -20.832 -10.247 -16.942 1.00 29.17 A
ATOM 850 NE ARG A 120 -19.808 -10.977 -16.209 1.00 28.61 A
ATOM 851 CZ ARG A 120 -18.607 -10.489 -15.929 1.00 29.37 A
ATOM 852 NH1 ARG A 120 -18.276 -9.265 -16.317 1.00 29.24 A
ATOM 853 NH2 ARG A 120 -17.730 -11.232 -15.273 1.00 29.99 A
ATOM 854 C ARG A 120 -20.482 -10.702 -20.525 1.00 30.48 A
ATOM 855 O ARG A 120 -21.134 -9.685 -20.782 1.00 30.02 A
ATOM 856 N ILE A 121 -19.164 -10.765 -20.638 1.00 29.89 A
ATOM 857 CA ILE A 121 -18.419 -9.611 -21.097 1.00 31.06 A
ATOM 858 CB ILE A 121 -16.924 -9.886 -21.122 1.00 31.12 A
ATOM 859 CG2 ILE A 121 -16.210 -8.762 -21.858 1.00 31.12 A
ATOM 860 CG1 ILE A 121 -16.413 -10.048 -19.689 1.00 32.35 A
ATOM 861 CD1 ILE A 121 -14.939 -10.367 -19.578 1.00 31.48 A
ATOM 862 C ILE A 121 -18.866 -9.278 -22.505 1.00 31.73 A
ATOM 863 O ILE A 121 -19.059 -8.111 -22.837 1.00 31.72 A
ATOM 864 N TYR A 122 -19.048 -10.307 -23.324 1.00 31.76 A
ATOM 865 CA TYR A 122 -19.468 -10.086 -24.695 1.00 31.15 A
ATOM 866 CB TYR A 122 -19.417 -11.383 -25.509 1.00 31.20 A
ATOM 867 CG TYR A 122 -19.983 -11.161 -26.899 1.00 32.03 A
ATOM 868 CD1 TYR A 122 -19.133 -11.092 -27.990 1.00 32.57 A
ATOM 869 CE1 TYR A 122 -19.606 -10.771 -29.249 1.00 32.08 A
ATOM 870 CD2 TYR A 122 -21.359 -10.903 -27.108 1.00 31.52 A
ATOM 871 CE2 TYR A 122 -21.847 -10.572 -28.364 1.00 32.46 A
ATOM 872 CZ TYR A 122 -20.961 -10.510 -29.433 1.00 31.76 A
ATOM 873 OH TYR A 122 -21.436 -10.208 -30.683 1.00 30.56 A
ATOM 874 C TYR A 122 -20.882 -9.585 -24.813 1.00 30.35 A
ATOM 875 O TYR A 122 -21.249 -8.895 -25.755 1.00 30.21 A
ATOM 876 N SER A 123 -21.695 -9.982 -23.870 1.00 29.28 A
ATOM 877 CA SER A 123 -23.087 -9.635 -23.983 1.00 29.42 A
ATOM 878 CB SER A 123 -23.911 -10.853 -23.630 1.00 29.27 A
ATOM 879 OG SER A 123 -24.057 -11.678 -24.763 1.00 29.72 A
ATOM 880 C SER A 123 -23.533 -8.505 -23.132 1.00 29.76 A
ATOM 881 O SER A 123 -24.714 -8.157 -23.057 1.00 29.80 A

ATOM 882 N THR A 124 -22.563 -7.902 -22.507 1.00 29.70 A
ATOM 883 CA THR A 124 -22.880 -6.875 -21.588 1.00 30.41 A
ATOM 884 CB THR A 124 -22.293 -7.287 -20.253 1.00 29.96 A
ATOM 885 OG1 THR A 124 -22.968 -8.463 -19.807 1.00 30.80 A
ATOM 886 CG2 THR A 124 -22.430 -6.209 -19.253 1.00 31.28 A
ATOM 887 C THR A 124 -22.332 -5.568 -22.032 1.00 30.72 A
ATOM 888 O THR A 124 -22.779 -4.537 -21.578 1.00 32.11 A
ATOM 889 N ALA A 125 -21.381 -5.627 -22.956 1.00 31.07 A
ATOM 890 CA ALA A 125 -20.678 -4.437 -23.437 1.00 30.99 A
ATOM 891 CB ALA A 125 -19.518 -4.835 -24.258 1.00 30.11 A
ATOM 892 C ALA A 125 -21.433 -3.354 -24.149 1.00 31.09 A
ATOM 893 O ALA A 125 -22.514 -3.535 -24.711 1.00 31.68 A
ATOM 894 N LYS A 126 -20.797 -2.205 -24.161 1.00 30.71 A
ATOM 895 CA LYS A 126 -21.459 -1.083 -24.721 1.00 31.56 A
ATOM 896 CB LYS A 126 -22.425 -0.579 -23.653 1.00 30.91 A
ATOM 897 CG LYS A 126 -23.373 -1.700 -23.207 1.00 31.33 A
ATOM 898 CD LYS A 126 -24.025 -1.440 -21.890 1.00 32.37 A
ATOM 899 CE LYS A 126 -24.038 -2.678 -21.057 0.00 32.09 A
ATOM 900 NZ LYS A 126 -24.632 -2.470 -19.733 0.00 32.24 A
ATOM 901 C LYS A 126 -20.554 0.007 -25.202 1.00 32.76 A
ATOM 902 O LYS A 126 -19.381 0.077 -24.825 1.00 31.52 A
ATOM 903 N VAL A 127 -21.123 0.870 -26.035 1.00 34.50 A
ATOM 904 CA VAL A 127 -20.373 1.971 -26.596 1.00 37.00 A
ATOM 905 CB VAL A 127 -20.379 1.889 -28.133 1.00 35.30 A
ATOM 906 CG1 VAL A 127 -19.691 3.078 -28.714 1.00 33.99 A
ATOM 907 CG2 VAL A 127 -19.665 0.624 -28.587 1.00 32.59 A
ATOM 908 C VAL A 127 -20.961 3.299 -26.119 1.00 39.73 A
ATOM 909 O VAL A 127 -22.137 3.588 -26.320 1.00 39.69 A
ATOM 910 N CYS A 128 -20.113 4.111 -25.505 1.00 43.32 A
ATOM 911 CA CYS A 128 -20.508 5.393 -24.976 1.00 47.48 A
ATOM 912 C CYS A 128 -19.956 6.554 -25.770 1.00 48.88 A
ATOM 913 O CYS A 128 -18.844 6.508 -26.270 1.00 48.40 A
ATOM 914 CB CYS A 128 -20.049 5.451 -23.555 1.00 49.83 A
ATOM 915 SG CYS A 128 -20.776 4.086 -22.623 1.00 55.22 A

ATOM 916 N LEU A 129 -20.747 7.623 -25.857 1.00 51.57 A
ATOM 917 CA LEU A 129 -20.334 8.805 -26.618 1.00 55.24 A
ATOM 918 CB LEU A 129 -21.538 9.580 -27.073 1.00 55.39 A
ATOM 919 CG LEU A 129 -22.422 8.755 -28.014 1.00 56.38 A
ATOM 920 CD1 LEU A 129 -23.089 7.601 -27.246 1.00 56.02 A
ATOM 921 CD2 LEU A 129 -23.481 9.642 -28.658 1.00 57.79 A
ATOM 922 C LEU A 129 -19.360 9.661 -25.809 1.00 57.59 A
ATOM 923 O LEU A 129 -19.487 9.809 -24.605 1.00 58.55 A
ATOM 924 N PRO A 130 -18.406 10.295 -26.485 1.00 59.83 A
ATOM 925 CD PRO A 130 -18.517 10.689 -27.901 1.00 60.44 A
ATOM 926 CA PRO A 130 -17.400 11.111 -25.806 1.00 61.74 A
ATOM 927 CB PRO A 130 -16.819 11.950 -26.928 1.00 61.76 A
ATOM 928 CG PRO A 130 -17.138 11.216 -28.174 1.00 61.53 A
ATOM 929 C PRO A 130 -17.716 12.031 -24.640 1.00 63.28 A
ATOM 930 O PRO A 130 -17.281 11.859 -23.504 1.00 63.45 A
ATOM 931 N ALA A 131 -18.510 13.053 -24.942 1.00 64.71 A
ATOM 932 CA ALA A 131 -18.609 14.226 -24.082 1.00 66.21 A
ATOM 933 CB ALA A 131 -18.670 15.494 -24.920 1.00 66.52 A
ATOM 934 C ALA A 131 -19.822 14.136 -23.162 1.00 66.85 A
ATOM 935 O ALA A 131 -19.683 14.013 -21.946 1.00 66.28 A
ATOM 936 N ALA A 132 -21.012 14.197 -23.752 1.00 68.26 A
ATOM 937 CA ALA A 132 -22.133 13.381 -23.303 1.00 69.42 A
ATOM 938 CB ALA A 132 -23.188 13.281 -24.395 1.00 69.09 A
ATOM 939 C ALA A 132 -21.617 12.023 -22.838 1.00 69.77 A
ATOM 940 O ALA A 132 -21.095 11.242 -23.633 1.00 70.34 A
ATOM 941 N ALA A 133 -21.770 11.749 -21.547 1.00 69.87 A
ATOM 942 CA ALA A 133 -22.040 10.395 -21.080 1.00 70.19 A
ATOM 943 CB ALA A 133 -21.436 10.179 -19.700 1.00 70.10 A
ATOM 944 C ALA A 133 -23.538 10.106 -21.058 1.00 70.40 A
ATOM 945 O ALA A 133 -24.161 10.088 -19.997 1.00 70.65 A
ATOM 946 N ALA A 134 -24.109 9.880 -22.237 1.00 70.17 A
ATOM 947 CA ALA A 134 -25.524 9.546 -22.351 1.00 69.70 A
ATOM 948 CB ALA A 134 -26.380 10.782 -22.119 1.00 69.51 A
ATOM 949 C ALA A 134 -25.837 8.926 -23.709 1.00 69.25 A

ATOM 950 O ALA A 134 -25.042 9.021 -24.643 1.00 70.20 A
ATOM 951 N ALA A 135 -27.001 8.292 -23.810 1.00 67.73 A
ATOM 952 CA ALA A 135 -27.148 6.894 -23.422 1.00 65.83 A
ATOM 953 CB ALA A 135 -26.762 6.705 -21.963 1.00 65.40 A
ATOM 954 C ALA A 135 -26.315 5.982 -24.317 1.00 64.73 A
ATOM 955 O ALA A 135 -26.643 5.775 -25.486 1.00 65.30 A
ATOM 956 N CYS A 136 -25.237 5.440 -23.761 1.00 62.28 A
ATOM 957 CA CYS A 136 -24.555 4.305 -24.362 1.00 59.58 A
ATOM 958 C CYS A 136 -25.315 3.200 -25.156 1.00 58.66 A
ATOM 959 O CYS A 136 -26.171 2.482 -24.621 1.00 58.93 A
ATOM 960 CB CYS A 136 -23.720 3.624 -23.205 1.00 58.39 A
ATOM 961 SG CYS A 136 -22.703 4.590 -22.123 1.00 57.13 A
ATOM 962 N TRP A 137 -24.882 3.041 -26.405 1.00 57.33 A
ATOM 963 CA TRP A 137 -25.416 2.084 -27.384 1.00 55.29 A
ATOM 964 CB TRP A 137 -24.856 2.426 -28.762 1.00 55.54 A
ATOM 965 CG TRP A 137 -25.347 3.733 -29.294 1.00 55.97 A
ATOM 966 CD2 TRP A 137 -24.702 4.585 -30.259 1.00 56.45 A
ATOM 967 CE2 TRP A 137 -25.568 5.673 -30.498 1.00 56.60 A
ATOM 968 CE3 TRP A 137 -23.482 4.533 -30.946 1.00 56.71 A
ATOM 969 CD1 TRP A 137 -26.533 4.325 -29.001 1.00 56.63 A
ATOM 970 NE1 TRP A 137 -26.676 5.488 -29.717 1.00 56.96 A
ATOM 971 CZ2 TRP A 137 -25.258 6.704 -31.393 1.00 56.89 A
ATOM 972 CZ3 TRP A 137 -23.173 5.564 -31.841 1.00 57.33 A
ATOM 973 CH2 TRP A 137 -24.061 6.633 -32.052 1.00 57.24 A
ATOM 974 C TRP A 137 -25.044 0.641 -27.056 1.00 53.50 A
ATOM 975 O TRP A 137 -24.022 0.371 -26.425 1.00 53.13 A
ATOM 976 N SER A 138 -25.869 -0.284 -27.521 1.00 52.11 A
ATOM 977 CA SER A 138 -25.619 -1.704 -27.325 1.00 51.83 A
ATOM 978 CB SER A 138 -26.685 -2.325 -26.435 1.00 52.70 A
ATOM 979 OG SER A 138 -27.904 -2.414 -27.145 1.00 55.57 A
ATOM 980 C SER A 138 -25.649 -2.413 -28.673 1.00 51.08 A
ATOM 981 O SER A 138 -26.292 -1.954 -29.618 1.00 50.92 A
ATOM 982 N LEU A 139 -24.959 -3.539 -28.753 1.00 49.66 A
ATOM 983 CA LEU A 139 -24.935 -4.302 -29.980 1.00 48.88 A

ATOM 984 CB LEU A 139 -23.964 -5.477 -29.836 1.00 47.24 A
ATOM 985 CG LEU A 139 -23.597 -6.235 -31.103 1.00 46.78 A
ATOM 986 CD1 LEU A 139 -22.823 -5.284 -31.983 1.00 45.80 A
ATOM 987 CD2 LEU A 139 -22.755 -7.464 -30.784 1.00 47.30 A
ATOM 988 C LEU A 139 -26.323 -4.850 -30.270 1.00 49.46 A
ATOM 989 O LEU A 139 -26.671 -5.105 -31.413 1.00 49.68 A
ATOM 990 N ALA A 140 -27.112 -5.034 -29.219 1.00 50.16 A
ATOM 991 CA ALA A 140 -28.451 -5.617 -29.353 1.00 49.80 A
ATOM 992 CB ALA A 140 -29.218 -5.504 -28.020 1.00 51.01 A
ATOM 993 C ALA A 140 -29.273 -5.063 -30.516 1.00 49.74 A
ATOM 994 O ALA A 140 -29.621 -5.809 -31.427 1.00 49.73 A
ATOM 995 N PRO A 141 -29.677 -3.786 -30.455 1.00 49.57 A
ATOM 996 CD PRO A 141 -30.252 -3.384 -29.159 1.00 49.40 A
ATOM 997 CA PRO A 141 -30.447 -3.171 -31.537 1.00 49.59 A
ATOM 998 CB PRO A 141 -31.752 -2.795 -30.846 1.00 50.03 A
ATOM 999 CG PRO A 141 -31.313 -2.403 -29.518 1.00 49.63 A
ATOM 1000 C PRO A 141 -29.713 -1.959 -32.118 1.00 48.93 A
ATOM 1001 O PRO A 141 -29.634 -1.805 -33.330 1.00 50.04 A
ATOM 1002 N ASP A 142 -29.149 -1.126 -31.245 1.00 47.84 A
ATOM 1003 CA ASP A 142 -28.451 0.102 -31.642 1.00 45.95 A
ATOM 1004 CB ASP A 142 -27.953 0.827 -30.394 1.00 47.99 A
ATOM 1005 CG ASP A 142 -28.988 0.845 -29.281 1.00 49.73 A
ATOM 1006 OD1 ASP A 142 -30.132 1.287 -29.528 1.00 51.60 A
ATOM 1007 OD2 ASP A 142 -28.653 0.418 -28.155 1.00 49.48 A
ATOM 1008 C ASP A 142 -27.297 -0.004 -32.635 1.00 43.20 A
ATOM 1009 O ASP A 142 -27.419 0.433 -33.776 1.00 43.55 A
ATOM 1010 N LEU A 143 -26.169 -0.553 -32.197 1.00 40.08 A
ATOM 1011 CA LEU A 143 -25.001 -0.686 -33.064 1.00 37.74 A
ATOM 1012 CB LEU A 143 -23.891 -1.462 -32.360 1.00 34.72 A
ATOM 1013 CG LEU A 143 -23.259 -0.832 -31.123 1.00 31.59 A
ATOM 1014 CD1 LEU A 143 -22.051 -1.646 -30.736 1.00 29.43 A
ATOM 1015 CD2 LEU A 143 -22.850 0.598 -31.404 1.00 28.49 A
ATOM 1016 C LEU A 143 -25.344 -1.394 -34.368 1.00 37.65 A
ATOM 1017 O LEU A 143 -24.937 -0.978 -35.460 1.00 37.85 A

ATOM 1018 N THR A 144 -26.093 -2.479 -34.253 1.00 36.54 A
ATOM 1019 CA THR A 144 -26.465 -3.199 -35.441 1.00 34.89 A
ATOM 1020 CB THR A 144 -27.353 -4.382 -35.082 1.00 33.23 A
ATOM 1021 OG1 THR A 144 -26.516 -5.503 -34.765 1.00 30.52 A
ATOM 1022 CG2 THR A 144 -28.275 -4.725 -36.225 1.00 32.24 A
ATOM 1023 C THR A 144 -27.139 -2.270 -36.451 1.00 36.22 A
ATOM 1024 O THR A 144 -26.656 -2.118 -37.570 1.00 38.14 A
ATOM 1025 N ASN A 145 -28.229 -1.620 -36.059 1.00 36.29 A
ATOM 1026 CA ASN A 145 -28.917 -0.716 -36.978 1.00 36.94 A
ATOM 1027 CB ASN A 145 -30.107 -0.048 -36.284 1.00 36.39 A
ATOM 1028 CG ASN A 145 -31.132 -1.053 -35.805 1.00 37.49 A
ATOM 1029 OD1 ASN A 145 -31.245 -2.166 -36.340 1.00 36.66 A
ATOM 1030 ND2 ASN A 145 -31.894 -0.667 -34.792 1.00 38.83 A
ATOM 1031 C ASN A 145 -28.008 0.356 -37.597 1.00 37.57 A
ATOM 1032 O ASN A 145 -28.090 0.649 -38.802 1.00 38.81 A
ATOM 1033 N ILE A 146 -27.119 0.922 -36.788 1.00 36.82 A
ATOM 1034 CA ILE A 146 -26.222 1.965 -37.286 1.00 36.01 A
ATOM 1035 CB ILE A 146 -25.309 2.486 -36.168 1.00 34.71 A
ATOM 1036 CG2 ILE A 146 -24.516 3.682 -36.657 1.00 34.63 A
ATOM 1037 CG1 ILE A 146 -26.159 2.924 -34.982 1.00 34.08 A
ATOM 1038 CD1 ILE A 146 -25.375 3.485 -33.828 1.00 33.07 A
ATOM 1039 C ILE A 146 -25.354 1.433 -38.411 1.00 35.41 A
ATOM 1040 O ILE A 146 -24.983 2.149 -39.345 1.00 35.77 A
ATOM 1041 N LEU A 147 -25.022 0.161 -38.313 1.00 34.38 A
ATOM 1042 CA LEU A 147 -24.204 -0.403 -39.342 1.00 34.05 A
ATOM 1043 CB LEU A 147 -23.514 -1.648 -38.824 1.00 32.69 A
ATOM 1044 CG LEU A 147 -22.003 -1.510 -38.915 1.00 33.02 A
ATOM 1045 CD1 LEU A 147 -21.421 -0.418 -38.015 1.00 31.79 A
ATOM 1046 CD2 LEU A 147 -21.478 -2.784 -38.473 1.00 32.73 A
ATOM 1047 C LEU A 147 -25.092 -0.726 -40.521 1.00 34.79 A
ATOM 1048 O LEU A 147 -24.792 -0.397 -41.667 1.00 35.46 A
ATOM 1049 N ALA A 148 -26.223 -1.338 -40.218 1.00 35.40 A
ATOM 1050 CA ALA A 148 -27.167 -1.732 -41.244 1.00 34.95 A
ATOM 1051 CB ALA A 148 -28.346 -2.455 -40.617 1.00 35.35 A

ATOM 1052 C ALA A 148 -27.680 -0.605 -42.123 1.00 34.91 A
ATOM 1053 O ALA A 148 -27.930 -0.840 -43.302 1.00 37.26 A
ATOM 1054 N SER A 149 -27.818 0.612 -41.601 1.00 33.14 A
ATOM 1055 CA SER A 149 -28.365 1.669 -42.440 1.00 32.52 A
ATOM 1056 CB SER A 149 -29.876 1.687 -42.252 1.00 34.30 A
ATOM 1057 OG SER A 149 -30.188 1.731 -40.873 1.00 38.20 A
ATOM 1058 C SER A 149 -27.814 3.092 -42.339 1.00 30.72 A
ATOM 1059 O SER A 149 -28.361 4.022 -42.935 1.00 31.13 A
ATOM 1060 N SER A 150 -26.734 3.277 -41.604 1.00 28.71 A
ATOM 1061 CA SER A 150 -26.163 4.604 -41.503 1.00 27.40 A
ATOM 1062 CB SER A 150 -25.491 4.807 -40.146 1.00 26.71 A
ATOM 1063 OG SER A 150 -24.596 5.907 -40.196 1.00 26.34 A
ATOM 1064 C SER A 150 -25.115 4.751 -42.582 1.00 27.16 A
ATOM 1065 O SER A 150 -24.297 3.861 -42.769 1.00 25.96 A
ATOM 1066 N ARG A 151 -25.141 5.872 -43.299 1.00 27.54 A
ATOM 1067 CA ARG A 151 -24.131 6.106 -44.333 1.00 27.72 A
ATOM 1068 CB ARG A 151 -24.743 6.397 -45.697 1.00 28.54 A
ATOM 1069 CG ARG A 151 -25.099 5.163 -46.450 1.00 30.76 A
ATOM 1070 CD ARG A 151 -26.414 4.684 -45.883 1.00 34.21 A
ATOM 1071 NE ARG A 151 -26.892 3.424 -46.448 1.00 36.93 A
ATOM 1072 CZ ARG A 151 -26.401 2.227 -46.160 1.00 37.57 A
ATOM 1073 NH1 ARG A 151 -26.915 1.148 -46.746 1.00 38.44 A
ATOM 1074 NH2 ARG A 151 -25.420 2.112 -45.282 1.00 37.66 A
ATOM 1075 C ARG A 151 -23.170 7.220 -44.011 1.00 26.81 A
ATOM 1076 O ARG A 151 -22.711 7.931 -44.898 1.00 27.38 A
ATOM 1077 N SER A 152 -22.872 7.375 -42.734 1.00 25.68 A
ATOM 1078 CA SER A 152 -21.942 8.399 -42.298 1.00 24.56 A
ATOM 1079 CB SER A 152 -22.453 9.101 -41.058 1.00 23.94 A
ATOM 1080 OG SER A 152 -21.331 9.498 -40.306 1.00 22.27 A
ATOM 1081 C SER A 152 -20.673 7.671 -41.954 1.00 24.24 A
ATOM 1082 O SER A 152 -20.648 6.903 -40.991 1.00 25.05 A
ATOM 1083 N TYR A 153 -19.627 7.895 -42.737 1.00 22.43 A
ATOM 1084 CA TYR A 153 -18.373 7.194 -42.499 1.00 21.69 A
ATOM 1085 CB TYR A 153 -17.269 7.722 -43.418 1.00 19.99 A

ATOM 1086 CG TYR A 153 -15.958 6.961 -43.350 1.00 19.94 A
ATOM 1087 CD1 TYR A 153 -15.715 5.855 -44.162 1.00 18.86 A
ATOM 1088 CE1 TYR A 153 -14.496 5.193 -44.116 1.00 18.65 A
ATOM 1089 CD2 TYR A 153 -14.948 7.370 -42.489 1.00 20.83 A
ATOM 1090 CE2 TYR A 153 -13.735 6.708 -42.438 1.00 19.36 A
ATOM 1091 CZ TYR A 153 -13.515 5.631 -43.250 1.00 18.44 A
ATOM 1092 OH TYR A 153 -12.295 5.009 -43.192 1.00 20.87 A
ATOM 1093 C TYR A 153 -17.936 7.315 -41.052 1.00 21.70 A
ATOM 1094 O TYR A 153 -17.727 6.308 -40.387 1.00 21.96 A
ATOM 1095 N ALA A 154 -17.803 8.543 -40.565 1.00 22.27 A
ATOM 1096 CA ALA A 154 -17.377 8.765 -39.189 1.00 23.22 A
ATOM 1097 CB ALA A 154 -17.384 10.253 -38.877 1.00 23.11 A
ATOM 1098 C ALA A 154 -18.271 8.007 -38.200 1.00 23.93 A
ATOM 1099 O ALA A 154 -17.781 7.316 -37.305 1.00 22.48 A
ATOM 1100 N MET A 155 -19.583 8.119 -38.371 1.00 24.92 A
ATOM 1101 CA MET A 155 -20.488 7.432 -37.463 1.00 25.65 A
ATOM 1102 CB MET A 155 -21.934 7.729 -37.823 1.00 27.41 A
ATOM 1103 CG MET A 155 -22.883 7.324 -36.734 1.00 28.27 A
ATOM 1104 SD MET A 155 -24.323 8.359 -36.792 1.00 33.58 A
ATOM 1105 CE MET A 155 -25.632 7.139 -37.002 1.00 31.32 A
ATOM 1106 C MET A 155 -20.255 5.926 -37.452 1.00 24.30 A
ATOM 1107 O MET A 155 -20.147 5.315 -36.393 1.00 24.33 A
ATOM 1108 N LEU A 156 -20.186 5.318 -38.626 1.00 24.10 A
ATOM 1109 CA LEU A 156 -19.937 3.883 -38.689 1.00 24.32 A
ATOM 1110 CB LEU A 156 -19.887 3.423 -40.149 1.00 24.56 A
ATOM 1111 CG LEU A 156 -21.162 3.725 -40.932 1.00 25.43 A
ATOM 1112 CD1 LEU A 156 -20.880 3.649 -42.411 1.00 25.43 A
ATOM 1113 CD2 LEU A 156 -22.258 2.750 -40.521 1.00 25.11 A
ATOM 1114 C LEU A 156 -18.598 3.594 -37.995 1.00 23.09 A
ATOM 1115 O LEU A 156 -18.470 2.632 -37.243 1.00 21.87 A
ATOM 1116 N LEU A 157 -17.611 4.449 -38.235 1.00 21.87 A
ATOM 1117 CA LEU A 157 -16.295 4.274 -37.645 1.00 20.18 A
ATOM 1118 CB LEU A 157 -15.350 5.369 -38.128 1.00 17.05 A
ATOM 1119 CG LEU A 157 -13.965 5.307 -37.502 1.00 15.05 A

ATOM 1120 CD1 LEU A 157 -13.372 3.936 -37.771 1.00 14.95 A
ATOM 1121 CD2 LEU A 157 -13.085 6.412 -38.042 1.00 12.32 A
ATOM 1122 C LEU A 157 -16.349 4.292 -36.128 1.00 22.27 A
ATOM 1123 O LEU A 157 -15.642 3.542 -35.464 1.00 23.67 A
ATOM 1124 N PHE A 158 -17.185 5.153 -35.569 1.00 23.33 A
ATOM 1125 CA PHE A 158 -17.280 5.236 -34.124 1.00 23.28 A
ATOM 1126 CB PHE A 158 -18.139 6.435 -33.708 1.00 25.38 A
ATOM 1127 CG PHE A 158 -18.106 6.716 -32.234 1.00 25.39 A
ATOM 1128 CD1 PHE A 158 -16.954 7.218 -31.647 1.00 24.91 A
ATOM 1129 CD2 PHE A 158 -19.214 6.450 -31.433 1.00 25.76 A
ATOM 1130 CE1 PHE A 158 -16.897 7.452 -30.285 1.00 27.20 A
ATOM 1131 CE2 PHE A 158 -19.172 6.681 -30.056 1.00 26.45 A
ATOM 1132 CZ PHE A 158 -18.011 7.183 -29.480 1.00 26.66 A
ATOM 1133 C PHE A 158 -17.873 3.956 -33.549 1.00 22.38 A
ATOM 1134 O PHE A 158 -17.443 3.480 -32.500 1.00 23.71 A
ATOM 1135 N ALA A 159 -18.860 3.393 -34.230 1.00 19.58 A
ATOM 1136 CA ALA A 159 -19.469 2.179 -33.727 1.00 18.41 A
ATOM 1137 CB ALA A 159 -20.840 1.993 -34.348 1.00 18.37 A
ATOM 1138 C ALA A 159 -18.594 0.958 -33.997 1.00 17.41 A
ATOM 1139 O ALA A 159 -18.556 0.021 -33.212 1.00 18.35 A
ATOM 1140 N TRP A 160 -17.883 0.966 -35.111 1.00 15.88 A
ATOM 1141 CA TRP A 160 -17.049 -0.173 -35.445 1.00 12.85 A
ATOM 1142 CB TRP A 160 -16.479 -0.031 -36.862 1.00 9.75 A
ATOM 1143 CG TRP A 160 -15.782 -1.283 -37.328 1.00 4.56 A
ATOM 1144 CD2 TRP A 160 -14.423 -1.661 -37.070 1.00 1.15 A
ATOM 1145 CE2 TRP A 160 -14.253 -2.965 -37.572 1.00 1.00 A
ATOM 1146 CE3 TRP A 160 -13.339 -1.026 -36.458 1.00 1.00 A
ATOM 1147 CD1 TRP A 160 -16.355 -2.337 -37.966 1.00 4.30 A
ATOM 1148 NE1 TRP A 160 -15.448 -3.355 -38.112 1.00 3.11 A
ATOM 1149 CZ2 TRP A 160 -13.047 -3.648 -37.482 1.00 1.00 A
ATOM 1150 CZ3 TRP A 160 -12.142 -1.703 -36.367 1.00 1.90 A
ATOM 1151 CH2 TRP A 160 -12.003 -3.006 -36.876 1.00 1.00 A
ATOM 1152 C TRP A 160 -15.906 -0.267 -34.446 1.00 12.98 A
ATOM 1153 O TRP A 160 -15.565 -1.356 -33.961 1.00 11.94 A

ATOM 1154 N GLU A 161 -15.302 0.884 -34.167 1.00 12.93 A
ATOM 1155 CA GLU A 161 -14.185 0.978 -33.218 1.00 14.44 A
ATOM 1156 CB GLU A 161 -13.534 2.350 -33.333 1.00 13.89 A
ATOM 1157 CG GLU A 161 -12.256 2.534 -32.570 1.00 12.36 A
ATOM 1158 CD GLU A 161 -11.753 3.964 -32.691 1.00 16.17 A
ATOM 1159 OE1 GLU A 161 -10.583 4.215 -32.330 1.00 15.57 A
ATOM 1160 OE2 GLU A 161 -12.536 4.845 -33.145 1.00 18.99 A
ATOM 1161 C GLU A 161 -14.722 0.788 -31.793 1.00 15.91 A
ATOM 1162 O GLU A 161 -14.159 0.038 -30.992 1.00 16.26 A
ATOM 1163 N GLY A 162 -15.821 1.474 -31.494 1.00 15.58 A
ATOM 1164 CA GLY A 162 -16.426 1.352 -30.194 1.00 16.39 A
ATOM 1165 C GLY A 162 -16.646 -0.095 -29.813 1.00 17.06 A
ATOM 1166 O GLY A 162 -16.148 -0.567 -28.778 1.00 17.28 A
ATOM 1167 N TRP A 163 -17.384 -0.807 -30.654 1.00 16.93 A
ATOM 1168 CA TRP A 163 -17.682 -2.204 -30.382 1.00 19.23 A
ATOM 1169 CB TRP A 163 -18.658 -2.762 -31.420 1.00 19.12 A
ATOM 1170 CG TRP A 163 -18.864 -4.208 -31.236 1.00 20.56 A
ATOM 1171 CD2 TRP A 163 -19.522 -4.834 -30.138 1.00 23.18 A
ATOM 1172 CE2 TRP A 163 -19.405 -6.233 -30.320 1.00 24.32 A
ATOM 1173 CE3 TRP A 163 -20.198 -4.351 -29.013 1.00 21.92 A
ATOM 1174 CD1 TRP A 163 -18.390 -5.208 -32.020 1.00 22.19 A
ATOM 1175 NE1 TRP A 163 -18.707 -6.436 -31.479 1.00 24.10 A
ATOM 1176 CZ2 TRP A 163 -19.941 -7.152 -29.420 1.00 24.81 A
ATOM 1177 CZ3 TRP A 163 -20.729 -5.257 -28.126 1.00 24.35 A
ATOM 1178 CH2 TRP A 163 -20.600 -6.648 -28.332 1.00 25.25 A
ATOM 1179 C TRP A 163 -16.466 -3.129 -30.299 1.00 19.50 A
ATOM 1180 O TRP A 163 -16.408 -4.038 -29.465 1.00 21.07 A
ATOM 1181 N HIS A 164 -15.485 -2.894 -31.150 1.00 18.68 A
ATOM 1182 CA HIS A 164 -14.318 -3.757 -31.169 1.00 18.91 A
ATOM 1183 CB HIS A 164 -13.554 -3.590 -32.489 1.00 18.22 A
ATOM 1184 CG HIS A 164 -14.174 -4.326 -33.634 1.00 15.27 A
ATOM 1185 CD2 HIS A 164 -13.819 -5.485 -34.238 1.00 14.32 A
ATOM 1186 ND1 HIS A 164 -15.355 -3.932 -34.223 1.00 13.00 A
ATOM 1187 CE1 HIS A 164 -15.704 -4.820 -35.138 1.00 11.78 A

ATOM 1188 NE2 HIS A 164 -14.788 -5.772 -35.166 1.00 11.00 A
ATOM 1189 C HIS A 164 -13.374 -3.581 -30.002 1.00 19.14 A
ATOM 1190 O HIS A 164 -12.664 -4.520 -29.623 1.00 18.85 A
ATOM 1191 N ASN A 165 -13.319 -2.376 -29.459 1.00 19.19 A
ATOM 1192 CA ASN A 165 -12.470 -2.164 -28.304 1.00 20.84 A
ATOM 1193 CB ASN A 165 -12.149 -0.684 -28.116 1.00 22.15 A
ATOM 1194 CG ASN A 165 -11.188 -0.161 -29.157 1.00 23.49 A
ATOM 1195 OD1 ASN A 165 -10.303 -0.882 -29.628 1.00 23.72 A
ATOM 1196 ND2 ASN A 165 -11.339 1.111 -29.505 1.00 24.40 A
ATOM 1197 C ASN A 165 -13.253 -2.674 -27.104 1.00 20.19 A
ATOM 1198 O ASN A 165 -12.779 -3.514 -26.340 1.00 19.38 A
ATOM 1199 N ALA A 166 -14.480 -2.180 -26.988 1.00 20.55 A
ATOM 1200 CA ALA A 166 -15.376 -2.537 -25.898 1.00 20.32 A
ATOM 1201 CB ALA A 166 -16.729 -1.886 -26.123 1.00 20.37 A
ATOM 1202 C ALA A 166 -15.555 -4.027 -25.654 1.00 19.46 A
ATOM 1203 O ALA A 166 -15.577 -4.464 -24.514 1.00 20.77 A
ATOM 1204 N ALA A 167 -15.670 -4.815 -26.710 1.00 19.30 A
ATOM 1205 CA ALA A 167 -15.879 -6.237 -26.534 1.00 19.08 A
ATOM 1206 CB ALA A 167 -16.804 -6.743 -27.628 1.00 21.14 A
ATOM 1207 C ALA A 167 -14.601 -7.051 -26.529 1.00 19.33 A
ATOM 1208 O ALA A 167 -14.469 -8.015 -25.788 1.00 21.26 A
ATOM 1209 N GLY A 168 -13.650 -6.663 -27.354 1.00 19.00 A
ATOM 1210 CA GLY A 168 -12.440 -7.443 -27.450 1.00 18.94 A
ATOM 1211 C GLY A 168 -11.400 -7.347 -26.369 1.00 18.02 A
ATOM 1212 O GLY A 168 -11.063 -8.353 -25.753 1.00 18.72 A
ATOM 1213 N ILE A 169 -10.876 -6.147 -26.162 1.00 16.73 A
ATOM 1214 CA ILE A 169 -9.840 -5.936 -25.175 1.00 15.94 A
ATOM 1215 CB ILE A 169 -9.666 -4.434 -24.932 1.00 16.26 A
ATOM 1216 CG2 ILE A 169 -8.733 -4.190 -23.736 1.00 18.24 A
ATOM 1217 CG1 ILE A 169 -9.110 -3.789 -26.202 1.00 13.73 A
ATOM 1218 CD1 ILE A 169 -9.090 -2.272 -26.174 1.00 13.87 A
ATOM 1219 C ILE A 169 -10.000 -6.680 -23.837 1.00 14.63 A
ATOM 1220 O ILE A 169 -9.080 -7.373 -23.398 1.00 13.27 A
ATOM 1221 N PRO A 170 -11.168 -6.569 -23.185 1.00 14.58 A

ATOM 1222 CD PRO A 170 -12.394 -5.846 -23.568 1.00 14.74 A
ATOM 1223 CA PRO A 170 -11.340 -7.266 -21.900 1.00 14.12 A
ATOM 1224 CB PRO A 170 -12.660 -6.716 -21.385 1.00 13.73 A
ATOM 1225 CG PRO A 170 -13.441 -6.467 -22.657 1.00 14.71 A
ATOM 1226 C PRO A 170 -11.364 -8.773 -22.009 1.00 13.26 A
ATOM 1227 O PRO A 170 -10.970 -9.488 -21.117 1.00 14.14 A
ATOM 1228 N LEU A 171 -11.830 -9.228 -23.151 1.00 13.65 A
ATOM 1229 CA LEU A 171 -11.989 -10.629 -23.491 1.00 13.79 A
ATOM 1230 CB LEU A 171 -12.832 -10.636 -24.747 1.00 14.97 A
ATOM 1231 CG LEU A 171 -13.921 -11.681 -24.915 1.00 16.26 A
ATOM 1232 CD1 LEU A 171 -14.263 -12.317 -23.566 1.00 18.92 A
ATOM 1233 CD2 LEU A 171 -15.132 -10.978 -25.533 1.00 14.84 A
ATOM 1234 C LEU A 171 -10.719 -11.465 -23.721 1.00 12.87 A
ATOM 1235 O LEU A 171 -10.672 -12.670 -23.508 1.00 13.73 A
ATOM 1236 N LYS A 172 -9.686 -10.796 -24.178 1.00 11.56 A
ATOM 1237 CA LYS A 172 -8.448 -11.451 -24.514 1.00 11.50 A
ATOM 1238 CB LYS A 172 -7.439 -10.416 -24.983 1.00 12.78 A
ATOM 1239 CG LYS A 172 -6.252 -11.017 -25.676 1.00 14.38 A
ATOM 1240 CD LYS A 172 -5.413 -9.923 -26.283 1.00 16.72 A
ATOM 1241 CE LYS A 172 -4.098 -10.453 -26.819 1.00 19.00 A
ATOM 1242 NZ LYS A 172 -3.200 -9.344 -27.291 1.00 20.51 A
ATOM 1243 C LYS A 172 -7.814 -12.342 -23.476 1.00 12.52 A
ATOM 1244 O LYS A 172 -7.620 -13.533 -23.728 1.00 12.02 A
ATOM 1245 N PRO A 173 -7.477 -11.792 -22.291 1.00 13.89 A
ATOM 1246 CD PRO A 173 -7.828 -10.463 -21.752 1.00 13.93 A
ATOM 1247 CA PRO A 173 -6.852 -12.620 -21.250 1.00 11.31 A
ATOM 1248 CB PRO A 173 -6.724 -11.651 -20.078 1.00 12.17 A
ATOM 1249 CG PRO A 173 -7.882 -10.728 -20.271 1.00 11.50 A
ATOM 1250 C PRO A 173 -7.660 -13.876 -20.910 1.00 10.08 A
ATOM 1251 O PRO A 173 -7.104 -14.963 -20.760 1.00 8.90 A
ATOM 1252 N LEU A 174 -8.975 -13.731 -20.815 1.00 9.26 A
ATOM 1253 CA LEU A 174 -9.791 -14.892 -20.516 1.00 10.17 A
ATOM 1254 CB LEU A 174 -11.287 -14.574 -20.409 1.00 8.28 A
ATOM 1255 CG LEU A 174 -12.009 -13.433 -19.673 1.00 7.40 A

ATOM 1256 CD1 LEU A 174 -13.101 -14.068 -18.831 1.00 2.59 A
ATOM 1257 CD2 LEU A 174 -11.103 -12.627 -18.783 1.00 1.00 A
ATOM 1258 C LEU A 174 -9.685 -15.911 -21.626 1.00 12.40 A
ATOM 1259 O LEU A 174 -9.611 -17.117 -21.359 1.00 12.37 A
ATOM 1260 N TYR A 175 -9.729 -15.438 -22.877 1.00 13.85 A
ATOM 1261 CA TYR A 175 -9.695 -16.366 -24.012 1.00 11.87 A
ATOM 1262 CB TYR A 175 -9.802 -15.655 -25.384 1.00 13.99 A
ATOM 1263 CG TYR A 175 -10.214 -16.611 -26.509 1.00 14.52 A
ATOM 1264 CD1 TYR A 175 -11.540 -17.049 -26.614 1.00 15.07 A
ATOM 1265 CE1 TYR A 175 -11.921 -18.033 -27.537 1.00 16.19 A
ATOM 1266 CD2 TYR A 175 -9.264 -17.179 -27.374 1.00 14.81 A
ATOM 1267 CE2 TYR A 175 -9.635 -18.175 -28.306 1.00 16.26 A
ATOM 1268 CZ TYR A 175 -10.975 -18.598 -28.374 1.00 16.48 A
ATOM 1269 OH TYR A 175 -11.391 -19.592 -29.245 1.00 14.40 A
ATOM 1270 C TYR A 175 -8.448 -17.218 -24.007 1.00 10.28 A
ATOM 1271 O TYR A 175 -8.519 -18.420 -24.192 1.00 10.02 A
ATOM 1272 N GLU A 176 -7.307 -16.595 -23.792 1.00 9.52 A
ATOM 1273 CA GLU A 176 -6.054 -17.328 -23.777 1.00 13.00 A
ATOM 1274 CB GLU A 176 -4.920 -16.401 -23.402 1.00 11.20 A
ATOM 1275 CG GLU A 176 -4.895 -15.130 -24.197 1.00 12.19 A
ATOM 1276 CD GLU A 176 -3.785 -14.215 -23.735 1.00 13.44 A
ATOM 1277 OE1 GLU A 176 -3.066 -14.622 -22.813 1.00 14.86 A
ATOM 1278 OE2 GLU A 176 -3.610 -13.098 -24.271 1.00 14.79 A
ATOM 1279 C GLU A 176 -6.077 -18.446 -22.765 1.00 16.67 A
ATOM 1280 O GLU A 176 -5.482 -19.506 -22.969 1.00 16.43 A
ATOM 1281 N ASP A 177 -6.738 -18.160 -21.643 1.00 20.64 A
ATOM 1282 CA ASP A 177 -6.843 -19.115 -20.551 1.00 22.10 A
ATOM 1283 CB ASP A 177 -7.159 -18.383 -19.247 1.00 23.86 A
ATOM 1284 CG ASP A 177 -5.903 -17.960 -18.516 1.00 22.96 A
ATOM 1285 OD1 ASP A 177 -4.821 -18.502 -18.867 1.00 23.41 A
ATOM 1286 OD2 ASP A 177 -6.009 -17.106 -17.607 1.00 21.25 A
ATOM 1287 C ASP A 177 -7.839 -20.222 -20.812 1.00 22.70 A
ATOM 1288 O ASP A 177 -7.631 -21.381 -20.451 1.00 24.27 A
ATOM 1289 N PHE A 178 -8.914 -19.863 -21.479 1.00 22.44 A

ATOM 1290 CA PHE A 178 -9.904 -20.849 -21.812 1.00 22.21 A
ATOM 1291 CB PHE A 178 -11.106 -20.175 -22.420 1.00 22.97 A
ATOM 1292 CG PHE A 178 -11.777 -21.026 -23.425 1.00 25.29 A
ATOM 1293 CD1 PHE A 178 -12.948 -21.694 -23.094 1.00 26.68 A
ATOM 1294 CD2 PHE A 178 -11.200 -21.216 -24.698 1.00 25.77 A
ATOM 1295 CE1 PHE A 178 -13.562 -22.542 -23.997 1.00 25.42 A
ATOM 1296 CE2 PHE A 178 -11.788 -22.066 -25.631 1.00 23.59 A
ATOM 1297 CZ PHE A 178 -12.983 -22.735 -25.280 1.00 24.90 A
ATOM 1298 C PHE A 178 -9.348 -21.835 -22.840 1.00 21.75 A
ATOM 1299 O PHE A 178 -9.768 -22.977 -22.956 1.00 23.13 A
ATOM 1300 N THR A 179 -8.413 -21.355 -23.626 1.00 21.75 A
ATOM 1301 CA THR A 179 -7.857 -22.167 -24.675 1.00 22.49 A
ATOM 1302 CB THR A 179 -7.118 -21.291 -25.721 1.00 21.36 A
ATOM 1303 OG1 THR A 179 -8.076 -20.568 -26.509 1.00 21.11 A
ATOM 1304 CG2 THR A 179 -6.258 -22.147 -26.615 1.00 20.77 A
ATOM 1305 C THR A 179 -6.922 -23.160 -24.061 1.00 23.81 A
ATOM 1306 O THR A 179 -6.954 -24.339 -24.387 1.00 25.76 A
ATOM 1307 N ALA A 180 -6.096 -22.698 -23.141 1.00 25.25 A
ATOM 1308 CA ALA A 180 -5.167 -23.615 -22.504 1.00 26.11 A
ATOM 1309 CB ALA A 180 -4.362 -22.900 -21.449 1.00 24.86 A
ATOM 1310 C ALA A 180 -5.929 -24.779 -21.879 1.00 27.30 A
ATOM 1311 O ALA A 180 -5.360 -25.945 -22.055 1.00 26.99 A
ATOM 1312 N LEU A 181 -7.004 -24.457 -21.166 1.00 27.81 A
ATOM 1313 CA LEU A 181 -7.796 -25.485 -20.511 1.00 28.96 A
ATOM 1314 CB LEU A 181 -8.818 -24.842 -19.563 1.00 28.50 A
ATOM 1315 CG LEU A 181 -8.192 -24.370 -18.235 1.00 27.96 A
ATOM 1316 CD1 LEU A 181 -9.240 -23.670 -17.400 1.00 28.14 A
ATOM 1317 CD2 LEU A 181 -7.595 -25.553 -17.472 1.00 25.65 A
ATOM 1318 C LEU A 181 -8.486 -26.423 -21.492 1.00 30.05 A
ATOM 1319 O LEU A 181 -8.299 -27.652 -21.426 1.00 29.72 A
ATOM 1320 N SER A 182 -9.265 -25.842 -22.408 1.00 31.02 A
ATOM 1321 CA SER A 182 -9.987 -26.615 -23.423 1.00 29.91 A
ATOM 1322 CB SER A 182 -10.536 -25.701 -24.508 1.00 29.45 A
ATOM 1323 OG SER A 182 -11.540 -26.385 -25.230 1.00 32.81 A

ATOM 1324 C SER A 182 -9.042 -27.634 -24.045 1.00 28.27 A
ATOM 1325 O SER A 182 -9.379 -28.801 -24.225 1.00 28.32 A
ATOM 1326 N ASN A 183 -7.848 -27.180 -24.371 1.00 26.59 A
ATOM 1327 CA ASN A 183 -6.855 -28.064 -24.930 1.00 28.72 A
ATOM 1328 CB ASN A 183 -5.562 -27.294 -25.146 1.00 29.24 A
ATOM 1329 CG ASN A 183 -5.275 -27.033 -26.607 1.00 29.72 A
ATOM 1330 OD1 ASN A 183 -6.185 -26.749 -27.394 1.00 30.05 A
ATOM 1331 ND2 ASN A 183 -3.997 -27.096 -26.976 1.00 27.72 A
ATOM 1332 C ASN A 183 -6.588 -29.215 -23.972 1.00 30.11 A
ATOM 1333 O ASN A 183 -6.846 -30.391 -24.255 1.00 31.24 A
ATOM 1334 N GLU A 184 -6.064 -28.847 -22.815 1.00 30.78 A
ATOM 1335 CA GLU A 184 -5.720 -29.819 -21.799 1.00 29.64 A
ATOM 1336 CB GLU A 184 -5.543 -29.146 -20.459 1.00 30.56 A
ATOM 1337 CG GLU A 184 -5.096 -30.116 -19.403 1.00 32.92 A
ATOM 1338 CD GLU A 184 -5.059 -29.482 -18.047 1.00 34.26 A
ATOM 1339 OE1 GLU A 184 -6.034 -28.779 -17.702 1.00 34.45 A
ATOM 1340 OE2 GLU A 184 -4.057 -29.696 -17.334 1.00 35.85 A
ATOM 1341 C GLU A 184 -6.748 -30.905 -21.646 1.00 28.64 A
ATOM 1342 O GLU A 184 -6.418 -32.075 -21.492 1.00 28.89 A
ATOM 1343 N ALA A 185 -8.003 -30.502 -21.692 1.00 26.95 A
ATOM 1344 CA ALA A 185 -9.091 -31.436 -21.553 1.00 26.57 A
ATOM 1345 CB ALA A 185 -10.370 -30.664 -21.542 1.00 25.67 A
ATOM 1346 C ALA A 185 -9.095 -32.508 -22.658 1.00 26.76 A
ATOM 1347 O ALA A 185 -9.024 -33.702 -22.378 1.00 27.85 A
ATOM 1348 N TYR A 186 -9.175 -32.095 -23.917 1.00 26.08 A
ATOM 1349 CA TYR A 186 -9.175 -33.077 -25.015 1.00 24.31 A
ATOM 1350 CB TYR A 186 -9.717 -32.476 -26.286 1.00 16.13 A
ATOM 1351 CG TYR A 186 -11.100 -32.019 -26.157 1.00 8.67 A
ATOM 1352 CD1 TYR A 186 -11.388 -30.663 -26.086 1.00 6.93 A
ATOM 1353 CE1 TYR A 186 -12.682 -30.230 -25.969 1.00 4.18 A
ATOM 1354 CD2 TYR A 186 -12.133 -32.941 -26.104 1.00 6.31 A
ATOM 1355 CE2 TYR A 186 -13.437 -32.540 -25.985 1.00 2.90 A
ATOM 1356 CZ TYR A 186 -13.712 -31.187 -25.925 1.00 2.67 A
ATOM 1357 OH TYR A 186 -15.027 -30.798 -25.870 1.00 1.61 A

ATOM 1358 C TYR A 186 -7.867 -33.690 -25.419 1.00 27.00 A
ATOM 1359 O TYR A 186 -7.832 -34.358 -26.432 1.00 27.34 A
ATOM 1360 N LYS A 187 -6.803 -33.439 -24.676 1.00 29.61 A
ATOM 1361 CA LYS A 187 -5.475 -33.972 -25.025 1.00 33.11 A
ATOM 1362 CB LYS A 187 -4.443 -33.135 -24.291 1.00 31.97 A
ATOM 1363 CG LYS A 187 -3.261 -32.700 -25.051 1.00 32.63 A
ATOM 1364 CD LYS A 187 -2.007 -33.401 -24.597 1.00 34.29 A
ATOM 1365 CE LYS A 187 -0.792 -32.715 -25.218 1.00 35.41 A
ATOM 1366 NZ LYS A 187 0.491 -33.173 -24.590 1.00 37.39 A
ATOM 1367 C LYS A 187 -5.430 -35.309 -24.389 1.00 35.79 A
ATOM 1368 O LYS A 187 -4.469 -36.011 -24.351 1.00 36.75 A
ATOM 1369 N ALA A 188 -6.597 -35.559 -23.902 1.00 38.16 A
ATOM 1370 CA ALA A 188 -6.891 -36.642 -23.017 1.00 39.96 A
ATOM 1371 CB ALA A 188 -7.797 -36.063 -22.016 1.00 40.43 A
ATOM 1372 C ALA A 188 -7.608 -37.788 -23.619 1.00 41.20 A
ATOM 1373 O ALA A 188 -7.427 -38.979 -23.368 1.00 42.24 A
ATOM 1374 N ASP A 189 -8.458 -37.214 -24.365 1.00 41.64 A
ATOM 1375 CA ASP A 189 -9.435 -37.880 -25.056 1.00 41.67 A
ATOM 1376 CB ASP A 189 -10.597 -36.858 -25.265 1.00 41.75 A
ATOM 1377 CG ASP A 189 -11.475 -36.792 -24.163 1.00 42.84 A
ATOM 1378 OD1 ASP A 189 -11.372 -37.807 -23.524 1.00 42.68 A
ATOM 1379 OD2 ASP A 189 -12.253 -35.798 -23.985 1.00 42.17 A
ATOM 1380 C ASP A 189 -8.797 -38.148 -26.405 1.00 41.46 A
ATOM 1381 O ASP A 189 -9.429 -38.189 -27.432 1.00 43.31 A
ATOM 1382 N GLY A 190 -7.484 -38.133 -26.462 1.00 39.75 A
ATOM 1383 CA GLY A 190 -6.842 -38.440 -27.764 1.00 39.30 A
ATOM 1384 C GLY A 190 -6.403 -37.364 -28.781 1.00 38.81 A
ATOM 1385 O GLY A 190 -5.280 -37.411 -29.271 1.00 38.94 A
ATOM 1386 N PHE A 191 -7.256 -36.398 -29.092 1.00 37.00 A
ATOM 1387 CA PHE A 191 -6.871 -35.340 -30.011 1.00 36.09 A
ATOM 1388 CB PHE A 191 -8.047 -34.402 -30.118 1.00 37.24 A
ATOM 1389 CG PHE A 191 -9.335 -35.135 -30.172 1.00 39.74 A
ATOM 1390 CD1 PHE A 191 -10.371 -34.818 -29.316 1.00 40.83 A
ATOM 1391 CD2 PHE A 191 -9.494 -36.190 -31.072 1.00 40.45 A

ATOM 1392 CE1 PHE A 191 -11.553 -35.544 -29.351 1.00 40.18 A
ATOM 1393 CE2 PHE A 191 -10.677 -36.927 -31.124 1.00 41.24 A
ATOM 1394 CZ PHE A 191 -11.715 -36.599 -30.262 1.00 40.46 A
ATOM 1395 C PHE A 191 -5.594 -34.598 -29.594 1.00 35.42 A
ATOM 1396 O PHE A 191 -5.015 -34.902 -28.563 1.00 36.10 A
ATOM 1397 N THR A 192 -5.151 -33.639 -30.408 1.00 34.84 A
ATOM 1398 CA THR A 192 -3.931 -32.872 -30.123 1.00 33.63 A
ATOM 1399 CB THR A 192 -3.182 -32.437 -31.406 1.00 35.57 A
ATOM 1400 OG1 THR A 192 -2.651 -33.582 -32.082 1.00 37.98 A
ATOM 1401 CG2 THR A 192 -2.039 -31.466 -31.056 1.00 36.46 A
ATOM 1402 C THR A 192 -4.327 -31.600 -29.433 1.00 32.14 A
ATOM 1403 O THR A 192 -3.665 -31.154 -28.499 1.00 32.93 A
ATOM 1404 N ASP A 193 -5.400 -31.007 -29.942 1.00 29.05 A
ATOM 1405 CA ASP A 193 -5.943 -29.771 -29.410 1.00 28.30 A
ATOM 1406 CB ASP A 193 -5.284 -28.569 -30.068 1.00 30.53 A
ATOM 1407 CG ASP A 193 -5.228 -28.689 -31.584 1.00 33.24 A
ATOM 1408 OD1 ASP A 193 -6.299 -28.587 -32.231 1.00 33.41 A
ATOM 1409 OD2 ASP A 193 -4.109 -28.893 -32.129 1.00 31.70 A
ATOM 1410 C ASP A 193 -7.419 -29.775 -29.716 1.00 27.22 A
ATOM 1411 O ASP A 193 -7.890 -30.665 -30.415 1.00 25.92 A
ATOM 1412 N THR A 194 -8.157 -28.794 -29.204 1.00 26.47 A
ATOM 1413 CA THR A 194 -9.593 -28.769 -29.445 1.00 26.18 A
ATOM 1414 CB THR A 194 -10.250 -27.627 -28.688 1.00 24.32 A
ATOM 1415 OG1 THR A 194 -9.637 -27.529 -27.404 1.00 22.31 A
ATOM 1416 CG2 THR A 194 -11.744 -27.895 -28.508 1.00 25.50 A
ATOM 1417 C THR A 194 -9.886 -28.635 -30.924 1.00 26.18 A
ATOM 1418 O THR A 194 -10.959 -29.010 -31.400 1.00 27.06 A
ATOM 1419 N GLY A 195 -8.913 -28.107 -31.652 1.00 26.72 A
ATOM 1420 CA GLY A 195 -9.084 -27.937 -33.081 1.00 26.88 A
ATOM 1421 C GLY A 195 -9.355 -29.273 -33.735 1.00 25.92 A
ATOM 1422 O GLY A 195 -10.362 -29.460 -34.417 1.00 25.20 A
ATOM 1423 N ALA A 196 -8.444 -30.211 -33.517 1.00 25.32 A
ATOM 1424 CA ALA A 196 -8.576 -31.541 -34.082 1.00 25.47 A
ATOM 1425 CB ALA A 196 -7.384 -32.402 -33.671 1.00 23.95 A

ATOM 1426 C ALA A 196 -9.882 -32.195 -33.641 1.00 26.30 A
ATOM 1427 O ALA A 196 -10.535 -32.867 -34.430 1.00 26.96 A
ATOM 1428 N TYR A 197 -10.266 -31.994 -32.384 1.00 27.58 A
ATOM 1429 CA TYR A 197 -11.496 -32.588 -31.878 1.00 28.53 A
ATOM 1430 CB TYR A 197 -11.677 -32.294 -30.375 1.00 26.60 A
ATOM 1431 CG TYR A 197 -13.062 -32.661 -29.853 1.00 22.86 A
ATOM 1432 CD1 TYR A 197 -13.523 -33.970 -29.900 1.00 20.50 A
ATOM 1433 CE1 TYR A 197 -14.791 -34.307 -29.512 1.00 20.23 A
ATOM 1434 CD2 TYR A 197 -13.932 -31.690 -29.387 1.00 21.31 A
ATOM 1435 CE2 TYR A 197 -15.220 -32.018 -28.998 1.00 20.03 A
ATOM 1436 CZ TYR A 197 -15.640 -33.326 -29.066 1.00 19.88 A
ATOM 1437 OH TYR A 197 -16.927 -33.649 -28.719 1.00 20.97 A
ATOM 1438 C TYR A 197 -12.681 -32.031 -32.645 1.00 29.97 A
ATOM 1439 O TYR A 197 -13.619 -32.750 -32.987 1.00 30.48 A
ATOM 1440 N TRP A 198 -12.636 -30.734 -32.897 1.00 31.97 A
ATOM 1441 CA TRP A 198 -13.705 -30.072 -33.617 1.00 34.86 A
ATOM 1442 CB TRP A 198 -13.458 -28.574 -33.642 1.00 37.29 A
ATOM 1443 CG TRP A 198 -13.793 -27.878 -32.397 1.00 39.31 A
ATOM 1444 CD2 TRP A 198 -13.793 -26.465 -32.190 1.00 40.91 A
ATOM 1445 CE2 TRP A 198 -14.174 -26.242 -30.852 1.00 41.28 A
ATOM 1446 CE3 TRP A 198 -13.508 -25.361 -33.007 1.00 41.29 A
ATOM 1447 CD1 TRP A 198 -14.160 -28.442 -31.220 1.00 39.85 A
ATOM 1448 NE1 TRP A 198 -14.392 -27.468 -30.282 1.00 40.92 A
ATOM 1449 CZ2 TRP A 198 -14.278 -24.958 -30.306 1.00 42.20 A
ATOM 1450 CZ3 TRP A 198 -13.610 -24.084 -32.467 1.00 42.32 A
ATOM 1451 CH2 TRP A 198 -13.992 -23.895 -31.127 1.00 43.03 A
ATOM 1452 C TRP A 198 -13.816 -30.569 -35.053 1.00 35.75 A
ATOM 1453 O TRP A 198 -14.906 -30.715 -35.584 1.00 35.48 A
ATOM 1454 N ARG A 199 -12.683 -30.830 -35.691 1.00 36.46 A
ATOM 1455 CA ARG A 199 -12.789 -31.277 -37.056 1.00 37.46 A
ATOM 1456 CB ARG A 199 -11.850 -30.407 -37.972 1.00 36.58 A
ATOM 1457 CG ARG A 199 -10.390 -30.741 -38.116 1.00 35.12 A
ATOM 1458 CD ARG A 199 -9.517 -29.511 -37.967 1.00 33.89 A
ATOM 1459 NE ARG A 199 -8.209 -30.021 -37.605 1.00 35.13 A

ATOM 1460 CZ ARG A 199 -7.236 -29.354 -37.002 1.00 37.14 A
ATOM 1461 NH1 ARG A 199 -6.095 -29.987 -36.735 1.00 37.36 A
ATOM 1462 NH2 ARG A 199 -7.391 -28.081 -36.681 1.00 38.72 A
ATOM 1463 C ARG A 199 -12.732 -32.820 -37.258 1.00 38.11 A
ATOM 1464 O ARG A 199 -12.517 -33.332 -38.361 1.00 37.98 A
ATOM 1465 N SER A 200 -12.961 -33.555 -36.164 1.00 38.32 A
ATOM 1466 CA SER A 200 -13.020 -35.023 -36.217 1.00 39.86 A
ATOM 1467 CB SER A 200 -12.539 -35.698 -34.904 1.00 40.16 A
ATOM 1468 OG SER A 200 -13.417 -35.444 -33.814 1.00 41.39 A
ATOM 1469 C SER A 200 -14.498 -35.303 -36.399 1.00 40.86 A
ATOM 1470 O SER A 200 -14.912 -36.438 -36.641 1.00 41.13 A
ATOM 1471 N TRP A 201 -15.292 -34.243 -36.270 1.00 41.71 A
ATOM 1472 CA TRP A 201 -16.743 -34.340 -36.407 1.00 42.86 A
ATOM 1473 CB TRP A 201 -17.428 -33.168 -35.824 1.00 45.41 A
ATOM 1474 CG TRP A 201 -17.273 -33.054 -34.446 1.00 48.88 A
ATOM 1475 CD2 TRP A 201 -17.706 -31.958 -33.691 1.00 50.38 A
ATOM 1476 CE2 TRP A 201 -17.432 -32.246 -32.337 1.00 51.40 A
ATOM 1477 CE3 TRP A 201 -18.313 -30.744 -34.027 1.00 51.49 A
ATOM 1478 CD1 TRP A 201 -16.745 -33.966 -33.577 1.00 50.30 A
ATOM 1479 NE1 TRP A 201 -16.837 -33.483 -32.294 1.00 51.96 A
ATOM 1480 CZ2 TRP A 201 -17.745 -31.352 -31.312 1.00 51.83 A
ATOM 1481 CZ3 TRP A 201 -18.623 -29.854 -33.027 1.00 52.80 A
ATOM 1482 CH2 TRP A 201 -18.344 -30.160 -31.674 1.00 52.85 A
ATOM 1483 C TRP A 201 -17.313 -34.435 -37.784 1.00 43.05 A
ATOM 1484 O TRP A 201 -18.529 -34.412 -37.950 1.00 44.34 A
ATOM 1485 N TYR A 202 -16.450 -34.487 -38.780 1.00 42.86 A
ATOM 1486 CA TYR A 202 -16.920 -34.596 -40.142 1.00 41.78 A
ATOM 1487 CB TYR A 202 -16.436 -33.411 -40.976 1.00 38.06 A
ATOM 1488 CG TYR A 202 -17.059 -32.119 -40.537 1.00 33.84 A
ATOM 1489 CD1 TYR A 202 -16.522 -31.404 -39.482 1.00 32.12 A
ATOM 1490 CE1 TYR A 202 -17.114 -30.240 -39.044 1.00 31.23 A
ATOM 1491 CD2 TYR A 202 -18.212 -31.638 -41.149 1.00 31.21 A
ATOM 1492 CE2 TYR A 202 -18.815 -30.478 -40.720 1.00 30.59 A
ATOM 1493 CZ TYR A 202 -18.263 -29.780 -39.667 1.00 30.81 A

ATOM 1494 OH TYR A 202 -18.866 -28.621 -39.248 1.00 31.65 A
ATOM 1495 C TYR A 202 -16.449 -35.908 -40.706 1.00 42.48 A
ATOM 1496 O TYR A 202 -16.796 -36.281 -41.821 1.00 42.53 A
ATOM 1497 N ALA A 203 -15.655 -36.615 -39.910 1.00 43.07 A
ATOM 1498 CA ALA A 203 -15.163 -37.924 -40.317 1.00 43.84 A
ATOM 1499 CB ALA A 203 -16.265 -38.956 -40.108 1.00 43.61 A
ATOM 1500 C ALA A 203 -14.719 -37.913 -41.767 1.00 43.89 A
ATOM 1501 O ALA A 203 -15.372 -38.477 -42.651 1.00 45.64 A
ATOM 1502 N SER A 204 -13.631 -37.221 -42.039 1.00 42.33 A
ATOM 1503 CA SER A 204 -13.105 -37.166 -43.373 1.00 40.12 A
ATOM 1504 CB SER A 204 -13.725 -36.029 -44.165 1.00 40.94 A
ATOM 1505 OG SER A 204 -13.139 -35.964 -45.456 1.00 41.48 A
ATOM 1506 C SER A 204 -11.648 -36.925 -43.178 1.00 38.61 A
ATOM 1507 O SER A 204 -11.242 -35.864 -42.722 1.00 38.63 A
ATOM 1508 N PRO A 205 -10.827 -37.917 -43.490 1.00 37.41 A
ATOM 1509 CD PRO A 205 -11.056 -39.233 -44.113 1.00 36.62 A
ATOM 1510 CA PRO A 205 -9.400 -37.656 -43.281 1.00 37.78 A
ATOM 1511 CB PRO A 205 -8.771 -39.015 -43.643 1.00 36.29 A
ATOM 1512 CG PRO A 205 -9.702 -39.547 -44.697 1.00 37.24 A
ATOM 1513 C PRO A 205 -8.845 -36.520 -44.144 1.00 37.99 A
ATOM 1514 O PRO A 205 -7.766 -36.027 -43.941 1.00 38.12 A
ATOM 1515 N THR A 206 -9.746 -36.010 -44.941 1.00 38.55 A
ATOM 1516 CA THR A 206 -9.394 -35.210 -46.021 1.00 38.30 A
ATOM 1517 CB THR A 206 -9.693 -36.206 -47.201 1.00 38.15 A
ATOM 1518 OG1 THR A 206 -8.498 -36.325 -47.990 1.00 37.56 A
ATOM 1519 CG2 THR A 206 -10.940 -35.741 -47.951 1.00 37.06 A
ATOM 1520 C THR A 206 -10.136 -33.797 -45.909 1.00 38.05 A
ATOM 1521 O THR A 206 -9.990 -32.840 -46.687 1.00 38.98 A
ATOM 1522 N PHE A 207 -10.926 -33.699 -44.852 1.00 36.97 A
ATOM 1523 CA PHE A 207 -11.738 -32.526 -44.556 1.00 36.68 A
ATOM 1524 CB PHE A 207 -12.087 -32.507 -43.066 1.00 32.53 A
ATOM 1525 CG PHE A 207 -13.022 -31.402 -42.676 1.00 27.90 A
ATOM 1526 CD1 PHE A 207 -14.213 -31.194 -43.363 1.00 27.40 A
ATOM 1527 CD2 PHE A 207 -12.750 -30.615 -41.580 1.00 26.46 A

ATOM 1528 CE1 PHE A 207 -15.128 -30.215 -42.951 1.00 25.33 A
ATOM 1529 CE2 PHE A 207 -13.660 -29.636 -41.162 1.00 26.09 A
ATOM 1530 CZ PHE A 207 -14.852 -29.442 -41.854 1.00 24.59 A
ATOM 1531 C PHE A 207 -11.142 -31.171 -44.941 1.00 38.65 A
ATOM 1532 O PHE A 207 -11.683 -30.448 -45.784 1.00 40.18 A
ATOM 1533 N GLU A 208 -10.031 -30.811 -44.310 1.00 40.35 A
ATOM 1534 CA GLU A 208 -9.393 -29.521 -44.584 1.00 41.72 A
ATOM 1535 CB GLU A 208 -8.109 -29.377 -43.764 1.00 42.43 A
ATOM 1536 CG GLU A 208 -8.354 -29.021 -42.304 1.00 44.40 A
ATOM 1537 CD GLU A 208 -7.066 -28.755 -41.545 1.00 45.43 A
ATOM 1538 OE1 GLU A 208 -6.413 -27.728 -41.825 1.00 46.31 A
ATOM 1539 OE2 GLU A 208 -6.703 -29.578 -40.677 1.00 46.86 A
ATOM 1540 C GLU A 208 -9.091 -29.255 -46.062 1.00 42.46 A
ATOM 1541 O GLU A 208 -9.372 -28.175 -46.581 1.00 42.81 A
ATOM 1542 N ASP A 209 -8.514 -30.240 -46.736 1.00 42.61 A
ATOM 1543 CA ASP A 209 -8.196 -30.103 -48.137 1.00 42.13 A
ATOM 1544 CB ASP A 209 -7.425 -31.332 -48.604 1.00 42.33 A
ATOM 1545 CG ASP A 209 -6.051 -31.420 -47.979 1.00 42.28 A
ATOM 1546 OD1 ASP A 209 -5.418 -30.349 -47.833 1.00 42.17 A
ATOM 1547 OD2 ASP A 209 -5.601 -32.547 -47.655 1.00 42.06 A
ATOM 1548 C ASP A 209 -9.484 -29.933 -48.931 1.00 42.15 A
ATOM 1549 O ASP A 209 -9.612 -28.994 -49.710 1.00 42.21 A
ATOM 1550 N ASP A 210 -10.441 -30.829 -48.711 1.00 42.30 A
ATOM 1551 CA ASP A 210 -11.720 -30.772 -49.407 1.00 43.50 A
ATOM 1552 CB ASP A 210 -12.703 -31.781 -48.805 1.00 44.47 A
ATOM 1553 CG ASP A 210 -12.225 -33.209 -48.938 1.00 46.97 A
ATOM 1554 OD1 ASP A 210 -11.476 -33.498 -49.906 1.00 47.36 A
ATOM 1555 OD2 ASP A 210 -12.619 -34.039 -48.081 1.00 47.45 A
ATOM 1556 C ASP A 210 -12.292 -29.360 -49.307 1.00 43.97 A
ATOM 1557 O ASP A 210 -12.962 -28.868 -50.224 1.00 45.93 A
ATOM 1558 N LEU A 211 -12.011 -28.700 -48.192 1.00 42.97 A
ATOM 1559 CA LEU A 211 -12.485 -27.344 -47.981 1.00 41.72 A
ATOM 1560 CB LEU A 211 -12.471 -27.013 -46.487 1.00 42.82 A
ATOM 1561 CG LEU A 211 -13.445 -27.759 -45.579 1.00 42.97 A

ATOM 1562 CD1 LEU A 211 -13.270 -27.287 -44.142 1.00 44.93 A
ATOM 1563 CD2 LEU A 211 -14.859 -27.481 -46.038 1.00 42.85 A
ATOM 1564 C LEU A 211 -11.675 -26.291 -48.733 1.00 40.66 A
ATOM 1565 O LEU A 211 -12.239 -25.381 -49.335 1.00 40.04 A
ATOM 1566 N GLU A 212 -10.353 -26.419 -48.688 1.00 39.87 A
ATOM 1567 CA GLU A 212 -9.461 -25.469 -49.349 1.00 40.22 A
ATOM 1568 CB GLU A 212 -8.009 -25.848 -49.100 1.00 39.96 A
ATOM 1569 CG GLU A 212 -7.027 -24.787 -49.537 1.00 40.42 A
ATOM 1570 CD GLU A 212 -5.600 -25.198 -49.317 1.00 41.29 A
ATOM 1571 OE1 GLU A 212 -4.709 -24.336 -49.440 1.00 41.21 A
ATOM 1572 OE2 GLU A 212 -5.368 -26.386 -49.025 1.00 44.60 A
ATOM 1573 C GLU A 212 -9.751 -25.465 -50.846 1.00 40.60 A
ATOM 1574 O GLU A 212 -9.830 -24.417 -51.483 1.00 41.05 A
ATOM 1575 N HIS A 213 -9.940 -26.658 -51.384 1.00 40.82 A
ATOM 1576 CA HIS A 213 -10.261 -26.825 -52.785 1.00 41.06 A
ATOM 1577 CB HIS A 213 -10.434 -28.293 -53.131 1.00 43.72 A
ATOM 1578 CG HIS A 213 -9.177 -29.091 -53.074 1.00 47.82 A
ATOM 1579 CD2 HIS A 213 -8.921 -30.352 -53.492 1.00 48.57 A
ATOM 1580 ND1 HIS A 213 -7.992 -28.607 -52.554 1.00 50.16 A
ATOM 1581 CE1 HIS A 213 -7.059 -29.540 -52.661 1.00 51.03 A
ATOM 1582 NE2 HIS A 213 -7.598 -30.608 -53.227 1.00 50.17 A
ATOM 1583 C HIS A 213 -11.608 -26.176 -53.013 1.00 39.23 A
ATOM 1584 O HIS A 213 -11.777 -25.290 -53.832 1.00 40.64 A
ATOM 1585 N LEU A 214 -12.601 -26.649 -52.286 1.00 36.39 A
ATOM 1586 CA LEU A 214 -13.933 -26.097 -52.493 1.00 34.96 A
ATOM 1587 CB LEU A 214 -14.922 -26.590 -51.462 1.00 34.57 A
ATOM 1588 CG LEU A 214 -16.180 -27.180 -52.071 1.00 34.24 A
ATOM 1589 CD1 LEU A 214 -15.996 -28.680 -52.055 1.00 33.77 A
ATOM 1590 CD2 LEU A 214 -17.399 -26.803 -51.253 1.00 34.65 A
ATOM 1591 C LEU A 214 -14.008 -24.599 -52.467 1.00 34.69 A
ATOM 1592 O LEU A 214 -14.942 -23.995 -53.002 1.00 35.13 A
ATOM 1593 N TYR A 215 -13.036 -23.988 -51.818 1.00 33.96 A
ATOM 1594 CA TYR A 215 -13.063 -22.549 -51.737 1.00 33.10 A
ATOM 1595 CB TYR A 215 -12.222 -22.059 -50.569 1.00 30.94 A

ATOM 1596 CG TYR A 215 -12.335 -20.578 -50.379 1.00 26.69 A
ATOM 1597 CD1 TYR A 215 -13.515 -20.000 -49.918 1.00 25.14 A
ATOM 1598 CE1 TYR A 215 -13.623 -18.630 -49.767 1.00 23.86 A
ATOM 1599 CD2 TYR A 215 -11.273 -19.751 -50.684 1.00 24.58 A
ATOM 1600 CE2 TYR A 215 -11.372 -18.385 -50.537 1.00 23.36 A
ATOM 1601 CZ TYR A 215 -12.546 -17.827 -50.079 1.00 22.87 A
ATOM 1602 OH TYR A 215 -12.632 -16.464 -49.916 1.00 24.09 A
ATOM 1603 C TYR A 215 -12.552 -21.982 -53.045 1.00 33.38 A
ATOM 1604 O TYR A 215 -13.169 -21.077 -53.598 1.00 33.86 A
ATOM 1605 N GLN A 216 -11.436 -22.521 -53.544 1.00 33.44 A
ATOM 1606 CA GLN A 216 -10.867 -22.064 -54.825 1.00 32.50 A
ATOM 1607 CB GLN A 216 -9.805 -23.027 -55.353 1.00 32.69 A
ATOM 1608 CG GLN A 216 -8.610 -23.206 -54.470 1.00 36.72 A
ATOM 1609 CD GLN A 216 -7.602 -24.137 -55.101 1.00 38.93 A
ATOM 1610 OE1 GLN A 216 -7.018 -23.811 -56.133 1.00 41.29 A
ATOM 1611 NE2 GLN A 216 -7.399 -25.308 -54.495 1.00 39.46 A
ATOM 1612 C GLN A 216 -11.964 -21.969 -55.882 1.00 30.82 A
ATOM 1613 O GLN A 216 -12.046 -20.983 -56.624 1.00 30.89 A
ATOM 1614 N GLN A 217 -12.796 -23.004 -55.946 1.00 27.30 A
ATOM 1615 CA GLN A 217 -13.887 -23.037 -56.896 1.00 25.33 A
ATOM 1616 CB GLN A 217 -14.721 -24.305 -56.717 1.00 27.85 A
ATOM 1617 CG GLN A 217 -14.119 -25.544 -57.357 1.00 29.91 A
ATOM 1618 CD GLN A 217 -14.967 -26.783 -57.140 1.00 32.00 A
ATOM 1619 OE1 GLN A 217 -16.193 -26.754 -57.314 1.00 33.31 A
ATOM 1620 NE2 GLN A 217 -14.318 -27.888 -56.762 1.00 32.17 A
ATOM 1621 C GLN A 217 -14.794 -21.841 -56.751 1.00 22.93 A
ATOM 1622 O GLN A 217 -15.331 -21.357 -57.734 1.00 22.16 A
ATOM 1623 N LEU A 218 -14.965 -21.366 -55.522 1.00 21.39 A
ATOM 1624 CA LEU A 218 -15.857 -20.240 -55.260 1.00 19.27 A
ATOM 1625 CB LEU A 218 -16.648 -20.499 -53.977 1.00 19.93 A
ATOM 1626 CG LEU A 218 -17.468 -21.786 -53.853 1.00 20.64 A
ATOM 1627 CD1 LEU A 218 -17.736 -22.099 -52.381 1.00 21.44 A
ATOM 1628 CD2 LEU A 218 -18.777 -21.625 -54.606 1.00 21.58 A
ATOM 1629 C LEU A 218 -15.177 -18.879 -55.151 1.00 17.75 A

ATOM 1630 O LEU A 218 -15.823 -17.855 -55.370 1.00 15.71 A
ATOM 1631 N GLU A 219 -13.880 -18.857 -54.833 1.00 16.42 A
ATOM 1632 CA GLU A 219 -13.196 -17.569 -54.670 1.00 15.74 A
ATOM 1633 CB GLU A 219 -11.664 -17.712 -54.562 1.00 16.69 A
ATOM 1634 CG GLU A 219 -11.002 -16.363 -54.264 1.00 19.35 A
ATOM 1635 CD GLU A 219 -9.575 -16.461 -53.754 1.00 22.26 A
ATOM 1636 OE1 GLU A 219 -9.138 -15.522 -53.046 1.00 23.87 A
ATOM 1637 OE2 GLU A 219 -8.886 -17.454 -54.067 1.00 23.43 A
ATOM 1638 C GLU A 219 -13.512 -16.557 -55.753 1.00 14.26 A
ATOM 1639 O GLU A 219 -13.796 -15.407 -55.448 1.00 13.37 A
ATOM 1640 N PRO A 220 -13.470 -16.971 -57.035 1.00 13.44 A
ATOM 1641 CD PRO A 220 -13.107 -18.304 -57.542 1.00 12.73 A
ATOM 1642 CA PRO A 220 -13.756 -16.062 -58.146 1.00 11.75 A
ATOM 1643 CB PRO A 220 -13.729 -16.985 -59.352 1.00 11.74 A
ATOM 1644 CG PRO A 220 -12.714 -17.997 -58.957 1.00 12.66 A
ATOM 1645 C PRO A 220 -15.102 -15.385 -57.970 1.00 12.40 A
ATOM 1646 O PRO A 220 -15.283 -14.207 -58.300 1.00 10.72 A
ATOM 1647 N LEU A 221 -16.046 -16.141 -57.430 1.00 13.08 A
ATOM 1648 CA LEU A 221 -17.378 -15.621 -57.211 1.00 13.96 A
ATOM 1649 CB LEU A 221 -18.268 -16.689 -56.588 1.00 13.73 A
ATOM 1650 CG LEU A 221 -19.445 -17.196 -57.416 1.00 13.10 A
ATOM 1651 CD1 LEU A 221 -18.943 -18.024 -58.569 1.00 14.33 A
ATOM 1652 CD2 LEU A 221 -20.332 -18.044 -56.559 1.00 13.91 A
ATOM 1653 C LEU A 221 -17.299 -14.429 -56.280 1.00 16.33 A
ATOM 1654 O LEU A 221 -17.851 -13.362 -56.578 1.00 18.55 A
ATOM 1655 N TYR A 222 -16.607 -14.605 -55.156 1.00 15.47 A
ATOM 1656 CA TYR A 222 -16.484 -13.535 -54.175 1.00 15.61 A
ATOM 1657 CB TYR A 222 -15.766 -14.025 -52.911 1.00 14.35 A
ATOM 1658 CG TYR A 222 -15.598 -12.954 -51.863 1.00 13.23 A
ATOM 1659 CD1 TYR A 222 -16.710 -12.347 -51.282 1.00 14.27 A
ATOM 1660 CE1 TYR A 222 -16.576 -11.316 -50.354 1.00 13.52 A
ATOM 1661 CD2 TYR A 222 -14.336 -12.510 -51.483 1.00 13.37 A
ATOM 1662 CE2 TYR A 222 -14.192 -11.477 -50.546 1.00 14.02 A
ATOM 1663 CZ TYR A 222 -15.322 -10.888 -49.995 1.00 13.45 A

ATOM 1664 OH TYR A 222 -15.209 -9.855 -49.101 1.00 16.83 A
ATOM 1665 C TYR A 222 -15.740 -12.343 -54.743 1.00 16.73 A
ATOM 1666 O TYR A 222 -16.269 -11.227 -54.770 1.00 17.27 A
ATOM 1667 N LEU A 223 -14.511 -12.584 -55.190 1.00 17.08 A
ATOM 1668 CA LEU A 223 -13.677 -11.533 -55.757 1.00 17.29 A
ATOM 1669 CB LEU A 223 -12.514 -12.143 -56.523 1.00 17.40 A
ATOM 1670 CG LEU A 223 -11.509 -12.944 -55.702 1.00 17.61 A
ATOM 1671 CD1 LEU A 223 -10.405 -13.467 -56.613 1.00 18.11 A
ATOM 1672 CD2 LEU A 223 -10.915 -12.052 -54.638 1.00 18.05 A
ATOM 1673 C LEU A 223 -14.448 -10.599 -56.681 1.00 18.10 A
ATOM 1674 O LEU A 223 -14.178 -9.396 -56.699 1.00 17.75 A
ATOM 1675 N ASN A 224 -15.395 -11.144 -57.450 1.00 18.40 A
ATOM 1676 CA ASN A 224 -16.170 -10.314 -58.358 1.00 18.39 A
ATOM 1677 CB ASN A 224 -16.748 -11.144 -59.507 1.00 17.47 A
ATOM 1678 CG ASN A 224 -15.834 -11.151 -60.723 1.00 16.66 A
ATOM 1679 OD1 ASN A 224 -15.646 -10.127 -61.372 1.00 15.52 A
ATOM 1680 ND2 ASN A 224 -15.246 -12.301 -61.022 1.00 15.87 A
ATOM 1681 C ASN A 224 -17.262 -9.540 -57.646 1.00 19.34 A
ATOM 1682 O ASN A 224 -17.466 -8.363 -57.946 1.00 20.98 A
ATOM 1683 N LEU A 225 -17.957 -10.174 -56.703 1.00 18.80 A
ATOM 1684 CA LEU A 225 -18.995 -9.459 -55.971 1.00 16.99 A
ATOM 1685 CB LEU A 225 -19.672 -10.365 -54.954 1.00 17.72 A
ATOM 1686 CG LEU A 225 -20.758 -9.664 -54.139 1.00 17.43 A
ATOM 1687 CD1 LEU A 225 -21.823 -9.119 -55.086 1.00 14.91 A
ATOM 1688 CD2 LEU A 225 -21.356 -10.651 -53.119 1.00 17.23 A
ATOM 1689 C LEU A 225 -18.281 -8.341 -55.246 1.00 16.27 A
ATOM 1690 O LEU A 225 -18.803 -7.251 -55.104 1.00 16.53 A
ATOM 1691 N HIS A 226 -17.061 -8.635 -54.812 1.00 15.87 A
ATOM 1692 CA HIS A 226 -16.216 -7.691 -54.094 1.00 15.99 A
ATOM 1693 CB HIS A 226 -14.927 -8.408 -53.662 1.00 17.77 A
ATOM 1694 CG HIS A 226 -13.988 -7.560 -52.858 1.00 17.72 A
ATOM 1695 CD2 HIS A 226 -13.446 -7.748 -51.635 1.00 17.85 A
ATOM 1696 ND1 HIS A 226 -13.435 -6.397 -53.345 1.00 19.72 A
ATOM 1697 CE1 HIS A 226 -12.587 -5.909 -52.458 1.00 18.10 A

ATOM 1698 NE2 HIS A 226 -12.574 -6.711 -51.413 1.00 17.61 A
ATOM 1699 C HIS A 226 -15.893 -6.434 -54.916 1.00 15.33 A
ATOM 1700 O HIS A 226 -16.327 -5.343 -54.562 1.00 13.37 A
ATOM 1701 N ALA A 227 -15.143 -6.579 -56.008 1.00 15.60 A
ATOM 1702 CA ALA A 227 -14.781 -5.430 -56.850 1.00 14.00 A
ATOM 1703 CB ALA A 227 -14.049 -5.907 -58.071 1.00 12.86 A
ATOM 1704 C ALA A 227 -15.983 -4.578 -57.269 1.00 13.28 A
ATOM 1705 O ALA A 227 -15.885 -3.346 -57.367 1.00 12.64 A
ATOM 1706 N PHE A 228 -17.112 -5.242 -57.504 1.00 12.59 A
ATOM 1707 CA PHE A 228 -18.356 -4.589 -57.910 1.00 12.78 A
ATOM 1708 CB PHE A 228 -19.407 -5.655 -58.264 1.00 13.75 A
ATOM 1709 CG PHE A 228 -20.715 -5.094 -58.776 1.00 15.84 A
ATOM 1710 CD1 PHE A 228 -20.816 -4.582 -60.062 1.00 17.55 A
ATOM 1711 CD2 PHE A 228 -21.848 -5.090 -57.974 1.00 16.56 A
ATOM 1712 CE1 PHE A 228 -22.017 -4.079 -60.535 1.00 16.90 A
ATOM 1713 CE2 PHE A 228 -23.050 -4.590 -58.445 1.00 17.54 A
ATOM 1714 CZ PHE A 228 -23.132 -4.085 -59.728 1.00 16.76 A
ATOM 1715 C PHE A 228 -18.900 -3.683 -56.813 1.00 13.64 A
ATOM 1716 O PHE A 228 -19.312 -2.557 -57.078 1.00 14.18 A
ATOM 1717 N VAL A 229 -18.920 -4.193 -55.582 1.00 12.60 A
ATOM 1718 CA VAL A 229 -19.405 -3.432 -54.448 1.00 10.36 A
ATOM 1719 CB VAL A 229 -19.627 -4.334 -53.222 1.00 11.81 A
ATOM 1720 CG1 VAL A 229 -19.959 -3.493 -51.995 1.00 9.80 A
ATOM 1721 CG2 VAL A 229 -20.759 -5.309 -53.506 1.00 13.31 A
ATOM 1722 C VAL A 229 -18.382 -2.387 -54.093 1.00 9.54 A
ATOM 1723 O VAL A 229 -18.726 -1.263 -53.786 1.00 10.79 A
ATOM 1724 N ARG A 230 -17.112 -2.756 -54.140 1.00 9.16 A
ATOM 1725 CA ARG A 230 -16.058 -1.809 -53.800 1.00 10.61 A
ATOM 1726 CB ARG A 230 -14.673 -2.435 -53.995 1.00 10.18 A
ATOM 1727 CG ARG A 230 -13.530 -1.521 -53.589 1.00 10.59 A
ATOM 1728 CD ARG A 230 -12.202 -2.219 -53.710 1.00 12.98 A
ATOM 1729 NE ARG A 230 -11.905 -2.587 -55.086 1.00 16.13 A
ATOM 1730 CZ ARG A 230 -10.962 -3.455 -55.437 1.00 15.50 A
ATOM 1731 NH1 ARG A 230 -10.221 -4.050 -54.529 1.00 14.50 A

ATOM 1732 NH2 ARG A 230 -10.761 -3.738 -56.703 1.00 18.61 A
ATOM 1733 C ARG A 230 -16.178 -0.579 -54.677 1.00 11.81 A
ATOM 1734 O ARG A 230 -15.834 0.534 -54.296 1.00 12.28 A
ATOM 1735 N ARG A 231 -16.682 -0.771 -55.872 1.00 12.96 A
ATOM 1736 CA ARG A 231 -16.773 0.375 -56.717 1.00 14.62 A
ATOM 1737 CB ARG A 231 -16.564 -0.116 -58.139 1.00 18.87 A
ATOM 1738 CG ARG A 231 -17.098 0.761 -59.176 1.00 21.24 A
ATOM 1739 CD ARG A 231 -16.030 1.563 -59.725 1.00 23.51 A
ATOM 1740 NE ARG A 231 -16.475 1.994 -61.026 1.00 30.23 A
ATOM 1741 CZ ARG A 231 -15.740 2.716 -61.840 1.00 33.19 A
ATOM 1742 NH1 ARG A 231 -16.219 3.073 -63.018 1.00 35.63 A
ATOM 1743 NH2 ARG A 231 -14.532 3.071 -61.455 1.00 36.54 A
ATOM 1744 C ARG A 231 -18.091 1.120 -56.457 1.00 14.12 A
ATOM 1745 O ARG A 231 -18.159 2.343 -56.512 1.00 12.78 A
ATOM 1746 N ALA A 232 -19.143 0.392 -56.134 1.00 14.76 A
ATOM 1747 CA ALA A 232 -20.379 1.076 -55.821 1.00 16.81 A
ATOM 1748 CB ALA A 232 -21.494 0.075 -55.526 1.00 17.40 A
ATOM 1749 C ALA A 232 -20.056 1.916 -54.575 1.00 18.51 A
ATOM 1750 O ALA A 232 -20.488 3.057 -54.463 1.00 18.98 A
ATOM 1751 N LEU A 233 -19.254 1.377 -53.661 1.00 19.34 A
ATOM 1752 CA LEU A 233 -18.917 2.121 -52.450 1.00 21.79 A
ATOM 1753 CB LEU A 233 -18.231 1.214 -51.405 1.00 22.72 A
ATOM 1754 CG LEU A 233 -19.154 0.308 -50.564 1.00 24.22 A
ATOM 1755 CD1 LEU A 233 -18.340 -0.498 -49.575 1.00 25.59 A
ATOM 1756 CD2 LEU A 233 -20.192 1.152 -49.821 1.00 25.40 A
ATOM 1757 C LEU A 233 -18.054 3.344 -52.725 1.00 23.27 A
ATOM 1758 O LEU A 233 -18.274 4.417 -52.157 1.00 23.88 A
ATOM 1759 N HIS A 234 -17.069 3.185 -53.595 1.00 24.52 A
ATOM 1760 CA HIS A 234 -16.189 4.292 -53.948 1.00 25.47 A
ATOM 1761 CB HIS A 234 -15.282 3.873 -55.107 1.00 25.82 A
ATOM 1762 CG HIS A 234 -14.366 4.955 -55.592 1.00 24.97 A
ATOM 1763 CD2 HIS A 234 -13.103 5.282 -55.229 1.00 25.15 A
ATOM 1764 ND1 HIS A 234 -14.726 5.853 -56.571 1.00 24.85 A
ATOM 1765 CE1 HIS A 234 -13.724 6.687 -56.790 1.00 24.96 A

ATOM 1766 NE2 HIS A 234 -12.728 6.363 -55.988 1.00 23.91 A
ATOM 1767 C HIS A 234 -17.084 5.448 -54.361 1.00 26.79 A
ATOM 1768 O HIS A 234 -16.918 6.593 -53.923 1.00 28.11 A
ATOM 1769 N ARG A 235 -18.055 5.107 -55.199 1.00 27.23 A
ATOM 1770 CA ARG A 235 -19.040 6.051 -55.710 1.00 27.72 A
ATOM 1771 CB ARG A 235 -20.139 5.285 -56.432 1.00 29.40 A
ATOM 1772 CG ARG A 235 -20.550 5.909 -57.739 1.00 33.41 A
ATOM 1773 CD ARG A 235 -20.518 4.854 -58.836 1.00 35.86 A
ATOM 1774 NE ARG A 235 -21.428 3.738 -58.577 1.00 39.08 A
ATOM 1775 CZ ARG A 235 -21.393 2.579 -59.230 1.00 41.03 A
ATOM 1776 NH1 ARG A 235 -20.480 2.415 -60.177 1.00 40.29 A
ATOM 1777 NH2 ARG A 235 -22.252 1.593 -58.930 1.00 40.81 A
ATOM 1778 C ARG A 235 -19.703 6.925 -54.657 1.00 27.13 A
ATOM 1779 O ARG A 235 -20.021 8.076 -54.899 1.00 27.37 A
ATOM 1780 N ARG A 236 -19.907 6.364 -53.477 1.00 26.91 A
ATOM 1781 CA ARG A 236 -20.587 7.087 -52.418 1.00 25.46 A
ATOM 1782 CB ARG A 236 -21.594 6.111 -51.754 1.00 26.44 A
ATOM 1783 CG ARG A 236 -21.789 6.216 -50.241 1.00 27.38 A
ATOM 1784 CD ARG A 236 -22.966 7.124 -49.815 1.00 29.19 A
ATOM 1785 NE ARG A 236 -24.313 6.524 -49.903 1.00 30.58 A
ATOM 1786 CZ ARG A 236 -25.444 7.153 -49.565 1.00 30.26 A
ATOM 1787 NH1 ARG A 236 -25.399 8.400 -49.115 1.00 29.47 A
ATOM 1788 NH2 ARG A 236 -26.617 6.537 -49.679 1.00 29.26 A
ATOM 1789 C ARG A 236 -19.699 7.791 -51.399 1.00 24.22 A
ATOM 1790 O ARG A 236 -19.975 8.927 -51.011 1.00 24.05 A
ATOM 1791 N TYR A 237 -18.618 7.144 -50.981 1.00 22.53 A
ATOM 1792 CA TYR A 237 -17.733 7.769 -49.995 1.00 20.75 A
ATOM 1793 CB TYR A 237 -17.230 6.745 -48.989 1.00 18.44 A
ATOM 1794 CG TYR A 237 -18.347 6.047 -48.266 1.00 15.88 A
ATOM 1795 CD1 TYR A 237 -18.617 4.707 -48.510 1.00 15.66 A
ATOM 1796 CE1 TYR A 237 -19.642 4.045 -47.838 1.00 14.85 A
ATOM 1797 CD2 TYR A 237 -19.134 6.721 -47.333 1.00 13.61 A
ATOM 1798 CE2 TYR A 237 -20.168 6.069 -46.655 1.00 13.20 A
ATOM 1799 CZ TYR A 237 -20.415 4.728 -46.915 1.00 13.99 A

ATOM 1800 OH TYR A 237 -21.433 4.052 -46.281 1.00 12.33 A
ATOM 1801 C TYR A 237 -16.554 8.486 -50.601 1.00 20.16 A
ATOM 1802 O TYR A 237 -15.867 9.241 -49.916 1.00 20.31 A
ATOM 1803 N GLY A 238 -16.305 8.248 -51.880 1.00 18.97 A
ATOM 1804 CA GLY A 238 -15.213 8.948 -52.515 1.00 18.74 A
ATOM 1805 C GLY A 238 -13.896 8.237 -52.685 1.00 19.05 A
ATOM 1806 O GLY A 238 -13.769 7.029 -52.495 1.00 18.48 A
ATOM 1807 N ASP A 239 -12.893 9.030 -53.024 1.00 19.72 A
ATOM 1808 CA ASP A 239 -11.570 8.514 -53.288 1.00 21.55 A
ATOM 1809 CB ASP A 239 -10.942 9.323 -54.422 1.00 21.57 A
ATOM 1810 CG ASP A 239 -9.970 8.514 -55.211 1.00 21.35 A
ATOM 1811 OD1 ASP A 239 -10.424 7.501 -55.788 1.00 19.75 A
ATOM 1812 OD2 ASP A 239 -8.768 8.875 -55.236 1.00 21.26 A
ATOM 1813 C ASP A 239 -10.627 8.490 -52.094 1.00 22.45 A
ATOM 1814 O ASP A 239 -9.594 7.822 -52.134 1.00 23.68 A
ATOM 1815 N ALA A 240 -10.973 9.220 -51.039 1.00 23.89 A
ATOM 1816 CA ALA A 240 -10.136 9.274 -49.847 1.00 23.30 A
ATOM 1817 CB ALA A 240 -10.430 10.539 -49.053 1.00 23.88 A
ATOM 1818 C ALA A 240 -10.364 8.061 -48.972 1.00 23.20 A
ATOM 1819 O ALA A 240 -9.413 7.473 -48.472 1.00 23.84 A
ATOM 1820 N TYR A 241 -11.626 7.681 -48.812 1.00 22.77 A
ATOM 1821 CA TYR A 241 -11.980 6.565 -47.953 1.00 23.87 A
ATOM 1822 CB TYR A 241 -13.354 6.824 -47.342 1.00 26.40 A
ATOM 1823 CG TYR A 241 -13.365 8.012 -46.390 1.00 30.51 A
ATOM 1824 CD1 TYR A 241 -14.495 8.833 -46.269 1.00 32.03 A
ATOM 1825 CE1 TYR A 241 -14.515 9.930 -45.397 1.00 33.39 A
ATOM 1826 CD2 TYR A 241 -12.248 8.319 -45.607 1.00 32.19 A
ATOM 1827 CE2 TYR A 241 -12.258 9.416 -44.730 1.00 34.30 A
ATOM 1828 CZ TYR A 241 -13.396 10.216 -44.632 1.00 34.81 A
ATOM 1829 OH TYR A 241 -13.414 11.295 -43.768 1.00 36.17 A
ATOM 1830 C TYR A 241 -11.950 5.193 -48.607 1.00 23.52 A
ATOM 1831 O TYR A 241 -11.766 4.177 -47.929 1.00 23.86 A
ATOM 1832 N ILE A 242 -12.128 5.149 -49.923 1.00 23.08 A
ATOM 1833 CA ILE A 242 -12.106 3.871 -50.634 1.00 20.51 A

ATOM 1834 CB ILE A 242 -13.417 3.634 -51.376 1.00 18.90 A
ATOM 1835 CG2 ILE A 242 -13.421 2.245 -51.944 1.00 18.39 A
ATOM 1836 CG1 ILE A 242 -14.596 3.842 -50.424 1.00 18.90 A
ATOM 1837 CD1 ILE A 242 -15.526 2.667 -50.298 1.00 16.95 A
ATOM 1838 C ILE A 242 -10.960 3.797 -51.637 1.00 19.34 A
ATOM 1839 O ILE A 242 -10.658 4.775 -52.303 1.00 20.31 A
ATOM 1840 N ASN A 243 -10.302 2.644 -51.711 1.00 18.61 A
ATOM 1841 CA ASN A 243 -9.209 2.446 -52.663 1.00 18.27 A
ATOM 1842 CB ASN A 243 -7.930 1.987 -51.967 1.00 16.65 A
ATOM 1843 CG ASN A 243 -6.808 1.733 -52.952 1.00 18.14 A
ATOM 1844 OD1 ASN A 243 -7.054 1.295 -54.081 1.00 20.76 A
ATOM 1845 ND2 ASN A 243 -5.574 2.009 -52.543 1.00 14.95 A
ATOM 1846 C ASN A 243 -9.649 1.380 -53.676 1.00 17.92 A
ATOM 1847 O ASN A 243 -9.841 0.214 -53.323 1.00 18.07 A
ATOM 1848 N LEU A 244 -9.803 1.790 -54.931 1.00 16.38 A
ATOM 1849 CA LEU A 244 -10.255 0.895 -55.995 1.00 15.79 A
ATOM 1850 CB LEU A 244 -10.485 1.721 -57.264 1.00 14.45 A
ATOM 1851 CG LEU A 244 -11.680 2.671 -57.187 1.00 13.70 A
ATOM 1852 CD1 LEU A 244 -11.731 3.573 -58.415 1.00 14.72 A
ATOM 1853 CD2 LEU A 244 -12.954 1.839 -57.065 1.00 11.27 A
ATOM 1854 C LEU A 244 -9.300 -0.268 -56.277 1.00 14.69 A
ATOM 1855 O LEU A 244 -9.595 -1.161 -57.065 1.00 13.00 A
ATOM 1856 N ARG A 245 -8.157 -0.241 -55.605 1.00 14.51 A
ATOM 1857 CA ARG A 245 -7.117 -1.244 -55.756 1.00 14.69 A
ATOM 1858 CB ARG A 245 -5.903 -0.633 -56.389 1.00 17.52 A
ATOM 1859 CG ARG A 245 -5.758 -0.943 -57.825 1.00 21.27 A
ATOM 1860 CD ARG A 245 -5.678 0.350 -58.547 1.00 24.86 A
ATOM 1861 NE ARG A 245 -4.309 0.681 -58.929 1.00 28.00 A
ATOM 1862 CZ ARG A 245 -3.624 1.721 -58.462 1.00 30.86 A
ATOM 1863 NH1 ARG A 245 -4.179 2.530 -57.574 1.00 31.18 A
ATOM 1864 NH2 ARG A 245 -2.400 1.975 -58.919 1.00 31.75 A
ATOM 1865 C ARG A 245 -6.656 -1.804 -54.442 1.00 14.88 A
ATOM 1866 O ARG A 245 -5.586 -2.405 -54.376 1.00 14.85 A
ATOM 1867 N GLY A 246 -7.439 -1.582 -53.394 1.00 13.82 A

ATOM 1868 CA GLY A 246 -7.062 -2.057 -52.082 1.00 11.75 A
ATOM 1869 C GLY A 246 -8.223 -2.734 -51.405 1.00 11.17 A
ATOM 1870 O GLY A 246 -9.308 -2.782 -51.980 1.00 11.59 A
ATOM 1871 N PRO A 247 -8.035 -3.267 -50.187 1.00 9.40 A
ATOM 1872 CD PRO A 247 -6.855 -3.158 -49.323 1.00 8.28 A
ATOM 1873 CA PRO A 247 -9.120 -3.936 -49.479 1.00 8.86 A
ATOM 1874 CB PRO A 247 -8.406 -4.581 -48.317 1.00 7.77 A
ATOM 1875 CG PRO A 247 -7.405 -3.594 -47.995 1.00 7.47 A
ATOM 1876 C PRO A 247 -10.133 -2.912 -49.028 1.00 10.51 A
ATOM 1877 O PRO A 247 -9.788 -1.750 -48.820 1.00 11.22 A
ATOM 1878 N ILE A 248 -11.388 -3.333 -48.899 1.00 12.75 A
ATOM 1879 CA ILE A 248 -12.452 -2.429 -48.458 1.00 14.69 A
ATOM 1880 CB ILE A 248 -13.832 -2.994 -48.798 1.00 12.49 A
ATOM 1881 CG2 ILE A 248 -14.907 -1.987 -48.413 1.00 11.78 A
ATOM 1882 CG1 ILE A 248 -13.904 -3.319 -50.283 1.00 11.23 A
ATOM 1883 CD1 ILE A 248 -15.127 -4.101 -50.656 1.00 11.06 A
ATOM 1884 C ILE A 248 -12.391 -2.232 -46.936 1.00 16.52 A
ATOM 1885 O ILE A 248 -12.057 -3.163 -46.194 1.00 17.79 A
ATOM 1886 N PRO A 249 -12.696 -1.017 -46.451 1.00 16.77 A
ATOM 1887 CD PRO A 249 -12.800 0.237 -47.215 1.00 16.58 A
ATOM 1888 CA PRO A 249 -12.669 -0.747 -45.003 1.00 16.81 A
ATOM 1889 CB PRO A 249 -12.834 0.769 -44.934 1.00 16.81 A
ATOM 1890 CG PRO A 249 -12.230 1.233 -46.243 1.00 17.94 A
ATOM 1891 C PRO A 249 -13.820 -1.508 -44.325 1.00 16.63 A
ATOM 1892 O PRO A 249 -14.990 -1.293 -44.651 1.00 16.67 A
ATOM 1893 N ALA A 250 -13.473 -2.386 -43.383 1.00 15.94 A
ATOM 1894 CA ALA A 250 -14.419 -3.259 -42.671 1.00 15.01 A
ATOM 1895 CB ALA A 250 -13.669 -4.010 -41.597 1.00 15.40 A
ATOM 1896 C ALA A 250 -15.744 -2.742 -42.087 1.00 14.22 A
ATOM 1897 O ALA A 250 -16.609 -3.541 -41.734 1.00 13.69 A
ATOM 1898 N HIS A 251 -15.928 -1.435 -41.989 1.00 13.95 A
ATOM 1899 CA HIS A 251 -17.169 -0.919 -41.428 1.00 13.58 A
ATOM 1900 CB HIS A 251 -16.852 0.188 -40.446 1.00 11.76 A
ATOM 1901 CG HIS A 251 -16.196 1.371 -41.074 1.00 10.39 A

ATOM 1902 CD2 HIS A 251 -16.561 2.673 -41.124 1.00 11.01 A
ATOM 1903 ND1 HIS A 251 -14.981 1.289 -41.713 1.00 9.51 A
ATOM 1904 CE1 HIS A 251 -14.622 2.492 -42.125 1.00 9.85 A
ATOM 1905 NE2 HIS A 251 -15.563 3.351 -41.780 1.00 10.29 A
ATOM 1906 C HIS A 251 -18.189 -0.384 -42.422 1.00 14.96 A
ATOM 1907 O HIS A 251 -19.219 0.148 -42.014 1.00 14.91 A
ATOM 1908 N LEU A 252 -17.933 -0.535 -43.718 1.00 16.66 A
ATOM 1909 CA LEU A 252 -18.845 0.008 -44.724 1.00 17.11 A
ATOM 1910 CB LEU A 252 -18.035 0.727 -45.793 1.00 17.85 A
ATOM 1911 CG LEU A 252 -17.118 1.781 -45.162 1.00 20.88 A
ATOM 1912 CD1 LEU A 252 -16.176 2.364 -46.200 1.00 21.91 A
ATOM 1913 CD2 LEU A 252 -17.968 2.886 -44.540 1.00 21.11 A
ATOM 1914 C LEU A 252 -19.758 -1.005 -45.382 1.00 17.11 A
ATOM 1915 O LEU A 252 -20.673 -0.632 -46.106 1.00 16.24 A
ATOM 1916 N LEU A 253 -19.517 -2.285 -45.120 1.00 17.78 A
ATOM 1917 CA LEU A 253 -20.308 -3.342 -45.733 1.00 18.06 A
ATOM 1918 CB LEU A 253 -19.516 -4.644 -45.727 1.00 17.29 A
ATOM 1919 CG LEU A 253 -18.244 -4.642 -46.586 1.00 18.06 A
ATOM 1920 CD1 LEU A 253 -18.602 -4.514 -48.043 1.00 17.54 A
ATOM 1921 CD2 LEU A 253 -17.366 -3.463 -46.201 1.00 20.34 A
ATOM 1922 C LEU A 253 -21.661 -3.569 -45.099 1.00 20.03 A
ATOM 1923 O LEU A 253 -22.293 -4.585 -45.348 1.00 20.44 A
ATOM 1924 N GLY A 254 -22.084 -2.634 -44.252 1.00 22.21 A
ATOM 1925 CA GLY A 254 -23.378 -2.722 -43.583 1.00 23.15 A
ATOM 1926 C GLY A 254 -23.599 -3.743 -42.468 1.00 24.13 A
ATOM 1927 O GLY A 254 -24.746 -3.986 -42.068 1.00 23.04 A
ATOM 1928 N ASP A 255 -22.516 -4.330 -41.960 1.00 24.98 A
ATOM 1929 CA ASP A 255 -22.587 -5.330 -40.900 1.00 25.91 A
ATOM 1930 CB ASP A 255 -22.844 -6.692 -41.513 1.00 26.37 A
ATOM 1931 CG ASP A 255 -22.639 -7.806 -40.537 1.00 29.64 A
ATOM 1932 OD1 ASP A 255 -21.467 -8.067 -40.195 1.00 30.49 A
ATOM 1933 OD2 ASP A 255 -23.645 -8.418 -40.108 1.00 32.96 A
ATOM 1934 C ASP A 255 -21.280 -5.332 -40.115 1.00 26.77 A
ATOM 1935 O ASP A 255 -20.204 -5.395 -40.709 1.00 27.46 A

ATOM 1936 N MET A 256 -21.393 -5.283 -38.784 1.00 27.19 A
ATOM 1937 CA MET A 256 -20.244 -5.205 -37.857 1.00 26.40 A
ATOM 1938 CB MET A 256 -20.723 -5.505 -36.409 1.00 25.51 A
ATOM 1939 CG MET A 256 -19.704 -5.265 -35.294 1.00 21.71 A
ATOM 1940 SD MET A 256 -18.958 -3.616 -35.299 1.00 21.92 A
ATOM 1941 CE MET A 256 -20.204 -2.618 -34.480 1.00 20.07 A
ATOM 1942 C MET A 256 -19.017 -6.038 -38.214 1.00 25.66 A
ATOM 1943 O MET A 256 -17.886 -5.621 -37.975 1.00 25.24 A
ATOM 1944 N TRP A 257 -19.226 -7.193 -38.819 1.00 26.14 A
ATOM 1945 CA TRP A 257 -18.099 -8.042 -39.173 1.00 28.47 A
ATOM 1946 CB TRP A 257 -18.327 -9.439 -38.587 1.00 30.56 A
ATOM 1947 CG TRP A 257 -18.608 -9.363 -37.129 1.00 32.44 A
ATOM 1948 CD2 TRP A 257 -19.897 -9.334 -36.509 1.00 33.76 A
ATOM 1949 CE2 TRP A 257 -19.693 -9.066 -35.142 1.00 33.44 A
ATOM 1950 CE3 TRP A 257 -21.205 -9.499 -36.979 1.00 34.52 A
ATOM 1951 CD1 TRP A 257 -17.703 -9.131 -36.136 1.00 32.45 A
ATOM 1952 NE1 TRP A 257 -18.344 -8.947 -34.945 1.00 33.17 A
ATOM 1953 CZ2 TRP A 257 -20.747 -8.956 -34.236 1.00 33.32 A
ATOM 1954 CZ3 TRP A 257 -22.253 -9.386 -36.077 1.00 35.34 A
ATOM 1955 CH2 TRP A 257 -22.014 -9.116 -34.719 1.00 33.84 A
ATOM 1956 C TRP A 257 -17.883 -8.120 -40.675 1.00 27.67 A
ATOM 1957 O TRP A 257 -16.932 -8.743 -41.135 1.00 25.75 A
ATOM 1958 N ALA A 258 -18.768 -7.469 -41.425 1.00 28.49 A
ATOM 1959 CA ALA A 258 -18.701 -7.469 -42.879 1.00 29.79 A
ATOM 1960 CB ALA A 258 -17.343 -6.967 -43.335 1.00 29.71 A
ATOM 1961 C ALA A 258 -18.935 -8.881 -43.407 1.00 30.53 A
ATOM 1962 O ALA A 258 -18.424 -9.245 -44.459 1.00 31.14 A
ATOM 1963 N GLN A 259 -19.707 -9.676 -42.672 1.00 31.63 A
ATOM 1964 CA GLN A 259 -19.984 -11.051 -43.074 1.00 31.27 A
ATOM 1965 CB GLN A 259 -20.273 -11.918 -41.842 1.00 32.89 A
ATOM 1966 CG GLN A 259 -21.429 -11.449 -40.968 1.00 35.15 A
ATOM 1967 CD GLN A 259 -21.727 -12.433 -39.854 1.00 36.96 A
ATOM 1968 OE1 GLN A 259 -20.849 -12.776 -39.061 1.00 38.73 A
ATOM 1969 NE2 GLN A 259 -22.966 -12.899 -39.794 1.00 37.07 A

ATOM 1970 C GLN A 259 -21.111 -11.202 -44.097 1.00 29.91 A
ATOM 1971 O GLN A 259 -21.206 -12.237 -44.757 1.00 30.25 A
ATOM 1972 N SER A 260 -21.969 -10.191 -44.220 1.00 27.92 A
ATOM 1973 CA SER A 260 -23.050 -10.228 -45.205 1.00 27.79 A
ATOM 1974 CB SER A 260 -24.262 -10.983 -44.664 1.00 27.23 A
ATOM 1975 OG SER A 260 -24.681 -10.452 -43.432 1.00 31.58 A
ATOM 1976 C SER A 260 -23.392 -8.788 -45.566 1.00 27.45 A
ATOM 1977 O SER A 260 -23.614 -7.956 -44.685 1.00 27.35 A
ATOM 1978 N TRP A 261 -23.439 -8.501 -46.865 1.00 26.13 A
ATOM 1979 CA TRP A 261 -23.648 -7.139 -47.324 1.00 25.38 A
ATOM 1980 CB TRP A 261 -22.670 -6.858 -48.468 1.00 25.96 A
ATOM 1981 CG TRP A 261 -21.279 -7.381 -48.222 1.00 25.97 A
ATOM 1982 CD2 TRP A 261 -20.196 -7.449 -49.162 1.00 27.04 A
ATOM 1983 CE2 TRP A 261 -19.084 -7.991 -48.477 1.00 27.27 A
ATOM 1984 CE3 TRP A 261 -20.054 -7.106 -50.515 1.00 27.72 A
ATOM 1985 CD1 TRP A 261 -20.790 -7.869 -47.052 1.00 26.05 A
ATOM 1986 NE1 TRP A 261 -19.479 -8.239 -47.191 1.00 25.51 A
ATOM 1987 CZ2 TRP A 261 -17.842 -8.200 -49.095 1.00 28.46 A
ATOM 1988 CZ3 TRP A 261 -18.816 -7.314 -51.133 1.00 28.30 A
ATOM 1989 CH2 TRP A 261 -17.727 -7.858 -50.417 1.00 28.83 A
ATOM 1990 C TRP A 261 -25.057 -6.769 -47.759 1.00 25.12 A
ATOM 1991 O TRP A 261 -25.287 -5.665 -48.252 1.00 24.44 A
ATOM 1992 N GLU A 262 -26.001 -7.678 -47.565 1.00 25.43 A
ATOM 1993 CA GLU A 262 -27.382 -7.434 -47.977 1.00 26.95 A
ATOM 1994 CB GLU A 262 -28.271 -8.608 -47.641 1.00 28.81 A
ATOM 1995 CG GLU A 262 -27.553 -9.700 -46.914 1.00 32.18 A
ATOM 1996 CD GLU A 262 -27.990 -9.858 -45.463 1.00 34.37 A
ATOM 1997 OE1 GLU A 262 -29.109 -9.413 -45.094 1.00 36.19 A
ATOM 1998 OE2 GLU A 262 -27.199 -10.454 -44.701 1.00 34.79 A
ATOM 1999 C GLU A 262 -28.049 -6.228 -47.419 1.00 27.14 A
ATOM 2000 O GLU A 262 -29.215 -5.996 -47.689 1.00 27.89 A
ATOM 2001 N ASN A 263 -27.336 -5.469 -46.611 1.00 27.94 A
ATOM 2002 CA ASN A 263 -27.929 -4.277 -46.033 1.00 28.11 A
ATOM 2003 CB ASN A 263 -27.613 -4.156 -44.555 1.00 28.97 A

ATOM 2004 CG ASN A 263 -28.805 -4.421 -43.688 1.00 30.01 A
ATOM 2005 OD1 ASN A 263 -29.812 -3.712 -43.762 1.00 31.60 A
ATOM 2006 ND2 ASN A 263 -28.708 -5.461 -42.852 1.00 30.83 A
ATOM 2007 C ASN A 263 -27.408 -3.062 -46.719 1.00 28.29 A
ATOM 2008 O ASN A 263 -27.540 -1.961 -46.225 1.00 28.47 A
ATOM 2009 N ILE A 264 -26.757 -3.258 -47.843 1.00 28.73 A
ATOM 2010 CA ILE A 264 -26.284 -2.110 -48.575 1.00 30.76 A
ATOM 2011 CB ILE A 264 -24.720 -1.964 -48.552 1.00 29.98 A
ATOM 2012 CG2 ILE A 264 -24.252 -1.583 -47.179 1.00 28.84 A
ATOM 2013 CG1 ILE A 264 -24.037 -3.246 -49.006 1.00 29.90 A
ATOM 2014 CD1 ILE A 264 -22.534 -3.079 -49.156 1.00 29.03 A
ATOM 2015 C ILE A 264 -26.819 -2.272 -49.993 1.00 32.26 A
ATOM 2016 O ILE A 264 -26.442 -1.544 -50.903 1.00 32.70 A
ATOM 2017 N TYR A 265 -27.738 -3.223 -50.145 1.00 33.28 A
ATOM 2018 CA TYR A 265 -28.370 -3.526 -51.423 1.00 34.00 A
ATOM 2019 CB TYR A 265 -29.578 -4.436 -51.196 1.00 35.17 A
ATOM 2020 CG TYR A 265 -30.417 -4.714 -52.421 1.00 36.93 A
ATOM 2021 CD1 TYR A 265 -29.908 -5.449 -53.486 1.00 38.00 A
ATOM 2022 CE1 TYR A 265 -30.687 -5.729 -54.608 1.00 38.24 A
ATOM 2023 CD2 TYR A 265 -31.735 -4.259 -52.505 1.00 37.89 A
ATOM 2024 CE2 TYR A 265 -32.523 -4.530 -53.621 1.00 37.94 A
ATOM 2025 CZ TYR A 265 -31.993 -5.266 -54.666 1.00 38.17 A
ATOM 2026 OH TYR A 265 -32.770 -5.543 -55.764 1.00 38.60 A
ATOM 2027 C TYR A 265 -28.818 -2.271 -52.157 1.00 34.48 A
ATOM 2028 O TYR A 265 -28.694 -2.180 -53.373 1.00 35.19 A
ATOM 2029 N ASP A 266 -29.337 -1.301 -51.417 1.00 34.75 A
ATOM 2030 CA ASP A 266 -29.820 -0.067 -52.021 1.00 35.21 A
ATOM 2031 CB ASP A 266 -30.625 0.741 -50.995 1.00 35.74 A
ATOM 2032 CG ASP A 266 -29.854 0.990 -49.707 1.00 36.66 A
ATOM 2033 OD1 ASP A 266 -29.566 -0.004 -49.000 1.00 36.46 A
ATOM 2034 OD2 ASP A 266 -29.539 2.171 -49.406 1.00 34.53 A
ATOM 2035 C ASP A 266 -28.700 0.792 -52.589 1.00 35.44 A
ATOM 2036 O ASP A 266 -28.960 1.792 -53.247 1.00 35.48 A
ATOM 2037 N MET A 267 -27.456 0.404 -52.335 1.00 36.22 A

ATOM 2038 CA MET A 267 -26.307 1.161 -52.830 1.00 37.30 A
ATOM 2039 CB MET A 267 -25.287 1.391 -51.711 1.00 39.06 A
ATOM 2040 CG MET A 267 -25.678 2.389 -50.643 1.00 42.06 A
ATOM 2041 SD MET A 267 -24.386 2.473 -49.381 1.00 45.47 A
ATOM 2042 CE MET A 267 -23.464 3.770 -49.952 1.00 42.49 A
ATOM 2043 C MET A 267 -25.597 0.451 -53.979 1.00 36.75 A
ATOM 2044 O MET A 267 -24.740 1.030 -54.652 1.00 36.03 A
ATOM 2045 N VAL A 268 -25.941 -0.809 -54.194 1.00 36.36 A
ATOM 2046 CA VAL A 268 -25.309 -1.568 -55.255 1.00 37.66 A
ATOM 2047 CB VAL A 268 -24.467 -2.736 -54.696 1.00 37.97 A
ATOM 2048 CG1 VAL A 268 -23.442 -2.212 -53.711 1.00 37.95 A
ATOM 2049 CG2 VAL A 268 -25.369 -3.766 -54.045 1.00 37.31 A
ATOM 2050 C VAL A 268 -26.330 -2.146 -56.215 1.00 38.36 A
ATOM 2051 O VAL A 268 -25.974 -2.592 -57.307 1.00 38.33 A
ATOM 2052 N VAL A 269 -27.593 -2.149 -55.803 1.00 38.86 A
ATOM 2053 CA VAL A 269 -28.654 -2.684 -56.641 1.00 38.82 A
ATOM 2054 CB VAL A 269 -30.042 -2.154 -56.201 1.00 39.78 A
ATOM 2055 CG1 VAL A 269 -30.210 -0.693 -56.603 1.00 39.00 A
ATOM 2056 CG2 VAL A 269 -31.131 -3.012 -56.791 1.00 39.77 A
ATOM 2057 C VAL A 269 -28.337 -2.238 -58.058 1.00 38.65 A
ATOM 2058 O VAL A 269 -28.244 -1.038 -58.341 1.00 37.65 A
ATOM 2059 N PRO A 270 -28.118 -3.204 -58.962 1.00 38.91 A
ATOM 2060 CD PRO A 270 -28.178 -4.663 -58.768 1.00 38.79 A
ATOM 2061 CA PRO A 270 -27.799 -2.877 -60.353 1.00 40.29 A
ATOM 2062 CB PRO A 270 -27.515 -4.249 -60.972 1.00 39.11 A
ATOM 2063 CG PRO A 270 -28.369 -5.168 -60.170 1.00 38.81 A
ATOM 2064 C PRO A 270 -28.908 -2.106 -61.062 1.00 41.49 A
ATOM 2065 O PRO A 270 -28.719 -0.956 -61.460 1.00 41.44 A
ATOM 2066 N PHE A 271 -30.069 -2.730 -61.212 1.00 42.78 A
ATOM 2067 CA PHE A 271 -31.178 -2.058 -61.867 1.00 44.21 A
ATOM 2068 CB PHE A 271 -31.867 -3.009 -62.849 1.00 42.92 A
ATOM 2069 CG PHE A 271 -30.912 -3.723 -63.751 1.00 41.12 A
ATOM 2070 CD1 PHE A 271 -30.601 -5.058 -63.534 1.00 40.15 A
ATOM 2071 CD2 PHE A 271 -30.254 -3.037 -64.764 1.00 40.09 A

ATOM 2072 CE1 PHE A 271 -29.644 -5.698 -64.306 1.00 38.68 A
ATOM 2073 CE2 PHE A 271 -29.295 -3.670 -65.537 1.00 39.16 A
ATOM 2074 CZ PHE A 271 -28.989 -5.001 -65.308 1.00 38.53 A
ATOM 2075 C PHE A 271 -32.173 -1.538 -60.842 1.00 45.89 A
ATOM 2076 O PHE A 271 -33.105 -2.245 -60.440 1.00 45.83 A
ATOM 2077 N PRO A 272 -31.970 -0.294 -60.385 1.00 47.80 A
ATOM 2078 CD PRO A 272 -30.896 0.647 -60.749 1.00 48.15 A
ATOM 2079 CA PRO A 272 -32.873 0.301 -59.401 1.00 50.23 A
ATOM 2080 CB PRO A 272 -32.075 1.492 -58.879 1.00 49.47 A
ATOM 2081 CG PRO A 272 -31.368 1.959 -60.112 1.00 48.82 A
ATOM 2082 C PRO A 272 -34.122 0.720 -60.150 1.00 52.22 A
ATOM 2083 O PRO A 272 -34.341 0.295 -61.286 1.00 52.31 A
ATOM 2084 N ALA A 273 -34.942 1.548 -59.521 1.00 54.74 A
ATOM 2085 CA ALA A 273 -36.164 2.018 -60.161 1.00 56.86 A
ATOM 2086 CB ALA A 273 -35.815 2.812 -61.412 1.00 55.84 A
ATOM 2087 C ALA A 273 -37.125 0.877 -60.511 1.00 58.05 A
ATOM 2088 O ALA A 273 -38.063 1.061 -61.283 1.00 58.13 A
ATOM 2089 N LYS A 274 -36.884 -0.301 -59.951 1.00 59.52 A
ATOM 2090 CA LYS A 274 -37.753 -1.447 -60.193 1.00 61.70 A
ATOM 2091 CB LYS A 274 -36.970 -2.585 -60.857 1.00 60.88 A
ATOM 2092 CG LYS A 274 -36.759 -2.393 -62.350 1.00 60.36 A
ATOM 2093 CD LYS A 274 -36.957 -3.712 -63.104 0.00 60.48 A
ATOM 2094 CE LYS A 274 -37.019 -3.503 -64.614 0.00 60.41 A
ATOM 2095 NZ LYS A 274 -37.528 -4.705 -65.338 0.00 60.42 A
ATOM 2096 C LYS A 274 -38.320 -1.890 -58.844 1.00 63.31 A
ATOM 2097 O LYS A 274 -37.885 -1.392 -57.806 1.00 63.81 A
ATOM 2098 N PRO A 275 -39.297 -2.816 -58.837 1.00 64.43 A
ATOM 2099 CD PRO A 275 -39.761 -3.706 -59.912 1.00 64.39 A
ATOM 2100 CA PRO A 275 -39.844 -3.240 -57.547 1.00 65.58 A
ATOM 2101 CB PRO A 275 -40.770 -4.397 -57.928 1.00 65.03 A
ATOM 2102 CG PRO A 275 -40.115 -4.953 -59.144 1.00 64.73 A
ATOM 2103 C PRO A 275 -38.702 -3.648 -56.622 1.00 66.82 A
ATOM 2104 O PRO A 275 -37.758 -4.312 -57.055 1.00 67.23 A
ATOM 2105 N ALA A 276 -38.794 -3.205 -55.365 1.00 67.48 A

ATOM 2106 CA ALA A 276 -37.801 -3.481 -54.323 1.00 67.41 A
ATOM 2107 CB ALA A 276 -37.913 -2.428 -53.222 1.00 67.05 A
ATOM 2108 C ALA A 276 -37.909 -4.858 -53.717 1.00 67.65 A
ATOM 2109 O ALA A 276 -38.947 -5.233 -53.154 1.00 67.95 A
ATOM 2110 N LEU A 277 -36.818 -5.604 -53.830 1.00 67.80 A
ATOM 2111 CA LEU A 277 -36.797 -6.920 -53.254 1.00 68.17 A
ATOM 2112 CB LEU A 277 -35.779 -7.832 -53.941 1.00 67.17 A
ATOM 2113 CG LEU A 277 -36.163 -8.313 -55.329 1.00 66.16 A
ATOM 2114 CD1 LEU A 277 -35.070 -9.187 -55.876 1.00 65.35 A
ATOM 2115 CD2 LEU A 277 -37.467 -9.084 -55.254 1.00 66.44 A
ATOM 2116 C LEU A 277 -36.514 -6.895 -51.780 1.00 69.26 A
ATOM 2117 O LEU A 277 -35.745 -7.668 -51.294 1.00 69.99 A
ATOM 2118 N ALA A 278 -37.163 -5.977 -51.070 1.00 70.15 A
ATOM 2119 CA ALA A 278 -36.895 -5.783 -49.649 1.00 70.63 A
ATOM 2120 CB ALA A 278 -35.790 -4.756 -49.453 1.00 71.03 A
ATOM 2121 C ALA A 278 -38.217 -5.392 -48.996 1.00 70.67 A
ATOM 2122 O ALA A 278 -38.502 -4.209 -48.809 1.00 70.21 A
ATOM 2123 N VAL A 279 -39.020 -6.393 -48.651 1.00 70.77 A
ATOM 2124 CA VAL A 279 -39.983 -6.264 -47.564 1.00 71.08 A
ATOM 2125 CB VAL A 279 -40.958 -7.455 -47.578 1.00 71.10 A
ATOM 2126 CG1 VAL A 279 -42.372 -6.991 -47.266 1.00 72.13 A
ATOM 2127 CG2 VAL A 279 -40.907 -8.169 -48.920 1.00 70.47 A
ATOM 2128 C VAL A 279 -39.088 -6.305 -46.330 1.00 71.02 A
ATOM 2129 O VAL A 279 -39.227 -7.183 -45.479 1.00 72.30 A
ATOM 2130 N ALA A 280 -38.169 -5.348 -46.239 1.00 70.06 A
ATOM 2131 CA ALA A 280 -37.737 -4.822 -44.950 1.00 68.32 A
ATOM 2132 CB ALA A 280 -36.325 -4.272 -45.089 1.00 68.95 A
ATOM 2133 C ALA A 280 -38.708 -3.709 -44.571 1.00 67.16 A
ATOM 2134 O ALA A 280 -38.659 -3.181 -43.460 1.00 66.59 A
ATOM 2135 N ALA A 281 -39.590 -3.358 -45.501 1.00 66.09 A
ATOM 2136 CA ALA A 281 -40.281 -2.075 -45.456 1.00 65.12 A
ATOM 2137 CB ALA A 281 -39.995 -1.274 -46.718 1.00 64.98 A
ATOM 2138 C ALA A 281 -41.783 -2.264 -45.273 1.00 64.22 A
ATOM 2139 O ALA A 281 -42.434 -1.494 -44.567 1.00 64.24 A

ATOM 2140 N THR A 282 -42.327 -3.294 -45.912 1.00 63.53 A
ATOM 2141 CA THR A 282 -43.767 -3.524 -45.909 1.00 63.07 A
ATOM 2142 CB THR A 282 -44.246 -3.963 -47.305 1.00 62.85 A
ATOM 2143 OG1 THR A 282 -45.663 -3.774 -47.408 1.00 62.73 A
ATOM 2144 CG2 THR A 282 -44.080 -5.465 -47.478 1.00 62.18 A
ATOM 2145 C THR A 282 -44.156 -4.570 -44.869 1.00 62.61 A
ATOM 2146 O THR A 282 -45.330 -4.912 -44.729 1.00 62.54 A
ATOM 2147 N MET A 283 -43.163 -5.073 -44.143 1.00 62.00 A
ATOM 2148 CA MET A 283 -43.413 -5.925 -43.002 1.00 61.58 A
ATOM 2149 CB MET A 283 -42.120 -6.611 -42.539 1.00 61.02 A
ATOM 2150 CG MET A 283 -41.758 -7.831 -43.347 1.00 60.60 A
ATOM 2151 SD MET A 283 -40.167 -8.532 -42.916 1.00 62.72 A
ATOM 2152 CE MET A 283 -40.620 -9.894 -42.022 1.00 60.84 A
ATOM 2153 C MET A 283 -43.905 -4.922 -41.962 1.00 62.01 A
ATOM 2154 O MET A 283 -44.897 -5.166 -41.283 1.00 61.88 A
ATOM 2155 N LEU A 284 -43.238 -3.770 -41.886 1.00 62.02 A
ATOM 2156 CA LEU A 284 -43.609 -2.727 -40.922 1.00 62.14 A
ATOM 2157 CB LEU A 284 -42.559 -1.604 -40.901 1.00 62.07 A
ATOM 2158 CG LEU A 284 -41.125 -2.030 -40.569 1.00 62.52 A
ATOM 2159 CD1 LEU A 284 -40.155 -0.906 -40.901 1.00 62.17 A
ATOM 2160 CD2 LEU A 284 -41.032 -2.429 -39.104 1.00 62.47 A
ATOM 2161 C LEU A 284 -44.959 -2.133 -41.298 1.00 62.37 A
ATOM 2162 O LEU A 284 -45.836 -1.963 -40.462 1.00 62.08 A
ATOM 2163 N ALA A 285 -45.112 -1.821 -42.573 1.00 63.66 A
ATOM 2164 CA ALA A 285 -46.348 -1.226 -43.068 1.00 64.73 A
ATOM 2165 CB ALA A 285 -46.346 -1.266 -44.576 1.00 65.56 A
ATOM 2166 C ALA A 285 -47.636 -1.858 -42.578 1.00 64.63 A
ATOM 2167 O ALA A 285 -48.594 -1.198 -42.181 1.00 65.34 A
ATOM 2168 N GLN A 286 -47.623 -3.159 -42.736 1.00 63.84 A
ATOM 2169 CA GLN A 286 -48.727 -4.008 -42.408 1.00 63.06 A
ATOM 2170 CB GLN A 286 -48.426 -5.395 -42.964 1.00 63.44 A
ATOM 2171 CG GLN A 286 -49.157 -5.677 -44.272 1.00 63.13 A
ATOM 2172 CD GLN A 286 -48.768 -7.008 -44.875 1.00 63.26 A
ATOM 2173 OE1 GLN A 286 -47.634 -7.187 -45.326 1.00 63.46 A

ATOM 2174 NE2 GLN A 286 -49.704 -7.957 -44.883 1.00 61.94 A
ATOM 2175 C GLN A 286 -49.275 -4.135 -40.992 1.00 61.98 A
ATOM 2176 O GLN A 286 -50.373 -3.688 -40.705 1.00 62.38 A
ATOM 2177 N GLY A 287 -48.481 -4.685 -40.095 1.00 60.83 A
ATOM 2178 CA GLY A 287 -48.983 -4.909 -38.743 1.00 58.57 A
ATOM 2179 C GLY A 287 -48.311 -6.139 -38.209 1.00 56.95 A
ATOM 2180 O GLY A 287 -48.982 -7.073 -37.839 1.00 58.02 A
ATOM 2181 N TRP A 288 -46.997 -6.105 -38.083 1.00 55.03 A
ATOM 2182 CA TRP A 288 -46.272 -7.313 -37.703 1.00 54.00 A
ATOM 2183 CB TRP A 288 -45.270 -7.563 -38.822 1.00 55.41 A
ATOM 2184 CG TRP A 288 -45.840 -8.135 -40.114 1.00 56.31 A
ATOM 2185 CD2 TRP A 288 -45.348 -9.301 -40.780 1.00 56.09 A
ATOM 2186 CE2 TRP A 288 -46.160 -9.523 -41.915 1.00 55.39 A
ATOM 2187 CE3 TRP A 288 -44.291 -10.186 -40.519 1.00 55.20 A
ATOM 2188 CD1 TRP A 288 -46.919 -7.685 -40.866 1.00 56.64 A
ATOM 2189 NE1 TRP A 288 -47.108 -8.529 -41.952 1.00 56.13 A
ATOM 2190 CZ2 TRP A 288 -45.944 -10.602 -42.782 1.00 54.04 A
ATOM 2191 CZ3 TRP A 288 -44.077 -11.256 -41.383 1.00 53.80 A
ATOM 2192 CH2 TRP A 288 -44.901 -11.454 -42.498 1.00 53.63 A
ATOM 2193 C TRP A 288 -45.534 -7.632 -36.385 1.00 52.82 A
ATOM 2194 O TRP A 288 -44.345 -7.341 -36.245 1.00 51.95 A
ATOM 2195 N ALA A 289 -46.192 -8.347 -35.483 1.00 51.84 A
ATOM 2196 CA ALA A 289 -45.568 -8.746 -34.230 1.00 50.52 A
ATOM 2197 CB ALA A 289 -46.523 -9.553 -33.381 1.00 49.73 A
ATOM 2198 C ALA A 289 -44.402 -9.608 -34.594 1.00 49.77 A
ATOM 2199 O ALA A 289 -44.323 -10.168 -35.680 1.00 50.05 A
ATOM 2200 N ALA A 290 -43.506 -9.701 -33.636 1.00 49.14 A
ATOM 2201 CA ALA A 290 -42.318 -10.498 -33.754 1.00 49.56 A
ATOM 2202 CB ALA A 290 -41.448 -10.259 -32.541 1.00 49.67 A
ATOM 2203 C ALA A 290 -42.822 -11.934 -33.776 1.00 50.08 A
ATOM 2204 O ALA A 290 -42.132 -12.852 -34.220 1.00 49.03 A
ATOM 2205 N ALA A 291 -44.043 -12.123 -33.287 1.00 51.48 A
ATOM 2206 CA ALA A 291 -44.639 -13.456 -33.248 1.00 53.44 A
ATOM 2207 CB ALA A 291 -45.812 -13.498 -32.241 1.00 53.44 A

ATOM 2208 C ALA A 291 -45.125 -13.791 -34.644 1.00 54.56 A
ATOM 2209 O ALA A 291 -44.933 -14.909 -35.134 1.00 54.51 A
ATOM 2210 N ALA A 292 -45.752 -12.808 -35.284 1.00 55.23 A
ATOM 2211 CA ALA A 292 -46.255 -12.978 -36.643 1.00 54.71 A
ATOM 2212 CB ALA A 292 -46.663 -11.626 -37.228 1.00 54.98 A
ATOM 2213 C ALA A 292 -45.164 -13.619 -37.501 1.00 54.61 A
ATOM 2214 O ALA A 292 -45.448 -14.429 -38.382 1.00 54.62 A
ATOM 2215 N MET A 293 -43.913 -13.258 -37.231 1.00 54.50 A
ATOM 2216 CA MET A 293 -42.780 -13.802 -37.971 1.00 53.68 A
ATOM 2217 CB MET A 293 -41.496 -13.020 -37.645 1.00 53.74 A
ATOM 2218 CG MET A 293 -41.403 -11.699 -38.390 1.00 54.17 A
ATOM 2219 SD MET A 293 -40.117 -10.621 -37.779 1.00 54.30 A
ATOM 2220 CE MET A 293 -38.651 -11.619 -38.138 1.00 54.28 A
ATOM 2221 C MET A 293 -42.579 -15.289 -37.700 1.00 52.38 A
ATOM 2222 O MET A 293 -42.333 -16.062 -38.618 1.00 52.98 A
ATOM 2223 N PHE A 294 -42.703 -15.705 -36.451 1.00 51.10 A
ATOM 2224 CA PHE A 294 -42.518 -17.117 -36.136 1.00 50.54 A
ATOM 2225 CB PHE A 294 -42.286 -17.294 -34.632 1.00 46.42 A
ATOM 2226 CG PHE A 294 -40.921 -16.876 -34.178 1.00 41.80 A
ATOM 2227 CD1 PHE A 294 -40.599 -15.525 -34.039 1.00 39.61 A
ATOM 2228 CD2 PHE A 294 -39.938 -17.836 -33.944 1.00 38.96 A
ATOM 2229 CE1 PHE A 294 -39.312 -15.133 -33.677 1.00 37.78 A
ATOM 2230 CE2 PHE A 294 -38.650 -17.461 -33.582 1.00 37.57 A
ATOM 2231 CZ PHE A 294 -38.335 -16.101 -33.450 1.00 37.56 A
ATOM 2232 C PHE A 294 -43.714 -17.964 -36.573 1.00 52.31 A
ATOM 2233 O PHE A 294 -43.717 -19.198 -36.463 1.00 51.32 A
ATOM 2234 N ARG A 295 -44.722 -17.262 -37.078 1.00 54.14 A
ATOM 2235 CA ARG A 295 -45.983 -17.844 -37.531 1.00 56.06 A
ATOM 2236 CB ARG A 295 -47.090 -16.863 -37.232 1.00 57.04 A
ATOM 2237 CG ARG A 295 -47.996 -17.312 -36.152 1.00 58.36 A
ATOM 2238 CD ARG A 295 -49.389 -17.132 -36.641 1.00 59.09 A
ATOM 2239 NE ARG A 295 -49.449 -16.397 -37.903 1.00 60.28 A
ATOM 2240 CZ ARG A 295 -50.494 -16.457 -38.716 1.00 61.09 A
ATOM 2241 NH1 ARG A 295 -51.516 -17.217 -38.367 1.00 61.92 A

ATOM 2242 NH2 ARG A 295 -50.530 -15.770 -39.853 1.00 61.44 A
ATOM 2243 C ARG A 295 -46.043 -18.184 -39.015 1.00 56.71 A
ATOM 2244 O ARG A 295 -46.727 -19.136 -39.440 1.00 58.07 A
ATOM 2245 N ALA A 296 -45.346 -17.351 -39.781 1.00 55.75 A
ATOM 2246 CA ALA A 296 -45.246 -17.465 -41.215 1.00 54.11 A
ATOM 2247 CB ALA A 296 -44.855 -16.114 -41.802 1.00 53.37 A
ATOM 2248 C ALA A 296 -44.169 -18.486 -41.458 1.00 53.81 A
ATOM 2249 O ALA A 296 -44.298 -19.345 -42.313 1.00 54.07 A
ATOM 2250 N ALA A 297 -43.101 -18.399 -40.683 1.00 53.71 A
ATOM 2251 CA ALA A 297 -42.011 -19.353 -40.829 1.00 53.97 A
ATOM 2252 CB ALA A 297 -40.912 -19.066 -39.823 1.00 53.80 A
ATOM 2253 C ALA A 297 -42.576 -20.740 -40.578 1.00 54.45 A
ATOM 2254 O ALA A 297 -42.160 -21.734 -41.180 1.00 55.32 A
ATOM 2255 N GLU A 298 -43.497 -20.785 -39.624 1.00 54.57 A
ATOM 2256 CA GLU A 298 -44.194 -22.007 -39.237 1.00 54.73 A
ATOM 2257 CB GLU A 298 -45.348 -21.685 -38.268 1.00 55.90 A
ATOM 2258 CG GLU A 298 -45.549 -22.710 -37.153 1.00 56.36 A
ATOM 2259 CD GLU A 298 -46.742 -22.414 -36.245 1.00 56.12 A
ATOM 2260 OE1 GLU A 298 -47.135 -21.229 -36.106 1.00 56.21 A
ATOM 2261 OE2 GLU A 298 -47.270 -23.386 -35.659 1.00 56.33 A
ATOM 2262 C GLU A 298 -44.829 -22.579 -40.469 1.00 53.80 A
ATOM 2263 O GLU A 298 -44.403 -23.579 -41.059 1.00 52.51 A
ATOM 2264 N GLU A 299 -45.892 -21.872 -40.815 1.00 53.35 A
ATOM 2265 CA GLU A 299 -46.741 -22.178 -41.928 1.00 53.42 A
ATOM 2266 CB GLU A 299 -47.552 -20.964 -42.303 1.00 52.91 A
ATOM 2267 CG GLU A 299 -47.625 -20.900 -43.785 1.00 53.99 A
ATOM 2268 CD GLU A 299 -48.649 -19.971 -44.329 1.00 53.83 A
ATOM 2269 OE1 GLU A 299 -49.744 -20.461 -44.689 1.00 53.15 A
ATOM 2270 OE2 GLU A 299 -48.338 -18.763 -44.407 1.00 52.52 A
ATOM 2271 C GLU A 299 -46.055 -22.716 -43.175 1.00 53.34 A
ATOM 2272 O GLU A 299 -46.696 -23.373 -43.975 1.00 53.78 A
ATOM 2273 N PHE A 300 -44.775 -22.432 -43.375 1.00 52.75 A
ATOM 2274 CA PHE A 300 -44.101 -22.974 -44.553 1.00 51.93 A
ATOM 2275 CB PHE A 300 -42.764 -22.259 -44.816 1.00 51.40 A

ATOM 2276 CG PHE A 300 -42.042 -22.728 -46.073 1.00 50.20 A
ATOM 2277 CD1 PHE A 300 -42.154 -22.051 -47.273 1.00 49.93 A
ATOM 2278 CD2 PHE A 300 -41.241 -23.839 -46.049 1.00 49.69 A
ATOM 2279 CE1 PHE A 300 -41.470 -22.502 -48.421 1.00 49.21 A
ATOM 2280 CE2 PHE A 300 -40.566 -24.264 -47.206 1.00 48.51 A
ATOM 2281 CZ PHE A 300 -40.689 -23.602 -48.370 1.00 48.36 A
ATOM 2282 C PHE A 300 -43.851 -24.413 -44.132 1.00 51.60 A
ATOM 2283 O PHE A 300 -44.215 -25.361 -44.824 1.00 52.08 A
ATOM 2284 N PHE A 301 -43.228 -24.557 -42.970 1.00 50.92 A
ATOM 2285 CA PHE A 301 -42.950 -25.878 -42.420 1.00 49.53 A
ATOM 2286 CB PHE A 301 -42.413 -25.772 -41.008 1.00 46.59 A
ATOM 2287 CG PHE A 301 -40.955 -25.552 -40.939 1.00 44.44 A
ATOM 2288 CD1 PHE A 301 -40.442 -24.255 -40.892 1.00 43.44 A
ATOM 2289 CD2 PHE A 301 -40.089 -26.645 -40.857 1.00 43.68 A
ATOM 2290 CE1 PHE A 301 -39.066 -24.036 -40.757 1.00 42.66 A
ATOM 2291 CE2 PHE A 301 -38.713 -26.457 -40.723 1.00 42.96 A
ATOM 2292 CZ PHE A 301 -38.193 -25.146 -40.666 1.00 42.26 A
ATOM 2293 C PHE A 301 -44.074 -26.905 -42.363 1.00 50.25 A
ATOM 2294 O PHE A 301 -43.813 -28.086 -42.557 1.00 49.95 A
ATOM 2295 N THR A 302 -45.282 -26.470 -42.010 1.00 51.11 A
ATOM 2296 CA THR A 302 -46.432 -27.368 -41.949 1.00 51.06 A
ATOM 2297 CB THR A 302 -47.713 -26.516 -41.732 1.00 50.04 A
ATOM 2298 OG1 THR A 302 -47.837 -25.477 -42.728 1.00 49.68 A
ATOM 2299 CG2 THR A 302 -47.640 -25.850 -40.355 1.00 48.07 A
ATOM 2300 C THR A 302 -46.583 -28.050 -43.297 1.00 52.02 A
ATOM 2301 O THR A 302 -46.387 -29.249 -43.471 1.00 50.88 A
ATOM 2302 N ALA A 303 -46.917 -27.153 -44.204 1.00 53.26 A
ATOM 2303 CA ALA A 303 -47.078 -27.320 -45.618 1.00 53.74 A
ATOM 2304 CB ALA A 303 -46.743 -26.000 -46.165 1.00 52.58 A
ATOM 2305 C ALA A 303 -46.052 -28.209 -46.282 1.00 54.13 A
ATOM 2306 O ALA A 303 -46.318 -29.120 -47.105 1.00 55.05 A
ATOM 2307 N LEU A 304 -44.802 -27.939 -45.921 1.00 55.08 A
ATOM 2308 CA LEU A 304 -43.752 -28.952 -45.945 1.00 57.35 A
ATOM 2309 CB LEU A 304 -42.386 -28.290 -45.747 1.00 57.82 A

ATOM 2310 CG LEU A 304 -41.603 -27.933 -47.012 1.00 57.57 A
ATOM 2311 CD1 LEU A 304 -41.555 -26.425 -47.205 1.00 57.35 A
ATOM 2312 CD2 LEU A 304 -40.199 -28.514 -46.953 1.00 57.39 A
ATOM 2313 C LEU A 304 -43.986 -29.993 -44.855 1.00 59.39 A
ATOM 2314 O LEU A 304 -43.107 -30.252 -44.033 1.00 61.25 A
ATOM 2315 N ALA A 305 -45.174 -30.589 -44.855 1.00 60.04 A
ATOM 2316 CA ALA A 305 -45.322 -31.999 -44.517 1.00 60.56 A
ATOM 2317 CB ALA A 305 -44.836 -32.873 -45.663 1.00 60.44 A
ATOM 2318 C ALA A 305 -44.578 -32.343 -43.230 1.00 60.71 A
ATOM 2319 O ALA A 305 -44.236 -33.502 -42.991 1.00 60.25 A
ATOM 2320 N LEU A 306 -44.332 -31.331 -42.405 1.00 60.77 A
ATOM 2321 CA LEU A 306 -43.492 -31.492 -41.224 1.00 60.47 A
ATOM 2322 CB LEU A 306 -42.125 -30.841 -41.447 1.00 59.93 A
ATOM 2323 CG LEU A 306 -41.152 -31.597 -42.353 1.00 59.35 A
ATOM 2324 CD1 LEU A 306 -39.778 -30.947 -42.327 1.00 59.11 A
ATOM 2325 CD2 LEU A 306 -41.065 -33.060 -41.946 1.00 58.36 A
ATOM 2326 C LEU A 306 -44.159 -30.900 -39.987 1.00 60.54 A
ATOM 2327 O LEU A 306 -45.039 -30.046 -40.095 1.00 60.62 A
ATOM 2328 N SER A 307 -43.735 -31.357 -38.813 1.00 60.01 A
ATOM 2329 CA SER A 307 -44.370 -30.952 -37.562 1.00 59.66 A
ATOM 2330 CB SER A 307 -43.881 -31.781 -36.390 1.00 58.82 A
ATOM 2331 OG SER A 307 -42.484 -31.879 -36.373 1.00 61.41 A
ATOM 2332 C SER A 307 -44.290 -29.478 -37.219 1.00 60.13 A
ATOM 2333 O SER A 307 -43.305 -28.788 -37.511 1.00 60.54 A
ATOM 2334 N PRO A 308 -45.371 -28.954 -36.624 1.00 60.90 A
ATOM 2335 CD PRO A 308 -46.644 -29.643 -36.337 1.00 61.08 A
ATOM 2336 CA PRO A 308 -45.449 -27.544 -36.232 1.00 61.23 A
ATOM 2337 CB PRO A 308 -46.947 -27.283 -36.201 1.00 61.05 A
ATOM 2338 CG PRO A 308 -47.462 -28.561 -35.614 1.00 61.35 A
ATOM 2339 C PRO A 308 -44.802 -27.335 -34.878 1.00 61.35 A
ATOM 2340 O PRO A 308 -44.363 -28.288 -34.238 1.00 61.43 A
ATOM 2341 N MET A 309 -44.741 -26.089 -34.439 1.00 61.55 A
ATOM 2342 CA MET A 309 -44.125 -25.816 -33.156 1.00 62.70 A
ATOM 2343 CB MET A 309 -43.882 -24.315 -32.998 1.00 61.81 A

ATOM 2344 CG MET A 309 -42.787 -23.784 -33.905 1.00 61.31 A
ATOM 2345 SD MET A 309 -41.213 -24.695 -33.709 1.00 60.49 A
ATOM 2346 CE MET A 309 -41.169 -25.656 -35.237 1.00 62.73 A
ATOM 2347 C MET A 309 -45.012 -26.325 -32.035 1.00 63.82 A
ATOM 2348 O MET A 309 -46.209 -26.018 -32.005 1.00 64.25 A
ATOM 2349 N PRO A 310 -44.441 -27.123 -31.101 1.00 64.49 A
ATOM 2350 CD PRO A 310 -43.035 -27.554 -31.039 1.00 64.10 A
ATOM 2351 CA PRO A 310 -45.196 -27.674 -29.966 1.00 65.02 A
ATOM 2352 CB PRO A 310 -44.160 -28.528 -29.231 1.00 63.73 A
ATOM 2353 CG PRO A 310 -43.146 -28.851 -30.281 1.00 63.64 A
ATOM 2354 C PRO A 310 -45.704 -26.532 -29.080 1.00 65.87 A
ATOM 2355 O PRO A 310 -45.251 -25.386 -29.203 1.00 66.83 A
ATOM 2356 N PRO A 311 -46.668 -26.818 -28.192 1.00 65.74 A
ATOM 2357 CD PRO A 311 -47.631 -27.932 -28.202 1.00 65.24 A
ATOM 2358 CA PRO A 311 -47.144 -25.721 -27.342 1.00 64.84 A
ATOM 2359 CB PRO A 311 -48.366 -26.326 -26.664 1.00 64.51 A
ATOM 2360 CG PRO A 311 -48.894 -27.251 -27.739 1.00 64.93 A
ATOM 2361 C PRO A 311 -46.055 -25.276 -26.353 1.00 64.31 A
ATOM 2362 O PRO A 311 -45.933 -24.089 -26.046 1.00 63.30 A
ATOM 2363 N GLU A 312 -45.258 -26.228 -25.870 1.00 63.75 A
ATOM 2364 CA GLU A 312 -44.174 -25.909 -24.942 1.00 63.85 A
ATOM 2365 CB GLU A 312 -43.320 -27.156 -24.681 1.00 63.97 A
ATOM 2366 CG GLU A 312 -44.058 -28.257 -23.948 1.00 64.38 A
ATOM 2367 CD GLU A 312 -43.664 -29.631 -24.424 1.00 64.65 A
ATOM 2368 OE1 GLU A 312 -43.738 -29.859 -25.651 1.00 64.73 A
ATOM 2369 OE2 GLU A 312 -43.281 -30.482 -23.586 1.00 64.70 A
ATOM 2370 C GLU A 312 -43.281 -24.807 -25.524 1.00 63.69 A
ATOM 2371 O GLU A 312 -42.895 -23.870 -24.829 1.00 63.43 A
ATOM 2372 N PHE A 313 -42.963 -24.943 -26.809 1.00 63.76 A
ATOM 2373 CA PHE A 313 -42.102 -24.010 -27.524 1.00 62.95 A
ATOM 2374 CB PHE A 313 -41.945 -24.435 -28.986 1.00 62.33 A
ATOM 2375 CG PHE A 313 -41.440 -23.322 -29.902 1.00 61.72 A
ATOM 2376 CD1 PHE A 313 -40.075 -23.102 -30.045 1.00 60.62 A
ATOM 2377 CD2 PHE A 313 -42.329 -22.490 -30.610 1.00 61.57 A

ATOM 2378 CE1 PHE A 313 -39.592 -22.089 -30.867 1.00 60.29 A
ATOM 2379 CE2 PHE A 313 -41.846 -21.462 -31.442 1.00 60.90 A
ATOM 2380 CZ PHE A 313 -40.474 -21.269 -31.566 1.00 60.80 A
ATOM 2381 C PHE A 313 -42.709 -22.650 -27.550 1.00 63.19 A
ATOM 2382 O PHE A 313 -42.053 -21.642 -27.371 1.00 63.66 A
ATOM 2383 N TRP A 314 -43.977 -22.643 -27.887 1.00 63.42 A
ATOM 2384 CA TRP A 314 -44.669 -21.397 -27.988 1.00 64.35 A
ATOM 2385 CB TRP A 314 -46.074 -21.650 -28.466 1.00 65.76 A
ATOM 2386 CG TRP A 314 -46.346 -21.200 -29.879 1.00 66.86 A
ATOM 2387 CD2 TRP A 314 -47.322 -20.236 -30.253 1.00 67.19 A
ATOM 2388 CE2 TRP A 314 -47.385 -20.213 -31.669 1.00 67.38 A
ATOM 2389 CE3 TRP A 314 -48.163 -19.388 -29.521 1.00 66.82 A
ATOM 2390 CD1 TRP A 314 -45.834 -21.714 -31.058 1.00 67.31 A
ATOM 2391 NE1 TRP A 314 -46.469 -21.122 -32.140 1.00 67.27 A
ATOM 2392 CZ2 TRP A 314 -48.268 -19.370 -32.361 1.00 67.66 A
ATOM 2393 CZ3 TRP A 314 -49.036 -18.553 -30.203 1.00 66.99 A
ATOM 2394 CH2 TRP A 314 -49.085 -18.550 -31.610 1.00 67.34 A
ATOM 2395 C TRP A 314 -44.690 -20.573 -26.719 1.00 64.38 A
ATOM 2396 O TRP A 314 -44.940 -19.365 -26.746 1.00 64.26 A
ATOM 2397 N ALA A 315 -44.413 -21.207 -25.595 1.00 64.36 A
ATOM 2398 CA ALA A 315 -44.422 -20.447 -24.367 1.00 64.15 A
ATOM 2399 CB ALA A 315 -45.626 -20.825 -23.526 1.00 63.43 A
ATOM 2400 C ALA A 315 -43.118 -20.600 -23.603 1.00 64.17 A
ATOM 2401 O ALA A 315 -42.730 -19.703 -22.882 1.00 64.36 A
ATOM 2402 N GLY A 316 -42.431 -21.722 -23.732 1.00 63.88 A
ATOM 2403 CA GLY A 316 -41.155 -21.779 -23.042 1.00 63.93 A
ATOM 2404 C GLY A 316 -40.219 -21.041 -23.993 1.00 64.03 A
ATOM 2405 O GLY A 316 -39.084 -21.435 -24.156 1.00 62.87 A
ATOM 2406 N SER A 317 -40.710 -19.999 -24.669 1.00 64.29 A
ATOM 2407 CA SER A 317 -39.873 -19.279 -25.657 1.00 64.86 A
ATOM 2408 CB SER A 317 -40.369 -19.584 -27.082 1.00 64.59 A
ATOM 2409 OG SER A 317 -39.773 -20.755 -27.597 1.00 63.06 A
ATOM 2410 C SER A 317 -39.699 -17.754 -25.578 1.00 65.60 A
ATOM 2411 O SER A 317 -40.639 -17.025 -25.249 1.00 65.85 A

ATOM 2412 N MET A 318 -38.509 -17.254 -25.907 1.00 65.97 A
ATOM 2413 CA MET A 318 -38.304 -15.814 -25.859 1.00 66.30 A
ATOM 2414 CB MET A 318 -37.126 -15.466 -24.961 1.00 67.20 A
ATOM 2415 CG MET A 318 -37.055 -13.990 -24.611 1.00 68.80 A
ATOM 2416 SD MET A 318 -35.434 -13.558 -23.971 1.00 71.05 A
ATOM 2417 CE MET A 318 -34.479 -13.605 -25.496 1.00 71.30 A
ATOM 2418 C MET A 318 -38.058 -15.302 -27.263 1.00 66.10 A
ATOM 2419 O MET A 318 -36.969 -15.475 -27.821 1.00 66.87 A
ATOM 2420 N LEU A 319 -39.077 -14.662 -27.825 1.00 65.61 A
ATOM 2421 CA LEU A 319 -38.978 -14.148 -29.173 1.00 65.34 A
ATOM 2422 CB LEU A 319 -40.147 -14.673 -30.008 1.00 63.98 A
ATOM 2423 CG LEU A 319 -40.544 -16.122 -29.703 1.00 62.28 A
ATOM 2424 CD1 LEU A 319 -41.715 -16.493 -30.580 1.00 61.58 A
ATOM 2425 CD2 LEU A 319 -39.382 -17.074 -29.924 1.00 61.30 A
ATOM 2426 C LEU A 319 -38.880 -12.628 -29.290 1.00 65.75 A
ATOM 2427 O LEU A 319 -38.960 -12.106 -30.387 1.00 67.28 A
ATOM 2428 N GLU A 320 -38.713 -11.926 -28.173 1.00 65.39 A
ATOM 2429 CA GLU A 320 -38.547 -10.475 -28.192 1.00 65.21 A
ATOM 2430 CB GLU A 320 -39.893 -9.751 -27.965 1.00 64.61 A
ATOM 2431 CG GLU A 320 -41.075 -10.243 -28.803 1.00 65.93 A
ATOM 2432 CD GLU A 320 -42.239 -9.249 -28.837 1.00 67.48 A
ATOM 2433 OE1 GLU A 320 -43.404 -9.707 -28.858 1.00 68.04 A
ATOM 2434 OE2 GLU A 320 -41.986 -8.022 -28.859 1.00 68.51 A
ATOM 2435 C GLU A 320 -37.568 -10.104 -27.080 1.00 65.11 A
ATOM 2436 O GLU A 320 -37.417 -10.846 -26.102 1.00 65.73 A
ATOM 2437 N ALA A 321 -36.868 -8.977 -27.231 1.00 64.52 A
ATOM 2438 CA ALA A 321 -35.942 -8.539 -26.175 1.00 63.43 A
ATOM 2439 CB ALA A 321 -35.065 -7.359 -26.655 1.00 63.59 A
ATOM 2440 C ALA A 321 -36.920 -8.107 -25.091 1.00 62.68 A
ATOM 2441 O ALA A 321 -37.637 -7.128 -25.261 1.00 62.43 A
ATOM 2442 N PRO A 322 -36.955 -8.859 -23.967 1.00 61.91 A
ATOM 2443 CD PRO A 322 -35.895 -9.817 -23.618 1.00 61.69 A
ATOM 2444 CA PRO A 322 -37.820 -8.630 -22.813 1.00 61.45 A
ATOM 2445 CB PRO A 322 -37.220 -9.519 -21.744 1.00 61.21 A

ATOM 2446 CG PRO A 322 -36.564 -10.608 -22.514 1.00 61.05 A
ATOM 2447 C PRO A 322 -37.955 -7.186 -22.362 1.00 61.68 A
ATOM 2448 O PRO A 322 -37.197 -6.275 -22.732 1.00 61.87 A
ATOM 2449 N ALA A 323 -38.919 -7.002 -21.486 1.00 62.11 A
ATOM 2450 CA ALA A 323 -39.220 -5.669 -21.018 1.00 62.69 A
ATOM 2451 CB ALA A 323 -40.680 -5.406 -21.291 1.00 62.20 A
ATOM 2452 C ALA A 323 -38.878 -5.321 -19.571 1.00 63.10 A
ATOM 2453 O ALA A 323 -38.778 -4.136 -19.216 1.00 63.19 A
ATOM 2454 N ALA A 324 -38.691 -6.356 -18.757 1.00 63.13 A
ATOM 2455 CA ALA A 324 -38.355 -6.235 -17.348 1.00 62.56 A
ATOM 2456 CB ALA A 324 -38.487 -7.606 -16.689 1.00 61.68 A
ATOM 2457 C ALA A 324 -36.933 -5.705 -17.213 1.00 62.44 A
ATOM 2458 O ALA A 324 -36.423 -5.540 -16.103 1.00 62.54 A
ATOM 2459 N GLY A 325 -36.319 -5.456 -18.372 1.00 62.32 A
ATOM 2460 CA GLY A 325 -34.960 -4.925 -18.476 1.00 61.93 A
ATOM 2461 C GLY A 325 -33.816 -5.902 -18.241 1.00 61.67 A
ATOM 2462 O GLY A 325 -32.634 -5.546 -18.157 1.00 61.51 A
ATOM 2463 N ARG A 326 -34.197 -7.155 -18.118 1.00 60.95 A
ATOM 2464 CA ARG A 326 -33.280 -8.237 -17.819 1.00 60.91 A
ATOM 2465 CB ARG A 326 -34.133 -9.464 -17.550 1.00 60.76 A
ATOM 2466 CG ARG A 326 -35.603 -9.106 -17.219 1.00 59.93 A
ATOM 2467 CD ARG A 326 -36.580 -10.017 -17.960 1.00 58.98 A
ATOM 2468 NE ARG A 326 -36.061 -11.380 -18.057 1.00 59.17 A
ATOM 2469 CZ ARG A 326 -36.551 -12.307 -18.874 1.00 59.84 A
ATOM 2470 NH1 ARG A 326 -37.580 -12.016 -19.663 1.00 60.47 A
ATOM 2471 NH2 ARG A 326 -35.995 -13.513 -18.922 1.00 59.22 A
ATOM 2472 C ARG A 326 -32.176 -8.568 -18.850 1.00 61.38 A
ATOM 2473 O ARG A 326 -32.346 -9.412 -19.750 1.00 62.56 A
ATOM 2474 N ALA A 327 -31.012 -7.953 -18.665 1.00 60.81 A
ATOM 2475 CA ALA A 327 -29.856 -8.181 -19.541 1.00 60.57 A
ATOM 2476 CB ALA A 327 -28.566 -7.869 -18.809 1.00 60.13 A
ATOM 2477 C ALA A 327 -29.811 -9.609 -20.072 1.00 60.61 A
ATOM 2478 O ALA A 327 -29.598 -10.586 -19.347 1.00 60.21 A
ATOM 2479 N VAL A 328 -29.990 -9.724 -21.371 1.00 60.02 A

ATOM 2480 CA VAL A 328 -29.989 -11.035 -21.958 1.00 59.38 A
ATOM 2481 CB VAL A 328 -31.452 -11.407 -22.354 1.00 59.17 A
ATOM 2482 CG1 VAL A 328 -32.265 -10.132 -22.580 1.00 58.46 A
ATOM 2483 CG2 VAL A 328 -31.471 -12.239 -23.618 1.00 58.92 A
ATOM 2484 C VAL A 328 -29.031 -11.162 -23.131 1.00 58.86 A
ATOM 2485 O VAL A 328 -28.559 -10.177 -23.698 1.00 59.98 A
ATOM 2486 N VAL A 329 -28.741 -12.408 -23.460 1.00 57.56 A
ATOM 2487 CA VAL A 329 -27.877 -12.752 -24.564 1.00 56.70 A
ATOM 2488 CB VAL A 329 -27.392 -14.158 -24.373 1.00 56.52 A
ATOM 2489 CG1 VAL A 329 -26.719 -14.653 -25.614 1.00 56.17 A
ATOM 2490 CG2 VAL A 329 -26.472 -14.194 -23.197 1.00 56.87 A
ATOM 2491 C VAL A 329 -28.753 -12.670 -25.789 1.00 56.40 A
ATOM 2492 O VAL A 329 -29.367 -13.645 -26.198 1.00 56.24 A
ATOM 2493 N CYS A 330 -28.817 -11.474 -26.349 1.00 55.16 A
ATOM 2494 CA CYS A 330 -29.681 -11.210 -27.477 1.00 54.04 A
ATOM 2495 C CYS A 330 -29.545 -12.039 -28.746 1.00 54.64 A
ATOM 2496 O CYS A 330 -30.462 -12.046 -29.578 1.00 55.49 A
ATOM 2497 CB CYS A 330 -29.626 -9.735 -27.814 1.00 53.81 A
ATOM 2498 SG CYS A 330 -31.019 -8.841 -27.067 1.00 54.73 A
ATOM 2499 N HIS A 331 -28.439 -12.761 -28.885 1.00 53.95 A
ATOM 2500 CA HIS A 331 -28.199 -13.591 -30.055 1.00 52.78 A
ATOM 2501 CB HIS A 331 -26.972 -14.446 -29.808 1.00 52.24 A
ATOM 2502 CG HIS A 331 -26.136 -14.643 -31.025 1.00 52.77 A
ATOM 2503 CD2 HIS A 331 -25.227 -15.594 -31.329 1.00 52.45 A
ATOM 2504 ND1 HIS A 331 -26.074 -13.717 -32.043 1.00 53.04 A
ATOM 2505 CE1 HIS A 331 -25.146 -14.081 -32.911 1.00 51.94 A
ATOM 2506 NE2 HIS A 331 -24.615 -15.216 -32.498 1.00 52.65 A
ATOM 2507 C HIS A 331 -29.383 -14.494 -30.339 1.00 52.07 A
ATOM 2508 O HIS A 331 -30.188 -14.752 -29.455 1.00 52.14 A
ATOM 2509 N ALA A 332 -29.489 -14.968 -31.572 1.00 51.11 A
ATOM 2510 CA ALA A 332 -30.564 -15.876 -31.924 1.00 50.02 A
ATOM 2511 CB ALA A 332 -30.987 -15.662 -33.358 1.00 51.10 A
ATOM 2512 C ALA A 332 -29.971 -17.256 -31.759 1.00 49.75 A
ATOM 2513 O ALA A 332 -28.854 -17.487 -32.198 1.00 49.73 A

ATOM 2514 N SER A 333 -30.697 -18.157 -31.103 1.00 49.26 A
ATOM 2515 CA SER A 333 -30.221 -19.532 -30.907 1.00 49.40 A
ATOM 2516 CB SER A 333 -29.247 -19.622 -29.722 1.00 49.55 A
ATOM 2517 OG SER A 333 -29.827 -19.080 -28.547 1.00 49.70 A
ATOM 2518 C SER A 333 -31.409 -20.461 -30.676 1.00 49.30 A
ATOM 2519 O SER A 333 -32.515 -20.001 -30.374 1.00 49.35 A
ATOM 2520 N ALA A 334 -31.178 -21.763 -30.830 1.00 48.89 A
ATOM 2521 CA ALA A 334 -32.229 -22.761 -30.646 1.00 48.44 A
ATOM 2522 CB ALA A 334 -32.496 -23.480 -31.950 1.00 49.71 A
ATOM 2523 C ALA A 334 -31.826 -23.759 -29.570 1.00 48.53 A
ATOM 2524 O ALA A 334 -30.696 -24.264 -29.556 1.00 46.89 A
ATOM 2525 N TRP A 335 -32.773 -24.067 -28.690 1.00 49.09 A
ATOM 2526 CA TRP A 335 -32.504 -24.957 -27.571 1.00 50.20 A
ATOM 2527 CB TRP A 335 -32.837 -24.224 -26.274 1.00 51.73 A
ATOM 2528 CG TRP A 335 -32.109 -22.925 -26.133 1.00 53.89 A
ATOM 2529 CD2 TRP A 335 -31.176 -22.573 -25.109 1.00 54.86 A
ATOM 2530 CE2 TRP A 335 -30.713 -21.271 -25.396 1.00 55.65 A
ATOM 2531 CE3 TRP A 335 -30.682 -23.231 -23.979 1.00 55.19 A
ATOM 2532 CD1 TRP A 335 -32.178 -21.848 -26.976 1.00 54.87 A
ATOM 2533 NE1 TRP A 335 -31.340 -20.851 -26.540 1.00 55.45 A
ATOM 2534 CZ2 TRP A 335 -29.780 -20.618 -24.590 1.00 55.68 A
ATOM 2535 CZ3 TRP A 335 -29.754 -22.578 -23.182 1.00 55.49 A
ATOM 2536 CH2 TRP A 335 -29.314 -21.287 -23.492 1.00 54.87 A
ATOM 2537 C TRP A 335 -33.179 -26.319 -27.556 1.00 49.89 A
ATOM 2538 O TRP A 335 -34.389 -26.436 -27.739 1.00 48.99 A
ATOM 2539 N ASP A 336 -32.371 -27.343 -27.308 1.00 49.85 A
ATOM 2540 CA ASP A 336 -32.838 -28.717 -27.219 1.00 51.07 A
ATOM 2541 CB ASP A 336 -32.044 -29.591 -28.194 1.00 50.80 A
ATOM 2542 CG ASP A 336 -32.565 -31.011 -28.274 1.00 50.56 A
ATOM 2543 OD1 ASP A 336 -33.771 -31.217 -28.006 1.00 50.32 A
ATOM 2544 OD2 ASP A 336 -31.768 -31.910 -28.628 1.00 50.44 A
ATOM 2545 C ASP A 336 -32.592 -29.153 -25.763 1.00 52.72 A
ATOM 2546 O ASP A 336 -31.440 -29.325 -25.339 1.00 52.58 A
ATOM 2547 N PHE A 337 -33.676 -29.317 -25.004 1.00 53.17 A

ATOM 2548 CA PHE A 337 -33.584 -29.707 -23.602 1.00 53.65 A
ATOM 2549 CB PHE A 337 -34.814 -29.220 -22.835 1.00 53.27 A
ATOM 2550 CG PHE A 337 -34.818 -27.744 -22.553 1.00 53.41 A
ATOM 2551 CD1 PHE A 337 -35.135 -26.827 -23.551 1.00 53.47 A
ATOM 2552 CD2 PHE A 337 -34.549 -27.272 -21.272 1.00 52.98 A
ATOM 2553 CE1 PHE A 337 -35.194 -25.457 -23.273 1.00 52.75 A
ATOM 2554 CE2 PHE A 337 -34.605 -25.912 -20.988 1.00 52.76 A
ATOM 2555 CZ PHE A 337 -34.931 -25.002 -21.993 1.00 52.79 A
ATOM 2556 C PHE A 337 -33.409 -31.207 -23.345 1.00 53.76 A
ATOM 2557 O PHE A 337 -33.431 -31.649 -22.199 1.00 54.03 A
ATOM 2558 N TYR A 338 -33.260 -31.990 -24.404 1.00 53.59 A
ATOM 2559 CA TYR A 338 -33.078 -33.430 -24.263 1.00 53.90 A
ATOM 2560 CB TYR A 338 -31.713 -33.704 -23.690 1.00 53.85 A
ATOM 2561 CG TYR A 338 -30.641 -33.395 -24.665 1.00 54.48 A
ATOM 2562 CD1 TYR A 338 -30.453 -32.090 -25.132 1.00 53.97 A
ATOM 2563 CE1 TYR A 338 -29.432 -31.798 -26.017 1.00 54.76 A
ATOM 2564 CD2 TYR A 338 -29.791 -34.402 -25.110 1.00 54.33 A
ATOM 2565 CE2 TYR A 338 -28.769 -34.133 -25.983 1.00 54.46 A
ATOM 2566 CZ TYR A 338 -28.582 -32.838 -26.438 1.00 54.89 A
ATOM 2567 OH TYR A 338 -27.520 -32.631 -27.294 1.00 55.05 A
ATOM 2568 C TYR A 338 -34.102 -34.167 -23.421 1.00 53.93 A
ATOM 2569 O TYR A 338 -33.783 -35.128 -22.718 1.00 54.37 A
ATOM 2570 N ASN A 339 -35.336 -33.699 -23.478 1.00 53.96 A
ATOM 2571 CA ASN A 339 -36.410 -34.322 -22.723 1.00 54.10 A
ATOM 2572 CB ASN A 339 -36.820 -33.405 -21.571 1.00 53.08 A
ATOM 2573 CG ASN A 339 -37.656 -32.231 -22.039 1.00 52.55 A
ATOM 2574 OD1 ASN A 339 -37.626 -31.864 -23.216 1.00 52.15 A
ATOM 2575 ND2 ASN A 339 -38.402 -31.630 -21.118 1.00 51.16 A
ATOM 2576 C ASN A 339 -37.610 -34.591 -23.654 1.00 54.50 A
ATOM 2577 O ASN A 339 -38.735 -34.810 -23.203 1.00 54.64 A
ATOM 2578 N ALA A 340 -37.355 -34.558 -24.961 1.00 54.05 A
ATOM 2579 CA ALA A 340 -38.382 -34.822 -25.973 1.00 53.75 A
ATOM 2580 CB ALA A 340 -38.758 -36.301 -25.947 1.00 51.59 A
ATOM 2581 C ALA A 340 -39.643 -33.986 -25.778 1.00 54.24 A

ATOM 2582 O ALA A 340 -40.652 -34.220 -26.447 1.00 54.79 A
ATOM 2583 N ALA A 341 -39.591 -33.000 -24.893 1.00 54.43 A
ATOM 2584 CA ALA A 341 -40.789 -32.226 -24.633 1.00 55.41 A
ATOM 2585 CB ALA A 341 -41.382 -32.679 -23.298 1.00 55.58 A
ATOM 2586 C ALA A 341 -40.568 -30.711 -24.633 1.00 56.16 A
ATOM 2587 O ALA A 341 -41.479 -29.936 -24.929 1.00 57.20 A
ATOM 2588 N ASP A 342 -39.353 -30.280 -24.302 1.00 55.55 A
ATOM 2589 CA ASP A 342 -39.049 -28.849 -24.251 1.00 55.06 A
ATOM 2590 CB ASP A 342 -38.468 -28.481 -22.877 1.00 57.77 A
ATOM 2591 CG ASP A 342 -39.481 -27.809 -21.959 1.00 59.63 A
ATOM 2592 OD1 ASP A 342 -40.589 -28.354 -21.793 1.00 60.49 A
ATOM 2593 OD2 ASP A 342 -39.157 -26.739 -21.394 1.00 60.48 A
ATOM 2594 C ASP A 342 -38.064 -28.471 -25.340 1.00 52.91 A
ATOM 2595 O ASP A 342 -36.931 -28.952 -25.350 1.00 51.85 A
ATOM 2596 N PHE A 343 -38.521 -27.621 -26.259 1.00 50.64 A
ATOM 2597 CA PHE A 343 -37.706 -27.135 -27.368 1.00 47.60 A
ATOM 2598 CB PHE A 343 -38.053 -27.854 -28.685 1.00 45.62 A
ATOM 2599 CG PHE A 343 -38.140 -29.355 -28.579 1.00 42.99 A
ATOM 2600 CD1 PHE A 343 -39.370 -29.979 -28.354 1.00 42.00 A
ATOM 2601 CD2 PHE A 343 -37.000 -30.144 -28.725 1.00 41.74 A
ATOM 2602 CE1 PHE A 343 -39.466 -31.369 -28.278 1.00 42.05 A
ATOM 2603 CE2 PHE A 343 -37.080 -31.542 -28.652 1.00 41.91 A
ATOM 2604 CZ PHE A 343 -38.318 -32.156 -28.427 1.00 41.69 A
ATOM 2605 C PHE A 343 -38.065 -25.660 -27.494 1.00 46.95 A
ATOM 2606 O PHE A 343 -39.238 -25.322 -27.703 1.00 46.15 A
ATOM 2607 N ALA A 344 -37.077 -24.782 -27.358 1.00 46.63 A
ATOM 2608 CA ALA A 344 -37.356 -23.355 -27.450 1.00 46.82 A
ATOM 2609 CB ALA A 344 -37.538 -22.781 -26.061 1.00 46.81 A
ATOM 2610 C ALA A 344 -36.320 -22.534 -28.222 1.00 47.03 A
ATOM 2611 O ALA A 344 -35.200 -22.993 -28.506 1.00 46.36 A
ATOM 2612 N ILE A 345 -36.715 -21.313 -28.557 1.00 46.64 A
ATOM 2613 CA ILE A 345 -35.873 -20.403 -29.298 1.00 47.95 A
ATOM 2614 CB ILE A 345 -36.461 -20.097 -30.690 1.00 48.62 A
ATOM 2615 CG2 ILE A 345 -35.842 -18.824 -31.256 1.00 49.50 A

ATOM 2616 CG1 ILE A 345 -36.203 -21.289 -31.620 1.00 48.24 A
ATOM 2617 CD1 ILE A 345 -36.677 -21.071 -33.036 1.00 48.75 A
ATOM 2618 C ILE A 345 -35.699 -19.123 -28.520 1.00 48.75 A
ATOM 2619 O ILE A 345 -36.633 -18.594 -27.916 1.00 49.10 A
ATOM 2620 N LYS A 346 -34.482 -18.611 -28.571 1.00 49.39 A
ATOM 2621 CA LYS A 346 -34.137 -17.417 -27.835 1.00 49.28 A
ATOM 2622 CB LYS A 346 -33.074 -17.786 -26.856 1.00 48.73 A
ATOM 2623 CG LYS A 346 -32.918 -16.811 -25.800 1.00 48.66 A
ATOM 2624 CD LYS A 346 -31.559 -16.997 -25.301 1.00 48.38 A
ATOM 2625 CE LYS A 346 -30.722 -15.894 -25.831 1.00 47.65 A
ATOM 2626 NZ LYS A 346 -29.412 -16.447 -26.201 1.00 48.75 A
ATOM 2627 C LYS A 346 -33.607 -16.399 -28.802 1.00 49.14 A
ATOM 2628 O LYS A 346 -32.601 -16.634 -29.458 1.00 49.20 A
ATOM 2629 N GLN A 347 -34.237 -15.243 -28.856 1.00 49.02 A
ATOM 2630 CA GLN A 347 -33.788 -14.312 -29.844 1.00 50.39 A
ATOM 2631 CB GLN A 347 -34.039 -15.006 -31.171 1.00 51.39 A
ATOM 2632 CG GLN A 347 -33.526 -14.379 -32.390 1.00 51.93 A
ATOM 2633 CD GLN A 347 -34.381 -14.773 -33.582 1.00 52.28 A
ATOM 2634 OE1 GLN A 347 -34.517 -15.960 -33.918 1.00 52.46 A
ATOM 2635 NE2 GLN A 347 -34.979 -13.769 -34.225 1.00 52.47 A
ATOM 2636 C GLN A 347 -34.488 -13.002 -29.538 1.00 50.69 A
ATOM 2637 O GLN A 347 -35.636 -12.996 -29.070 1.00 50.29 A
ATOM 2638 N CYS A 348 -33.787 -11.900 -29.818 1.00 51.09 A
ATOM 2639 CA CYS A 348 -34.293 -10.546 -29.546 1.00 52.49 A
ATOM 2640 C CYS A 348 -34.809 -10.006 -30.874 1.00 53.29 A
ATOM 2641 O CYS A 348 -34.196 -9.097 -31.492 1.00 53.80 A
ATOM 2642 CB CYS A 348 -33.232 -9.614 -28.978 1.00 53.27 A
ATOM 2643 SG CYS A 348 -32.624 -10.067 -27.324 1.00 51.81 A
ATOM 2644 N THR A 349 -35.936 -10.547 -31.324 1.00 53.21 A
ATOM 2645 CA THR A 349 -36.490 -10.194 -32.627 1.00 52.62 A
ATOM 2646 CB THR A 349 -37.836 -10.908 -32.852 1.00 52.36 A
ATOM 2647 OG1 THR A 349 -37.680 -12.313 -32.620 1.00 51.47 A
ATOM 2648 CG2 THR A 349 -38.238 -10.838 -34.318 1.00 52.31 A
ATOM 2649 C THR A 349 -37.272 -8.940 -33.006 1.00 52.87 A

ATOM 2650 O THR A 349 -38.244 -8.579 -32.342 1.00 52.22 A
ATOM 2651 N ARG A 350 -36.842 -8.280 -34.076 1.00 53.88 A
ATOM 2652 CA ARG A 350 -37.221 -6.894 -34.327 1.00 55.07 A
ATOM 2653 CB ARG A 350 -38.392 -6.064 -33.796 1.00 55.45 A
ATOM 2654 CG ARG A 350 -38.663 -4.795 -34.590 1.00 56.32 A
ATOM 2655 CD ARG A 350 -39.699 -3.877 -33.962 1.00 58.94 A
ATOM 2656 NE ARG A 350 -39.632 -2.524 -34.506 1.00 61.93 A
ATOM 2657 CZ ARG A 350 -40.644 -1.667 -34.503 1.00 63.89 A
ATOM 2658 NH1 ARG A 350 -41.812 -2.020 -33.983 1.00 63.58 A
ATOM 2659 NH2 ARG A 350 -40.493 -0.456 -35.019 1.00 64.58 A
ATOM 2660 C ARG A 350 -37.170 -6.876 -35.852 1.00 55.60 A
ATOM 2661 O ARG A 350 -36.339 -6.188 -36.446 1.00 58.50 A
ATOM 2662 N VAL A 351 -38.063 -7.635 -36.480 1.00 53.68 A
ATOM 2663 CA VAL A 351 -38.965 -7.086 -37.487 1.00 52.44 A
ATOM 2664 CB VAL A 351 -39.807 -5.934 -36.907 1.00 51.86 A
ATOM 2665 CG1 VAL A 351 -40.691 -5.326 -37.985 1.00 51.14 A
ATOM 2666 CG2 VAL A 351 -40.644 -6.423 -35.735 1.00 52.78 A
ATOM 2667 C VAL A 351 -38.243 -6.595 -38.738 1.00 51.90 A
ATOM 2668 O VAL A 351 -38.610 -5.572 -39.317 1.00 50.46 A
ATOM 2669 N THR A 352 -37.216 -7.331 -39.151 1.00 51.27 A
ATOM 2670 CA THR A 352 -36.530 -7.056 -40.409 1.00 50.18 A
ATOM 2671 CB THR A 352 -35.087 -6.591 -40.142 1.00 50.52 A
ATOM 2672 OG1 THR A 352 -35.103 -5.286 -39.551 1.00 50.64 A
ATOM 2673 CG2 THR A 352 -34.345 -6.375 -41.451 1.00 51.46 A
ATOM 2674 C THR A 352 -36.524 -8.292 -41.303 1.00 49.35 A
ATOM 2675 O THR A 352 -36.655 -9.416 -40.821 1.00 49.71 A
ATOM 2676 N ALA A 353 -36.372 -8.079 -42.607 1.00 49.95 A
ATOM 2677 CA ALA A 353 -36.272 -9.188 -43.545 1.00 49.33 A
ATOM 2678 CB ALA A 353 -36.112 -8.672 -44.971 1.00 50.10 A
ATOM 2679 C ALA A 353 -35.097 -10.085 -43.168 1.00 48.85 A
ATOM 2680 O ALA A 353 -35.259 -11.294 -43.004 1.00 48.70 A
ATOM 2681 N ASP A 354 -34.041 -9.434 -42.867 1.00 49.55 A
ATOM 2682 CA ASP A 354 -32.853 -10.052 -42.539 1.00 51.24 A
ATOM 2683 CB ASP A 354 -32.028 -8.876 -42.242 1.00 51.45 A

ATOM 2684 CG ASP A 354 -32.373 -7.779 -43.154 1.00 55.11 A
ATOM 2685 OD1 ASP A 354 -31.611 -7.524 -44.096 1.00 54.81 A
ATOM 2686 OD2 ASP A 354 -33.430 -7.180 -43.098 1.00 52.60 A
ATOM 2687 C ASP A 354 -33.044 -10.945 -41.406 1.00 50.22 A
ATOM 2688 O ASP A 354 -32.387 -11.930 -41.259 1.00 46.16 A
ATOM 2689 N GLN A 355 -33.923 -10.526 -40.527 1.00 50.78 A
ATOM 2690 CA GLN A 355 -34.264 -11.339 -39.392 1.00 50.64 A
ATOM 2691 CB GLN A 355 -34.444 -10.543 -38.147 1.00 51.36 A
ATOM 2692 CG GLN A 355 -33.722 -11.244 -36.999 1.00 51.64 A
ATOM 2693 CD GLN A 355 -33.468 -10.398 -35.831 1.00 49.18 A
ATOM 2694 OE1 GLN A 355 -32.433 -10.532 -35.192 1.00 46.95 A
ATOM 2695 NE2 GLN A 355 -34.411 -9.519 -35.527 1.00 44.92 A
ATOM 2696 C GLN A 355 -35.383 -12.320 -39.601 1.00 50.72 A
ATOM 2697 O GLN A 355 -35.445 -13.319 -38.927 1.00 47.38 A
ATOM 2698 N LEU A 356 -36.200 -12.092 -40.619 1.00 47.61 A
ATOM 2699 CA LEU A 356 -37.235 -13.040 -40.898 1.00 46.73 A
ATOM 2700 CB LEU A 356 -38.287 -12.443 -41.854 1.00 45.40 A
ATOM 2701 CG LEU A 356 -39.470 -13.429 -42.014 1.00 44.28 A
ATOM 2702 CD1 LEU A 356 -39.509 -14.422 -40.865 1.00 43.66 A
ATOM 2703 CD2 LEU A 356 -40.784 -12.720 -41.998 1.00 43.08 A
ATOM 2704 C LEU A 356 -36.636 -14.348 -41.437 1.00 47.55 A
ATOM 2705 O LEU A 356 -37.263 -15.408 -41.388 1.00 47.69 A
ATOM 2706 N ALA A 357 -35.413 -14.292 -41.947 1.00 44.89 A
ATOM 2707 CA ALA A 357 -34.796 -15.524 -42.452 1.00 44.83 A
ATOM 2708 CB ALA A 357 -33.843 -15.231 -43.640 1.00 44.43 A
ATOM 2709 C ALA A 357 -34.046 -16.201 -41.313 1.00 43.56 A
ATOM 2710 O ALA A 357 -33.866 -17.427 -41.288 1.00 42.59 A
ATOM 2711 N THR A 358 -33.610 -15.385 -40.359 1.00 43.36 A
ATOM 2712 CA THR A 358 -32.910 -15.907 -39.189 1.00 41.64 A
ATOM 2713 CB THR A 358 -32.345 -14.784 -38.294 1.00 41.49 A
ATOM 2714 OG1 THR A 358 -31.178 -14.223 -38.903 1.00 42.09 A
ATOM 2715 CG2 THR A 358 -31.956 -15.337 -36.939 1.00 43.50 A
ATOM 2716 C THR A 358 -33.927 -16.710 -38.391 1.00 38.97 A
ATOM 2717 O THR A 358 -33.596 -17.707 -37.758 1.00 37.61 A

ATOM 2718 N VAL A 359 -35.174 -16.263 -38.432 1.00 37.85 A
ATOM 2719 CA VAL A 359 -36.233 -16.968 -37.741 1.00 36.72 A
ATOM 2720 CB VAL A 359 -37.565 -16.201 -37.831 1.00 36.73 A
ATOM 2721 CG1 VAL A 359 -38.706 -17.079 -37.325 1.00 35.48 A
ATOM 2722 CG2 VAL A 359 -37.473 -14.909 -37.016 1.00 36.05 A
ATOM 2723 C VAL A 359 -36.382 -18.341 -38.383 1.00 37.49 A
ATOM 2724 O VAL A 359 -36.498 -19.348 -37.673 1.00 37.78 A
ATOM 2725 N HIS A 360 -36.372 -18.384 -39.720 1.00 36.64 A
ATOM 2726 CA HIS A 360 -36.481 -19.656 -40.428 1.00 35.57 A
ATOM 2727 CB HIS A 360 -36.529 -19.452 -41.949 1.00 34.70 A
ATOM 2728 CG HIS A 360 -37.831 -18.908 -42.447 1.00 33.84 A
ATOM 2729 CD2 HIS A 360 -38.855 -19.506 -43.099 1.00 33.50 A
ATOM 2730 ND1 HIS A 360 -38.205 -17.593 -42.267 1.00 33.16 A
ATOM 2731 CE1 HIS A 360 -39.404 -17.402 -42.789 1.00 33.79 A
ATOM 2732 NE2 HIS A 360 -39.822 -18.548 -43.300 1.00 34.67 A
ATOM 2733 C HIS A 360 -35.272 -20.510 -40.066 1.00 35.21 A
ATOM 2734 O HIS A 360 -35.394 -21.697 -39.761 1.00 34.44 A
ATOM 2735 N HIS A 361 -34.103 -19.884 -40.091 1.00 35.76 A
ATOM 2736 CA HIS A 361 -32.856 -20.565 -39.770 1.00 36.76 A
ATOM 2737 CB HIS A 361 -31.716 -19.557 -39.657 1.00 35.81 A
ATOM 2738 CG HIS A 361 -30.458 -20.134 -39.084 1.00 35.15 A
ATOM 2739 CD2 HIS A 361 -29.926 -20.048 -37.844 1.00 33.67 A
ATOM 2740 ND1 HIS A 361 -29.600 -20.934 -39.812 1.00 36.20 A
ATOM 2741 CE1 HIS A 361 -28.593 -21.313 -39.044 1.00 34.17 A
ATOM 2742 NE2 HIS A 361 -28.768 -20.789 -37.845 1.00 32.95 A
ATOM 2743 C HIS A 361 -32.963 -21.306 -38.457 1.00 37.04 A
ATOM 2744 O HIS A 361 -32.581 -22.479 -38.358 1.00 36.98 A
ATOM 2745 N GLU A 362 -33.470 -20.594 -37.452 1.00 37.61 A
ATOM 2746 CA GLU A 362 -33.633 -21.139 -36.109 1.00 38.09 A
ATOM 2747 CB GLU A 362 -33.992 -20.024 -35.116 1.00 37.70 A
ATOM 2748 CG GLU A 362 -32.895 -18.953 -34.907 1.00 36.48 A
ATOM 2749 CD GLU A 362 -31.544 -19.540 -34.553 1.00 36.69 A
ATOM 2750 OE1 GLU A 362 -31.507 -20.596 -33.886 1.00 39.13 A
ATOM 2751 OE2 GLU A 362 -30.520 -18.937 -34.930 1.00 35.47 A

ATOM 2752 C GLU A 362 -34.683 -22.243 -36.084 1.00 39.02 A
ATOM 2753 O GLU A 362 -34.439 -23.319 -35.514 1.00 38.92 A
ATOM 2754 N MET A 363 -35.838 -21.995 -36.705 1.00 39.33 A
ATOM 2755 CA MET A 363 -36.885 -23.020 -36.761 1.00 39.83 A
ATOM 2756 CB MET A 363 -38.053 -22.586 -37.630 1.00 41.06 A
ATOM 2757 CG MET A 363 -39.005 -21.623 -36.965 1.00 43.15 A
ATOM 2758 SD MET A 363 -40.724 -22.185 -37.127 1.00 45.53 A
ATOM 2759 CE MET A 363 -41.545 -20.938 -36.122 1.00 44.03 A
ATOM 2760 C MET A 363 -36.315 -24.287 -37.354 1.00 39.32 A
ATOM 2761 O MET A 363 -36.777 -25.379 -37.066 1.00 40.37 A
ATOM 2762 N GLY A 364 -35.313 -24.131 -38.202 1.00 39.06 A
ATOM 2763 CA GLY A 364 -34.701 -25.281 -38.823 1.00 39.71 A
ATOM 2764 C GLY A 364 -34.056 -26.166 -37.790 1.00 40.19 A
ATOM 2765 O GLY A 364 -34.027 -27.393 -37.943 1.00 40.77 A
ATOM 2766 N HIS A 365 -33.533 -25.548 -36.733 1.00 40.39 A
ATOM 2767 CA HIS A 365 -32.878 -26.302 -35.657 1.00 40.52 A
ATOM 2768 CB HIS A 365 -32.080 -25.360 -34.759 1.00 38.69 A
ATOM 2769 CG HIS A 365 -30.808 -24.872 -35.373 1.00 36.64 A
ATOM 2770 CD2 HIS A 365 -30.355 -23.616 -35.612 1.00 35.39 A
ATOM 2771 ND1 HIS A 365 -29.807 -25.727 -35.785 1.00 36.12 A
ATOM 2772 CE1 HIS A 365 -28.791 -25.019 -36.248 1.00 35.70 A
ATOM 2773 NE2 HIS A 365 -29.098 -23.736 -36.154 1.00 35.39 A
ATOM 2774 C HIS A 365 -33.938 -27.023 -34.834 1.00 41.33 A
ATOM 2775 O HIS A 365 -33.819 -28.218 -34.533 1.00 39.61 A
ATOM 2776 N ILE A 366 -34.982 -26.274 -34.487 1.00 42.54 A
ATOM 2777 CA ILE A 366 -36.099 -26.798 -33.720 1.00 44.33 A
ATOM 2778 CB ILE A 366 -37.179 -25.711 -33.536 1.00 44.00 A
ATOM 2779 CG2 ILE A 366 -38.352 -26.260 -32.762 1.00 44.43 A
ATOM 2780 CG1 ILE A 366 -36.566 -24.506 -32.830 1.00 45.26 A
ATOM 2781 CD1 ILE A 366 -35.706 -24.883 -31.634 1.00 46.64 A
ATOM 2782 C ILE A 366 -36.715 -28.004 -34.424 1.00 45.53 A
ATOM 2783 O ILE A 366 -36.952 -29.041 -33.797 1.00 45.64 A
ATOM 2784 N GLN A 367 -36.961 -27.859 -35.728 1.00 46.57 A
ATOM 2785 CA GLN A 367 -37.554 -28.918 -36.533 1.00 47.02 A

ATOM 2786 CB GLN A 367 -37.833 -28.434 -37.954 1.00 47.64 A
ATOM 2787 CG GLN A 367 -38.560 -29.479 -38.792 1.00 49.36 A
ATOM 2788 CD GLN A 367 -40.026 -29.613 -38.413 1.00 49.00 A
ATOM 2789 OE1 GLN A 367 -40.643 -30.666 -38.604 1.00 49.43 A
ATOM 2790 NE2 GLN A 367 -40.595 -28.536 -37.886 1.00 48.52 A
ATOM 2791 C GLN A 367 -36.656 -30.140 -36.599 1.00 46.97 A
ATOM 2792 O GLN A 367 -37.134 -31.255 -36.764 1.00 46.51 A
ATOM 2793 N TYR A 368 -35.353 -29.928 -36.480 1.00 47.60 A
ATOM 2794 CA TYR A 368 -34.421 -31.037 -36.532 1.00 49.41 A
ATOM 2795 CB TYR A 368 -33.002 -30.507 -36.746 1.00 49.31 A
ATOM 2796 CG TYR A 368 -32.075 -31.460 -37.473 1.00 50.12 A
ATOM 2797 CD1 TYR A 368 -30.955 -30.986 -38.149 1.00 50.34 A
ATOM 2798 CE1 TYR A 368 -30.083 -31.853 -38.813 1.00 51.08 A
ATOM 2799 CD2 TYR A 368 -32.305 -32.835 -37.476 1.00 51.00 A
ATOM 2800 CE2 TYR A 368 -31.436 -33.715 -38.139 1.00 51.70 A
ATOM 2801 CZ TYR A 368 -30.325 -33.217 -38.805 1.00 51.66 A
ATOM 2802 OH TYR A 368 -29.450 -34.083 -39.441 1.00 51.66 A
ATOM 2803 C TYR A 368 -34.547 -31.772 -35.201 1.00 51.19 A
ATOM 2804 O TYR A 368 -34.488 -33.010 -35.137 1.00 52.72 A
ATOM 2805 N TYR A 369 -34.740 -30.997 -34.136 1.00 52.21 A
ATOM 2806 CA TYR A 369 -34.899 -31.558 -32.793 1.00 53.24 A
ATOM 2807 CB TYR A 369 -35.044 -30.436 -31.758 1.00 52.94 A
ATOM 2808 CG TYR A 369 -33.840 -29.542 -31.642 1.00 52.22 A
ATOM 2809 CD1 TYR A 369 -33.996 -28.176 -31.424 1.00 51.70 A
ATOM 2810 CE1 TYR A 369 -32.900 -27.337 -31.341 1.00 52.85 A
ATOM 2811 CD2 TYR A 369 -32.546 -30.057 -31.768 1.00 52.36 A
ATOM 2812 CE2 TYR A 369 -31.435 -29.229 -31.685 1.00 52.94 A
ATOM 2813 CZ TYR A 369 -31.618 -27.866 -31.475 1.00 53.65 A
ATOM 2814 OH TYR A 369 -30.526 -27.024 -31.418 1.00 55.42 A
ATOM 2815 C TYR A 369 -36.159 -32.414 -32.764 1.00 53.41 A
ATOM 2816 O TYR A 369 -36.113 -33.621 -32.475 1.00 53.08 A
ATOM 2817 N LEU A 370 -37.284 -31.767 -33.064 1.00 52.00 A
ATOM 2818 CA LEU A 370 -38.573 -32.434 -33.090 1.00 49.93 A
ATOM 2819 CB LEU A 370 -39.617 -31.526 -33.733 1.00 48.29 A

ATOM 2820 CG LEU A 370 -39.807 -30.138 -33.130 1.00 47.36 A
ATOM 2821 CD1 LEU A 370 -40.730 -29.324 -34.017 1.00 45.59 A
ATOM 2822 CD2 LEU A 370 -40.383 -30.254 -31.737 1.00 46.95 A
ATOM 2823 C LEU A 370 -38.515 -33.747 -33.872 1.00 50.69 A
ATOM 2824 O LEU A 370 -39.155 -34.727 -33.500 1.00 54.36 A
ATOM 2825 N GLN A 371 -37.737 -33.774 -34.947 1.00 50.60 A
ATOM 2826 CA GLN A 371 -37.661 -34.966 -35.777 1.00 49.99 A
ATOM 2827 CB GLN A 371 -37.157 -34.615 -37.187 1.00 48.83 A
ATOM 2828 CG GLN A 371 -38.091 -33.720 -38.019 1.00 46.57 A
ATOM 2829 CD GLN A 371 -39.483 -34.298 -38.170 1.00 44.88 A
ATOM 2830 OE1 GLN A 371 -39.653 -35.516 -38.262 1.00 43.43 A
ATOM 2831 NE2 GLN A 371 -40.487 -33.424 -38.214 1.00 42.86 A
ATOM 2832 C GLN A 371 -36.821 -36.112 -35.236 1.00 50.17 A
ATOM 2833 O GLN A 371 -37.164 -37.272 -35.447 1.00 49.15 A
ATOM 2834 N TYR A 372 -35.745 -35.823 -34.491 1.00 48.86 A
ATOM 2835 CA TYR A 372 -34.899 -36.933 -34.073 1.00 49.15 A
ATOM 2836 CB TYR A 372 -33.436 -36.655 -34.420 1.00 50.57 A
ATOM 2837 CG TYR A 372 -32.936 -35.311 -33.939 1.00 51.69 A
ATOM 2838 CD1 TYR A 372 -31.597 -34.962 -34.063 1.00 53.10 A
ATOM 2839 CE1 TYR A 372 -31.136 -33.735 -33.624 1.00 53.80 A
ATOM 2840 CD2 TYR A 372 -33.803 -34.393 -33.362 1.00 50.23 A
ATOM 2841 CE2 TYR A 372 -33.350 -33.164 -32.919 1.00 50.67 A
ATOM 2842 CZ TYR A 372 -32.017 -32.840 -33.054 1.00 53.11 A
ATOM 2843 OH TYR A 372 -31.560 -31.619 -32.615 1.00 58.49 A
ATOM 2844 C TYR A 372 -35.041 -37.201 -32.578 1.00 48.22 A
ATOM 2845 O TYR A 372 -34.267 -38.089 -32.059 1.00 46.80 A
ATOM 2846 N LYS A 373 -35.928 -36.560 -31.894 1.00 48.37 A
ATOM 2847 CA LYS A 373 -36.037 -36.791 -30.466 1.00 48.41 A
ATOM 2848 CB LYS A 373 -37.262 -36.091 -29.900 1.00 45.55 A
ATOM 2849 CG LYS A 373 -38.533 -36.847 -30.046 1.00 43.98 A
ATOM 2850 CD LYS A 373 -39.579 -35.811 -30.160 1.00 42.88 A
ATOM 2851 CE LYS A 373 -40.955 -36.346 -30.080 1.00 41.31 A
ATOM 2852 NZ LYS A 373 -41.825 -35.153 -29.936 1.00 38.40 A
ATOM 2853 C LYS A 373 -36.117 -38.266 -30.141 1.00 50.79 A

ATOM 2854 O LYS A 373 -35.546 -38.726 -29.147 1.00 50.25 A
ATOM 2855 N ASP A 374 -36.802 -39.013 -31.000 1.00 49.63 A
ATOM 2856 CA ASP A 374 -36.974 -40.429 -30.763 1.00 50.66 A
ATOM 2857 CB ASP A 374 -38.208 -40.929 -31.491 1.00 52.47 A
ATOM 2858 CG ASP A 374 -39.475 -40.311 -30.931 1.00 54.61 A
ATOM 2859 OD1 ASP A 374 -39.701 -40.379 -29.688 1.00 55.39 A
ATOM 2860 OD2 ASP A 374 -40.240 -39.723 -31.724 1.00 56.56 A
ATOM 2861 C ASP A 374 -35.779 -41.348 -30.996 1.00 50.62 A
ATOM 2862 O ASP A 374 -35.907 -42.445 -31.505 1.00 50.82 A
ATOM 2863 N ALA A 375 -34.602 -40.899 -30.593 1.00 50.96 A
ATOM 2864 CA ALA A 375 -33.445 -41.774 -30.650 1.00 51.69 A
ATOM 2865 CB ALA A 375 -32.535 -41.443 -31.866 1.00 51.00 A
ATOM 2866 C ALA A 375 -32.726 -41.599 -29.310 1.00 52.00 A
ATOM 2867 O ALA A 375 -33.301 -41.049 -28.360 1.00 51.50 A
ATOM 2868 N PRO A 376 -31.483 -42.078 -29.207 1.00 52.78 A
ATOM 2869 CD PRO A 376 -30.864 -43.065 -30.110 1.00 53.41 A
ATOM 2870 CA PRO A 376 -30.711 -41.955 -27.967 1.00 53.66 A
ATOM 2871 CB PRO A 376 -29.497 -42.855 -28.217 1.00 53.56 A
ATOM 2872 CG PRO A 376 -29.999 -43.863 -29.176 1.00 52.68 A
ATOM 2873 C PRO A 376 -30.265 -40.535 -27.576 1.00 54.21 A
ATOM 2874 O PRO A 376 -30.822 -39.521 -28.029 1.00 54.09 A
ATOM 2875 N ALA A 377 -29.254 -40.485 -26.712 1.00 53.82 A
ATOM 2876 CA ALA A 377 -28.723 -39.220 -26.262 1.00 53.27 A
ATOM 2877 CB ALA A 377 -28.202 -39.338 -24.840 1.00 52.91 A
ATOM 2878 C ALA A 377 -27.598 -38.823 -27.183 1.00 52.56 A
ATOM 2879 O ALA A 377 -27.676 -37.809 -27.869 1.00 52.78 A
ATOM 2880 N SER A 378 -26.562 -39.651 -27.209 1.00 51.65 A
ATOM 2881 CA SER A 378 -25.376 -39.356 -27.994 1.00 51.97 A
ATOM 2882 CB SER A 378 -24.255 -40.285 -27.615 1.00 52.47 A
ATOM 2883 OG SER A 378 -24.784 -41.333 -26.857 1.00 53.41 A
ATOM 2884 C SER A 378 -25.480 -39.287 -29.502 1.00 51.80 A
ATOM 2885 O SER A 378 -24.462 -39.328 -30.214 1.00 52.03 A
ATOM 2886 N LEU A 379 -26.706 -39.154 -29.990 1.00 51.58 A
ATOM 2887 CA LEU A 379 -26.922 -38.933 -31.401 1.00 52.24 A

ATOM 2888 CB LEU A 379 -26.878 -40.211 -32.222 1.00 51.30 A
ATOM 2889 CG LEU A 379 -26.538 -41.523 -31.533 1.00 50.80 A
ATOM 2890 CD1 LEU A 379 -27.584 -42.522 -31.965 1.00 50.10 A
ATOM 2891 CD2 LEU A 379 -25.125 -41.978 -31.867 1.00 50.39 A
ATOM 2892 C LEU A 379 -28.236 -38.184 -31.654 1.00 52.82 A
ATOM 2893 O LEU A 379 -28.993 -38.541 -32.538 1.00 53.41 A
ATOM 2894 N ALA A 380 -28.485 -37.147 -30.861 1.00 53.65 A
ATOM 2895 CA ALA A 380 -29.484 -36.142 -31.203 1.00 54.92 A
ATOM 2896 CB ALA A 380 -30.368 -35.843 -30.002 1.00 55.31 A
ATOM 2897 C ALA A 380 -28.827 -34.865 -31.715 1.00 55.58 A
ATOM 2898 O ALA A 380 -29.150 -33.766 -31.264 1.00 55.52 A
ATOM 2899 N ARG A 381 -27.903 -35.017 -32.658 1.00 56.44 A
ATOM 2900 CA ARG A 381 -27.306 -33.874 -33.337 1.00 56.79 A
ATOM 2901 CB ARG A 381 -25.791 -34.052 -33.453 1.00 58.23 A
ATOM 2902 CG ARG A 381 -25.011 -33.536 -32.254 1.00 59.49 A
ATOM 2903 CD ARG A 381 -24.668 -34.606 -31.230 1.00 60.39 A
ATOM 2904 NE ARG A 381 -23.684 -35.556 -31.739 1.00 61.96 A
ATOM 2905 CZ ARG A 381 -22.647 -36.001 -31.043 1.00 62.52 A
ATOM 2906 NH1 ARG A 381 -22.452 -35.583 -29.800 1.00 62.53 A
ATOM 2907 NH2 ARG A 381 -21.802 -36.866 -31.587 1.00 62.94 A
ATOM 2908 C ARG A 381 -27.842 -33.870 -34.765 1.00 55.97 A
ATOM 2909 O ARG A 381 -28.911 -34.416 -35.038 1.00 56.93 A
ATOM 2910 N GLY A 382 -27.092 -33.252 -35.671 1.00 54.10 A
ATOM 2911 CA GLY A 382 -27.318 -33.565 -37.070 1.00 50.63 A
ATOM 2912 C GLY A 382 -26.192 -34.385 -37.669 1.00 47.80 A
ATOM 2913 O GLY A 382 -25.135 -34.544 -37.060 1.00 47.43 A
ATOM 2914 N ALA A 383 -26.422 -34.907 -38.869 1.00 44.67 A
ATOM 2915 CA ALA A 383 -25.469 -35.825 -39.506 1.00 41.50 A
ATOM 2916 CB ALA A 383 -25.749 -35.888 -40.989 1.00 44.79 A
ATOM 2917 C ALA A 383 -24.057 -35.282 -39.245 1.00 38.31 A
ATOM 2918 O ALA A 383 -23.097 -36.016 -38.979 1.00 35.32 A
ATOM 2919 N ASN A 384 -23.962 -33.965 -39.381 1.00 35.47 A
ATOM 2920 CA ASN A 384 -22.759 -33.195 -39.060 1.00 33.33 A
ATOM 2921 CB ASN A 384 -21.641 -33.248 -40.129 1.00 33.51 A

ATOM 2922 CG ASN A 384 -21.982 -32.532 -41.425 1.00 34.03 A
ATOM 2923 OD1 ASN A 384 -22.539 -31.427 -41.442 1.00 30.86 A
ATOM 2924 ND2 ASN A 384 -21.601 -33.161 -42.534 1.00 33.66 A
ATOM 2925 C ASN A 384 -23.260 -31.778 -38.791 1.00 31.80 A
ATOM 2926 O ASN A 384 -24.329 -31.394 -39.268 1.00 31.00 A
ATOM 2927 N PRO A 385 -22.521 -30.998 -37.988 1.00 30.57 A
ATOM 2928 CD PRO A 385 -21.133 -31.251 -37.572 1.00 30.60 A
ATOM 2929 CA PRO A 385 -22.916 -29.631 -37.646 1.00 30.84 A
ATOM 2930 CB PRO A 385 -21.640 -29.037 -37.070 1.00 30.58 A
ATOM 2931 CG PRO A 385 -20.949 -30.226 -36.497 1.00 30.65 A
ATOM 2932 C PRO A 385 -23.435 -28.849 -38.828 1.00 31.89 A
ATOM 2933 O PRO A 385 -24.331 -28.007 -38.688 1.00 31.41 A
ATOM 2934 N GLY A 386 -22.854 -29.139 -39.992 1.00 33.12 A
ATOM 2935 CA GLY A 386 -23.245 -28.479 -41.224 1.00 31.34 A
ATOM 2936 C GLY A 386 -24.706 -28.688 -41.561 1.00 31.70 A
ATOM 2937 O GLY A 386 -25.437 -27.719 -41.797 1.00 30.29 A
ATOM 2938 N PHE A 387 -25.138 -29.948 -41.586 1.00 32.33 A
ATOM 2939 CA PHE A 387 -26.530 -30.250 -41.896 1.00 34.08 A
ATOM 2940 CB PHE A 387 -26.830 -31.736 -41.695 1.00 36.90 A
ATOM 2941 CG PHE A 387 -26.237 -32.636 -42.754 1.00 39.53 A
ATOM 2942 CD1 PHE A 387 -24.864 -32.651 -42.993 1.00 40.62 A
ATOM 2943 CD2 PHE A 387 -27.052 -33.504 -43.484 1.00 40.02 A
ATOM 2944 CE1 PHE A 387 -24.311 -33.527 -43.944 1.00 42.29 A
ATOM 2945 CE2 PHE A 387 -26.510 -34.381 -44.433 1.00 41.71 A
ATOM 2946 CZ PHE A 387 -25.138 -34.395 -44.664 1.00 41.89 A
ATOM 2947 C PHE A 387 -27.461 -29.431 -41.017 1.00 34.04 A
ATOM 2948 O PHE A 387 -28.471 -28.899 -41.493 1.00 32.93 A
ATOM 2949 N HIS A 388 -27.107 -29.315 -39.738 1.00 34.25 A
ATOM 2950 CA HIS A 388 -27.939 -28.565 -38.798 1.00 34.69 A
ATOM 2951 CB HIS A 388 -27.361 -28.625 -37.368 1.00 36.41 A
ATOM 2952 CG HIS A 388 -28.354 -29.057 -36.325 1.00 35.88 A
ATOM 2953 CD2 HIS A 388 -28.371 -30.137 -35.507 1.00 35.37 A
ATOM 2954 ND1 HIS A 388 -29.522 -28.364 -36.067 1.00 35.69 A
ATOM 2955 CE1 HIS A 388 -30.216 -29.003 -35.141 1.00 35.11 A

ATOM 2956 NE2 HIS A 388 -29.541 -30.081 -34.784 1.00 35.58 A
ATOM 2957 C HIS A 388 -28.117 -27.111 -39.213 1.00 34.16 A
ATOM 2958 O HIS A 388 -29.249 -26.615 -39.281 1.00 33.08 A
ATOM 2959 N GLU A 389 -27.008 -26.427 -39.499 1.00 33.75 A
ATOM 2960 CA GLU A 389 -27.086 -25.017 -39.892 1.00 33.57 A
ATOM 2961 CB GLU A 389 -25.683 -24.393 -39.938 1.00 32.96 A
ATOM 2962 CG GLU A 389 -24.890 -24.466 -38.631 1.00 31.84 A
ATOM 2963 CD GLU A 389 -25.654 -23.929 -37.405 1.00 32.65 A
ATOM 2964 OE1 GLU A 389 -26.427 -22.957 -37.532 1.00 31.41 A
ATOM 2965 OE2 GLU A 389 -25.468 -24.472 -36.296 1.00 31.27 A
ATOM 2966 C GLU A 389 -27.780 -24.838 -41.253 1.00 32.92 A
ATOM 2967 O GLU A 389 -28.233 -23.740 -41.591 1.00 33.27 A
ATOM 2968 N ALA A 390 -27.879 -25.923 -42.014 1.00 31.19 A
ATOM 2969 CA ALA A 390 -28.495 -25.862 -43.322 1.00 29.86 A
ATOM 2970 CB ALA A 390 -28.036 -27.023 -44.139 1.00 29.30 A
ATOM 2971 C ALA A 390 -30.012 -25.871 -43.288 1.00 30.07 A
ATOM 2972 O ALA A 390 -30.674 -25.027 -43.902 1.00 28.73 A
ATOM 2973 N ILE A 391 -30.545 -26.851 -42.564 1.00 30.53 A
ATOM 2974 CA ILE A 391 -31.980 -27.075 -42.512 1.00 32.75 A
ATOM 2975 CB ILE A 391 -32.386 -27.887 -41.286 1.00 32.25 A
ATOM 2976 CG2 ILE A 391 -33.872 -28.232 -41.373 1.00 30.36 A
ATOM 2977 CG1 ILE A 391 -31.576 -29.187 -41.248 1.00 32.70 A
ATOM 2978 CD1 ILE A 391 -31.488 -29.931 -42.579 1.00 33.41 A
ATOM 2979 C ILE A 391 -32.918 -25.887 -42.668 1.00 35.02 A
ATOM 2980 O ILE A 391 -33.820 -25.933 -43.504 1.00 37.22 A
ATOM 2981 N GLY A 392 -32.711 -24.818 -41.913 1.00 36.40 A
ATOM 2982 CA GLY A 392 -33.608 -23.687 -42.030 1.00 37.72 A
ATOM 2983 C GLY A 392 -33.263 -22.813 -43.199 1.00 38.81 A
ATOM 2984 O GLY A 392 -34.144 -22.150 -43.736 1.00 38.73 A
ATOM 2985 N ASP A 393 -31.989 -22.794 -43.583 1.00 40.28 A
ATOM 2986 CA ASP A 393 -31.560 -21.961 -44.700 1.00 42.67 A
ATOM 2987 CB ASP A 393 -30.023 -21.918 -44.783 1.00 44.44 A
ATOM 2988 CG ASP A 393 -29.412 -20.843 -43.881 1.00 44.69 A
ATOM 2989 OD1 ASP A 393 -29.756 -20.790 -42.682 1.00 44.28 A

ATOM 2990 OD2 ASP A 393 -28.577 -20.051 -44.374 1.00 46.33 A
ATOM 2991 C ASP A 393 -32.169 -22.466 -46.010 1.00 42.32 A
ATOM 2992 O ASP A 393 -32.625 -21.672 -46.843 1.00 41.62 A
ATOM 2993 N VAL A 394 -32.197 -23.785 -46.174 1.00 41.70 A
ATOM 2994 CA VAL A 394 -32.770 -24.387 -47.367 1.00 41.31 A
ATOM 2995 CB VAL A 394 -32.951 -25.899 -47.201 1.00 40.79 A
ATOM 2996 CG1 VAL A 394 -33.660 -26.457 -48.400 1.00 40.47 A
ATOM 2997 CG2 VAL A 394 -31.595 -26.581 -47.019 1.00 40.21 A
ATOM 2998 C VAL A 394 -34.136 -23.766 -47.595 1.00 41.48 A
ATOM 2999 O VAL A 394 -34.341 -23.038 -48.568 1.00 43.64 A
ATOM 3000 N LEU A 395 -35.064 -24.046 -46.685 1.00 40.22 A
ATOM 3001 CA LEU A 395 -36.415 -23.505 -46.786 1.00 38.99 A
ATOM 3002 CB LEU A 395 -37.252 -23.854 -45.555 1.00 39.04 A
ATOM 3003 CG LEU A 395 -37.716 -25.303 -45.358 1.00 39.16 A
ATOM 3004 CD1 LEU A 395 -36.540 -26.221 -45.012 1.00 37.82 A
ATOM 3005 CD2 LEU A 395 -38.748 -25.328 -44.251 1.00 38.09 A
ATOM 3006 C LEU A 395 -36.410 -22.008 -46.945 1.00 38.83 A
ATOM 3007 O LEU A 395 -37.356 -21.445 -47.484 1.00 39.84 A
ATOM 3008 N ALA A 396 -35.357 -21.358 -46.464 1.00 38.76 A
ATOM 3009 CA ALA A 396 -35.264 -19.912 -46.581 1.00 39.84 A
ATOM 3010 CB ALA A 396 -34.079 -19.406 -45.801 1.00 39.96 A
ATOM 3011 C ALA A 396 -35.122 -19.522 -48.050 1.00 41.01 A
ATOM 3012 O ALA A 396 -35.701 -18.517 -48.503 1.00 40.26 A
ATOM 3013 N LEU A 397 -34.352 -20.325 -48.791 1.00 41.23 A
ATOM 3014 CA LEU A 397 -34.122 -20.079 -50.214 1.00 40.75 A
ATOM 3015 CB LEU A 397 -33.333 -21.230 -50.839 1.00 40.92 A
ATOM 3016 CG LEU A 397 -31.831 -21.249 -50.536 1.00 41.38 A
ATOM 3017 CD1 LEU A 397 -31.203 -22.506 -51.120 1.00 41.93 A
ATOM 3018 CD2 LEU A 397 -31.171 -20.000 -51.114 1.00 41.50 A
ATOM 3019 C LEU A 397 -35.446 -19.908 -50.936 1.00 40.52 A
ATOM 3020 O LEU A 397 -35.644 -18.939 -51.673 1.00 40.11 A
ATOM 3021 N SER A 398 -36.356 -20.847 -50.702 1.00 39.93 A
ATOM 3022 CA SER A 398 -37.667 -20.796 -51.326 1.00 39.62 A
ATOM 3023 CB SER A 398 -38.433 -22.082 -51.028 1.00 38.20 A

ATOM 3024 OG SER A 398 -37.676 -23.214 -51.417 1.00 37.23 A
ATOM 3025 C SER A 398 -38.473 -19.587 -50.855 1.00 39.92 A
ATOM 3026 O SER A 398 -39.254 -19.022 -51.610 1.00 40.56 A
ATOM 3027 N VAL A 399 -38.282 -19.177 -49.610 1.00 40.01 A
ATOM 3028 CA VAL A 399 -39.037 -18.050 -49.099 1.00 40.24 A
ATOM 3029 CB VAL A 399 -38.923 -17.939 -47.554 1.00 40.16 A
ATOM 3030 CG1 VAL A 399 -39.901 -16.908 -47.029 1.00 38.55 A
ATOM 3031 CG2 VAL A 399 -39.196 -19.278 -46.912 1.00 39.41 A
ATOM 3032 C VAL A 399 -38.566 -16.759 -49.733 1.00 41.27 A
ATOM 3033 O VAL A 399 -39.369 -15.918 -50.080 1.00 40.66 A
ATOM 3034 N SER A 400 -37.260 -16.609 -49.902 1.00 43.50 A
ATOM 3035 CA SER A 400 -36.707 -15.385 -50.478 1.00 46.32 A
ATOM 3036 CB SER A 400 -35.181 -15.440 -50.420 1.00 46.65 A
ATOM 3037 OG SER A 400 -34.739 -15.692 -49.098 1.00 46.46 A
ATOM 3038 C SER A 400 -37.172 -15.048 -51.901 1.00 47.73 A
ATOM 3039 O SER A 400 -37.189 -13.888 -52.307 1.00 47.20 A
ATOM 3040 N THR A 401 -37.562 -16.071 -52.667 1.00 48.69 A
ATOM 3041 CA THR A 401 -38.033 -15.857 -54.036 1.00 49.55 A
ATOM 3042 CB THR A 401 -38.465 -17.193 -54.665 1.00 49.73 A
ATOM 3043 OG1 THR A 401 -39.662 -17.685 -54.067 1.00 50.76 A
ATOM 3044 CG2 THR A 401 -37.350 -18.226 -54.480 1.00 49.22 A
ATOM 3045 C THR A 401 -39.130 -14.815 -53.892 1.00 50.60 A
ATOM 3046 O THR A 401 -39.994 -14.903 -53.030 1.00 50.19 A
ATOM 3047 N PRO A 402 -39.027 -13.732 -54.684 1.00 52.01 A
ATOM 3048 CD PRO A 402 -38.210 -13.831 -55.892 1.00 51.38 A
ATOM 3049 CA PRO A 402 -39.906 -12.544 -54.795 1.00 53.56 A
ATOM 3050 CB PRO A 402 -39.441 -11.889 -56.058 1.00 52.46 A
ATOM 3051 CG PRO A 402 -37.927 -12.411 -56.156 1.00 51.93 A
ATOM 3052 C PRO A 402 -41.360 -12.952 -55.052 1.00 54.79 A
ATOM 3053 O PRO A 402 -42.317 -12.466 -54.503 1.00 55.92 A
ATOM 3054 N ALA A 403 -41.323 -13.918 -55.912 1.00 56.57 A
ATOM 3055 CA ALA A 403 -42.426 -14.609 -56.439 1.00 57.68 A
ATOM 3056 CB ALA A 403 -41.928 -15.573 -57.505 1.00 56.96 A
ATOM 3057 C ALA A 403 -42.821 -15.353 -55.092 1.00 58.24 A

ATOM 3058 O ALA A 403 -43.979 -15.359 -54.658 1.00 58.22 A
ATOM 3059 N HIS A 404 -41.991 -16.075 -54.351 1.00 58.80 A
ATOM 3060 CA HIS A 404 -42.598 -16.763 -53.085 1.00 59.78 A
ATOM 3061 CB HIS A 404 -41.617 -17.559 -52.127 1.00 60.51 A
ATOM 3062 CG HIS A 404 -42.306 -18.205 -50.935 1.00 61.16 A
ATOM 3063 CD2 HIS A 404 -42.338 -17.856 -49.623 1.00 61.75 A
ATOM 3064 ND1 HIS A 404 -43.031 -19.378 -51.026 1.00 61.38 A
ATOM 3065 CE1 HIS A 404 -43.468 -19.725 -49.826 1.00 61.10 A
ATOM 3066 NE2 HIS A 404 -43.061 -18.818 -48.957 1.00 61.04 A
ATOM 3067 C HIS A 404 -43.283 -15.722 -52.178 1.00 60.08 A
ATOM 3068 O HIS A 404 -44.409 -15.899 -51.690 1.00 60.60 A
ATOM 3069 N LEU A 405 -42.610 -14.596 -52.002 1.00 59.79 A
ATOM 3070 CA LEU A 405 -43.138 -13.503 -51.199 1.00 59.46 A
ATOM 3071 CB LEU A 405 -42.133 -12.369 -51.156 1.00 59.73 A
ATOM 3072 CG LEU A 405 -40.753 -12.983 -51.019 1.00 60.23 A
ATOM 3073 CD1 LEU A 405 -39.777 -11.864 -50.901 1.00 60.43 A
ATOM 3074 CD2 LEU A 405 -40.678 -13.912 -49.809 1.00 58.88 A
ATOM 3075 C LEU A 405 -44.462 -12.937 -51.649 1.00 59.37 A
ATOM 3076 O LEU A 405 -45.271 -12.558 -50.814 1.00 59.91 A
ATOM 3077 N HIS A 406 -44.684 -12.851 -52.954 1.00 59.44 A
ATOM 3078 CA HIS A 406 -45.939 -12.287 -53.441 1.00 59.23 A
ATOM 3079 CB HIS A 406 -45.961 -12.215 -54.968 1.00 59.68 A
ATOM 3080 CG HIS A 406 -47.239 -11.663 -55.517 1.00 59.90 A
ATOM 3081 CD2 HIS A 406 -47.479 -10.561 -56.265 1.00 60.96 A
ATOM 3082 ND1 HIS A 406 -48.467 -12.254 -55.303 1.00 60.36 A
ATOM 3083 CE1 HIS A 406 -49.407 -11.539 -55.898 1.00 60.76 A
ATOM 3084 NE2 HIS A 406 -48.833 -10.506 -56.489 1.00 60.53 A
ATOM 3085 C HIS A 406 -47.071 -13.181 -52.990 1.00 58.59 A
ATOM 3086 O HIS A 406 -48.164 -12.724 -52.647 1.00 58.06 A
ATOM 3087 N ALA A 407 -46.792 -14.476 -53.025 1.00 57.83 A
ATOM 3088 CA ALA A 407 -47.764 -15.470 -52.629 1.00 57.68 A
ATOM 3089 CB ALA A 407 -47.168 -16.848 -52.745 1.00 56.99 A
ATOM 3090 C ALA A 407 -48.185 -15.249 -51.204 1.00 57.88 A
ATOM 3091 O ALA A 407 -49.245 -15.685 -50.759 1.00 58.95 A

ATOM 3092 N ILE A 408 -47.354 -14.555 -50.462 1.00 57.21 A
ATOM 3093 CA ILE A 408 -47.674 -14.413 -49.066 1.00 55.73 A
ATOM 3094 CB ILE A 408 -46.714 -15.219 -48.305 1.00 54.45 A
ATOM 3095 CG2 ILE A 408 -45.806 -15.916 -49.306 1.00 54.71 A
ATOM 3096 CG1 ILE A 408 -45.886 -14.345 -47.378 1.00 53.43 A
ATOM 3097 CD1 ILE A 408 -44.493 -14.765 -47.387 1.00 53.54 A
ATOM 3098 C ILE A 408 -47.738 -13.005 -48.570 1.00 55.55 A
ATOM 3099 O ILE A 408 -47.815 -12.714 -47.376 1.00 55.09 A
ATOM 3100 N GLY A 409 -47.716 -12.104 -49.512 1.00 55.73 A
ATOM 3101 CA GLY A 409 -47.936 -10.775 -49.059 1.00 56.50 A
ATOM 3102 C GLY A 409 -47.028 -9.634 -49.105 1.00 57.76 A
ATOM 3103 O GLY A 409 -47.506 -8.508 -48.973 1.00 57.11 A
ATOM 3104 N ALA A 410 -45.765 -9.838 -49.353 1.00 60.07 A
ATOM 3105 CA ALA A 410 -44.991 -8.659 -49.267 1.00 62.81 A
ATOM 3106 CB ALA A 410 -44.039 -8.836 -48.194 1.00 63.37 A
ATOM 3107 C ALA A 410 -44.321 -8.147 -50.513 1.00 64.64 A
ATOM 3108 O ALA A 410 -43.553 -7.195 -50.438 1.00 64.97 A
ATOM 3109 N LEU A 411 -44.657 -8.736 -51.655 1.00 66.13 A
ATOM 3110 CA LEU A 411 -44.102 -8.334 -52.914 1.00 66.82 A
ATOM 3111 CB LEU A 411 -43.318 -9.490 -53.485 1.00 66.56 A
ATOM 3112 CG LEU A 411 -41.843 -9.146 -53.363 1.00 66.64 A
ATOM 3113 CD1 LEU A 411 -41.045 -9.862 -54.399 1.00 66.34 A
ATOM 3114 CD2 LEU A 411 -41.691 -7.648 -53.602 1.00 66.84 A
ATOM 3115 C LEU A 411 -45.307 -8.042 -53.759 1.00 67.82 A
ATOM 3116 O LEU A 411 -45.862 -8.963 -54.328 1.00 68.26 A
ATOM 3117 N ALA A 412 -45.703 -6.776 -53.843 1.00 68.48 A
ATOM 3118 CA ALA A 412 -47.053 -6.422 -54.266 1.00 68.97 A
ATOM 3119 CB ALA A 412 -47.296 -4.934 -54.069 1.00 68.66 A
ATOM 3120 C ALA A 412 -47.302 -6.817 -55.718 1.00 68.78 A
ATOM 3121 O ALA A 412 -48.446 -6.864 -56.170 1.00 68.61 A
ATOM 3122 N ALA A 413 -46.225 -7.101 -56.443 1.00 69.31 A
ATOM 3123 CA ALA A 413 -46.194 -6.888 -57.885 1.00 69.72 A
ATOM 3124 CB ALA A 413 -45.175 -5.816 -58.240 1.00 69.12 A
ATOM 3125 C ALA A 413 -45.887 -8.184 -58.627 1.00 69.65 A

ATOM 3126 O ALA A 413 -46.002 -9.274 -58.066 1.00 69.57 A
ATOM 3127 N ALA A 414 -45.497 -8.058 -59.891 1.00 69.78 A
ATOM 3128 CA ALA A 414 -44.089 -8.119 -60.268 1.00 69.28 A
ATOM 3129 CB ALA A 414 -43.642 -9.566 -60.413 1.00 69.10 A
ATOM 3130 C ALA A 414 -43.830 -7.348 -61.558 1.00 68.69 A
ATOM 3131 O ALA A 414 -44.721 -6.683 -62.085 1.00 68.97 A
ATOM 3132 N ALA A 415 -42.603 -7.442 -62.060 1.00 67.53 A
ATOM 3133 CA ALA A 415 -42.354 -8.039 -63.367 1.00 65.77 A
ATOM 3134 CB ALA A 415 -41.805 -6.997 -64.330 1.00 65.81 A
ATOM 3135 C ALA A 415 -41.399 -9.223 -63.259 1.00 64.53 A
ATOM 3136 O ALA A 415 -40.595 -9.302 -62.331 1.00 64.45 A
ATOM 3137 N ALA A 416 -41.493 -10.142 -64.215 1.00 63.05 A
ATOM 3138 CA ALA A 416 -40.697 -11.362 -64.185 1.00 62.35 A
ATOM 3139 CB ALA A 416 -41.601 -12.586 -64.195 1.00 61.49 A
ATOM 3140 C ALA A 416 -39.719 -11.411 -65.355 1.00 61.95 A
ATOM 3141 O ALA A 416 -39.868 -12.225 -66.267 1.00 62.79 A
ATOM 3142 N ASP A 417 -38.720 -10.536 -65.322 1.00 60.60 A
ATOM 3143 CA ASP A 417 -37.817 -10.359 -66.457 1.00 58.96 A
ATOM 3144 CB ASP A 417 -37.869 -8.898 -66.890 1.00 58.78 A
ATOM 3145 CG ASP A 417 -37.484 -7.941 -65.764 1.00 59.40 A
ATOM 3146 OD1 ASP A 417 -38.370 -7.473 -65.011 1.00 60.10 A
ATOM 3147 OD2 ASP A 417 -36.276 -7.651 -65.623 1.00 59.31 A
ATOM 3148 C ASP A 417 -36.409 -10.720 -66.062 1.00 58.21 A
ATOM 3149 O ASP A 417 -36.187 -11.441 -65.090 1.00 58.36 A
ATOM 3150 N THR A 418 -35.462 -10.200 -66.828 1.00 56.71 A
ATOM 3151 CA THR A 418 -34.057 -10.423 -66.561 1.00 54.91 A
ATOM 3152 CB THR A 418 -33.217 -10.242 -67.840 1.00 52.85 A
ATOM 3153 OG1 THR A 418 -33.639 -9.062 -68.525 1.00 52.50 A
ATOM 3154 CG2 THR A 418 -33.369 -11.426 -68.743 1.00 52.69 A
ATOM 3155 C THR A 418 -33.619 -9.406 -65.498 1.00 54.99 A
ATOM 3156 O THR A 418 -33.233 -9.784 -64.398 1.00 54.53 A
ATOM 3157 N GLU A 419 -33.714 -8.118 -65.822 1.00 54.79 A
ATOM 3158 CA GLU A 419 -33.322 -7.066 -64.889 1.00 54.42 A
ATOM 3159 CB GLU A 419 -33.888 -5.714 -65.336 1.00 54.34 A

ATOM 3160 CG GLU A 419 -33.060 -5.054 -66.424 1.00 55.56 A
ATOM 3161 CD GLU A 419 -33.487 -3.624 -66.710 1.00 57.09 A
ATOM 3162 OE1 GLU A 419 -34.170 -3.020 -65.853 1.00 57.66 A
ATOM 3163 OE2 GLU A 419 -33.126 -3.096 -67.786 1.00 58.09 A
ATOM 3164 C GLU A 419 -33.738 -7.363 -63.450 1.00 54.41 A
ATOM 3165 O GLU A 419 -32.913 -7.315 -62.535 1.00 54.72 A
ATOM 3166 N SER A 420 -35.009 -7.677 -63.238 1.00 53.65 A
ATOM 3167 CA SER A 420 -35.455 -7.986 -61.890 1.00 51.88 A
ATOM 3168 CB SER A 420 -36.972 -8.176 -61.854 1.00 51.57 A
ATOM 3169 OG SER A 420 -37.629 -6.948 -62.121 1.00 52.95 A
ATOM 3170 C SER A 420 -34.747 -9.258 -61.441 1.00 50.76 A
ATOM 3171 O SER A 420 -34.332 -9.376 -60.291 1.00 51.30 A
ATOM 3172 N ASP A 421 -34.593 -10.199 -62.365 1.00 49.44 A
ATOM 3173 CA ASP A 421 -33.934 -11.466 -62.069 1.00 48.34 A
ATOM 3174 CB ASP A 421 -33.943 -12.353 -63.322 1.00 49.20 A
ATOM 3175 CG ASP A 421 -33.579 -13.800 -63.025 1.00 50.41 A
ATOM 3176 OD1 ASP A 421 -34.043 -14.329 -61.995 1.00 51.04 A
ATOM 3177 OD2 ASP A 421 -32.845 -14.422 -63.825 1.00 50.80 A
ATOM 3178 C ASP A 421 -32.505 -11.227 -61.569 1.00 47.30 A
ATOM 3179 O ASP A 421 -32.074 -11.833 -60.587 1.00 46.69 A
ATOM 3180 N ILE A 422 -31.777 -10.337 -62.242 1.00 46.94 A
ATOM 3181 CA ILE A 422 -30.406 -9.998 -61.853 1.00 45.84 A
ATOM 3182 CB ILE A 422 -29.754 -8.990 -62.861 1.00 46.02 A
ATOM 3183 CG2 ILE A 422 -28.517 -8.337 -62.253 1.00 45.56 A
ATOM 3184 CG1 ILE A 422 -29.355 -9.715 -64.147 1.00 45.43 A
ATOM 3185 CD1 ILE A 422 -28.177 -10.647 -63.987 1.00 44.02 A
ATOM 3186 C ILE A 422 -30.428 -9.385 -60.448 1.00 45.39 A
ATOM 3187 O ILE A 422 -29.689 -9.837 -59.571 1.00 45.74 A
ATOM 3188 N ASN A 423 -31.275 -8.371 -60.234 1.00 43.87 A
ATOM 3189 CA ASN A 423 -31.397 -7.728 -58.923 1.00 42.18 A
ATOM 3190 CB ASN A 423 -32.622 -6.813 -58.873 1.00 41.12 A
ATOM 3191 CG ASN A 423 -32.400 -5.500 -59.583 1.00 40.90 A
ATOM 3192 OD1 ASN A 423 -31.496 -4.746 -59.247 1.00 40.28 A
ATOM 3193 ND2 ASN A 423 -33.232 -5.217 -60.570 1.00 42.40 A

ATOM 3194 C ASN A 423 -31.529 -8.785 -57.826 1.00 42.16 A
ATOM 3195 O ASN A 423 -30.744 -8.816 -56.876 1.00 42.09 A
ATOM 3196 N TYR A 424 -32.526 -9.653 -57.966 1.00 41.71 A
ATOM 3197 CA TYR A 424 -32.746 -10.701 -56.989 1.00 41.29 A
ATOM 3198 CB TYR A 424 -33.828 -11.683 -57.454 1.00 41.15 A
ATOM 3199 CG TYR A 424 -33.954 -12.923 -56.579 1.00 39.99 A
ATOM 3200 CD1 TYR A 424 -34.270 -12.826 -55.221 1.00 39.58 A
ATOM 3201 CE1 TYR A 424 -34.333 -13.967 -54.401 1.00 39.13 A
ATOM 3202 CD2 TYR A 424 -33.711 -14.187 -57.102 1.00 39.81 A
ATOM 3203 CE2 TYR A 424 -33.770 -15.329 -56.297 1.00 40.30 A
ATOM 3204 CZ TYR A 424 -34.080 -15.216 -54.945 1.00 39.63 A
ATOM 3205 OH TYR A 424 -34.119 -16.347 -54.151 1.00 37.35 A
ATOM 3206 C TYR A 424 -31.466 -11.454 -56.744 1.00 41.74 A
ATOM 3207 O TYR A 424 -30.995 -11.520 -55.612 1.00 43.62 A
ATOM 3208 N LEU A 425 -30.902 -12.022 -57.802 1.00 41.76 A
ATOM 3209 CA LEU A 425 -29.676 -12.791 -57.666 1.00 41.35 A
ATOM 3210 CB LEU A 425 -29.224 -13.321 -59.032 1.00 42.74 A
ATOM 3211 CG LEU A 425 -29.839 -14.646 -59.488 1.00 42.03 A
ATOM 3212 CD1 LEU A 425 -29.111 -15.141 -60.727 1.00 42.66 A
ATOM 3213 CD2 LEU A 425 -29.702 -15.680 -58.382 1.00 43.07 A
ATOM 3214 C LEU A 425 -28.540 -12.015 -57.005 1.00 40.45 A
ATOM 3215 O LEU A 425 -27.734 -12.604 -56.277 1.00 39.47 A
ATOM 3216 N LEU A 426 -28.464 -10.707 -57.254 1.00 39.09 A
ATOM 3217 CA LEU A 426 -27.402 -9.921 -56.644 1.00 38.12 A
ATOM 3218 CB LEU A 426 -27.302 -8.518 -57.247 1.00 35.86 A
ATOM 3219 CG LEU A 426 -26.257 -7.712 -56.462 1.00 35.07 A
ATOM 3220 CD1 LEU A 426 -24.859 -8.087 -56.899 1.00 33.95 A
ATOM 3221 CD2 LEU A 426 -26.478 -6.246 -56.658 1.00 35.09 A
ATOM 3222 C LEU A 426 -27.689 -9.813 -55.154 1.00 38.69 A
ATOM 3223 O LEU A 426 -26.793 -9.989 -54.326 1.00 38.47 A
ATOM 3224 N LYS A 427 -28.942 -9.535 -54.806 1.00 39.41 A
ATOM 3225 CA LYS A 427 -29.297 -9.429 -53.396 1.00 38.93 A
ATOM 3226 CB LYS A 427 -30.798 -9.227 -53.207 1.00 40.26 A
ATOM 3227 CG LYS A 427 -31.091 -8.494 -51.916 1.00 42.52 A

ATOM 3228 CD LYS A 427 -32.533 -8.595 -51.475 1.00 44.23 A
ATOM 3229 CE LYS A 427 -32.699 -8.021 -50.071 1.00 45.38 A
ATOM 3230 NZ LYS A 427 -31.858 -8.738 -49.056 1.00 46.31 A
ATOM 3231 C LYS A 427 -28.858 -10.703 -52.682 1.00 37.84 A
ATOM 3232 O LYS A 427 -28.141 -10.641 -51.694 1.00 38.04 A
ATOM 3233 N MET A 428 -29.272 -11.855 -53.193 1.00 36.27 A
ATOM 3234 CA MET A 428 -28.892 -13.128 -52.600 1.00 35.94 A
ATOM 3235 CB MET A 428 -29.516 -14.275 -53.390 1.00 37.03 A
ATOM 3236 CG MET A 428 -31.032 -14.374 -53.271 1.00 39.38 A
ATOM 3237 SD MET A 428 -31.582 -14.888 -51.610 1.00 40.81 A
ATOM 3238 CE MET A 428 -31.204 -16.615 -51.704 1.00 39.93 A
ATOM 3239 C MET A 428 -27.379 -13.306 -52.589 1.00 35.66 A
ATOM 3240 O MET A 428 -26.832 -14.021 -51.758 1.00 34.79 A
ATOM 3241 N ALA A 429 -26.701 -12.663 -53.529 1.00 36.32 A
ATOM 3242 CA ALA A 429 -25.248 -12.785 -53.628 1.00 35.93 A
ATOM 3243 CB ALA A 429 -24.754 -12.221 -54.986 1.00 37.05 A
ATOM 3244 C ALA A 429 -24.604 -12.039 -52.476 1.00 34.31 A
ATOM 3245 O ALA A 429 -23.585 -12.465 -51.919 1.00 33.40 A
ATOM 3246 N LEU A 430 -25.215 -10.916 -52.130 1.00 32.90 A
ATOM 3247 CA LEU A 430 -24.722 -10.091 -51.049 1.00 32.81 A
ATOM 3248 CB LEU A 430 -25.538 -8.799 -50.958 1.00 30.19 A
ATOM 3249 CG LEU A 430 -25.357 -7.741 -52.049 1.00 28.77 A
ATOM 3250 CD1 LEU A 430 -26.199 -6.524 -51.720 1.00 26.75 A
ATOM 3251 CD2 LEU A 430 -23.897 -7.346 -52.155 1.00 27.83 A
ATOM 3252 C LEU A 430 -24.817 -10.849 -49.732 1.00 34.30 A
ATOM 3253 O LEU A 430 -24.010 -10.640 -48.823 1.00 34.52 A
ATOM 3254 N GLU A 431 -25.807 -11.734 -49.639 1.00 35.43 A
ATOM 3255 CA GLU A 431 -26.035 -12.514 -48.431 1.00 35.74 A
ATOM 3256 CB GLU A 431 -27.523 -12.866 -48.287 1.00 36.66 A
ATOM 3257 CG GLU A 431 -27.832 -13.770 -47.086 1.00 39.76 A
ATOM 3258 CD GLU A 431 -29.324 -13.984 -46.840 1.00 40.98 A
ATOM 3259 OE1 GLU A 431 -30.123 -13.046 -47.075 1.00 40.56 A
ATOM 3260 OE2 GLU A 431 -29.691 -15.092 -46.386 1.00 41.61 A
ATOM 3261 C GLU A 431 -25.225 -13.795 -48.353 1.00 35.79 A

ATOM 3262 O GLU A 431 -24.574 -14.054 -47.350 1.00 37.93 A
ATOM 3263 N LYS A 432 -25.254 -14.600 -49.404 1.00 35.41 A
ATOM 3264 CA LYS A 432 -24.545 -15.869 -49.378 1.00 35.37 A
ATOM 3265 CB LYS A 432 -25.326 -16.923 -50.176 1.00 37.67 A
ATOM 3266 CG LYS A 432 -26.824 -17.050 -49.849 1.00 40.63 A
ATOM 3267 CD LYS A 432 -27.105 -17.604 -48.457 1.00 43.26 A
ATOM 3268 CE LYS A 432 -28.606 -17.793 -48.243 1.00 45.87 A
ATOM 3269 NZ LYS A 432 -28.959 -18.171 -46.838 1.00 47.58 A
ATOM 3270 C LYS A 432 -23.108 -15.838 -49.885 1.00 34.70 A
ATOM 3271 O LYS A 432 -22.235 -16.474 -49.307 1.00 35.14 A
ATOM 3272 N ILE A 433 -22.853 -15.114 -50.969 1.00 34.15 A
ATOM 3273 CA ILE A 433 -21.505 -15.074 -51.529 1.00 32.90 A
ATOM 3274 CB ILE A 433 -21.476 -14.410 -52.933 1.00 32.52 A
ATOM 3275 CG2 ILE A 433 -20.049 -14.440 -53.492 1.00 32.39 A
ATOM 3276 CG1 ILE A 433 -22.430 -15.145 -53.881 1.00 32.67 A
ATOM 3277 CD1 ILE A 433 -22.109 -16.632 -54.082 1.00 33.46 A
ATOM 3278 C ILE A 433 -20.534 -14.329 -50.643 1.00 31.62 A
ATOM 3279 O ILE A 433 -19.456 -14.825 -50.327 1.00 31.86 A
ATOM 3280 N ALA A 434 -20.928 -13.131 -50.245 1.00 30.66 A
ATOM 3281 CA ALA A 434 -20.093 -12.283 -49.410 1.00 30.18 A
ATOM 3282 CB ALA A 434 -20.828 -10.974 -49.112 1.00 30.30 A
ATOM 3283 C ALA A 434 -19.666 -12.942 -48.102 1.00 29.70 A
ATOM 3284 O ALA A 434 -18.670 -12.540 -47.497 1.00 30.11 A
ATOM 3285 N PHE A 435 -20.425 -13.945 -47.671 1.00 27.93 A
ATOM 3286 CA PHE A 435 -20.151 -14.646 -46.426 1.00 26.22 A
ATOM 3287 CB PHE A 435 -21.447 -15.292 -45.920 1.00 26.88 A
ATOM 3288 CG PHE A 435 -21.310 -15.975 -44.589 1.00 28.09 A
ATOM 3289 CD1 PHE A 435 -21.428 -15.252 -43.407 1.00 27.98 A
ATOM 3290 CD2 PHE A 435 -21.014 -17.332 -44.518 1.00 28.26 A
ATOM 3291 CE1 PHE A 435 -21.250 -15.866 -42.178 1.00 28.66 A
ATOM 3292 CE2 PHE A 435 -20.833 -17.952 -43.290 1.00 30.08 A
ATOM 3293 CZ PHE A 435 -20.951 -17.213 -42.115 1.00 29.86 A
ATOM 3294 C PHE A 435 -19.054 -15.710 -46.560 1.00 25.49 A
ATOM 3295 O PHE A 435 -18.218 -15.880 -45.673 1.00 26.09 A

ATOM 3296 N LEU A 436 -19.053 -16.418 -47.678 1.00 24.52 A
ATOM 3297 CA LEU A 436 -18.085 -17.479 -47.907 1.00 23.66 A
ATOM 3298 CB LEU A 436 -18.032 -17.812 -49.395 1.00 23.35 A
ATOM 3299 CG LEU A 436 -19.380 -18.299 -49.919 1.00 22.69 A
ATOM 3300 CD1 LEU A 436 -19.205 -18.825 -51.323 1.00 25.20 A
ATOM 3301 CD2 LEU A 436 -19.910 -19.404 -49.022 1.00 22.16 A
ATOM 3302 C LEU A 436 -16.684 -17.223 -47.379 1.00 23.03 A
ATOM 3303 O LEU A 436 -16.151 -18.024 -46.605 1.00 22.70 A
ATOM 3304 N PRO A 437 -16.057 -16.112 -47.790 1.00 22.16 A
ATOM 3305 CD PRO A 437 -16.486 -14.935 -48.562 1.00 20.38 A
ATOM 3306 CA PRO A 437 -14.716 -15.926 -47.246 1.00 21.38 A
ATOM 3307 CB PRO A 437 -14.309 -14.557 -47.804 1.00 20.67 A
ATOM 3308 CG PRO A 437 -15.613 -13.857 -47.998 1.00 20.47 A
ATOM 3309 C PRO A 437 -14.715 -16.006 -45.707 1.00 21.34 A
ATOM 3310 O PRO A 437 -14.078 -16.885 -45.135 1.00 21.17 A
ATOM 3311 N PHE A 438 -15.449 -15.112 -45.052 1.00 20.48 A
ATOM 3312 CA PHE A 438 -15.518 -15.082 -43.592 1.00 21.02 A
ATOM 3313 CB PHE A 438 -16.645 -14.143 -43.153 1.00 24.30 A
ATOM 3314 CG PHE A 438 -16.657 -13.848 -41.674 1.00 26.82 A
ATOM 3315 CD1 PHE A 438 -15.616 -13.131 -41.076 1.00 28.90 A
ATOM 3316 CD2 PHE A 438 -17.710 -14.275 -40.878 1.00 26.95 A
ATOM 3317 CE1 PHE A 438 -15.633 -12.849 -39.699 1.00 30.06 A
ATOM 3318 CE2 PHE A 438 -17.734 -13.999 -39.503 1.00 27.62 A
ATOM 3319 CZ PHE A 438 -16.694 -13.286 -38.914 1.00 28.41 A
ATOM 3320 C PHE A 438 -15.727 -16.461 -42.956 1.00 19.49 A
ATOM 3321 O PHE A 438 -14.908 -16.909 -42.155 1.00 16.91 A
ATOM 3322 N GLY A 439 -16.830 -17.116 -43.317 1.00 18.18 A
ATOM 3323 CA GLY A 439 -17.139 -18.429 -42.788 1.00 16.92 A
ATOM 3324 C GLY A 439 -15.942 -19.359 -42.840 1.00 17.89 A
ATOM 3325 O GLY A 439 -15.736 -20.160 -41.950 1.00 20.24 A
ATOM 3326 N TYR A 440 -15.148 -19.273 -43.892 1.00 18.32 A
ATOM 3327 CA TYR A 440 -13.962 -20.117 -44.029 1.00 18.45 A
ATOM 3328 CB TYR A 440 -13.420 -19.976 -45.466 1.00 15.98 A
ATOM 3329 CG TYR A 440 -12.298 -20.915 -45.813 1.00 11.99 A

ATOM 3330 CD1 TYR A 440 -12.537 -22.273 -45.905 1.00 10.26 A
ATOM 3331 CE1 TYR A 440 -11.523 -23.155 -46.198 1.00 10.92 A
ATOM 3332 CD2 TYR A 440 -10.994 -20.447 -46.031 1.00 10.51 A
ATOM 3333 CE2 TYR A 440 -9.956 -21.321 -46.327 1.00 8.89 A
ATOM 3334 CZ TYR A 440 -10.228 -22.684 -46.406 1.00 11.12 A
ATOM 3335 OH TYR A 440 -9.216 -23.602 -46.634 1.00 11.47 A
ATOM 3336 C TYR A 440 -12.876 -19.682 -43.019 1.00 19.11 A
ATOM 3337 O TYR A 440 -12.379 -20.476 -42.218 1.00 18.57 A
ATOM 3338 N LEU A 441 -12.546 -18.397 -43.095 1.00 19.81 A
ATOM 3339 CA LEU A 441 -11.536 -17.723 -42.291 1.00 20.54 A
ATOM 3340 CB LEU A 441 -11.602 -16.223 -42.631 1.00 20.98 A
ATOM 3341 CG LEU A 441 -11.251 -15.094 -41.668 1.00 21.62 A
ATOM 3342 CD1 LEU A 441 -11.307 -13.813 -42.448 1.00 23.58 A
ATOM 3343 CD2 LEU A 441 -12.237 -15.011 -40.508 1.00 23.56 A
ATOM 3344 C LEU A 441 -11.540 -17.917 -40.778 1.00 20.49 A
ATOM 3345 O LEU A 441 -10.508 -18.218 -40.190 1.00 21.16 A
ATOM 3346 N VAL A 442 -12.696 -17.747 -40.147 1.00 19.98 A
ATOM 3347 CA VAL A 442 -12.796 -17.836 -38.698 1.00 18.64 A
ATOM 3348 CB VAL A 442 -14.260 -17.702 -38.248 1.00 17.04 A
ATOM 3349 CG1 VAL A 442 -14.382 -18.072 -36.780 1.00 15.43 A
ATOM 3350 CG2 VAL A 442 -14.745 -16.261 -38.481 1.00 14.17 A
ATOM 3351 C VAL A 442 -12.170 -19.061 -38.055 1.00 20.84 A
ATOM 3352 O VAL A 442 -11.259 -18.939 -37.230 1.00 21.75 A
ATOM 3353 N ASP A 443 -12.645 -20.245 -38.409 1.00 21.56 A
ATOM 3354 CA ASP A 443 -12.065 -21.425 -37.809 1.00 22.76 A
ATOM 3355 CB ASP A 443 -12.969 -22.624 -38.037 1.00 23.89 A
ATOM 3356 CG ASP A 443 -13.910 -22.864 -36.881 1.00 23.96 A
ATOM 3357 OD1 ASP A 443 -14.315 -21.874 -36.217 1.00 22.48 A
ATOM 3358 OD2 ASP A 443 -14.237 -24.052 -36.659 1.00 24.76 A
ATOM 3359 C ASP A 443 -10.672 -21.663 -38.363 1.00 23.39 A
ATOM 3360 O ASP A 443 -9.932 -22.514 -37.880 1.00 25.02 A
ATOM 3361 N GLN A 444 -10.314 -20.899 -39.381 1.00 24.20 A
ATOM 3362 CA GLN A 444 -8.988 -21.013 -39.968 1.00 24.71 A
ATOM 3363 CB GLN A 444 -8.884 -20.160 -41.244 1.00 25.46 A

ATOM 3364 CG GLN A 444 -9.550 -20.758 -42.477 1.00 25.96 A
ATOM 3365 CD GLN A 444 -8.914 -22.072 -42.851 1.00 26.73 A
ATOM 3366 OE1 GLN A 444 -7.697 -22.152 -43.050 1.00 27.45 A
ATOM 3367 NE2 GLN A 444 -9.724 -23.117 -42.938 1.00 25.73 A
ATOM 3368 C GLN A 444 -8.096 -20.439 -38.886 1.00 24.19 A
ATOM 3369 O GLN A 444 -7.092 -21.023 -38.493 1.00 24.29 A
ATOM 3370 N TRP A 445 -8.505 -19.280 -38.396 1.00 24.30 A
ATOM 3371 CA TRP A 445 -7.786 -18.571 -37.352 1.00 24.84 A
ATOM 3372 CB TRP A 445 -8.502 -17.255 -37.042 1.00 25.62 A
ATOM 3373 CG TRP A 445 -7.927 -16.507 -35.883 1.00 26.83 A
ATOM 3374 CD2 TRP A 445 -8.440 -16.476 -34.543 1.00 28.17 A
ATOM 3375 CE2 TRP A 445 -7.552 -15.696 -33.773 1.00 27.58 A
ATOM 3376 CE3 TRP A 445 -9.565 -17.033 -33.920 1.00 28.75 A
ATOM 3377 CD1 TRP A 445 -6.784 -15.762 -35.871 1.00 26.63 A
ATOM 3378 NE1 TRP A 445 -6.551 -15.274 -34.608 1.00 27.53 A
ATOM 3379 CZ2 TRP A 445 -7.751 -15.459 -32.413 1.00 27.60 A
ATOM 3380 CZ3 TRP A 445 -9.763 -16.796 -32.564 1.00 28.45 A
ATOM 3381 CH2 TRP A 445 -8.859 -16.016 -31.828 1.00 28.74 A
ATOM 3382 C TRP A 445 -7.715 -19.422 -36.087 1.00 25.09 A
ATOM 3383 O TRP A 445 -6.638 -19.589 -35.498 1.00 24.69 A
ATOM 3384 N ARG A 446 -8.865 -19.954 -35.675 1.00 24.13 A
ATOM 3385 CA ARG A 446 -8.919 -20.776 -34.478 1.00 23.55 A
ATOM 3386 CB ARG A 446 -10.351 -21.104 -34.099 1.00 21.69 A
ATOM 3387 CG ARG A 446 -10.934 -20.101 -33.200 1.00 20.00 A
ATOM 3388 CD ARG A 446 -12.094 -20.668 -32.489 1.00 20.91 A
ATOM 3389 NE ARG A 446 -13.322 -20.581 -33.258 1.00 23.43 A
ATOM 3390 CZ ARG A 446 -14.506 -20.382 -32.708 1.00 25.29 A
ATOM 3391 NH1 ARG A 446 -14.582 -20.261 -31.398 1.00 28.61 A
ATOM 3392 NH2 ARG A 446 -15.588 -20.276 -33.460 1.00 25.58 A
ATOM 3393 C ARG A 446 -8.150 -22.062 -34.455 1.00 24.22 A
ATOM 3394 O ARG A 446 -7.442 -22.332 -33.494 1.00 26.11 A
ATOM 3395 N TRP A 447 -8.286 -22.879 -35.487 1.00 23.90 A
ATOM 3396 CA TRP A 447 -7.558 -24.135 -35.455 1.00 23.53 A
ATOM 3397 CB TRP A 447 -7.688 -24.907 -36.770 1.00 26.85 A

ATOM 3398 CG TRP A 447 -9.063 -25.346 -37.103 1.00 29.56 A
ATOM 3399 CD2 TRP A 447 -9.564 -25.596 -38.412 1.00 31.72 A
ATOM 3400 CE2 TRP A 447 -10.913 -26.002 -38.274 1.00 33.10 A
ATOM 3401 CE3 TRP A 447 -9.003 -25.515 -39.694 1.00 31.91 A
ATOM 3402 CD1 TRP A 447 -10.089 -25.602 -36.239 1.00 30.05 A
ATOM 3403 NE1 TRP A 447 -11.210 -25.997 -36.936 1.00 31.31 A
ATOM 3404 CZ2 TRP A 447 -11.714 -26.326 -39.378 1.00 34.13 A
ATOM 3405 CZ3 TRP A 447 -9.794 -25.835 -40.791 1.00 34.11 A
ATOM 3406 CH2 TRP A 447 -11.140 -26.235 -40.625 1.00 34.69 A
ATOM 3407 C TRP A 447 -6.091 -23.839 -35.174 1.00 21.52 A
ATOM 3408 O TRP A 447 -5.375 -24.654 -34.592 1.00 20.05 A
ATOM 3409 N GLY A 448 -5.661 -22.644 -35.561 1.00 20.39 A
ATOM 3410 CA GLY A 448 -4.277 -22.250 -35.363 1.00 19.59 A
ATOM 3411 C GLY A 448 -3.958 -21.723 -33.983 1.00 18.09 A
ATOM 3412 O GLY A 448 -2.801 -21.762 -33.544 1.00 16.29 A
ATOM 3413 N VAL A 449 -4.977 -21.193 -33.318 1.00 16.98 A
ATOM 3414 CA VAL A 449 -4.807 -20.701 -31.965 1.00 17.33 A
ATOM 3415 CB VAL A 449 -5.998 -19.862 -31.499 1.00 18.19 A
ATOM 3416 CG1 VAL A 449 -5.875 -19.594 -30.001 1.00 17.73 A
ATOM 3417 CG2 VAL A 449 -6.050 -18.551 -32.285 1.00 19.06 A
ATOM 3418 C VAL A 449 -4.724 -21.923 -31.077 1.00 16.04 A
ATOM 3419 O VAL A 449 -3.858 -22.016 -30.229 1.00 17.18 A
ATOM 3420 N PHE A 450 -5.647 -22.850 -31.288 1.00 15.46 A
ATOM 3421 CA PHE A 450 -5.712 -24.103 -30.544 1.00 16.62 A
ATOM 3422 CB PHE A 450 -6.925 -24.927 -30.979 1.00 13.13 A
ATOM 3423 CG PHE A 450 -8.216 -24.514 -30.338 1.00 12.52 A
ATOM 3424 CD1 PHE A 450 -9.382 -24.450 -31.091 1.00 12.24 A
ATOM 3425 CD2 PHE A 450 -8.280 -24.215 -28.981 1.00 12.88 A
ATOM 3426 CE1 PHE A 450 -10.597 -24.094 -30.503 1.00 12.74 A
ATOM 3427 CE2 PHE A 450 -9.488 -23.858 -28.390 1.00 12.88 A
ATOM 3428 CZ PHE A 450 -10.645 -23.798 -29.150 1.00 11.88 A
ATOM 3429 C PHE A 450 -4.482 -24.969 -30.757 1.00 19.32 A
ATOM 3430 O PHE A 450 -4.142 -25.796 -29.915 1.00 21.34 A
ATOM 3431 N SER A 451 -3.826 -24.793 -31.892 1.00 21.35 A

ATOM 3432 CA SER A 451 -2.655 -25.587 -32.207 1.00 22.82 A
ATOM 3433 CB SER A 451 -2.646 -25.914 -33.698 1.00 23.79 A
ATOM 3434 OG SER A 451 -1.970 -24.918 -34.462 1.00 25.10 A
ATOM 3435 C SER A 451 -1.352 -24.891 -31.832 1.00 23.99 A
ATOM 3436 O SER A 451 -0.296 -25.503 -31.807 1.00 24.29 A
ATOM 3437 N GLY A 452 -1.402 -23.601 -31.560 1.00 25.32 A
ATOM 3438 CA GLY A 452 -0.163 -22.934 -31.196 1.00 28.81 A
ATOM 3439 C GLY A 452 0.477 -22.202 -32.362 1.00 30.57 A
ATOM 3440 O GLY A 452 1.498 -21.522 -32.226 1.00 29.86 A
ATOM 3441 N ARG A 453 -0.176 -22.304 -33.506 1.00 32.86 A
ATOM 3442 CA ARG A 453 0.301 -21.643 -34.694 1.00 35.69 A
ATOM 3443 CB ARG A 453 -0.646 -21.963 -35.863 1.00 38.68 A
ATOM 3444 CG ARG A 453 -0.148 -21.496 -37.217 1.00 41.90 A
ATOM 3445 CD ARG A 453 -1.288 -20.977 -38.080 1.00 44.16 A
ATOM 3446 NE ARG A 453 -1.877 -21.986 -38.959 1.00 47.79 A
ATOM 3447 CZ ARG A 453 -3.183 -22.232 -39.038 1.00 50.00 A
ATOM 3448 NH1 ARG A 453 -4.036 -21.542 -38.288 1.00 51.34 A
ATOM 3449 NH2 ARG A 453 -3.644 -23.165 -39.860 1.00 51.40 A
ATOM 3450 C ARG A 453 0.244 -20.184 -34.366 1.00 35.09 A
ATOM 3451 O ARG A 453 1.166 -19.416 -34.633 1.00 35.74 A
ATOM 3452 N THR A 454 -0.866 -19.822 -33.749 1.00 34.12 A
ATOM 3453 CA THR A 454 -1.109 -18.435 -33.391 1.00 33.76 A
ATOM 3454 CB THR A 454 -2.381 -17.959 -34.110 1.00 34.48 A
ATOM 3455 OG1 THR A 454 -2.180 -18.095 -35.522 1.00 37.25 A
ATOM 3456 CG2 THR A 454 -2.714 -16.511 -33.775 1.00 35.67 A
ATOM 3457 C THR A 454 -1.227 -18.152 -31.888 1.00 33.06 A
ATOM 3458 O THR A 454 -2.323 -18.167 -31.325 1.00 34.76 A
ATOM 3459 N PRO A 455 -0.096 -17.877 -31.218 1.00 31.46 A
ATOM 3460 CD PRO A 455 1.257 -17.791 -31.784 1.00 31.95 A
ATOM 3461 CA PRO A 455 -0.069 -17.583 -29.783 1.00 30.57 A
ATOM 3462 CB PRO A 455 1.421 -17.564 -29.471 1.00 30.93 A
ATOM 3463 CG PRO A 455 1.997 -17.025 -30.712 1.00 30.59 A
ATOM 3464 C PRO A 455 -0.734 -16.239 -29.523 1.00 29.76 A
ATOM 3465 O PRO A 455 -0.959 -15.463 -30.449 1.00 30.74 A

ATOM 3466 N PRO A 456 -1.063 -15.939 -28.260 1.00 28.59 A
ATOM 3467 CD PRO A 456 -0.952 -16.750 -27.035 1.00 28.22 A
ATOM 3468 CA PRO A 456 -1.708 -14.649 -27.974 1.00 26.49 A
ATOM 3469 CB PRO A 456 -1.838 -14.675 -26.459 1.00 27.81 A
ATOM 3470 CG PRO A 456 -2.027 -16.149 -26.169 1.00 27.76 A
ATOM 3471 C PRO A 456 -0.855 -13.489 -28.467 1.00 23.88 A
ATOM 3472 O PRO A 456 -1.295 -12.351 -28.577 1.00 23.44 A
ATOM 3473 N SER A 457 0.393 -13.828 -28.734 1.00 20.98 A
ATOM 3474 CA SER A 457 1.407 -12.916 -29.233 1.00 18.18 A
ATOM 3475 CB SER A 457 2.755 -13.641 -29.136 1.00 16.89 A
ATOM 3476 OG SER A 457 3.622 -13.304 -30.183 1.00 19.22 A
ATOM 3477 C SER A 457 1.117 -12.451 -30.683 1.00 18.18 A
ATOM 3478 O SER A 457 1.715 -11.489 -31.191 1.00 18.53 A
ATOM 3479 N ARG A 458 0.182 -13.139 -31.336 1.00 17.03 A
ATOM 3480 CA ARG A 458 -0.194 -12.860 -32.727 1.00 15.25 A
ATOM 3481 CB ARG A 458 0.521 -13.814 -33.692 1.00 12.78 A
ATOM 3482 CG ARG A 458 2.036 -13.705 -33.662 1.00 12.10 A
ATOM 3483 CD ARG A 458 2.661 -14.542 -34.747 1.00 10.80 A
ATOM 3484 NE ARG A 458 3.928 -15.131 -34.334 1.00 6.37 A
ATOM 3485 CZ ARG A 458 4.097 -16.427 -34.133 1.00 6.59 A
ATOM 3486 NH1 ARG A 458 3.078 -17.268 -34.294 1.00 8.02 A
ATOM 3487 NH2 ARG A 458 5.293 -16.890 -33.817 1.00 7.02 A
ATOM 3488 C ARG A 458 -1.679 -13.014 -32.952 1.00 15.24 A
ATOM 3489 O ARG A 458 -2.103 -13.249 -34.065 1.00 14.38 A
ATOM 3490 N TYR A 459 -2.467 -12.899 -31.893 1.00 16.14 A
ATOM 3491 CA TYR A 459 -3.910 -13.025 -32.018 1.00 15.97 A
ATOM 3492 CB TYR A 459 -4.606 -12.802 -30.662 1.00 18.56 A
ATOM 3493 CG TYR A 459 -4.730 -14.024 -29.769 1.00 20.75 A
ATOM 3494 CD1 TYR A 459 -5.562 -14.003 -28.655 1.00 21.39 A
ATOM 3495 CE1 TYR A 459 -5.678 -15.104 -27.817 1.00 22.61 A
ATOM 3496 CD2 TYR A 459 -4.007 -15.190 -30.024 1.00 22.04 A
ATOM 3497 CE2 TYR A 459 -4.114 -16.301 -29.190 1.00 22.44 A
ATOM 3498 CZ TYR A 459 -4.954 -16.247 -28.084 1.00 23.41 A
ATOM 3499 OH TYR A 459 -5.072 -17.329 -27.237 1.00 24.19 A

ATOM 3500 C TYR A 459 -4.497 -12.041 -33.030 1.00 15.14 A
ATOM 3501 O TYR A 459 -5.263 -12.432 -33.900 1.00 16.78 A
ATOM 3502 N ASN A 460 -4.156 -10.764 -32.930 1.00 12.60 A
ATOM 3503 CA ASN A 460 -4.744 -9.807 -33.846 1.00 11.06 A
ATOM 3504 CB ASN A 460 -4.787 -8.427 -33.212 1.00 7.19 A
ATOM 3505 CG ASN A 460 -6.108 -7.713 -33.467 1.00 5.16 A
ATOM 3506 OD1 ASN A 460 -7.193 -8.280 -33.260 1.00 1.00 A
ATOM 3507 ND2 ASN A 460 -6.026 -6.461 -33.916 1.00 5.44 A
ATOM 3508 C ASN A 460 -4.003 -9.756 -35.169 1.00 13.05 A
ATOM 3509 O ASN A 460 -4.604 -9.573 -36.225 1.00 11.98 A
ATOM 3510 N PHE A 461 -2.692 -9.930 -35.109 1.00 14.60 A
ATOM 3511 CA PHE A 461 -1.884 -9.916 -36.311 1.00 14.20 A
ATOM 3512 CB PHE A 461 -0.416 -9.946 -35.932 1.00 14.64 A
ATOM 3513 CG PHE A 461 0.498 -10.326 -37.043 1.00 14.77 A
ATOM 3514 CD1 PHE A 461 0.892 -11.635 -37.190 1.00 16.65 A
ATOM 3515 CD2 PHE A 461 1.042 -9.366 -37.883 1.00 16.09 A
ATOM 3516 CE1 PHE A 461 1.819 -11.991 -38.144 1.00 17.35 A
ATOM 3517 CE2 PHE A 461 1.974 -9.718 -38.844 1.00 15.79 A
ATOM 3518 CZ PHE A 461 2.365 -11.028 -38.975 1.00 15.89 A
ATOM 3519 C PHE A 461 -2.231 -11.067 -37.231 1.00 14.65 A
ATOM 3520 O PHE A 461 -2.152 -10.912 -38.442 1.00 17.34 A
ATOM 3521 N ASP A 462 -2.619 -12.217 -36.685 1.00 13.53 A
ATOM 3522 CA ASP A 462 -2.990 -13.341 -37.544 1.00 12.23 A
ATOM 3523 CB ASP A 462 -2.666 -14.702 -36.886 1.00 11.68 A
ATOM 3524 CG ASP A 462 -1.238 -15.154 -37.160 1.00 10.89 A
ATOM 3525 OD1 ASP A 462 -0.550 -14.444 -37.915 1.00 10.88 A
ATOM 3526 OD2 ASP A 462 -0.794 -16.200 -36.635 1.00 9.26 A
ATOM 3527 C ASP A 462 -4.474 -13.273 -37.919 1.00 12.15 A
ATOM 3528 O ASP A 462 -4.926 -13.932 -38.856 1.00 13.04 A
ATOM 3529 N TRP A 463 -5.237 -12.466 -37.199 1.00 11.67 A
ATOM 3530 CA TRP A 463 -6.653 -12.343 -37.510 1.00 11.56 A
ATOM 3531 CB TRP A 463 -7.414 -11.770 -36.303 1.00 5.52 A
ATOM 3532 CG TRP A 463 -8.864 -11.347 -36.522 1.00 1.82 A
ATOM 3533 CD2 TRP A 463 -10.019 -12.196 -36.568 1.00 1.00 A

ATOM 3534 CE2 TRP A 463 -11.154 -11.354 -36.685 1.00 1.00 A
ATOM 3535 CE3 TRP A 463 -10.208 -13.585 -36.515 1.00 1.00 A
ATOM 3536 CD1 TRP A 463 -9.336 -10.064 -36.620 1.00 1.00 A
ATOM 3537 NE1 TRP A 463 -10.706 -10.063 -36.711 1.00 1.00 A
ATOM 3538 CZ2 TRP A 463 -12.455 -11.850 -36.753 1.00 1.00 A
ATOM 3539 CZ3 TRP A 463 -11.510 -14.087 -36.582 1.00 1.00 A
ATOM 3540 CH2 TRP A 463 -12.616 -13.217 -36.700 1.00 1.00 A
ATOM 3541 C TRP A 463 -6.799 -11.448 -38.725 1.00 12.78 A
ATOM 3542 O TRP A 463 -7.527 -11.781 -39.634 1.00 14.39 A
ATOM 3543 N TRP A 464 -6.105 -10.316 -38.744 1.00 15.15 A
ATOM 3544 CA TRP A 464 -6.206 -9.415 -39.885 1.00 17.34 A
ATOM 3545 CB TRP A 464 -5.767 -8.000 -39.493 1.00 17.19 A
ATOM 3546 CG TRP A 464 -6.809 -7.354 -38.680 1.00 19.86 A
ATOM 3547 CD2 TRP A 464 -8.027 -6.782 -39.167 1.00 21.59 A
ATOM 3548 CE2 TRP A 464 -8.788 -6.406 -38.042 1.00 22.71 A
ATOM 3549 CE3 TRP A 464 -8.552 -6.555 -40.449 1.00 22.13 A
ATOM 3550 CD1 TRP A 464 -6.873 -7.298 -37.320 1.00 20.38 A
ATOM 3551 NE1 TRP A 464 -8.060 -6.734 -36.927 1.00 21.44 A
ATOM 3552 CZ2 TRP A 464 -10.057 -5.810 -38.160 1.00 23.83 A
ATOM 3553 CZ3 TRP A 464 -9.809 -5.963 -40.566 1.00 22.49 A
ATOM 3554 CH2 TRP A 464 -10.547 -5.597 -39.428 1.00 22.10 A
ATOM 3555 C TRP A 464 -5.432 -9.939 -41.107 1.00 18.81 A
ATOM 3556 O TRP A 464 -5.616 -9.459 -42.236 1.00 17.74 A
ATOM 3557 N TYR A 465 -4.566 -10.927 -40.887 1.00 18.06 A
ATOM 3558 CA TYR A 465 -3.864 -11.508 -42.009 1.00 16.13 A
ATOM 3559 CB TYR A 465 -2.807 -12.505 -41.552 1.00 17.53 A
ATOM 3560 CG TYR A 465 -2.308 -13.356 -42.684 1.00 18.90 A
ATOM 3561 CD1 TYR A 465 -1.404 -12.850 -43.606 1.00 19.33 A
ATOM 3562 CE1 TYR A 465 -1.013 -13.599 -44.712 1.00 21.94 A
ATOM 3563 CD2 TYR A 465 -2.811 -14.640 -42.887 1.00 19.93 A
ATOM 3564 CE2 TYR A 465 -2.434 -15.401 -43.993 1.00 21.44 A
ATOM 3565 CZ TYR A 465 -1.534 -14.877 -44.907 1.00 22.21 A
ATOM 3566 OH TYR A 465 -1.182 -15.623 -46.019 1.00 22.78 A
ATOM 3567 C TYR A 465 -4.977 -12.247 -42.732 1.00 14.99 A

ATOM 3568 O TYR A 465 -5.214 -12.030 -43.913 1.00 16.30 A
ATOM 3569 N LEU A 466 -5.683 -13.110 -42.009 1.00 13.62 A
ATOM 3570 CA LEU A 466 -6.769 -13.887 -42.596 1.00 12.40 A
ATOM 3571 CB LEU A 466 -7.320 -14.886 -41.578 1.00 10.65 A
ATOM 3572 CG LEU A 466 -6.293 -15.912 -41.095 1.00 9.26 A
ATOM 3573 CD1 LEU A 466 -6.948 -16.871 -40.147 1.00 10.69 A
ATOM 3574 CD2 LEU A 466 -5.732 -16.667 -42.272 1.00 11.43 A
ATOM 3575 C LEU A 466 -7.906 -13.055 -43.173 1.00 12.66 A
ATOM 3576 O LEU A 466 -8.405 -13.351 -44.259 1.00 14.43 A
ATOM 3577 N ARG A 467 -8.318 -12.015 -42.461 1.00 12.47 A
ATOM 3578 CA ARG A 467 -9.400 -11.154 -42.926 1.00 13.22 A
ATOM 3579 CB ARG A 467 -9.740 -10.115 -41.860 1.00 11.28 A
ATOM 3580 CG ARG A 467 -10.212 -10.711 -40.537 1.00 11.58 A
ATOM 3581 CD ARG A 467 -11.736 -10.796 -40.432 1.00 9.31 A
ATOM 3582 NE ARG A 467 -12.336 -9.467 -40.439 1.00 7.85 A
ATOM 3583 CZ ARG A 467 -13.633 -9.233 -40.289 1.00 7.41 A
ATOM 3584 NH1 ARG A 467 -14.099 -7.991 -40.310 1.00 10.27 A
ATOM 3585 NH2 ARG A 467 -14.467 -10.241 -40.120 1.00 5.26 A
ATOM 3586 C ARG A 467 -9.029 -10.453 -44.238 1.00 15.47 A
ATOM 3587 O ARG A 467 -9.783 -10.507 -45.210 1.00 16.05 A
ATOM 3588 N THR A 468 -7.882 -9.778 -44.264 1.00 15.89 A
ATOM 3589 CA THR A 468 -7.459 -9.107 -45.481 1.00 15.95 A
ATOM 3590 CB THR A 468 -6.070 -8.433 -45.316 1.00 15.49 A
ATOM 3591 OG1 THR A 468 -6.199 -7.271 -44.489 1.00 13.79 A
ATOM 3592 CG2 THR A 468 -5.492 -8.020 -46.689 1.00 15.88 A
ATOM 3593 C THR A 468 -7.385 -10.181 -46.563 1.00 17.63 A
ATOM 3594 O THR A 468 -8.077 -10.123 -47.585 1.00 18.37 A
ATOM 3595 N LYS A 469 -6.576 -11.192 -46.288 1.00 17.49 A
ATOM 3596 CA LYS A 469 -6.390 -12.284 -47.223 1.00 16.47 A
ATOM 3597 CB LYS A 469 -5.508 -13.355 -46.600 1.00 16.06 A
ATOM 3598 CG LYS A 469 -5.470 -14.569 -47.453 1.00 12.08 A
ATOM 3599 CD LYS A 469 -4.291 -15.410 -47.152 1.00 10.90 A
ATOM 3600 CE LYS A 469 -4.705 -16.829 -47.389 1.00 9.92 A
ATOM 3601 NZ LYS A 469 -3.593 -17.719 -47.793 1.00 11.17 A

ATOM 3602 C LYS A 469 -7.621 -12.948 -47.811 1.00 15.94 A
ATOM 3603 O LYS A 469 -7.617 -13.354 -48.953 1.00 17.82 A
ATOM 3604 N TYR A 470 -8.683 -13.094 -47.049 1.00 15.53 A
ATOM 3605 CA TYR A 470 -9.853 -13.725 -47.641 1.00 16.43 A
ATOM 3606 CB TYR A 470 -10.423 -14.848 -46.765 1.00 15.10 A
ATOM 3607 CG TYR A 470 -9.549 -16.077 -46.722 1.00 15.38 A
ATOM 3608 CD1 TYR A 470 -8.519 -16.193 -45.795 1.00 16.14 A
ATOM 3609 CE1 TYR A 470 -7.690 -17.317 -45.776 1.00 15.38 A
ATOM 3610 CD2 TYR A 470 -9.730 -17.111 -47.626 1.00 13.62 A
ATOM 3611 CE2 TYR A 470 -8.910 -18.230 -47.614 1.00 13.00 A
ATOM 3612 CZ TYR A 470 -7.896 -18.332 -46.694 1.00 13.73 A
ATOM 3613 OH TYR A 470 -7.099 -19.451 -46.698 1.00 13.03 A
ATOM 3614 C TYR A 470 -10.957 -12.764 -47.990 1.00 18.01 A
ATOM 3615 O TYR A 470 -11.547 -12.875 -49.049 1.00 21.96 A
ATOM 3616 N GLN A 471 -11.234 -11.800 -47.131 1.00 18.10 A
ATOM 3617 CA GLN A 471 -12.307 -10.872 -47.431 1.00 17.57 A
ATOM 3618 CB GLN A 471 -13.028 -10.481 -46.145 1.00 20.48 A
ATOM 3619 CG GLN A 471 -13.981 -11.568 -45.613 1.00 22.42 A
ATOM 3620 CD GLN A 471 -14.715 -11.153 -44.335 1.00 22.68 A
ATOM 3621 OE1 GLN A 471 -14.116 -11.074 -43.270 1.00 21.86 A
ATOM 3622 NE2 GLN A 471 -16.015 -10.877 -44.449 1.00 22.86 A
ATOM 3623 C GLN A 471 -11.873 -9.626 -48.180 1.00 16.77 A
ATOM 3624 O GLN A 471 -12.687 -8.972 -48.832 1.00 15.24 A
ATOM 3625 N GLY A 472 -10.594 -9.293 -48.095 1.00 16.00 A
ATOM 3626 CA GLY A 472 -10.126 -8.111 -48.788 1.00 15.14 A
ATOM 3627 C GLY A 472 -10.717 -6.890 -48.150 1.00 15.67 A
ATOM 3628 O GLY A 472 -11.237 -5.979 -48.803 1.00 14.72 A
ATOM 3629 N ILE A 473 -10.670 -6.908 -46.827 1.00 16.88 A
ATOM 3630 CA ILE A 473 -11.140 -5.797 -46.028 1.00 14.85 A
ATOM 3631 CB ILE A 473 -12.392 -6.161 -45.265 1.00 14.40 A
ATOM 3632 CG2 ILE A 473 -13.479 -6.499 -46.246 1.00 13.67 A
ATOM 3633 CG1 ILE A 473 -12.110 -7.338 -44.329 1.00 15.74 A
ATOM 3634 CD1 ILE A 473 -13.213 -7.608 -43.298 1.00 14.84 A
ATOM 3635 C ILE A 473 -10.029 -5.441 -45.055 1.00 13.85 A

ATOM 3636 O ILE A 473 -9.188 -6.276 -44.700 1.00 11.70 A
ATOM 3637 N CYS A 474 -10.003 -4.186 -44.649 1.00 13.50 A
ATOM 3638 CA CYS A 474 -8.989 -3.751 -43.709 1.00 13.97 A
ATOM 3639 CB CYS A 474 -7.911 -2.939 -44.427 1.00 13.11 A
ATOM 3640 SG CYS A 474 -8.539 -1.394 -45.110 1.00 15.19 A
ATOM 3641 C CYS A 474 -9.669 -2.920 -42.624 1.00 13.03 A
ATOM 3642 O CYS A 474 -10.761 -2.400 -42.824 1.00 14.32 A
ATOM 3643 N PRO A 475 -9.036 -2.811 -41.453 1.00 12.11 A
ATOM 3644 CD PRO A 475 -7.731 -3.434 -41.172 1.00 12.64 A
ATOM 3645 CA PRO A 475 -9.519 -2.071 -40.291 1.00 10.95 A
ATOM 3646 CB PRO A 475 -8.554 -2.504 -39.204 1.00 12.89 A
ATOM 3647 CG PRO A 475 -7.273 -2.684 -39.972 1.00 13.37 A
ATOM 3648 C PRO A 475 -9.480 -0.581 -40.541 1.00 10.84 A
ATOM 3649 O PRO A 475 -8.484 -0.062 -41.015 1.00 10.74 A
ATOM 3650 N PRO A 476 -10.572 0.127 -40.231 1.00 10.75 A
ATOM 3651 CD PRO A 476 -11.867 -0.428 -39.821 1.00 11.55 A
ATOM 3652 CA PRO A 476 -10.672 1.574 -40.424 1.00 10.83 A
ATOM 3653 CB PRO A 476 -12.151 1.860 -40.186 1.00 10.74 A
ATOM 3654 CG PRO A 476 -12.566 0.792 -39.284 1.00 12.75 A
ATOM 3655 C PRO A 476 -9.759 2.421 -39.555 1.00 11.53 A
ATOM 3656 O PRO A 476 -9.447 3.551 -39.921 1.00 14.06 A
ATOM 3657 N VAL A 477 -9.348 1.889 -38.405 1.00 10.78 A
ATOM 3658 CA VAL A 477 -8.426 2.585 -37.498 1.00 10.09 A
ATOM 3659 CB VAL A 477 -9.090 2.941 -36.162 1.00 9.90 A
ATOM 3660 CG1 VAL A 477 -10.146 4.034 -36.367 1.00 10.32 A
ATOM 3661 CG2 VAL A 477 -9.728 1.695 -35.565 1.00 11.83 A
ATOM 3662 C VAL A 477 -7.290 1.602 -37.244 1.00 10.08 A
ATOM 3663 O VAL A 477 -7.440 0.408 -37.484 1.00 9.86 A
ATOM 3664 N THR A 478 -6.153 2.086 -36.766 1.00 9.52 A
ATOM 3665 CA THR A 478 -5.017 1.200 -36.524 1.00 9.54 A
ATOM 3666 CB THR A 478 -3.765 2.004 -36.149 1.00 7.53 A
ATOM 3667 OG1 THR A 478 -3.582 3.066 -37.093 1.00 8.73 A
ATOM 3668 CG2 THR A 478 -2.537 1.116 -36.160 1.00 6.75 A
ATOM 3669 C THR A 478 -5.294 0.204 -35.411 1.00 11.61 A

ATOM 3670 O THR A 478 -6.118 0.467 -34.520 1.00 13.58 A
ATOM 3671 N ARG A 479 -4.614 -0.941 -35.458 1.00 11.11 A
ATOM 3672 CA ARG A 479 -4.781 -1.962 -34.419 1.00 12.13 A
ATOM 3673 CB ARG A 479 -5.649 -3.115 -34.916 1.00 10.92 A
ATOM 3674 CG ARG A 479 -6.742 -2.716 -35.881 1.00 12.59 A
ATOM 3675 CD ARG A 479 -7.805 -1.897 -35.224 1.00 10.46 A
ATOM 3676 NE ARG A 479 -8.543 -2.666 -34.234 1.00 11.97 A
ATOM 3677 CZ ARG A 479 -9.036 -2.137 -33.126 1.00 11.03 A
ATOM 3678 NH1 ARG A 479 -8.859 -0.850 -32.872 1.00 9.89 A
ATOM 3679 NH2 ARG A 479 -9.715 -2.889 -32.289 1.00 10.98 A
ATOM 3680 C ARG A 479 -3.435 -2.554 -33.989 1.00 13.30 A
ATOM 3681 O ARG A 479 -2.455 -2.457 -34.712 1.00 13.40 A
ATOM 3682 N ASN A 480 -3.394 -3.153 -32.800 1.00 14.80 A
ATOM 3683 CA ASN A 480 -2.191 -3.827 -32.302 1.00 16.87 A
ATOM 3684 CB ASN A 480 -1.328 -2.930 -31.449 1.00 19.07 A
ATOM 3685 CG ASN A 480 -2.082 -1.813 -30.915 1.00 23.39 A
ATOM 3686 OD1 ASN A 480 -3.072 -1.999 -30.216 1.00 25.39 A
ATOM 3687 ND2 ASN A 480 -1.657 -0.605 -31.268 1.00 26.41 A
ATOM 3688 C ASN A 480 -2.524 -5.012 -31.459 1.00 16.82 A
ATOM 3689 O ASN A 480 -3.684 -5.302 -31.172 1.00 16.76 A
ATOM 3690 N GLU A 481 -1.477 -5.692 -31.024 1.00 17.43 A
ATOM 3691 CA GLU A 481 -1.705 -6.842 -30.183 1.00 19.57 A
ATOM 3692 CB GLU A 481 -0.448 -7.678 -29.972 1.00 18.17 A
ATOM 3693 CG GLU A 481 -0.098 -8.544 -31.135 1.00 20.36 A
ATOM 3694 CD GLU A 481 -1.292 -9.332 -31.684 1.00 21.87 A
ATOM 3695 OE1 GLU A 481 -1.174 -9.812 -32.825 1.00 23.07 A
ATOM 3696 OE2 GLU A 481 -2.331 -9.478 -30.996 1.00 24.73 A
ATOM 3697 C GLU A 481 -2.190 -6.416 -28.808 1.00 21.24 A
ATOM 3698 O GLU A 481 -1.626 -6.833 -27.822 1.00 22.84 A
ATOM 3699 N THR A 482 -3.207 -5.583 -28.698 1.00 21.24 A
ATOM 3700 CA THR A 482 -3.675 -5.259 -27.353 1.00 20.68 A
ATOM 3701 CB THR A 482 -3.398 -3.852 -26.883 1.00 22.03 A
ATOM 3702 OG1 THR A 482 -4.625 -3.272 -26.438 1.00 25.45 A
ATOM 3703 CG2 THR A 482 -2.864 -3.020 -27.976 1.00 23.49 A

ATOM 3704 C THR A 482 -5.114 -5.325 -27.641 1.00 19.20 A
ATOM 3705 O THR A 482 -5.977 -5.092 -26.818 1.00 20.34 A
ATOM 3706 N HIS A 483 -5.337 -5.611 -28.897 1.00 18.43 A
ATOM 3707 CA HIS A 483 -6.650 -5.700 -29.418 1.00 14.78 A
ATOM 3708 CB HIS A 483 -6.688 -4.955 -30.703 1.00 17.56 A
ATOM 3709 CG HIS A 483 -6.532 -3.495 -30.515 1.00 20.24 A
ATOM 3710 CD2 HIS A 483 -7.380 -2.594 -29.968 1.00 21.11 A
ATOM 3711 ND1 HIS A 483 -5.439 -2.784 -30.963 1.00 21.93 A
ATOM 3712 CE1 HIS A 483 -5.627 -1.501 -30.705 1.00 21.87 A
ATOM 3713 NE2 HIS A 483 -6.795 -1.360 -30.103 1.00 21.19 A
ATOM 3714 C HIS A 483 -7.014 -7.107 -29.623 1.00 12.07 A
ATOM 3715 O HIS A 483 -6.174 -7.996 -29.682 1.00 8.57 A
ATOM 3716 N PHE A 484 -8.299 -7.317 -29.734 1.00 11.90 A
ATOM 3717 CA PHE A 484 -8.746 -8.644 -29.914 1.00 14.17 A
ATOM 3718 CB PHE A 484 -8.974 -9.262 -28.582 1.00 17.91 A
ATOM 3719 CG PHE A 484 -9.104 -10.702 -28.667 1.00 21.52 A
ATOM 3720 CD1 PHE A 484 -8.171 -11.419 -29.414 1.00 21.02 A
ATOM 3721 CD2 PHE A 484 -10.118 -11.366 -27.987 1.00 23.17 A
ATOM 3722 CE1 PHE A 484 -8.225 -12.795 -29.499 1.00 19.93 A
ATOM 3723 CE2 PHE A 484 -10.202 -12.757 -28.047 1.00 23.43 A
ATOM 3724 CZ PHE A 484 -9.237 -13.481 -28.812 1.00 22.20 A
ATOM 3725 C PHE A 484 -10.008 -8.580 -30.680 1.00 15.12 A
ATOM 3726 O PHE A 484 -11.091 -8.753 -30.140 1.00 14.80 A
ATOM 3727 N ASP A 485 -9.855 -8.339 -31.973 1.00 15.95 A
ATOM 3728 CA ASP A 485 -10.998 -8.180 -32.831 1.00 12.53 A
ATOM 3729 CB ASP A 485 -10.539 -7.421 -34.060 1.00 12.53 A
ATOM 3730 CG ASP A 485 -9.903 -6.093 -33.688 1.00 11.90 A
ATOM 3731 OD1 ASP A 485 -10.586 -5.288 -33.025 1.00 11.41 A
ATOM 3732 OD2 ASP A 485 -8.731 -5.853 -34.045 1.00 11.57 A
ATOM 3733 C ASP A 485 -11.709 -9.484 -33.124 1.00 11.25 A
ATOM 3734 O ASP A 485 -12.899 -9.481 -33.422 1.00 9.78 A
ATOM 3735 N ALA A 486 -10.999 -10.602 -32.999 1.00 10.42 A
ATOM 3736 CA ALA A 486 -11.640 -11.896 -33.214 1.00 13.14 A
ATOM 3737 CB ALA A 486 -10.618 -13.017 -33.189 1.00 10.24 A

ATOM 3738 C ALA A 486 -12.664 -12.104 -32.099 1.00 16.37 A
ATOM 3739 O ALA A 486 -13.722 -12.718 -32.301 1.00 18.80 A
ATOM 3740 N GLY A 487 -12.346 -11.567 -30.923 1.00 17.72 A
ATOM 3741 CA GLY A 487 -13.232 -11.699 -29.789 1.00 17.26 A
ATOM 3742 C GLY A 487 -14.507 -10.881 -29.860 1.00 18.12 A
ATOM 3743 O GLY A 487 -15.412 -11.085 -29.044 1.00 18.35 A
ATOM 3744 N ALA A 488 -14.604 -9.959 -30.814 1.00 18.65 A
ATOM 3745 CA ALA A 488 -15.809 -9.138 -30.909 1.00 19.99 A
ATOM 3746 CB ALA A 488 -15.501 -7.786 -31.540 1.00 18.39 A
ATOM 3747 C ALA A 488 -16.879 -9.833 -31.702 1.00 21.31 A
ATOM 3748 O ALA A 488 -17.937 -9.258 -31.938 1.00 21.92 A
ATOM 3749 N LYS A 489 -16.612 -11.068 -32.115 1.00 22.31 A
ATOM 3750 CA LYS A 489 -17.605 -11.869 -32.821 1.00 23.96 A
ATOM 3751 CB LYS A 489 -16.961 -12.608 -33.996 1.00 25.41 A
ATOM 3752 CG LYS A 489 -17.907 -13.541 -34.736 1.00 25.44 A
ATOM 3753 CD LYS A 489 -19.031 -12.769 -35.408 1.00 27.23 A
ATOM 3754 CE LYS A 489 -20.095 -13.707 -35.954 1.00 27.60 A
ATOM 3755 NZ LYS A 489 -21.376 -12.998 -36.223 1.00 29.58 A
ATOM 3756 C LYS A 489 -18.283 -12.863 -31.884 1.00 24.65 A
ATOM 3757 O LYS A 489 -17.617 -13.650 -31.212 1.00 26.03 A
ATOM 3758 N PHE A 490 -19.611 -12.820 -31.844 1.00 24.58 A
ATOM 3759 CA PHE A 490 -20.369 -13.515 -30.811 1.00 25.61 A
ATOM 3760 CB PHE A 490 -21.852 -13.573 -31.181 1.00 27.25 A
ATOM 3761 CG PHE A 490 -22.635 -14.582 -30.391 1.00 28.53 A
ATOM 3762 CD1 PHE A 490 -23.478 -14.179 -29.369 1.00 30.18 A
ATOM 3763 CD2 PHE A 490 -22.529 -15.934 -30.671 1.00 29.34 A
ATOM 3764 CE1 PHE A 490 -24.199 -15.105 -28.640 1.00 30.55 A
ATOM 3765 CE2 PHE A 490 -23.248 -16.865 -29.945 1.00 30.42 A
ATOM 3766 CZ PHE A 490 -24.084 -16.450 -28.929 1.00 30.66 A
ATOM 3767 C PHE A 490 -19.830 -14.923 -30.585 1.00 25.71 A
ATOM 3768 O PHE A 490 -19.988 -15.493 -29.506 1.00 25.98 A
ATOM 3769 N HIS A 491 -19.193 -15.479 -31.611 1.00 24.96 A
ATOM 3770 CA HIS A 491 -18.968 -16.918 -31.684 1.00 23.99 A
ATOM 3771 CB HIS A 491 -18.982 -17.389 -33.140 1.00 22.63 A

ATOM 3772 CG HIS A 491 -20.354 -17.486 -33.730 1.00 21.04 A
ATOM 3773 CD2 HIS A 491 -21.115 -18.560 -34.048 1.00 19.80 A
ATOM 3774 ND1 HIS A 491 -21.102 -16.376 -34.063 1.00 21.25 A
ATOM 3775 CE1 HIS A 491 -22.263 -16.763 -34.560 1.00 21.24 A
ATOM 3776 NE2 HIS A 491 -22.296 -18.083 -34.562 1.00 20.25 A
ATOM 3777 C HIS A 491 -17.652 -17.305 -31.019 1.00 24.02 A
ATOM 3778 O HIS A 491 -17.490 -18.432 -30.552 1.00 23.05 A
ATOM 3779 N VAL A 492 -16.715 -16.364 -30.980 1.00 24.69 A
ATOM 3780 CA VAL A 492 -15.401 -16.614 -30.399 1.00 26.87 A
ATOM 3781 CB VAL A 492 -14.385 -15.533 -30.812 1.00 26.86 A
ATOM 3782 CG1 VAL A 492 -13.092 -15.691 -30.028 1.00 26.46 A
ATOM 3783 CG2 VAL A 492 -14.121 -15.595 -32.308 1.00 26.66 A
ATOM 3784 C VAL A 492 -15.474 -16.676 -28.877 1.00 26.44 A
ATOM 3785 O VAL A 492 -14.941 -17.597 -28.257 1.00 26.17 A
ATOM 3786 N PRO A 493 -16.135 -15.689 -28.280 1.00 26.31 A
ATOM 3787 CD PRO A 493 -16.801 -14.560 -28.952 1.00 27.58 A
ATOM 3788 CA PRO A 493 -16.299 -15.641 -26.823 1.00 25.01 A
ATOM 3789 CB PRO A 493 -17.017 -14.308 -26.598 1.00 25.15 A
ATOM 3790 CG PRO A 493 -17.711 -14.032 -27.884 1.00 27.46 A
ATOM 3791 C PRO A 493 -17.156 -16.793 -26.308 1.00 24.42 A
ATOM 3792 O PRO A 493 -16.843 -17.376 -25.270 1.00 26.77 A
ATOM 3793 N ASN A 494 -18.225 -17.112 -27.030 1.00 22.16 A
ATOM 3794 CA ASN A 494 -19.068 -18.251 -26.687 1.00 19.71 A
ATOM 3795 CB ASN A 494 -20.521 -17.982 -27.085 1.00 20.25 A
ATOM 3796 CG ASN A 494 -21.081 -16.732 -26.435 1.00 23.29 A
ATOM 3797 OD1 ASN A 494 -22.118 -16.773 -25.773 1.00 23.11 A
ATOM 3798 ND2 ASN A 494 -20.394 -15.610 -26.621 1.00 25.63 A
ATOM 3799 C ASN A 494 -18.558 -19.608 -27.162 1.00 19.10 A
ATOM 3800 O ASN A 494 -19.262 -20.613 -27.070 1.00 19.48 A
ATOM 3801 N VAL A 495 -17.330 -19.628 -27.671 1.00 18.74 A
ATOM 3802 CA VAL A 495 -16.649 -20.880 -27.980 1.00 20.82 A
ATOM 3803 CB VAL A 495 -16.149 -21.700 -26.777 1.00 19.25 A
ATOM 3804 CG1 VAL A 495 -15.452 -22.967 -27.249 1.00 18.51 A
ATOM 3805 CG2 VAL A 495 -15.220 -20.863 -25.912 1.00 20.91 A

ATOM 3806 C VAL A 495 -17.618 -21.730 -28.796 1.00 22.29 A
ATOM 3807 O VAL A 495 -17.981 -22.835 -28.392 1.00 22.24 A
ATOM 3808 N THR A 496 -18.032 -21.208 -29.945 1.00 23.90 A
ATOM 3809 CA THR A 496 -18.743 -22.005 -30.938 1.00 23.18 A
ATOM 3810 CB THR A 496 -20.075 -21.331 -31.317 1.00 24.15 A
ATOM 3811 OG1 THR A 496 -21.134 -21.877 -30.522 1.00 26.53 A
ATOM 3812 CG2 THR A 496 -20.475 -21.703 -32.737 1.00 23.43 A
ATOM 3813 C THR A 496 -17.890 -22.218 -32.184 1.00 22.37 A
ATOM 3814 O THR A 496 -17.222 -21.298 -32.655 1.00 23.18 A
ATOM 3815 N PRO A 497 -17.918 -23.437 -32.714 1.00 22.39 A
ATOM 3816 CD PRO A 497 -18.371 -24.638 -31.997 1.00 21.71 A
ATOM 3817 CA PRO A 497 -17.110 -23.783 -33.889 1.00 23.13 A
ATOM 3818 CB PRO A 497 -17.262 -25.305 -33.984 1.00 22.70 A
ATOM 3819 CG PRO A 497 -17.481 -25.729 -32.572 1.00 22.08 A
ATOM 3820 C PRO A 497 -17.741 -23.054 -35.074 1.00 23.19 A
ATOM 3821 O PRO A 497 -18.955 -22.894 -35.105 1.00 23.31 A
ATOM 3822 N TYR A 498 -16.941 -22.609 -36.039 1.00 22.79 A
ATOM 3823 CA TYR A 498 -17.506 -21.864 -37.155 1.00 23.66 A
ATOM 3824 CB TYR A 498 -16.814 -20.502 -37.235 1.00 22.49 A
ATOM 3825 CG TYR A 498 -17.681 -19.348 -37.676 1.00 21.14 A
ATOM 3826 CD1 TYR A 498 -18.539 -18.712 -36.783 1.00 20.22 A
ATOM 3827 CE1 TYR A 498 -19.347 -17.632 -37.186 1.00 19.34 A
ATOM 3828 CD2 TYR A 498 -17.642 -18.884 -38.986 1.00 21.48 A
ATOM 3829 CE2 TYR A 498 -18.447 -17.806 -39.397 1.00 20.72 A
ATOM 3830 CZ TYR A 498 -19.292 -17.192 -38.489 1.00 19.76 A
ATOM 3831 OH TYR A 498 -20.087 -16.149 -38.877 1.00 20.01 A
ATOM 3832 C TYR A 498 -17.461 -22.519 -38.545 1.00 25.08 A
ATOM 3833 O TYR A 498 -18.334 -22.253 -39.373 1.00 24.30 A
ATOM 3834 N ILE A 499 -16.464 -23.365 -38.806 1.00 26.86 A
ATOM 3835 CA ILE A 499 -16.315 -23.993 -40.126 1.00 29.19 A
ATOM 3836 CB ILE A 499 -15.169 -25.036 -40.170 1.00 29.41 A
ATOM 3837 CG2 ILE A 499 -15.588 -26.326 -39.440 1.00 30.85 A
ATOM 3838 CG1 ILE A 499 -14.870 -25.416 -41.622 1.00 30.64 A
ATOM 3839 CD1 ILE A 499 -14.597 -24.244 -42.521 1.00 28.01 A

ATOM 3840 C ILE A 499 -17.555 -24.707 -40.592 1.00 30.83 A
ATOM 3841 O ILE A 499 -17.586 -25.287 -41.664 1.00 32.32 A
ATOM 3842 N ARG A 500 -18.586 -24.683 -39.782 1.00 32.52 A
ATOM 3843 CA ARG A 500 -19.799 -25.372 -40.157 1.00 34.72 A
ATOM 3844 CB ARG A 500 -20.424 -25.897 -38.911 1.00 35.11 A
ATOM 3845 CG ARG A 500 -20.173 -24.898 -37.845 1.00 35.19 A
ATOM 3846 CD ARG A 500 -21.271 -24.856 -36.878 1.00 35.36 A
ATOM 3847 NE ARG A 500 -20.946 -25.810 -35.836 1.00 33.87 A
ATOM 3848 CZ ARG A 500 -21.564 -25.910 -34.674 1.00 32.30 A
ATOM 3849 NH1 ARG A 500 -22.577 -25.106 -34.378 1.00 29.21 A
ATOM 3850 NH2 ARG A 500 -21.133 -26.817 -33.810 1.00 32.33 A
ATOM 3851 C ARG A 500 -20.766 -24.464 -40.880 1.00 35.89 A
ATOM 3852 O ARG A 500 -21.722 -24.923 -41.502 1.00 37.39 A
ATOM 3853 N TYR A 501 -20.521 -23.167 -40.803 1.00 37.26 A
ATOM 3854 CA TYR A 501 -21.392 -22.235 -41.485 1.00 38.76 A
ATOM 3855 CB TYR A 501 -21.313 -20.858 -40.842 1.00 41.31 A
ATOM 3856 CG TYR A 501 -21.949 -20.827 -39.486 1.00 44.79 A
ATOM 3857 CD1 TYR A 501 -21.184 -20.623 -38.339 1.00 46.66 A
ATOM 3858 CE1 TYR A 501 -21.774 -20.619 -37.070 1.00 47.91 A
ATOM 3859 CD2 TYR A 501 -23.319 -21.026 -39.344 1.00 46.41 A
ATOM 3860 CE2 TYR A 501 -23.920 -21.026 -38.089 1.00 48.76 A
ATOM 3861 CZ TYR A 501 -23.143 -20.824 -36.952 1.00 48.54 A
ATOM 3862 OH TYR A 501 -23.729 -20.845 -35.704 1.00 49.31 A
ATOM 3863 C TYR A 501 -20.957 -22.190 -42.928 1.00 37.98 A
ATOM 3864 O TYR A 501 -21.731 -21.817 -43.798 1.00 36.78 A
ATOM 3865 N PHE A 502 -19.708 -22.585 -43.168 1.00 37.42 A
ATOM 3866 CA PHE A 502 -19.158 -22.635 -44.522 1.00 36.94 A
ATOM 3867 CB PHE A 502 -17.640 -22.831 -44.478 1.00 37.66 A
ATOM 3868 CG PHE A 502 -16.977 -22.765 -45.819 1.00 39.28 A
ATOM 3869 CD1 PHE A 502 -16.823 -21.547 -46.469 1.00 40.33 A
ATOM 3870 CD2 PHE A 502 -16.496 -23.920 -46.428 1.00 39.73 A
ATOM 3871 CE1 PHE A 502 -16.200 -21.475 -47.706 1.00 41.55 A
ATOM 3872 CE2 PHE A 502 -15.872 -23.860 -47.664 1.00 40.96 A
ATOM 3873 CZ PHE A 502 -15.724 -22.634 -48.305 1.00 41.74 A

ATOM 3874 C PHE A 502 -19.810 -23.850 -45.179 1.00 36.42 A
ATOM 3875 O PHE A 502 -20.512 -23.736 -46.190 1.00 36.55 A
ATOM 3876 N VAL A 503 -19.577 -25.012 -44.570 1.00 34.85 A
ATOM 3877 CA VAL A 503 -20.132 -26.271 -45.035 1.00 32.33 A
ATOM 3878 CB VAL A 503 -19.995 -27.348 -43.950 1.00 29.74 A
ATOM 3879 CG1 VAL A 503 -20.660 -28.622 -44.398 1.00 29.51 A
ATOM 3880 CG2 VAL A 503 -18.537 -27.600 -43.659 1.00 27.23 A
ATOM 3881 C VAL A 503 -21.604 -26.038 -45.322 1.00 32.58 A
ATOM 3882 O VAL A 503 -22.134 -26.420 -46.368 1.00 33.01 A
ATOM 3883 N SER A 504 -22.249 -25.378 -44.375 1.00 31.73 A
ATOM 3884 CA SER A 504 -23.659 -25.058 -44.473 1.00 32.56 A
ATOM 3885 CB SER A 504 -24.079 -24.268 -43.226 1.00 31.67 A
ATOM 3886 OG SER A 504 -25.423 -23.822 -43.293 1.00 30.27 A
ATOM 3887 C SER A 504 -24.000 -24.261 -45.729 1.00 33.41 A
ATOM 3888 O SER A 504 -24.880 -24.640 -46.489 1.00 34.44 A
ATOM 3889 N PHE A 505 -23.307 -23.153 -45.948 1.00 34.05 A
ATOM 3890 CA PHE A 505 -23.604 -22.326 -47.100 1.00 34.45 A
ATOM 3891 CB PHE A 505 -22.811 -21.020 -47.000 1.00 36.29 A
ATOM 3892 CG PHE A 505 -23.525 -19.944 -46.226 1.00 37.94 A
ATOM 3893 CD1 PHE A 505 -24.022 -20.202 -44.954 1.00 39.15 A
ATOM 3894 CD2 PHE A 505 -23.724 -18.676 -46.780 1.00 38.25 A
ATOM 3895 CE1 PHE A 505 -24.709 -19.219 -44.244 1.00 39.84 A
ATOM 3896 CE2 PHE A 505 -24.410 -17.684 -46.082 1.00 38.56 A
ATOM 3897 CZ PHE A 505 -24.905 -17.956 -44.811 1.00 40.42 A
ATOM 3898 C PHE A 505 -23.364 -23.035 -48.442 1.00 34.33 A
ATOM 3899 O PHE A 505 -24.009 -22.741 -49.450 1.00 32.50 A
ATOM 3900 N VAL A 506 -22.454 -23.991 -48.464 1.00 33.54 A
ATOM 3901 CA VAL A 506 -22.208 -24.677 -49.715 1.00 32.67 A
ATOM 3902 CB VAL A 506 -20.788 -25.281 -49.759 1.00 32.02 A
ATOM 3903 CG1 VAL A 506 -20.721 -26.446 -50.729 1.00 31.02 A
ATOM 3904 CG2 VAL A 506 -19.804 -24.206 -50.184 1.00 32.13 A
ATOM 3905 C VAL A 506 -23.228 -25.771 -49.908 1.00 32.60 A
ATOM 3906 O VAL A 506 -23.741 -25.994 -50.985 1.00 35.16 A
ATOM 3907 N LEU A 507 -23.571 -26.430 -48.833 1.00 31.39 A

ATOM 3908 CA LEU A 507 -24.478 -27.532 -48.941 1.00 30.41 A
ATOM 3909 CB LEU A 507 -23.931 -28.583 -48.035 1.00 30.39 A
ATOM 3910 CG LEU A 507 -24.924 -29.544 -47.446 1.00 29.97 A
ATOM 3911 CD1 LEU A 507 -24.339 -30.834 -47.800 1.00 30.43 A
ATOM 3912 CD2 LEU A 507 -25.152 -29.396 -45.943 1.00 29.81 A
ATOM 3913 C LEU A 507 -25.951 -27.263 -48.664 1.00 29.76 A
ATOM 3914 O LEU A 507 -26.759 -28.169 -48.424 1.00 29.00 A
ATOM 3915 N GLN A 508 -26.308 -25.998 -48.693 1.00 29.63 A
ATOM 3916 CA GLN A 508 -27.683 -25.676 -48.453 1.00 30.50 A
ATOM 3917 CB GLN A 508 -27.815 -24.319 -47.765 1.00 30.36 A
ATOM 3918 CG GLN A 508 -27.634 -23.114 -48.629 1.00 31.36 A
ATOM 3919 CD GLN A 508 -27.609 -21.838 -47.798 1.00 32.04 A
ATOM 3920 OE1 GLN A 508 -28.122 -20.796 -48.215 1.00 31.47 A
ATOM 3921 NE2 GLN A 508 -26.999 -21.915 -46.613 1.00 31.67 A
ATOM 3922 C GLN A 508 -28.322 -25.687 -49.815 1.00 31.39 A
ATOM 3923 O GLN A 508 -29.507 -25.931 -49.946 1.00 32.15 A
ATOM 3924 N PHE A 509 -27.507 -25.460 -50.841 1.00 32.41 A
ATOM 3925 CA PHE A 509 -27.989 -25.474 -52.214 1.00 31.48 A
ATOM 3926 CB PHE A 509 -27.099 -24.601 -53.098 1.00 31.31 A
ATOM 3927 CG PHE A 509 -27.137 -23.138 -52.741 1.00 30.78 A
ATOM 3928 CD1 PHE A 509 -26.259 -22.613 -51.806 1.00 31.68 A
ATOM 3929 CD2 PHE A 509 -28.041 -22.284 -53.346 1.00 30.24 A
ATOM 3930 CE1 PHE A 509 -26.282 -21.253 -51.487 1.00 31.41 A
ATOM 3931 CE2 PHE A 509 -28.068 -20.921 -53.028 1.00 30.91 A
ATOM 3932 CZ PHE A 509 -27.188 -20.411 -52.101 1.00 30.49 A
ATOM 3933 C PHE A 509 -28.060 -26.900 -52.768 1.00 30.56 A
ATOM 3934 O PHE A 509 -28.896 -27.191 -53.608 1.00 29.89 A
ATOM 3935 N GLN A 510 -27.185 -27.788 -52.310 1.00 30.11 A
ATOM 3936 CA GLN A 510 -27.236 -29.162 -52.778 1.00 31.18 A
ATOM 3937 CB GLN A 510 -26.193 -30.039 -52.087 1.00 28.68 A
ATOM 3938 CG GLN A 510 -24.748 -29.671 -52.341 1.00 26.11 A
ATOM 3939 CD GLN A 510 -23.833 -30.875 -52.200 1.00 25.95 A
ATOM 3940 OE1 GLN A 510 -22.645 -30.749 -51.892 1.00 25.64 A
ATOM 3941 NE2 GLN A 510 -24.386 -32.054 -52.437 1.00 25.81 A

ATOM 3942 C GLN A 510 -28.617 -29.651 -52.379 1.00 33.71 A
ATOM 3943 O GLN A 510 -29.274 -30.379 -53.125 1.00 35.79 A
ATOM 3944 N PHE A 511 -29.041 -29.235 -51.189 1.00 34.52 A
ATOM 3945 CA PHE A 511 -30.343 -29.601 -50.643 1.00 35.97 A
ATOM 3946 CB PHE A 511 -30.490 -29.111 -49.185 1.00 36.44 A
ATOM 3947 CG PHE A 511 -29.781 -29.955 -48.147 1.00 35.00 A
ATOM 3948 CD1 PHE A 511 -28.791 -30.875 -48.497 1.00 34.68 A
ATOM 3949 CD2 PHE A 511 -30.084 -29.777 -46.798 1.00 35.08 A
ATOM 3950 CE1 PHE A 511 -28.106 -31.606 -47.513 1.00 35.05 A
ATOM 3951 CE2 PHE A 511 -29.413 -30.496 -45.804 1.00 35.30 A
ATOM 3952 CZ PHE A 511 -28.418 -31.415 -46.161 1.00 35.38 A
ATOM 3953 C PHE A 511 -31.430 -28.935 -51.476 1.00 35.93 A
ATOM 3954 O PHE A 511 -32.412 -29.558 -51.859 1.00 36.26 A
ATOM 3955 N HIS A 512 -31.251 -27.651 -51.740 1.00 37.55 A
ATOM 3956 CA HIS A 512 -32.232 -26.890 -52.503 1.00 39.62 A
ATOM 3957 CB HIS A 512 -31.765 -25.447 -52.664 1.00 38.72 A
ATOM 3958 CG HIS A 512 -32.786 -24.550 -53.284 1.00 37.10 A
ATOM 3959 CD2 HIS A 512 -32.665 -23.565 -54.204 1.00 38.22 A
ATOM 3960 ND1 HIS A 512 -34.113 -24.565 -52.915 1.00 36.55 A
ATOM 3961 CE1 HIS A 512 -34.766 -23.625 -53.578 1.00 37.21 A
ATOM 3962 NE2 HIS A 512 -33.910 -23.003 -54.367 1.00 38.01 A
ATOM 3963 C HIS A 512 -32.473 -27.501 -53.871 1.00 41.19 A
ATOM 3964 O HIS A 512 -33.597 -27.491 -54.380 1.00 41.38 A
ATOM 3965 N GLU A 513 -31.411 -28.031 -54.471 1.00 42.46 A
ATOM 3966 CA GLU A 513 -31.530 -28.649 -55.784 1.00 42.83 A
ATOM 3967 CB GLU A 513 -30.133 -28.931 -56.370 1.00 42.45 A
ATOM 3968 CG GLU A 513 -30.129 -29.340 -57.842 1.00 40.87 A
ATOM 3969 CD GLU A 513 -28.734 -29.653 -58.364 1.00 39.37 A
ATOM 3970 OE1 GLU A 513 -28.029 -30.479 -57.760 1.00 38.92 A
ATOM 3971 OE2 GLU A 513 -28.332 -29.078 -59.387 1.00 38.87 A
ATOM 3972 C GLU A 513 -32.303 -29.948 -55.570 1.00 43.12 A
ATOM 3973 O GLU A 513 -33.419 -30.121 -56.064 1.00 43.31 A
ATOM 3974 N ALA A 514 -31.708 -30.844 -54.795 1.00 42.92 A
ATOM 3975 CA ALA A 514 -32.311 -32.131 -54.493 1.00 42.91 A

ATOM 3976 CB ALA A 514 -31.522 -32.816 -53.368 1.00 44.02 A
ATOM 3977 C ALA A 514 -33.792 -32.048 -54.116 1.00 42.77 A
ATOM 3978 O ALA A 514 -34.590 -32.885 -54.520 1.00 42.07 A
ATOM 3979 N ALA A 515 -34.170 -31.046 -53.340 1.00 43.86 A
ATOM 3980 CA ALA A 515 -35.564 -30.931 -52.932 1.00 45.49 A
ATOM 3981 CB ALA A 515 -35.701 -29.975 -51.721 1.00 44.71 A
ATOM 3982 C ALA A 515 -36.430 -30.453 -54.084 1.00 45.81 A
ATOM 3983 O ALA A 515 -37.526 -30.977 -54.308 1.00 45.73 A
ATOM 3984 N CYS A 516 -35.942 -29.458 -54.818 1.00 46.17 A
ATOM 3985 CA CYS A 516 -36.704 -28.934 -55.940 1.00 46.57 A
ATOM 3986 C CYS A 516 -36.960 -30.019 -56.970 1.00 47.64 A
ATOM 3987 O CYS A 516 -37.984 -30.014 -57.651 1.00 46.83 A
ATOM 3988 CB CYS A 516 -35.971 -27.770 -56.585 1.00 45.37 A
ATOM 3989 SG CYS A 516 -35.898 -26.334 -55.490 1.00 46.37 A
ATOM 3990 N LYS A 517 -36.031 -30.958 -57.080 1.00 49.08 A
ATOM 3991 CA LYS A 517 -36.209 -32.031 -58.039 1.00 51.38 A
ATOM 3992 CB LYS A 517 -34.933 -32.876 -58.165 1.00 51.08 A
ATOM 3993 CG LYS A 517 -34.977 -33.884 -59.309 1.00 51.09 A
ATOM 3994 CD LYS A 517 -33.683 -34.663 -59.448 1.00 50.74 A
ATOM 3995 CE LYS A 517 -33.824 -35.791 -60.478 1.00 51.61 A
ATOM 3996 NZ LYS A 517 -34.045 -35.314 -61.883 1.00 51.57 A
ATOM 3997 C LYS A 517 -37.396 -32.905 -57.629 1.00 52.76 A
ATOM 3998 O LYS A 517 -38.290 -33.159 -58.431 1.00 53.39 A
ATOM 3999 N GLU A 518 -37.429 -33.354 -56.382 1.00 54.51 A
ATOM 4000 CA GLU A 518 -38.548 -34.185 -55.966 1.00 55.83 A
ATOM 4001 CB GLU A 518 -38.249 -34.827 -54.648 1.00 56.80 A
ATOM 4002 CG GLU A 518 -37.545 -36.111 -54.814 1.00 58.89 A
ATOM 4003 CD GLU A 518 -38.489 -37.262 -54.621 1.00 60.61 A
ATOM 4004 OE1 GLU A 518 -38.068 -38.241 -53.966 1.00 60.39 A
ATOM 4005 OE2 GLU A 518 -39.643 -37.174 -55.115 1.00 61.85 A
ATOM 4006 C GLU A 518 -39.857 -33.451 -55.874 1.00 56.17 A
ATOM 4007 O GLU A 518 -40.922 -34.051 -55.973 1.00 56.72 A
ATOM 4008 N ALA A 519 -39.788 -32.147 -55.673 1.00 56.21 A
ATOM 4009 CA ALA A 519 -41.016 -31.391 -55.614 1.00 57.01 A

ATOM 4010 CB ALA A 519 -40.733 -29.954 -55.294 1.00 56.75 A
ATOM 4011 C ALA A 519 -41.608 -31.517 -57.007 1.00 57.82 A
ATOM 4012 O ALA A 519 -42.821 -31.506 -57.179 1.00 58.37 A
ATOM 4013 N GLY A 520 -40.735 -31.671 -58.000 1.00 58.31 A
ATOM 4014 CA GLY A 520 -41.198 -31.809 -59.371 1.00 59.05 A
ATOM 4015 C GLY A 520 -41.157 -30.467 -60.073 1.00 59.06 A
ATOM 4016 O GLY A 520 -41.880 -30.197 -61.037 1.00 59.42 A
ATOM 4017 N TYR A 521 -40.285 -29.616 -59.569 1.00 58.92 A
ATOM 4018 CA TYR A 521 -40.116 -28.302 -60.118 1.00 57.56 A
ATOM 4019 CB TYR A 521 -39.481 -27.407 -59.078 1.00 56.72 A
ATOM 4020 CG TYR A 521 -39.461 -25.989 -59.510 1.00 55.40 A
ATOM 4021 CD1 TYR A 521 -40.626 -25.232 -59.441 1.00 54.76 A
ATOM 4022 CE1 TYR A 521 -40.634 -23.911 -59.794 1.00 54.50 A
ATOM 4023 CD2 TYR A 521 -38.282 -25.386 -59.962 1.00 55.09 A
ATOM 4024 CE2 TYR A 521 -38.270 -24.051 -60.333 1.00 55.22 A
ATOM 4025 CZ TYR A 521 -39.453 -23.320 -60.241 1.00 54.68 A
ATOM 4026 OH TYR A 521 -39.451 -22.002 -60.610 1.00 54.05 A
ATOM 4027 C TYR A 521 -39.179 -28.345 -61.292 1.00 57.18 A
ATOM 4028 O TYR A 521 -38.248 -29.141 -61.328 1.00 57.28 A
ATOM 4029 N GLU A 522 -39.467 -27.531 -62.284 1.00 56.56 A
ATOM 4030 CA GLU A 522 -38.541 -27.401 -63.371 1.00 56.09 A
ATOM 4031 CB GLU A 522 -38.735 -28.335 -64.527 1.00 57.02 A
ATOM 4032 CG GLU A 522 -37.649 -29.385 -64.445 1.00 58.11 A
ATOM 4033 CD GLU A 522 -38.180 -30.701 -64.814 1.00 59.28 A
ATOM 4034 OE1 GLU A 522 -39.274 -30.671 -65.399 1.00 59.75 A
ATOM 4035 OE2 GLU A 522 -37.543 -31.739 -64.538 1.00 60.18 A
ATOM 4036 C GLU A 522 -38.714 -25.990 -63.756 1.00 55.21 A
ATOM 4037 O GLU A 522 -39.763 -25.383 -63.685 1.00 54.57 A
ATOM 4038 N GLY A 523 -37.577 -25.466 -64.044 1.00 54.66 A
ATOM 4039 CA GLY A 523 -37.501 -24.104 -64.357 1.00 53.58 A
ATOM 4040 C GLY A 523 -36.165 -24.040 -63.685 1.00 52.61 A
ATOM 4041 O GLY A 523 -35.492 -25.066 -63.453 1.00 52.61 A
ATOM 4042 N PRO A 524 -35.738 -22.846 -63.382 1.00 51.10 A
ATOM 4043 CD PRO A 524 -36.494 -21.632 -63.741 1.00 50.37 A

ATOM 4044 CA PRO A 524 -34.502 -22.455 -62.734 1.00 50.25 A
ATOM 4045 CB PRO A 524 -34.354 -21.023 -63.176 1.00 50.56 A
ATOM 4046 CG PRO A 524 -35.387 -20.895 -64.348 1.00 50.33 A
ATOM 4047 C PRO A 524 -34.247 -22.598 -61.267 1.00 50.16 A
ATOM 4048 O PRO A 524 -34.949 -22.031 -60.406 1.00 50.27 A
ATOM 4049 N LEU A 525 -33.153 -23.268 -60.972 1.00 48.82 A
ATOM 4050 CA LEU A 525 -32.849 -23.504 -59.581 1.00 47.90 A
ATOM 4051 CB LEU A 525 -31.426 -24.042 -59.421 1.00 47.05 A
ATOM 4052 CG LEU A 525 -31.189 -24.574 -58.001 1.00 45.49 A
ATOM 4053 CD1 LEU A 525 -32.242 -25.595 -57.610 1.00 44.89 A
ATOM 4054 CD2 LEU A 525 -29.822 -25.204 -57.953 1.00 45.61 A
ATOM 4055 C LEU A 525 -33.077 -22.322 -58.653 1.00 47.76 A
ATOM 4056 O LEU A 525 -33.591 -22.535 -57.563 1.00 48.69 A
ATOM 4057 N HIS A 526 -32.785 -21.094 -59.087 1.00 46.79 A
ATOM 4058 CA HIS A 526 -32.961 -19.936 -58.222 1.00 45.59 A
ATOM 4059 CB HIS A 526 -31.947 -18.861 -58.597 1.00 45.30 A
ATOM 4060 CG HIS A 526 -32.295 -18.096 -59.836 1.00 44.77 A
ATOM 4061 CD2 HIS A 526 -32.860 -16.874 -59.990 1.00 44.34 A
ATOM 4062 ND1 HIS A 526 -32.053 -18.571 -61.108 1.00 43.66 A
ATOM 4063 CE1 HIS A 526 -32.453 -17.671 -61.990 1.00 44.60 A
ATOM 4064 NE2 HIS A 526 -32.946 -16.633 -61.338 1.00 43.72 A
ATOM 4065 C HIS A 526 -34.360 -19.342 -58.211 1.00 45.59 A
ATOM 4066 O HIS A 526 -34.578 -18.285 -57.626 1.00 44.23 A
ATOM 4067 N GLN A 527 -35.308 -20.002 -58.863 1.00 46.24 A
ATOM 4068 CA GLN A 527 -36.673 -19.495 -58.870 1.00 46.90 A
ATOM 4069 CB GLN A 527 -37.106 -19.102 -60.291 1.00 47.85 A
ATOM 4070 CG GLN A 527 -36.436 -17.828 -60.798 1.00 49.10 A
ATOM 4071 CD GLN A 527 -37.011 -17.349 -62.114 1.00 49.36 A
ATOM 4072 OE1 GLN A 527 -37.188 -18.139 -63.043 1.00 49.47 A
ATOM 4073 NE2 GLN A 527 -37.296 -16.050 -62.206 1.00 48.08 A
ATOM 4074 C GLN A 527 -37.578 -20.567 -58.307 1.00 45.85 A
ATOM 4075 O GLN A 527 -38.792 -20.390 -58.207 1.00 44.88 A
ATOM 4076 N CYS A 528 -36.960 -21.677 -57.920 1.00 45.84 A
ATOM 4077 CA CYS A 528 -37.693 -22.795 -57.361 1.00 46.87 A

ATOM 4078 C CYS A 528 -38.232 -22.443 -56.002 1.00 47.68 A
ATOM 4079 O CYS A 528 -37.652 -21.647 -55.277 1.00 48.41 A
ATOM 4080 CB CYS A 528 -36.813 -24.033 -57.234 1.00 46.41 A
ATOM 4081 SG CYS A 528 -37.487 -25.184 -56.001 1.00 44.80 A
ATOM 4082 N ASP A 529 -39.362 -23.047 -55.650 1.00 47.69 A
ATOM 4083 CA ASP A 529 -39.977 -22.824 -54.347 1.00 47.81 A
ATOM 4084 CB ASP A 529 -40.951 -21.646 -54.409 1.00 45.58 A
ATOM 4085 CG ASP A 529 -41.866 -21.582 -53.202 1.00 45.30 A
ATOM 4086 OD1 ASP A 529 -41.920 -22.572 -52.442 1.00 42.82 A
ATOM 4087 OD2 ASP A 529 -42.567 -20.585 -52.932 1.00 45.27 A
ATOM 4088 C ASP A 529 -40.698 -24.075 -53.856 1.00 48.85 A
ATOM 4089 O ASP A 529 -41.803 -24.383 -54.303 1.00 49.52 A
ATOM 4090 N ILE A 530 -40.066 -24.793 -52.933 1.00 49.34 A
ATOM 4091 CA ILE A 530 -40.539 -26.112 -52.530 1.00 50.37 A
ATOM 4092 CB ILE A 530 -39.408 -26.906 -51.849 1.00 50.65 A
ATOM 4093 CG2 ILE A 530 -39.679 -27.047 -50.359 1.00 50.70 A
ATOM 4094 CG1 ILE A 530 -39.251 -28.279 -52.504 1.00 51.03 A
ATOM 4095 CD1 ILE A 530 -37.815 -28.749 -52.602 1.00 50.05 A
ATOM 4096 C ILE A 530 -41.743 -26.007 -51.600 1.00 51.69 A
ATOM 4097 O ILE A 530 -41.941 -26.851 -50.726 1.00 51.88 A
ATOM 4098 N TYR A 531 -42.544 -24.965 -51.798 1.00 53.11 A
ATOM 4099 CA TYR A 531 -43.689 -24.697 -50.936 1.00 54.83 A
ATOM 4100 CB TYR A 531 -44.362 -23.383 -51.339 1.00 56.21 A
ATOM 4101 CG TYR A 531 -45.323 -22.841 -50.306 1.00 57.91 A
ATOM 4102 CD1 TYR A 531 -45.149 -23.116 -48.956 1.00 59.23 A
ATOM 4103 CE1 TYR A 531 -46.025 -22.622 -48.007 1.00 60.89 A
ATOM 4104 CD2 TYR A 531 -46.403 -22.053 -50.680 1.00 58.97 A
ATOM 4105 CE2 TYR A 531 -47.284 -21.555 -49.739 1.00 60.57 A
ATOM 4106 CZ TYR A 531 -47.090 -21.842 -48.405 1.00 61.35 A
ATOM 4107 OH TYR A 531 -47.965 -21.349 -47.463 1.00 62.27 A
ATOM 4108 C TYR A 531 -44.777 -25.757 -51.063 1.00 55.39 A
ATOM 4109 O TYR A 531 -44.991 -26.315 -52.139 1.00 56.36 A
ATOM 4110 N ARG A 532 -45.463 -26.029 -49.957 1.00 54.87 A
ATOM 4111 CA ARG A 532 -46.706 -26.790 -49.994 1.00 52.89 A

ATOM 4112 CB ARG A 532 -47.833 -26.086 -50.752 1.00 51.63 A
ATOM 4113 CG ARG A 532 -48.589 -25.059 -49.925 1.00 52.41 A
ATOM 4114 CD ARG A 532 -50.031 -24.850 -50.362 1.00 53.94 A
ATOM 4115 NE ARG A 532 -50.725 -23.887 -49.512 1.00 57.07 A
ATOM 4116 CZ ARG A 532 -51.287 -24.189 -48.350 1.00 59.29 A
ATOM 4117 NH1 ARG A 532 -51.240 -25.432 -47.891 1.00 60.08 A
ATOM 4118 NH2 ARG A 532 -51.898 -23.248 -47.643 1.00 60.79 A
ATOM 4119 C ARG A 532 -46.402 -28.138 -50.640 1.00 52.54 A
ATOM 4120 O ARG A 532 -47.308 -28.844 -51.082 1.00 53.93 A
ATOM 4121 N SER A 533 -45.120 -28.487 -50.692 1.00 51.49 A
ATOM 4122 CA SER A 533 -44.674 -29.651 -51.448 1.00 51.67 A
ATOM 4123 CB SER A 533 -43.401 -29.325 -52.232 1.00 52.51 A
ATOM 4124 OG SER A 533 -42.847 -30.493 -52.813 1.00 52.05 A
ATOM 4125 C SER A 533 -44.433 -30.844 -50.530 1.00 51.87 A
ATOM 4126 O SER A 533 -43.319 -31.056 -50.051 1.00 51.70 A
ATOM 4127 N THR A 534 -45.484 -31.621 -50.289 1.00 52.21 A
ATOM 4128 CA THR A 534 -45.424 -32.715 -49.326 1.00 53.00 A
ATOM 4129 CB THR A 534 -46.810 -33.388 -49.191 1.00 53.62 A
ATOM 4130 OG1 THR A 534 -47.120 -34.125 -50.382 1.00 53.90 A
ATOM 4131 CG2 THR A 534 -47.881 -32.319 -48.973 1.00 54.06 A
ATOM 4132 C THR A 534 -44.422 -33.762 -49.771 1.00 52.72 A
ATOM 4133 O THR A 534 -43.878 -34.539 -48.983 1.00 52.88 A
ATOM 4134 N LYS A 535 -44.206 -33.768 -51.072 1.00 53.47 A
ATOM 4135 CA LYS A 535 -43.310 -34.721 -51.712 1.00 53.94 A
ATOM 4136 CB LYS A 535 -43.642 -34.734 -53.217 1.00 52.54 A
ATOM 4137 CG LYS A 535 -45.157 -34.540 -53.490 1.00 49.85 A
ATOM 4138 CD LYS A 535 -45.534 -33.057 -53.671 1.00 49.61 A
ATOM 4139 CE LYS A 535 -47.051 -32.853 -53.879 1.00 49.59 A
ATOM 4140 NZ LYS A 535 -47.446 -31.399 -53.873 1.00 47.92 A
ATOM 4141 C LYS A 535 -41.824 -34.407 -51.434 1.00 54.72 A
ATOM 4142 O LYS A 535 -41.002 -35.316 -51.186 1.00 53.97 A
ATOM 4143 N ALA A 536 -41.513 -33.110 -51.453 1.00 55.33 A
ATOM 4144 CA ALA A 536 -40.178 -32.607 -51.196 1.00 55.43 A
ATOM 4145 CB ALA A 536 -40.111 -31.139 -51.597 1.00 55.29 A

ATOM 4146 C ALA A 536 -39.897 -32.769 -49.702 1.00 55.64 A
ATOM 4147 O ALA A 536 -38.897 -33.374 -49.305 1.00 55.54 A
ATOM 4148 N GLY A 537 -40.804 -32.241 -48.883 1.00 55.22 A
ATOM 4149 CA GLY A 537 -40.644 -32.313 -47.442 1.00 55.04 A
ATOM 4150 C GLY A 537 -40.358 -33.692 -46.865 1.00 54.59 A
ATOM 4151 O GLY A 537 -39.616 -33.831 -45.891 1.00 55.19 A
ATOM 4152 N ALA A 538 -40.936 -34.723 -47.464 1.00 53.06 A
ATOM 4153 CA ALA A 538 -40.749 -36.076 -46.966 1.00 51.94 A
ATOM 4154 CB ALA A 538 -41.680 -37.020 -47.686 1.00 52.39 A
ATOM 4155 C ALA A 538 -39.321 -36.524 -47.168 1.00 51.76 A
ATOM 4156 O ALA A 538 -38.807 -37.390 -46.452 1.00 52.18 A
ATOM 4157 N LYS A 539 -38.693 -35.927 -48.171 1.00 51.16 A
ATOM 4158 CA LYS A 539 -37.322 -36.254 -48.530 1.00 50.24 A
ATOM 4159 CB LYS A 539 -37.035 -35.675 -49.894 1.00 49.01 A
ATOM 4160 CG LYS A 539 -35.923 -36.336 -50.583 1.00 47.01 A
ATOM 4161 CD LYS A 539 -35.339 -35.366 -51.554 1.00 44.85 A
ATOM 4162 CE LYS A 539 -34.181 -36.019 -52.227 1.00 43.62 A
ATOM 4163 NZ LYS A 539 -34.470 -37.488 -52.234 1.00 43.89 A
ATOM 4164 C LYS A 539 -36.353 -35.667 -47.526 1.00 49.85 A
ATOM 4165 O LYS A 539 -35.321 -36.259 -47.177 1.00 48.81 A
ATOM 4166 N LEU A 540 -36.728 -34.480 -47.068 1.00 49.97 A
ATOM 4167 CA LEU A 540 -35.942 -33.730 -46.108 1.00 50.22 A
ATOM 4168 CB LEU A 540 -36.478 -32.307 -45.987 1.00 48.81 A
ATOM 4169 CG LEU A 540 -35.551 -31.192 -45.496 1.00 47.47 A
ATOM 4170 CD1 LEU A 540 -36.411 -30.156 -44.782 1.00 46.64 A
ATOM 4171 CD2 LEU A 540 -34.471 -31.729 -44.575 1.00 45.77 A
ATOM 4172 C LEU A 540 -36.047 -34.388 -44.756 1.00 50.71 A
ATOM 4173 O LEU A 540 -35.044 -34.629 -44.077 1.00 50.73 A
ATOM 4174 N ARG A 541 -37.276 -34.687 -44.363 1.00 50.31 A
ATOM 4175 CA ARG A 541 -37.452 -35.287 -43.059 1.00 50.18 A
ATOM 4176 CB ARG A 541 -38.914 -35.476 -42.729 1.00 51.35 A
ATOM 4177 CG ARG A 541 -39.140 -36.891 -42.236 1.00 54.03 A
ATOM 4178 CD ARG A 541 -40.456 -37.077 -41.572 1.00 56.25 A
ATOM 4179 NE ARG A 541 -41.491 -36.241 -42.167 1.00 58.07 A

ATOM 4180 CZ ARG A 541 -42.280 -36.597 -43.176 1.00 59.08 A
ATOM 4181 NH1 ARG A 541 -42.157 -37.798 -43.729 1.00 59.25 A
ATOM 4182 NH2 ARG A 541 -43.216 -35.752 -43.611 1.00 59.38 A
ATOM 4183 C ARG A 541 -36.738 -36.619 -42.853 1.00 49.07 A
ATOM 4184 O ARG A 541 -36.461 -37.006 -41.721 1.00 49.10 A
ATOM 4185 N ALA A 542 -36.450 -37.332 -43.931 1.00 48.76 A
ATOM 4186 CA ALA A 542 -35.779 -38.611 -43.783 1.00 49.31 A
ATOM 4187 CB ALA A 542 -35.742 -39.351 -45.104 1.00 49.01 A
ATOM 4188 C ALA A 542 -34.376 -38.329 -43.291 1.00 49.48 A
ATOM 4189 O ALA A 542 -33.824 -39.082 -42.503 1.00 49.91 A
ATOM 4190 N VAL A 543 -33.805 -37.216 -43.735 1.00 49.49 A
ATOM 4191 CA VAL A 543 -32.452 -36.852 -43.311 1.00 49.12 A
ATOM 4192 CB VAL A 543 -31.853 -35.726 -44.222 1.00 49.18 A
ATOM 4193 CG1 VAL A 543 -32.550 -35.730 -45.564 1.00 49.82 A
ATOM 4194 CG2 VAL A 543 -31.995 -34.351 -43.575 1.00 48.93 A
ATOM 4195 C VAL A 543 -32.499 -36.379 -41.855 1.00 48.79 A
ATOM 4196 O VAL A 543 -31.623 -36.704 -41.042 1.00 47.71 A
ATOM 4197 N LEU A 544 -33.542 -35.613 -41.541 1.00 47.69 A
ATOM 4198 CA LEU A 544 -33.725 -35.104 -40.195 1.00 46.33 A
ATOM 4199 CB LEU A 544 -35.003 -34.263 -40.116 1.00 44.01 A
ATOM 4200 CG LEU A 544 -34.943 -32.988 -40.945 1.00 42.97 A
ATOM 4201 CD1 LEU A 544 -36.140 -32.103 -40.664 1.00 42.60 A
ATOM 4202 CD2 LEU A 544 -33.665 -32.259 -40.596 1.00 43.72 A
ATOM 4203 C LEU A 544 -33.804 -36.273 -39.214 1.00 46.46 A
ATOM 4204 O LEU A 544 -33.000 -36.401 -38.283 1.00 46.51 A
ATOM 4205 N ALA A 545 -34.771 -37.147 -39.446 1.00 45.16 A
ATOM 4206 CA ALA A 545 -34.970 -38.290 -38.581 1.00 43.31 A
ATOM 4207 CB ALA A 545 -36.160 -39.095 -39.068 1.00 44.79 A
ATOM 4208 C ALA A 545 -33.758 -39.206 -38.441 1.00 41.75 A
ATOM 4209 O ALA A 545 -33.846 -40.257 -37.816 1.00 41.40 A
ATOM 4210 N ALA A 546 -32.614 -38.824 -38.995 1.00 40.31 A
ATOM 4211 CA ALA A 546 -31.448 -39.700 -38.887 1.00 40.04 A
ATOM 4212 CB ALA A 546 -30.730 -39.794 -40.232 1.00 39.67 A
ATOM 4213 C ALA A 546 -30.456 -39.304 -37.805 1.00 39.82 A

ATOM 4214 O ALA A 546 -29.693 -40.149 -37.314 1.00 38.20 A
ATOM 4215 N GLY A 547 -30.470 -38.023 -37.441 1.00 39.71 A
ATOM 4216 CA GLY A 547 -29.559 -37.536 -36.422 1.00 41.46 A
ATOM 4217 C GLY A 547 -28.116 -37.916 -36.710 1.00 42.94 A
ATOM 4218 O GLY A 547 -27.620 -37.682 -37.805 1.00 43.39 A
ATOM 4219 N ALA A 548 -27.434 -38.507 -35.735 1.00 44.03 A
ATOM 4220 CA ALA A 548 -26.041 -38.907 -35.921 1.00 43.50 A
ATOM 4221 CB ALA A 548 -25.189 -38.398 -34.749 1.00 44.89 A
ATOM 4222 C ALA A 548 -25.939 -40.416 -36.020 1.00 43.52 A
ATOM 4223 O ALA A 548 -24.849 -40.985 -35.906 1.00 44.62 A
ATOM 4224 N SER A 549 -27.084 -41.060 -36.238 1.00 45.90 A
ATOM 4225 CA SER A 549 -27.141 -42.523 -36.324 1.00 47.05 A
ATOM 4226 CB SER A 549 -28.593 -42.994 -36.441 1.00 47.67 A
ATOM 4227 OG SER A 549 -29.000 -43.042 -37.797 1.00 52.22 A
ATOM 4228 C SER A 549 -26.323 -43.087 -37.490 1.00 46.55 A
ATOM 4229 O SER A 549 -25.535 -44.019 -37.324 1.00 44.72 A
ATOM 4230 N ARG A 550 -26.702 -42.714 -38.740 1.00 47.15 A
ATOM 4231 CA ARG A 550 -25.939 -42.840 -40.063 1.00 45.33 A
ATOM 4232 CB ARG A 550 -25.556 -44.271 -40.536 1.00 45.80 A
ATOM 4233 CG ARG A 550 -26.671 -45.276 -41.038 1.00 44.79 A
ATOM 4234 CD ARG A 550 -26.867 -45.382 -42.551 1.00 45.75 A
ATOM 4235 NE ARG A 550 -28.019 -44.588 -43.025 1.00 47.90 A
ATOM 4236 CZ ARG A 550 -28.180 -44.149 -44.265 1.00 49.05 A
ATOM 4237 NH1 ARG A 550 -27.284 -44.432 -45.151 1.00 50.16 A
ATOM 4238 NH2 ARG A 550 -29.224 -43.426 -44.602 1.00 50.14 A
ATOM 4239 C ARG A 550 -24.897 -41.805 -40.452 1.00 44.04 A
ATOM 4240 O ARG A 550 -25.158 -40.669 -40.230 1.00 43.16 A
ATOM 4241 N PRO A 551 -23.766 -42.188 -41.051 1.00 44.59 A
ATOM 4242 CD PRO A 551 -23.394 -43.581 -41.352 1.00 43.62 A
ATOM 4243 CA PRO A 551 -22.714 -41.267 -41.516 1.00 45.07 A
ATOM 4244 CB PRO A 551 -21.749 -42.189 -42.253 1.00 43.63 A
ATOM 4245 CG PRO A 551 -21.893 -43.476 -41.531 1.00 43.47 A
ATOM 4246 C PRO A 551 -23.319 -40.205 -42.443 1.00 47.24 A
ATOM 4247 O PRO A 551 -24.118 -40.535 -43.325 1.00 47.46 A

ATOM 4248 N TRP A 552 -22.947 -38.940 -42.265 1.00 46.97 A
ATOM 4249 CA TRP A 552 -23.525 -37.899 -43.106 1.00 48.26 A
ATOM 4250 CB TRP A 552 -22.917 -36.519 -42.801 1.00 50.27 A
ATOM 4251 CG TRP A 552 -21.414 -36.333 -43.099 1.00 52.19 A
ATOM 4252 CD2 TRP A 552 -20.821 -35.885 -44.332 1.00 52.88 A
ATOM 4253 CE2 TRP A 552 -19.428 -35.778 -44.115 1.00 52.80 A
ATOM 4254 CE3 TRP A 552 -21.333 -35.560 -45.596 1.00 51.97 A
ATOM 4255 CD1 TRP A 552 -20.376 -36.483 -42.219 1.00 52.50 A
ATOM 4256 NE1 TRP A 552 -19.185 -36.147 -42.819 1.00 52.27 A
ATOM 4257 CZ2 TRP A 552 -18.545 -35.360 -45.113 1.00 52.69 A
ATOM 4258 CZ3 TRP A 552 -20.455 -35.148 -46.582 1.00 51.42 A
ATOM 4259 CH2 TRP A 552 -19.078 -35.051 -46.336 1.00 51.96 A
ATOM 4260 C TRP A 552 -23.290 -38.224 -44.569 1.00 47.96 A
ATOM 4261 O TRP A 552 -24.148 -38.040 -45.440 1.00 47.76 A
ATOM 4262 N GLN A 553 -22.100 -38.715 -44.841 1.00 48.94 A
ATOM 4263 CA GLN A 553 -21.747 -39.044 -46.201 1.00 49.76 A
ATOM 4264 CB GLN A 553 -20.347 -39.551 -46.195 1.00 48.62 A
ATOM 4265 CG GLN A 553 -19.756 -39.246 -44.877 1.00 49.62 A
ATOM 4266 CD GLN A 553 -18.315 -38.947 -44.982 1.00 50.98 A
ATOM 4267 OE1 GLN A 553 -17.921 -38.039 -45.709 1.00 51.63 A
ATOM 4268 NE2 GLN A 553 -17.494 -39.708 -44.261 1.00 51.11 A
ATOM 4269 C GLN A 553 -22.687 -40.043 -46.853 1.00 50.24 A
ATOM 4270 O GLN A 553 -22.689 -40.179 -48.066 1.00 51.45 A
ATOM 4271 N GLU A 554 -23.490 -40.733 -46.048 1.00 50.78 A
ATOM 4272 CA GLU A 554 -24.462 -41.691 -46.564 1.00 49.96 A
ATOM 4273 CB GLU A 554 -24.538 -42.939 -45.681 1.00 50.80 A
ATOM 4274 CG GLU A 554 -23.653 -44.079 -46.126 1.00 51.63 A
ATOM 4275 CD GLU A 554 -23.615 -45.204 -45.118 1.00 52.89 A
ATOM 4276 OE1 GLU A 554 -24.668 -45.505 -44.504 1.00 53.48 A
ATOM 4277 OE2 GLU A 554 -22.529 -45.796 -44.950 1.00 52.99 A
ATOM 4278 C GLU A 554 -25.804 -41.002 -46.588 1.00 49.13 A
ATOM 4279 O GLU A 554 -26.503 -41.048 -47.582 1.00 49.56 A
ATOM 4280 N VAL A 555 -26.153 -40.351 -45.488 1.00 47.92 A
ATOM 4281 CA VAL A 555 -27.427 -39.648 -45.411 1.00 46.97 A

ATOM 4282 CB VAL A 555 -27.585 -38.955 -44.055 1.00 46.96 A
ATOM 4283 CG1 VAL A 555 -29.036 -38.514 -43.845 1.00 46.53 A
ATOM 4284 CG2 VAL A 555 -27.126 -39.896 -42.970 1.00 47.70 A
ATOM 4285 C VAL A 555 -27.504 -38.604 -46.513 1.00 46.26 A
ATOM 4286 O VAL A 555 -28.591 -38.218 -46.946 1.00 45.46 A
ATOM 4287 N LEU A 556 -26.336 -38.149 -46.959 1.00 46.50 A
ATOM 4288 CA LEU A 556 -26.259 -37.157 -48.030 1.00 46.38 A
ATOM 4289 CB LEU A 556 -24.873 -36.495 -48.048 1.00 44.73 A
ATOM 4290 CG LEU A 556 -24.664 -35.375 -49.074 1.00 41.94 A
ATOM 4291 CD1 LEU A 556 -25.770 -34.343 -48.958 1.00 40.10 A
ATOM 4292 CD2 LEU A 556 -23.315 -34.731 -48.842 1.00 41.42 A
ATOM 4293 C LEU A 556 -26.539 -37.837 -49.378 1.00 46.75 A
ATOM 4294 O LEU A 556 -27.383 -37.374 -50.155 1.00 45.74 A
ATOM 4295 N LYS A 557 -25.840 -38.943 -49.639 1.00 47.19 A
ATOM 4296 CA LYS A 557 -26.028 -39.685 -50.878 1.00 47.08 A
ATOM 4297 CB LYS A 557 -25.221 -40.978 -50.867 1.00 46.46 A
ATOM 4298 CG LYS A 557 -25.111 -41.624 -52.242 1.00 46.98 A
ATOM 4299 CD LYS A 557 -23.986 -42.653 -52.270 1.00 47.05 A
ATOM 4300 CE LYS A 557 -23.515 -42.899 -53.684 1.00 46.61 A
ATOM 4301 NZ LYS A 557 -22.192 -43.577 -53.701 1.00 47.09 A
ATOM 4302 C LYS A 557 -27.504 -40.000 -51.088 1.00 47.63 A
ATOM 4303 O LYS A 557 -28.054 -39.674 -52.126 1.00 48.68 A
ATOM 4304 N ASP A 558 -28.152 -40.627 -50.113 1.00 47.84 A
ATOM 4305 CA ASP A 558 -29.573 -40.941 -50.240 1.00 48.06 A
ATOM 4306 CB ASP A 558 -30.133 -41.461 -48.912 1.00 50.06 A
ATOM 4307 CG ASP A 558 -29.796 -42.919 -48.659 1.00 52.25 A
ATOM 4308 OD1 ASP A 558 -28.599 -43.279 -48.723 1.00 52.85 A
ATOM 4309 OD2 ASP A 558 -30.735 -43.703 -48.386 1.00 53.92 A
ATOM 4310 C ASP A 558 -30.387 -39.714 -50.654 1.00 47.36 A
ATOM 4311 O ASP A 558 -31.253 -39.783 -51.519 1.00 47.89 A
ATOM 4312 N MET A 559 -30.102 -38.576 -50.044 1.00 46.41 A
ATOM 4313 CA MET A 559 -30.864 -37.377 -50.350 1.00 45.63 A
ATOM 4314 CB MET A 559 -30.836 -36.425 -49.158 1.00 44.34 A
ATOM 4315 CG MET A 559 -31.548 -35.122 -49.431 1.00 42.64 A

ATOM 4316 SD MET A 559 -30.871 -33.779 -48.476 1.00 43.40 A
ATOM 4317 CE MET A 559 -32.271 -32.650 -48.382 1.00 41.50 A
ATOM 4318 C MET A 559 -30.458 -36.600 -51.594 1.00 45.92 A
ATOM 4319 O MET A 559 -31.315 -36.142 -52.339 1.00 45.11 A
ATOM 4320 N VAL A 560 -29.159 -36.435 -51.817 1.00 46.31 A
ATOM 4321 CA VAL A 560 -28.698 -35.664 -52.965 1.00 46.52 A
ATOM 4322 CB VAL A 560 -27.708 -34.578 -52.496 1.00 46.80 A
ATOM 4323 CG1 VAL A 560 -27.090 -33.863 -53.684 1.00 48.49 A
ATOM 4324 CG2 VAL A 560 -28.443 -33.575 -51.632 1.00 47.09 A
ATOM 4325 C VAL A 560 -28.079 -36.473 -54.110 1.00 46.55 A
ATOM 4326 O VAL A 560 -28.072 -36.033 -55.257 1.00 46.12 A
ATOM 4327 N GLY A 561 -27.568 -37.655 -53.807 1.00 46.79 A
ATOM 4328 CA GLY A 561 -26.977 -38.470 -54.848 1.00 47.30 A
ATOM 4329 C GLY A 561 -25.473 -38.338 -54.850 1.00 48.32 A
ATOM 4330 O GLY A 561 -24.785 -38.914 -55.701 1.00 48.34 A
ATOM 4331 N LEU A 562 -24.951 -37.587 -53.883 1.00 48.71 A
ATOM 4332 CA LEU A 562 -23.512 -37.382 -53.802 1.00 48.13 A
ATOM 4333 CB LEU A 562 -23.176 -35.916 -54.103 1.00 47.90 A
ATOM 4334 CG LEU A 562 -22.310 -35.695 -55.349 1.00 47.26 A
ATOM 4335 CD1 LEU A 562 -22.042 -34.214 -55.502 1.00 46.90 A
ATOM 4336 CD2 LEU A 562 -20.992 -36.477 -55.232 1.00 46.65 A
ATOM 4337 C LEU A 562 -22.854 -37.804 -52.489 1.00 46.55 A
ATOM 4338 O LEU A 562 -23.401 -37.624 -51.405 1.00 46.29 A
ATOM 4339 N ASP A 563 -21.658 -38.362 -52.626 1.00 44.96 A
ATOM 4340 CA ASP A 563 -20.862 -38.828 -51.516 1.00 43.59 A
ATOM 4341 CB ASP A 563 -19.714 -39.680 -52.031 1.00 45.04 A
ATOM 4342 CG ASP A 563 -19.758 -41.088 -51.510 1.00 47.48 A
ATOM 4343 OD1 ASP A 563 -20.687 -41.828 -51.904 1.00 49.10 A
ATOM 4344 OD2 ASP A 563 -18.865 -41.454 -50.708 1.00 48.25 A
ATOM 4345 C ASP A 563 -20.264 -37.682 -50.726 1.00 43.06 A
ATOM 4346 O ASP A 563 -19.743 -37.910 -49.645 1.00 43.68 A
ATOM 4347 N ALA A 564 -20.311 -36.458 -51.252 1.00 41.75 A
ATOM 4348 CA ALA A 564 -19.715 -35.328 -50.539 1.00 39.92 A
ATOM 4349 CB ALA A 564 -18.208 -35.376 -50.695 1.00 39.82 A

ATOM 4350 C ALA A 564 -20.213 -33.935 -50.903 1.00 38.73 A
ATOM 4351 O ALA A 564 -21.185 -33.783 -51.638 1.00 37.49 A
ATOM 4352 N LEU A 565 -19.531 -32.922 -50.358 1.00 38.41 A
ATOM 4353 CA LEU A 565 -19.863 -31.513 -50.594 1.00 37.66 A
ATOM 4354 CB LEU A 565 -19.051 -30.598 -49.680 1.00 37.36 A
ATOM 4355 CG LEU A 565 -19.589 -30.377 -48.265 1.00 38.19 A
ATOM 4356 CD1 LEU A 565 -18.510 -29.761 -47.385 1.00 38.85 A
ATOM 4357 CD2 LEU A 565 -20.819 -29.478 -48.329 1.00 38.01 A
ATOM 4358 C LEU A 565 -19.537 -31.186 -52.027 1.00 37.44 A
ATOM 4359 O LEU A 565 -18.520 -31.645 -52.551 1.00 36.42 A
ATOM 4360 N ASP A 566 -20.392 -30.383 -52.652 1.00 37.21 A
ATOM 4361 CA ASP A 566 -20.216 -30.015 -54.049 1.00 37.23 A
ATOM 4362 CB ASP A 566 -21.028 -30.980 -54.922 1.00 39.92 A
ATOM 4363 CG ASP A 566 -20.633 -30.929 -56.371 1.00 41.52 A
ATOM 4364 OD1 ASP A 566 -19.443 -31.181 -56.675 1.00 43.01 A
ATOM 4365 OD2 ASP A 566 -21.521 -30.646 -57.198 1.00 43.00 A
ATOM 4366 C ASP A 566 -20.698 -28.587 -54.243 1.00 36.16 A
ATOM 4367 O ASP A 566 -21.782 -28.226 -53.791 1.00 34.09 A
ATOM 4368 N ALA A 567 -19.890 -27.774 -54.912 1.00 36.25 A
ATOM 4369 CA ALA A 567 -20.250 -26.378 -55.135 1.00 36.57 A
ATOM 4370 CB ALA A 567 -18.998 -25.529 -55.174 1.00 35.93 A
ATOM 4371 C ALA A 567 -21.020 -26.232 -56.436 1.00 36.99 A
ATOM 4372 O ALA A 567 -21.609 -25.186 -56.718 1.00 36.38 A
ATOM 4373 N ALA A 568 -21.019 -27.311 -57.216 1.00 36.93 A
ATOM 4374 CA ALA A 568 -21.684 -27.340 -58.510 1.00 36.61 A
ATOM 4375 CB ALA A 568 -21.719 -28.750 -59.026 1.00 36.29 A
ATOM 4376 C ALA A 568 -23.095 -26.765 -58.444 1.00 36.17 A
ATOM 4377 O ALA A 568 -23.426 -25.788 -59.131 1.00 37.38 A
ATOM 4378 N PRO A 569 -23.945 -27.340 -57.580 1.00 35.14 A
ATOM 4379 CD PRO A 569 -23.704 -28.420 -56.607 1.00 34.86 A
ATOM 4380 CA PRO A 569 -25.316 -26.836 -57.478 1.00 34.34 A
ATOM 4381 CB PRO A 569 -25.986 -27.831 -56.543 1.00 34.52 A
ATOM 4382 CG PRO A 569 -24.859 -28.256 -55.664 1.00 36.33 A
ATOM 4383 C PRO A 569 -25.428 -25.412 -57.004 1.00 33.23 A

ATOM 4384 O PRO A 569 -26.487 -24.795 -57.105 1.00 33.17 A
ATOM 4385 N LEU A 570 -24.326 -24.895 -56.488 1.00 33.10 A
ATOM 4386 CA LEU A 570 -24.287 -23.523 -56.003 1.00 33.65 A
ATOM 4387 CB LEU A 570 -23.216 -23.404 -54.910 1.00 34.37 A
ATOM 4388 CG LEU A 570 -22.603 -22.051 -54.509 1.00 34.76 A
ATOM 4389 CD1 LEU A 570 -23.638 -20.969 -54.426 1.00 33.40 A
ATOM 4390 CD2 LEU A 570 -21.914 -22.212 -53.167 1.00 35.81 A
ATOM 4391 C LEU A 570 -23.988 -22.583 -57.177 1.00 33.47 A
ATOM 4392 O LEU A 570 -24.589 -21.517 -57.324 1.00 32.95 A
ATOM 4393 N LEU A 571 -23.061 -23.011 -58.022 1.00 32.97 A
ATOM 4394 CA LEU A 571 -22.657 -22.246 -59.189 1.00 32.40 A
ATOM 4395 CB LEU A 571 -21.514 -22.983 -59.869 1.00 32.05 A
ATOM 4396 CG LEU A 571 -20.337 -23.210 -58.913 1.00 32.23 A
ATOM 4397 CD1 LEU A 571 -19.233 -24.028 -59.569 1.00 32.18 A
ATOM 4398 CD2 LEU A 571 -19.805 -21.858 -58.477 1.00 30.96 A
ATOM 4399 C LEU A 571 -23.846 -22.103 -60.130 1.00 32.95 A
ATOM 4400 O LEU A 571 -24.055 -21.088 -60.791 1.00 32.29 A
ATOM 4401 N LYS A 572 -24.634 -23.159 -60.139 1.00 34.72 A
ATOM 4402 CA LYS A 572 -25.836 -23.290 -60.946 1.00 36.95 A
ATOM 4403 CB LYS A 572 -26.193 -24.756 -60.914 1.00 38.54 A
ATOM 4404 CG LYS A 572 -27.571 -25.148 -61.247 1.00 39.43 A
ATOM 4405 CD LYS A 572 -27.470 -26.630 -61.208 1.00 39.95 A
ATOM 4406 CE LYS A 572 -28.437 -27.293 -62.126 1.00 40.40 A
ATOM 4407 NZ LYS A 572 -28.040 -28.718 -62.338 1.00 39.89 A
ATOM 4408 C LYS A 572 -26.988 -22.430 -60.440 1.00 37.42 A
ATOM 4409 O LYS A 572 -27.957 -22.138 -61.147 1.00 37.20 A
ATOM 4410 N TYR A 573 -26.873 -22.027 -59.189 1.00 37.92 A
ATOM 4411 CA TYR A 573 -27.898 -21.206 -58.593 1.00 37.61 A
ATOM 4412 CB TYR A 573 -27.810 -21.272 -57.064 1.00 36.20 A
ATOM 4413 CG TYR A 573 -28.863 -20.427 -56.366 1.00 34.61 A
ATOM 4414 CD1 TYR A 573 -30.074 -20.983 -55.960 1.00 34.39 A
ATOM 4415 CE1 TYR A 573 -31.053 -20.204 -55.355 1.00 34.03 A
ATOM 4416 CD2 TYR A 573 -28.660 -19.062 -56.147 1.00 32.57 A
ATOM 4417 CE2 TYR A 573 -29.632 -18.276 -55.551 1.00 31.89 A

ATOM 4418 CZ TYR A 573 -30.828 -18.845 -55.159 1.00 33.58 A
ATOM 4419 OH TYR A 573 -31.817 -18.036 -54.617 1.00 33.95 A
ATOM 4420 C TYR A 573 -27.678 -19.776 -59.052 1.00 38.56 A
ATOM 4421 O TYR A 573 -28.568 -19.152 -59.626 1.00 39.07 A
ATOM 4422 N PHE A 574 -26.468 -19.286 -58.810 1.00 39.16 A
ATOM 4423 CA PHE A 574 -26.110 -17.917 -59.157 1.00 40.00 A
ATOM 4424 CB PHE A 574 -24.964 -17.429 -58.262 1.00 40.48 A
ATOM 4425 CG PHE A 574 -25.318 -17.336 -56.820 1.00 40.05 A
ATOM 4426 CD1 PHE A 574 -24.986 -18.355 -55.935 1.00 39.91 A
ATOM 4427 CD2 PHE A 574 -25.971 -16.211 -56.338 1.00 40.07 A
ATOM 4428 CE1 PHE A 574 -25.296 -18.242 -54.587 1.00 39.20 A
ATOM 4429 CE2 PHE A 574 -26.284 -16.091 -55.003 1.00 39.09 A
ATOM 4430 CZ PHE A 574 -25.945 -17.102 -54.124 1.00 39.84 A
ATOM 4431 C PHE A 574 -25.636 -17.715 -60.577 1.00 40.03 A
ATOM 4432 O PHE A 574 -25.150 -16.628 -60.925 1.00 40.73 A
ATOM 4433 N GLN A 575 -25.741 -18.735 -61.398 1.00 38.81 A
ATOM 4434 CA GLN A 575 -25.193 -18.580 -62.723 1.00 37.84 A
ATOM 4435 CB GLN A 575 -25.697 -19.626 -63.659 1.00 36.50 A
ATOM 4436 CG GLN A 575 -24.623 -19.926 -64.601 1.00 36.01 A
ATOM 4437 CD GLN A 575 -24.549 -21.385 -64.738 1.00 36.34 A
ATOM 4438 OE1 GLN A 575 -25.577 -22.020 -64.962 1.00 37.03 A
ATOM 4439 NE2 GLN A 575 -23.366 -21.955 -64.557 1.00 35.24 A
ATOM 4440 C GLN A 575 -25.325 -17.286 -63.482 1.00 37.59 A
ATOM 4441 O GLN A 575 -24.346 -16.744 -63.978 1.00 37.28 A
ATOM 4442 N PRO A 576 -26.556 -16.780 -63.609 1.00 37.47 A
ATOM 4443 CD PRO A 576 -27.839 -17.316 -63.119 1.00 38.20 A
ATOM 4444 CA PRO A 576 -26.756 -15.536 -64.348 1.00 37.01 A
ATOM 4445 CB PRO A 576 -28.248 -15.277 -64.207 1.00 36.40 A
ATOM 4446 CG PRO A 576 -28.825 -16.659 -64.038 1.00 37.62 A
ATOM 4447 C PRO A 576 -25.926 -14.373 -63.858 1.00 36.73 A
ATOM 4448 O PRO A 576 -25.108 -13.843 -64.601 1.00 37.21 A
ATOM 4449 N VAL A 577 -26.139 -13.969 -62.614 1.00 37.14 A
ATOM 4450 CA VAL A 577 -25.416 -12.830 -62.054 1.00 36.90 A
ATOM 4451 CB VAL A 577 -25.931 -12.514 -60.643 1.00 37.62 A

ATOM 4452 CG1 VAL A 577 -25.399 -13.546 -59.661 1.00 38.83 A
ATOM 4453 CG2 VAL A 577 -25.522 -11.114 -60.237 1.00 38.33 A
ATOM 4454 C VAL A 577 -23.915 -13.119 -62.013 1.00 36.43 A
ATOM 4455 O VAL A 577 -23.096 -12.193 -62.036 1.00 34.63 A
ATOM 4456 N THR A 578 -23.564 -14.407 -61.949 1.00 35.41 A
ATOM 4457 CA THR A 578 -22.162 -14.817 -61.934 1.00 35.05 A
ATOM 4458 CB THR A 578 -22.006 -16.354 -61.907 1.00 36.94 A
ATOM 4459 OG1 THR A 578 -22.272 -16.846 -60.588 1.00 36.52 A
ATOM 4460 CG2 THR A 578 -20.588 -16.757 -62.341 1.00 37.48 A
ATOM 4461 C THR A 578 -21.493 -14.322 -63.202 1.00 33.33 A
ATOM 4462 O THR A 578 -20.377 -13.823 -63.181 1.00 35.14 A
ATOM 4463 N GLN A 579 -22.185 -14.486 -64.317 1.00 30.44 A
ATOM 4464 CA GLN A 579 -21.655 -14.061 -65.589 1.00 27.05 A
ATOM 4465 CB GLN A 579 -22.389 -14.790 -66.712 1.00 24.86 A
ATOM 4466 CG GLN A 579 -21.496 -15.652 -67.587 1.00 24.70 A
ATOM 4467 CD GLN A 579 -20.847 -16.786 -66.851 1.00 25.42 A
ATOM 4468 OE1 GLN A 579 -21.526 -17.611 -66.232 1.00 26.71 A
ATOM 4469 NE2 GLN A 579 -19.518 -16.852 -66.920 1.00 26.10 A
ATOM 4470 C GLN A 579 -21.830 -12.556 -65.708 1.00 25.65 A
ATOM 4471 O GLN A 579 -20.955 -11.865 -66.209 1.00 26.98 A
ATOM 4472 N TRP A 580 -22.954 -12.048 -65.219 1.00 24.25 A
ATOM 4473 CA TRP A 580 -23.249 -10.624 -65.293 1.00 23.72 A
ATOM 4474 CB TRP A 580 -24.615 -10.332 -64.695 1.00 24.18 A
ATOM 4475 CG TRP A 580 -24.986 -8.880 -64.772 1.00 24.51 A
ATOM 4476 CD2 TRP A 580 -24.733 -7.873 -63.786 1.00 25.82 A
ATOM 4477 CE2 TRP A 580 -25.215 -6.655 -64.307 1.00 24.58 A
ATOM 4478 CE3 TRP A 580 -24.146 -7.881 -62.511 1.00 28.22 A
ATOM 4479 CD1 TRP A 580 -25.588 -8.252 -65.807 1.00 22.89 A
ATOM 4480 NE1 TRP A 580 -25.730 -6.920 -65.543 1.00 22.79 A
ATOM 4481 CZ2 TRP A 580 -25.133 -5.450 -63.605 1.00 24.82 A
ATOM 4482 CZ3 TRP A 580 -24.064 -6.678 -61.808 1.00 28.70 A
ATOM 4483 CH2 TRP A 580 -24.558 -5.480 -62.361 1.00 27.73 A
ATOM 4484 C TRP A 580 -22.223 -9.748 -64.595 1.00 25.48 A
ATOM 4485 O TRP A 580 -21.742 -8.774 -65.168 1.00 25.20 A

ATOM 4486 N LEU A 581 -21.917 -10.073 -63.341 1.00 27.57 A
ATOM 4487 CA LEU A 581 -20.942 -9.307 -62.567 1.00 26.98 A
ATOM 4488 CB LEU A 581 -20.793 -9.920 -61.173 1.00 26.82 A
ATOM 4489 CG LEU A 581 -21.896 -9.560 -60.170 1.00 25.05 A
ATOM 4490 CD1 LEU A 581 -21.738 -10.375 -58.908 1.00 21.58 A
ATOM 4491 CD2 LEU A 581 -21.834 -8.073 -59.857 1.00 23.93 A
ATOM 4492 C LEU A 581 -19.605 -9.337 -63.300 1.00 28.08 A
ATOM 4493 O LEU A 581 -18.957 -8.311 -63.555 1.00 28.35 A
ATOM 4494 N GLN A 582 -19.218 -10.547 -63.656 1.00 28.05 A
ATOM 4495 CA GLN A 582 -17.984 -10.772 -64.364 1.00 27.95 A
ATOM 4496 CB GLN A 582 -17.945 -12.219 -64.744 1.00 27.25 A
ATOM 4497 CG GLN A 582 -16.664 -12.867 -64.481 1.00 27.29 A
ATOM 4498 CD GLN A 582 -16.741 -14.300 -64.909 1.00 27.75 A
ATOM 4499 OE1 GLN A 582 -15.792 -14.848 -65.472 1.00 29.80 A
ATOM 4500 NE2 GLN A 582 -17.893 -14.921 -64.667 1.00 26.44 A
ATOM 4501 C GLN A 582 -17.837 -9.901 -65.606 1.00 29.01 A
ATOM 4502 O GLN A 582 -16.765 -9.382 -65.905 1.00 30.29 A
ATOM 4503 N GLU A 583 -18.935 -9.743 -66.330 1.00 28.94 A
ATOM 4504 CA GLU A 583 -18.932 -8.925 -67.535 1.00 27.41 A
ATOM 4505 CB GLU A 583 -20.178 -9.206 -68.395 1.00 27.96 A
ATOM 4506 CG GLU A 583 -20.303 -8.303 -69.634 1.00 31.84 A
ATOM 4507 CD GLU A 583 -19.449 -8.743 -70.826 1.00 32.16 A
ATOM 4508 OE1 GLU A 583 -18.354 -9.330 -70.643 1.00 31.03 A
ATOM 4509 OE2 GLU A 583 -19.885 -8.475 -71.961 1.00 34.08 A
ATOM 4510 C GLU A 583 -18.857 -7.442 -67.191 1.00 26.19 A
ATOM 4511 O GLU A 583 -18.187 -6.684 -67.874 1.00 27.32 A
ATOM 4512 N GLN A 584 -19.520 -7.029 -66.116 1.00 24.80 A
ATOM 4513 CA GLN A 584 -19.508 -5.614 -65.713 1.00 23.12 A
ATOM 4514 CB GLN A 584 -20.536 -5.342 -64.642 1.00 23.20 A
ATOM 4515 CG GLN A 584 -21.933 -5.455 -65.093 1.00 25.69 A
ATOM 4516 CD GLN A 584 -22.485 -4.117 -65.536 1.00 27.04 A
ATOM 4517 OE1 GLN A 584 -22.628 -3.189 -64.729 1.00 25.73 A
ATOM 4518 NE2 GLN A 584 -22.790 -3.999 -66.828 1.00 27.48 A
ATOM 4519 C GLN A 584 -18.219 -5.087 -65.167 1.00 23.04 A

ATOM 4520 O GLN A 584 -17.917 -3.909 -65.312 1.00 22.14 A
ATOM 4521 N ASN A 585 -17.468 -5.952 -64.501 1.00 23.75 A
ATOM 4522 CA ASN A 585 -16.226 -5.497 -63.906 1.00 24.81 A
ATOM 4523 CB ASN A 585 -15.679 -6.506 -62.883 1.00 26.04 A
ATOM 4524 CG ASN A 585 -16.510 -6.560 -61.615 1.00 25.81 A
ATOM 4525 OD1 ASN A 585 -16.955 -5.522 -61.108 1.00 26.89 A
ATOM 4526 ND2 ASN A 585 -16.716 -7.765 -61.091 1.00 24.05 A
ATOM 4527 C ASN A 585 -15.227 -5.259 -64.996 1.00 24.73 A
ATOM 4528 O ASN A 585 -14.564 -4.217 -65.043 1.00 25.57 A
ATOM 4529 N GLN A 586 -15.148 -6.230 -65.894 1.00 24.36 A
ATOM 4530 CA GLN A 586 -14.238 -6.134 -67.014 1.00 23.49 A
ATOM 4531 CB GLN A 586 -14.437 -7.336 -67.936 1.00 23.76 A
ATOM 4532 CG GLN A 586 -13.208 -7.721 -68.717 1.00 25.72 A
ATOM 4533 CD GLN A 586 -13.118 -6.994 -70.046 1.00 26.67 A
ATOM 4534 OE1 GLN A 586 -14.133 -6.805 -70.724 1.00 26.19 A
ATOM 4535 NE2 GLN A 586 -11.899 -6.595 -70.436 1.00 26.57 A
ATOM 4536 C GLN A 586 -14.476 -4.828 -67.764 1.00 22.34 A
ATOM 4537 O GLN A 586 -13.611 -3.958 -67.804 1.00 22.05 A
ATOM 4538 N GLN A 587 -15.658 -4.668 -68.340 1.00 21.05 A
ATOM 4539 CA GLN A 587 -15.909 -3.438 -69.075 1.00 20.99 A
ATOM 4540 CB GLN A 587 -17.383 -3.295 -69.462 1.00 21.02 A
ATOM 4541 CG GLN A 587 -18.162 -4.560 -69.383 1.00 21.47 A
ATOM 4542 CD GLN A 587 -19.322 -4.571 -70.326 1.00 23.33 A
ATOM 4543 OE1 GLN A 587 -19.172 -4.938 -71.480 1.00 27.32 A
ATOM 4544 NE2 GLN A 587 -20.489 -4.155 -69.852 1.00 24.21 A
ATOM 4545 C GLN A 587 -15.466 -2.222 -68.267 1.00 20.89 A
ATOM 4546 O GLN A 587 -14.691 -1.399 -68.763 1.00 21.08 A
ATOM 4547 N ASN A 588 -15.930 -2.120 -67.020 1.00 20.04 A
ATOM 4548 CA ASN A 588 -15.550 -0.993 -66.182 1.00 18.04 A
ATOM 4549 CB ASN A 588 -16.505 -0.853 -65.017 1.00 18.11 A
ATOM 4550 CG ASN A 588 -17.812 -0.250 -65.429 1.00 20.06 A
ATOM 4551 OD1 ASN A 588 -18.013 0.968 -65.332 1.00 21.10 A
ATOM 4552 ND2 ASN A 588 -18.713 -1.093 -65.926 1.00 21.37 A
ATOM 4553 C ASN A 588 -14.124 -1.023 -65.678 1.00 17.52 A

ATOM 4554 O ASN A 588 -13.786 -0.294 -64.786 1.00 18.95 A
ATOM 4555 N GLY A 589 -13.299 -1.879 -66.257 1.00 18.49 A
ATOM 4556 CA GLY A 589 -11.888 -1.959 -65.909 1.00 19.45 A
ATOM 4557 C GLY A 589 -11.483 -2.240 -64.476 1.00 19.67 A
ATOM 4558 O GLY A 589 -10.386 -1.894 -64.032 1.00 20.64 A
ATOM 4559 N GLU A 590 -12.359 -2.896 -63.739 1.00 19.76 A
ATOM 4560 CA GLU A 590 -12.036 -3.226 -62.364 1.00 19.21 A
ATOM 4561 CB GLU A 590 -13.219 -3.866 -61.680 1.00 18.69 A
ATOM 4562 CG GLU A 590 -13.541 -3.093 -60.490 1.00 19.19 A
ATOM 4563 CD GLU A 590 -14.275 -1.844 -60.896 1.00 19.92 A
ATOM 4564 OE1 GLU A 590 -13.718 -0.724 -60.824 1.00 19.96 A
ATOM 4565 OE2 GLU A 590 -15.431 -2.025 -61.318 1.00 21.81 A
ATOM 4566 C GLU A 590 -10.850 -4.135 -62.128 1.00 18.58 A
ATOM 4567 O GLU A 590 -10.367 -4.803 -63.025 1.00 18.46 A
ATOM 4568 N VAL A 591 -10.395 -4.169 -60.888 1.00 18.94 A
ATOM 4569 CA VAL A 591 -9.292 -5.040 -60.547 1.00 19.79 A
ATOM 4570 CB VAL A 591 -8.110 -4.277 -59.918 1.00 19.25 A
ATOM 4571 CG1 VAL A 591 -6.998 -5.251 -59.564 1.00 19.12 A
ATOM 4572 CG2 VAL A 591 -7.585 -3.264 -60.897 1.00 20.21 A
ATOM 4573 C VAL A 591 -9.780 -6.077 -59.553 1.00 20.15 A
ATOM 4574 O VAL A 591 -10.122 -5.748 -58.429 1.00 21.49 A
ATOM 4575 N LEU A 592 -9.836 -7.332 -59.964 1.00 20.76 A
ATOM 4576 CA LEU A 592 -10.267 -8.363 -59.041 1.00 21.17 A
ATOM 4577 CB LEU A 592 -10.532 -9.685 -59.773 1.00 19.89 A
ATOM 4578 CG LEU A 592 -11.591 -9.582 -60.864 1.00 19.77 A
ATOM 4579 CD1 LEU A 592 -11.826 -10.947 -61.479 1.00 20.68 A
ATOM 4580 CD2 LEU A 592 -12.875 -9.014 -60.285 1.00 18.95 A
ATOM 4581 C LEU A 592 -9.165 -8.549 -58.001 1.00 21.64 A
ATOM 4582 O LEU A 592 -8.000 -8.818 -58.335 1.00 21.11 A
ATOM 4583 N GLY A 593 -9.555 -8.384 -56.736 1.00 21.69 A
ATOM 4584 CA GLY A 593 -8.626 -8.532 -55.626 1.00 20.70 A
ATOM 4585 C GLY A 593 -8.032 -7.234 -55.068 1.00 19.39 A
ATOM 4586 O GLY A 593 -8.429 -6.139 -55.442 1.00 19.23 A
ATOM 4587 N TRP A 594 -7.081 -7.359 -54.154 1.00 18.86 A

ATOM 4588 CA TRP A 594 -6.405 -6.212 -53.557 1.00 17.99 A
ATOM 4589 CB TRP A 594 -6.744 -6.045 -52.056 1.00 15.33 A
ATOM 4590 CG TRP A 594 -7.078 -7.324 -51.345 1.00 13.19 A
ATOM 4591 CD2 TRP A 594 -8.220 -8.140 -51.589 1.00 9.81 A
ATOM 4592 CE2 TRP A 594 -8.113 -9.277 -50.759 1.00 9.83 A
ATOM 4593 CE3 TRP A 594 -9.325 -8.024 -52.435 1.00 8.56 A
ATOM 4594 CD1 TRP A 594 -6.337 -7.970 -50.389 1.00 12.44 A
ATOM 4595 NE1 TRP A 594 -6.955 -9.147 -50.034 1.00 11.36 A
ATOM 4596 CZ2 TRP A 594 -9.083 -10.300 -50.754 1.00 8.27 A
ATOM 4597 CZ3 TRP A 594 -10.284 -9.034 -52.431 1.00 7.89 A
ATOM 4598 CH2 TRP A 594 -10.157 -10.156 -51.596 1.00 7.54 A
ATOM 4599 C TRP A 594 -4.921 -6.436 -53.720 1.00 18.11 A
ATOM 4600 O TRP A 594 -4.351 -7.350 -53.127 1.00 19.99 A
ATOM 4601 N PRO A 595 -4.303 -5.664 -54.611 1.00 16.51 A
ATOM 4602 CD PRO A 595 -4.998 -5.187 -55.811 1.00 15.94 A
ATOM 4603 CA PRO A 595 -2.874 -5.773 -54.854 1.00 14.72 A
ATOM 4604 CB PRO A 595 -2.743 -5.413 -56.325 1.00 14.66 A
ATOM 4605 CG PRO A 595 -3.898 -4.540 -56.579 1.00 15.73 A
ATOM 4606 C PRO A 595 -2.196 -4.804 -53.919 1.00 14.82 A
ATOM 4607 O PRO A 595 -1.060 -5.027 -53.501 1.00 13.95 A
ATOM 4608 N GLU A 596 -2.914 -3.736 -53.573 1.00 14.53 A
ATOM 4609 CA GLU A 596 -2.392 -2.751 -52.645 1.00 15.24 A
ATOM 4610 CB GLU A 596 -2.898 -1.341 -52.974 1.00 17.86 A
ATOM 4611 CG GLU A 596 -2.232 -0.703 -54.182 1.00 23.83 A
ATOM 4612 CD GLU A 596 -2.571 0.761 -54.350 1.00 26.46 A
ATOM 4613 OE1 GLU A 596 -3.134 1.345 -53.393 1.00 29.87 A
ATOM 4614 OE2 GLU A 596 -2.264 1.319 -55.431 1.00 28.19 A
ATOM 4615 C GLU A 596 -2.800 -3.127 -51.218 1.00 14.44 A
ATOM 4616 O GLU A 596 -3.462 -2.370 -50.522 1.00 13.51 A
ATOM 4617 N TYR A 597 -2.430 -4.332 -50.806 1.00 14.28 A
ATOM 4618 CA TYR A 597 -2.700 -4.798 -49.457 1.00 13.29 A
ATOM 4619 CB TYR A 597 -2.131 -6.215 -49.281 1.00 13.32 A
ATOM 4620 CG TYR A 597 -0.626 -6.266 -49.364 1.00 13.04 A
ATOM 4621 CD1 TYR A 597 0.152 -5.878 -48.291 1.00 14.71 A

ATOM 4622 CE1 TYR A 597 1.539 -5.814 -48.382 1.00 15.62 A
ATOM 4623 CD2 TYR A 597 0.023 -6.606 -50.539 1.00 14.55 A
ATOM 4624 CE2 TYR A 597 1.428 -6.544 -50.636 1.00 15.60 A
ATOM 4625 CZ TYR A 597 2.168 -6.143 -49.549 1.00 14.49 A
ATOM 4626 OH TYR A 597 3.532 -6.040 -49.600 1.00 15.84 A
ATOM 4627 C TYR A 597 -1.858 -3.798 -48.696 1.00 13.67 A
ATOM 4628 O TYR A 597 -1.051 -3.107 -49.314 1.00 17.20 A
ATOM 4629 N GLN A 598 -2.004 -3.703 -47.387 1.00 10.84 A
ATOM 4630 CA GLN A 598 -1.198 -2.741 -46.634 1.00 10.57 A
ATOM 4631 CB GLN A 598 0.255 -2.706 -47.161 1.00 6.06 A
ATOM 4632 CG GLN A 598 1.179 -1.663 -46.508 1.00 8.26 A
ATOM 4633 CD GLN A 598 2.656 -1.798 -46.931 1.00 9.22 A
ATOM 4634 OE1 GLN A 598 3.521 -1.051 -46.479 1.00 8.16 A
ATOM 4635 NE2 GLN A 598 2.937 -2.759 -47.790 1.00 11.83 A
ATOM 4636 C GLN A 598 -1.801 -1.337 -46.657 1.00 10.80 A
ATOM 4637 O GLN A 598 -1.369 -0.475 -45.909 1.00 15.12 A
ATOM 4638 N TRP A 599 -2.809 -1.104 -47.487 1.00 10.02 A
ATOM 4639 CA TRP A 599 -3.424 0.216 -47.548 1.00 11.03 A
ATOM 4640 CB TRP A 599 -4.104 0.463 -48.891 1.00 7.32 A
ATOM 4641 CG TRP A 599 -4.892 1.761 -48.911 1.00 2.13 A
ATOM 4642 CD2 TRP A 599 -6.304 1.920 -48.690 1.00 1.00 A
ATOM 4643 CE2 TRP A 599 -6.581 3.302 -48.736 1.00 1.00 A
ATOM 4644 CE3 TRP A 599 -7.362 1.026 -48.452 1.00 1.00 A
ATOM 4645 CD1 TRP A 599 -4.392 3.013 -49.077 1.00 1.57 A
ATOM 4646 NE1 TRP A 599 -5.396 3.944 -48.976 1.00 1.00 A
ATOM 4647 CZ2 TRP A 599 -7.878 3.823 -48.551 1.00 1.00 A
ATOM 4648 CZ3 TRP A 599 -8.653 1.541 -48.266 1.00 1.00 A
ATOM 4649 CH2 TRP A 599 -8.897 2.929 -48.316 1.00 1.00 A
ATOM 4650 C TRP A 599 -4.489 0.371 -46.491 1.00 14.25 A
ATOM 4651 O TRP A 599 -5.280 -0.553 -46.278 1.00 17.77 A
ATOM 4652 N HIS A 600 -4.539 1.543 -45.856 1.00 14.78 A
ATOM 4653 CA HIS A 600 -5.551 1.801 -44.842 1.00 14.29 A
ATOM 4654 CB HIS A 600 -4.973 1.683 -43.423 1.00 17.51 A
ATOM 4655 CG HIS A 600 -4.649 0.279 -43.006 1.00 20.21 A

ATOM 4656 CD2 HIS A 600 -5.313 -0.589 -42.204 1.00 20.54 A
ATOM 4657 ND1 HIS A 600 -3.528 -0.393 -43.450 1.00 21.92 A
ATOM 4658 CE1 HIS A 600 -3.518 -1.613 -42.941 1.00 22.11 A
ATOM 4659 NE2 HIS A 600 -4.590 -1.757 -42.181 1.00 20.94 A
ATOM 4660 C HIS A 600 -6.128 3.176 -45.029 1.00 13.64 A
ATOM 4661 O HIS A 600 -5.426 4.116 -45.407 1.00 11.65 A
ATOM 4662 N PRO A 601 -7.424 3.314 -44.758 1.00 14.43 A
ATOM 4663 CD PRO A 601 -8.369 2.294 -44.277 1.00 14.41 A
ATOM 4664 CA PRO A 601 -8.106 4.593 -44.896 1.00 16.13 A
ATOM 4665 CB PRO A 601 -9.573 4.199 -44.813 1.00 15.15 A
ATOM 4666 CG PRO A 601 -9.538 3.142 -43.816 1.00 13.09 A
ATOM 4667 C PRO A 601 -7.745 5.510 -43.764 1.00 18.22 A
ATOM 4668 O PRO A 601 -7.376 5.054 -42.684 1.00 19.37 A
ATOM 4669 N PRO A 602 -7.822 6.818 -44.008 1.00 19.85 A
ATOM 4670 CD PRO A 602 -7.845 7.466 -45.327 1.00 20.19 A
ATOM 4671 CA PRO A 602 -7.502 7.786 -42.970 1.00 20.82 A
ATOM 4672 CB PRO A 602 -7.064 9.002 -43.751 1.00 19.20 A
ATOM 4673 CG PRO A 602 -7.936 8.937 -44.952 1.00 19.60 A
ATOM 4674 C PRO A 602 -8.708 8.061 -42.162 1.00 22.58 A
ATOM 4675 O PRO A 602 -9.844 7.927 -42.660 1.00 24.11 A
ATOM 4676 N LEU A 603 -8.458 8.473 -40.946 1.00 24.16 A
ATOM 4677 CA LEU A 603 -9.520 8.774 -40.050 1.00 25.66 A
ATOM 4678 CB LEU A 603 -8.985 9.351 -38.743 1.00 24.77 A
ATOM 4679 CG LEU A 603 -8.177 8.523 -37.807 1.00 23.68 A
ATOM 4680 CD1 LEU A 603 -7.660 9.390 -36.665 1.00 22.98 A
ATOM 4681 CD2 LEU A 603 -9.121 7.497 -37.323 1.00 23.04 A
ATOM 4682 C LEU A 603 -10.249 9.926 -40.620 1.00 27.45 A
ATOM 4683 O LEU A 603 -9.759 10.610 -41.480 1.00 27.83 A
ATOM 4684 N PRO A 604 -11.437 10.176 -40.084 1.00 30.49 A
ATOM 4685 CD PRO A 604 -12.345 9.047 -39.883 1.00 31.45 A
ATOM 4686 CA PRO A 604 -12.213 11.296 -40.528 1.00 33.74 A
ATOM 4687 CB PRO A 604 -13.467 11.206 -39.652 1.00 32.51 A
ATOM 4688 CG PRO A 604 -13.753 9.736 -39.728 1.00 32.28 A
ATOM 4689 C PRO A 604 -11.354 12.476 -40.239 1.00 37.73 A

ATOM 4690 O PRO A 604 -10.171 12.368 -40.104 1.00 39.57 A
ATOM 4691 N ASP A 605 -12.024 13.602 -40.186 1.00 41.82 A
ATOM 4692 CA ASP A 605 -11.396 14.903 -40.045 1.00 45.34 A
ATOM 4693 CB ASP A 605 -12.309 15.848 -40.747 1.00 47.73 A
ATOM 4694 CG ASP A 605 -11.977 15.937 -42.244 1.00 49.64 A
ATOM 4695 OD1 ASP A 605 -12.402 15.119 -43.132 1.00 51.46 A
ATOM 4696 OD2 ASP A 605 -11.188 16.855 -42.527 1.00 50.18 A
ATOM 4697 C ASP A 605 -10.816 15.509 -38.742 1.00 46.53 A
ATOM 4698 O ASP A 605 -9.814 16.248 -38.752 1.00 46.38 A
ATOM 4699 N ASN A 606 -11.548 15.295 -37.662 1.00 48.38 A
ATOM 4700 CA ASN A 606 -11.111 15.565 -36.299 1.00 49.24 A
ATOM 4701 CB ASN A 606 -11.290 16.979 -35.776 1.00 50.76 A
ATOM 4702 CG ASN A 606 -9.987 17.767 -35.891 1.00 53.11 A
ATOM 4703 OD1 ASN A 606 -8.880 17.208 -35.780 1.00 54.37 A
ATOM 4704 ND2 ASN A 606 -10.108 19.053 -36.146 1.00 54.82 A
ATOM 4705 C ASN A 606 -11.951 14.529 -35.633 1.00 49.40 A
ATOM 4706 O ASN A 606 -13.161 14.638 -35.477 1.00 49.80 A
ATOM 4707 N TYR A 607 -11.250 13.446 -35.337 1.00 48.42 A
ATOM 4708 CA TYR A 607 -11.875 12.300 -34.718 1.00 47.93 A
ATOM 4709 CB TYR A 607 -11.528 11.069 -35.572 1.00 44.06 A
ATOM 4710 CG TYR A 607 -12.428 9.874 -35.400 1.00 39.59 A
ATOM 4711 CD1 TYR A 607 -13.776 9.946 -35.717 1.00 37.70 A
ATOM 4712 CE1 TYR A 607 -14.608 8.855 -35.551 1.00 36.35 A
ATOM 4713 CD2 TYR A 607 -11.923 8.665 -34.910 1.00 37.64 A
ATOM 4714 CE2 TYR A 607 -12.743 7.564 -34.738 1.00 36.04 A
ATOM 4715 CZ TYR A 607 -14.091 7.668 -35.059 1.00 36.65 A
ATOM 4716 OH TYR A 607 -14.927 6.589 -34.869 1.00 36.19 A
ATOM 4717 C TYR A 607 -11.423 12.009 -33.287 1.00 50.36 A
ATOM 4718 O TYR A 607 -10.240 11.954 -32.981 1.00 51.37 A
ATOM 4719 N PRO A 608 -12.403 11.795 -32.384 1.00 51.76 A
ATOM 4720 CD PRO A 608 -12.100 10.955 -31.196 1.00 52.16 A
ATOM 4721 CA PRO A 608 -13.821 11.678 -32.735 1.00 53.64 A
ATOM 4722 CB PRO A 608 -14.166 10.287 -32.305 1.00 52.45 A
ATOM 4723 CG PRO A 608 -13.360 10.145 -31.018 1.00 52.59 A

ATOM 4724 C PRO A 608 -14.797 12.709 -32.125 1.00 56.66 A
ATOM 4725 O PRO A 608 -15.267 12.514 -31.012 1.00 57.88 A
ATOM 4726 N ALA A 609 -15.123 13.763 -32.860 1.00 59.66 A
ATOM 4727 CA ALA A 609 -16.095 14.753 -32.389 1.00 62.41 A
ATOM 4728 CB ALA A 609 -15.395 15.995 -31.831 1.00 61.08 A
ATOM 4729 C ALA A 609 -16.951 15.106 -33.603 1.00 64.44 A
ATOM 4730 O ALA A 609 -16.617 16.009 -34.386 1.00 65.30 A
ATOM 4731 N GLY A 610 -18.032 14.343 -33.780 1.00 66.30 A
ATOM 4732 CA GLY A 610 -18.911 14.537 -34.926 1.00 68.34 A
ATOM 4733 C GLY A 610 -20.447 14.614 -34.780 1.00 70.36 A
ATOM 4734 O GLY A 610 -20.952 15.359 -33.961 1.00 71.51 A
ATOM 4735 N ALA A 611 -21.202 13.871 -35.611 1.00 71.42 A
ATOM 4736 CA ALA A 611 -22.736 13.882 -35.670 1.00 72.72 A
ATOM 4737 CB ALA A 611 -23.163 13.640 -37.039 1.00 72.75 A
ATOM 4738 C ALA A 611 -23.064 12.732 -34.731 1.00 73.60 A
ATOM 4739 O ALA A 611 -24.178 12.445 -34.243 1.00 74.05 A
ATOM 4740 N ALA A 612 -21.972 12.049 -34.958 1.00 74.11 A
ATOM 4741 CA ALA A 612 -21.273 11.072 -34.163 1.00 74.24 A
ATOM 4742 CB ALA A 612 -22.007 10.136 -33.096 1.00 73.63 A
ATOM 4743 C ALA A 612 -20.223 10.444 -34.981 1.00 74.24 A
ATOM 4744 O ALA A 612 -19.243 11.153 -35.210 1.00 73.79 A
ATOM 4745 ZN+2 ZN2 A 701 -27.724 -22.055 -36.604 1.00 41.65 A
ATOM 4746 CL CL A 702 -28.101 -18.465 -91.428 1.00 32.55 A
ATOM 4747 C1 NAG A 691 -3.037 0.333 -29.182 1.00 34.22 A
ATOM 4748 C2 NAG A 691 -1.632 0.801 -28.782 1.00 33.25 A
ATOM 4749 C3 NAG A 691 -1.860 2.045 -28.130 1.00 34.93 A
ATOM 4750 C4 NAG A 691 -2.550 2.976 -28.922 1.00 36.91 A
ATOM 4751 C5 NAG A 691 -3.771 2.539 -29.253 1.00 36.60 A
ATOM 4752 C6 NAG A 691 -4.399 3.909 -29.786 1.00 36.92 A
ATOM 4753 C7 NAG A 691 -0.186 -0.668 -27.684 1.00 32.79 A
ATOM 4754 C8 NAG A 691 -0.061 -1.112 -26.501 1.00 32.53 A
ATOM 4755 N2 NAG A 691 -1.182 0.111 -27.725 1.00 32.84 A
ATOM 4756 O3 NAG A 691 -0.665 2.685 -27.681 1.00 35.82 A
ATOM 4757 O4 NAG A 691 -2.795 4.001 -28.298 1.00 38.64 A

ATOM 4758 O5 NAG A 691 -3.458 1.330 -30.129 1.00 35.00 A
ATOM 4759 O6 NAG A 691 -5.762 3.704 -30.161 1.00 37.39 A
ATOM 4760 O7 NAG A 691 0.575 -0.974 -28.611 1.00 34.87 A
ATOM 4761 C1 NAG A 693 -34.828 -42.696 -23.171 1.00 73.93 A
ATOM 4762 C2 NAG A 693 -36.209 -42.149 -23.347 1.00 74.24 A
ATOM 4763 C3 NAG A 693 -37.066 -43.252 -23.948 1.00 74.48 A
ATOM 4764 C4 NAG A 693 -36.439 -43.869 -25.193 1.00 74.92 A
ATOM 4765 C5 NAG A 693 -35.057 -44.430 -24.834 1.00 74.47 A
ATOM 4766 C6 NAG A 693 -34.368 -45.041 -26.061 1.00 73.79 A
ATOM 4767 C7 NAG A 693 -36.590 -42.892 -20.975 1.00 75.21 A
ATOM 4768 C8 NAG A 693 -37.057 -42.556 -19.809 1.00 74.84 A
ATOM 4769 N2 NAG A 693 -36.684 -41.929 -21.975 1.00 74.70 A
ATOM 4770 O3 NAG A 693 -38.348 -42.718 -24.208 1.00 73.79 A
ATOM 4771 O4 NAG A 693 -37.285 -44.903 -25.674 1.00 76.15 A
ATOM 4772 O5 NAG A 693 -34.304 -43.329 -24.363 1.00 74.07 A
ATOM 4773 O6 NAG A 693 -33.075 -45.538 -25.723 1.00 72.93 A
ATOM 4774 O7 NAG A 693 -36.105 -44.027 -21.110 1.00 75.95 A
ATOM 4775 C1 NAG A 695 -15.124 -13.831 -13.697 1.00 75.31 A
ATOM 4776 C2 NAG A 695 -13.817 -14.389 -13.038 1.00 75.99 A
ATOM 4777 C3 NAG A 695 -14.255 -14.895 -11.792 1.00 76.42 A
ATOM 4778 C4 NAG A 695 -14.920 -13.815 -10.972 1.00 76.85 A
ATOM 4779 C5 NAG A 695 -16.185 -13.297 -11.718 1.00 76.11 A
ATOM 4780 C6 NAG A 695 -16.883 -12.219 -10.956 1.00 76.32 A
ATOM 4781 C7 NAG A 695 -12.561 -16.067 -14.495 1.00 74.90 A
ATOM 4782 C8 NAG A 695 -12.314 -17.445 -14.593 1.00 74.74 A
ATOM 4783 N2 NAG A 695 -13.348 -15.704 -13.507 1.00 75.31 A
ATOM 4784 O3 NAG A 695 -13.122 -15.385 -11.223 1.00 77.06 A
ATOM 4785 O4 NAG A 695 -15.293 -14.409 -9.732 1.00 77.55 A
ATOM 4786 O5 NAG A 695 -15.789 -12.769 -12.956 1.00 75.35 A
ATOM 4787 O6 NAG A 695 -18.001 -11.816 -11.707 1.00 76.68 A
ATOM 4788 O7 NAG A 695 -12.087 -15.327 -15.243 1.00 75.02 A
ATOM 4789 C1 NAG A 696 -3.457 5.301 -26.546 1.00101.83 A
ATOM 4790 C2 NAG A 696 -2.964 6.686 -26.254 1.00102.79 A
ATOM 4791 C3 NAG A 696 -3.888 7.206 -25.175 1.00102.90 A

ATOM 4792 C4 NAG A 696 -5.350 7.193 -25.693 1.00102.52 A
ATOM 4793 C5 NAG A 696 -5.758 5.761 -26.052 1.00102.20 A
ATOM 4794 C6 NAG A 696 -7.189 5.685 -26.588 1.00102.41 A
ATOM 4795 C7 NAG A 696 -0.567 7.252 -26.228 1.00104.49 A
ATOM 4796 C8 NAG A 696 0.608 7.036 -25.667 1.00104.44 A
ATOM 4797 N2 NAG A 696 -1.612 6.556 -25.716 1.00104.00 A
ATOM 4798 O3 NAG A 696 -3.496 8.509 -24.845 1.00103.56 A
ATOM 4799 O4 NAG A 696 -6.235 7.664 -24.710 1.00102.63 A
ATOM 4800 O5 NAG A 696 -4.824 5.307 -27.038 1.00101.44 A
ATOM 4801 O6 NAG A 696 -7.505 4.333 -26.920 1.00103.51 A
ATOM 4802 O7 NAG A 696 -0.652 8.040 -27.163 1.00104.62 A
ATOM 4803 O1 LPR A 705 -24.780 -17.055 -35.025 1.00 51.85 A
ATOM 4804 O2 LPR A 705 -28.280 -20.333 -34.837 1.00 48.97 A
ATOM 4805 O3 LPR A 705 -26.292 -21.183 -34.775 1.00 51.15 A
ATOM 4806 O4 LPR A 705 -22.630 -15.172 -36.862 1.00 47.18 A
ATOM 4807 O5 LPR A 705 -24.479 -14.213 -37.579 1.00 46.74 A
ATOM 4808 N1 LPR A 705 -27.106 -18.081 -33.878 1.00 49.72 A
ATOM 4809 N2 LPR A 705 -25.611 -16.977 -37.214 1.00 49.51 A
ATOM 4810 N3 LPR A 705 -28.576 -11.653 -36.055 1.00 52.25 A
ATOM 4811 C1 LPR A 705 -25.749 -17.169 -35.834 1.00 50.24 A
ATOM 4812 C2 LPR A 705 -27.206 -17.516 -35.265 1.00 49.61 A
ATOM 4813 C3 LPR A 705 -27.110 -20.305 -34.460 1.00 50.30 A
ATOM 4814 C4 LPR A 705 -26.562 -19.104 -33.595 1.00 49.76 A
ATOM 4815 C5 LPR A 705 -24.266 -16.619 -37.841 1.00 48.33 A
ATOM 4816 C6 LPR A 705 -24.623 -16.538 -39.304 1.00 48.76 A
ATOM 4817 C7 LPR A 705 -25.942 -16.777 -39.507 1.00 49.37 A
ATOM 4818 C8 LPR A 705 -26.673 -17.062 -38.274 1.00 49.77 A
ATOM 4819 C9 LPR A 705 -23.791 -15.181 -37.409 1.00 47.68 A
ATOM 4820 C10 LPR A 705 -28.035 -16.243 -35.305 1.00 50.42 A
ATOM 4821 C11 LPR A 705 -27.625 -15.038 -34.744 1.00 52.11 A
ATOM 4822 C12 LPR A 705 -28.233 -13.903 -35.560 1.00 52.03 A
ATOM 4823 C13 LPR A 705 -27.964 -12.635 -35.144 1.00 52.74 A
ATOM 4824 C14 LPR A 705 -26.507 -19.751 -32.272 1.00 48.18 A
ATOM 4825 C15 LPR A 705 -25.222 -20.397 -31.839 1.00 47.27 A

ATOM 4826 C16 LPR A 705 -25.006 -20.961 -30.501 1.00 47.29 A
ATOM 4827 C17 LPR A 705 -25.536 -20.300 -29.293 1.00 46.22 A
ATOM 4828 C18 LPR A 705 -25.243 -20.857 -28.002 1.00 45.61 A
ATOM 4829 C19 LPR A 705 -24.410 -22.081 -27.900 1.00 45.21 A
ATOM 4830 C20 LPR A 705 -23.882 -22.751 -29.120 1.00 45.60 A
ATOM 4831 C21 LPR A 705 -24.185 -22.180 -30.421 1.00 46.04 A
ATOM 4832 C1 GOL A2433 -11.517 -6.452 -73.647 1.00 26.86 A
ATOM 4833 O1 GOL A2433 -10.422 -5.649 -73.969 1.00 29.76 A
ATOM 4834 C2 GOL A2433 -12.404 -6.720 -74.834 1.00 28.22 A
ATOM 4835 O2 GOL A2433 -13.421 -7.583 -74.471 1.00 30.13 A
ATOM 4836 C3 GOL A2433 -13.142 -5.527 -75.364 1.00 27.58 A
ATOM 4837 O3 GOL A2433 -13.329 -5.698 -76.748 1.00 24.03 A
ATOM 4838 C1 GOL A2434 -6.284 -11.249 -54.481 1.00 28.59 A
ATOM 4839 O1 GOL A2434 -5.760 -9.994 -54.163 1.00 27.28 A
ATOM 4840 C2 GOL A2434 -6.905 -11.915 -53.289 1.00 29.11 A
ATOM 4841 O2 GOL A2434 -7.937 -12.759 -53.628 1.00 32.32 A
ATOM 4842 C3 GOL A2434 -5.955 -12.812 -52.588 1.00 28.71 A
ATOM 4843 O3 GOL A2434 -6.287 -12.745 -51.232 1.00 26.89 A
ATOM 4844 ZN+2 ZN2 B 701 -22.955 -27.750 -91.195 1.00 34.77 B
ATOM 4845 CL CL B 703 -18.111 -27.426 -36.838 1.00 38.31 B
ATOM 4846 N ALA B 2 -39.505 -24.258 -120.446 1.00 58.00 B
ATOM 4847 CA ALA B 2 -40.300 -25.340 -119.815 1.00 58.18 B
ATOM 4848 CB ALA B 2 -41.663 -25.361 -120.596 1.00 57.02 B
ATOM 4849 C ALA B 2 -39.394 -26.660 -120.142 1.00 58.50 B
ATOM 4850 O ALA B 2 -38.196 -26.572 -120.131 1.00 58.21 B
ATOM 4851 N PRO B 3 -40.016 -27.878 -120.289 1.00 59.51 B
ATOM 4852 CD PRO B 3 -39.131 -29.073 -120.389 1.00 59.85 B
ATOM 4853 CA PRO B 3 -41.423 -28.416 -120.256 1.00 60.53 B
ATOM 4854 CB PRO B 3 -41.194 -29.673 -119.450 1.00 60.27 B
ATOM 4855 CG PRO B 3 -40.062 -30.302 -120.296 1.00 60.02 B
ATOM 4856 C PRO B 3 -42.814 -27.876 -119.907 1.00 61.79 B
ATOM 4857 O PRO B 3 -43.309 -26.872 -120.449 1.00 62.07 B
ATOM 4858 N GLY B 4 -43.363 -28.557 -118.919 1.00 62.82 B
ATOM 4859 CA GLY B 4 -44.670 -28.339 -118.321 1.00 63.69 B

ATOM 4860 C GLY B 4 -44.259 -28.112-116.901 1.00 64.25 B
ATOM 4861 O GLY B 4 -45.057 -27.988-115.987 1.00 64.32 B
ATOM 4862 N LEU B 5 -42.948 -27.916-116.878 1.00 64.25 B
ATOM 4863 CA LEU B 5 -42.217 -27.596-115.668 1.00 63.11 B
ATOM 4864 CB LEU B 5 -40.690 -27.500-115.912 1.00 61.21 B
ATOM 4865 CG LEU B 5 -39.974 -28.814-115.942 1.00 60.29 B
ATOM 4866 CD1 LEU B 5 -38.492 -28.578-116.050 1.00 59.57 B
ATOM 4867 CD2 LEU B 5 -40.310 -29.507-114.653 1.00 60.32 B
ATOM 4868 C LEU B 5 -42.793 -26.244-115.703 1.00 63.43 B
ATOM 4869 O LEU B 5 -42.174 -25.290-116.015 1.00 63.71 B
ATOM 4870 N ALA B 6 -44.086 -26.281-115.639 1.00 63.62 B
ATOM 4871 CA ALA B 6 -44.776 -25.085-115.756 1.00 63.69 B
ATOM 4872 CB ALA B 6 -44.681 -24.427-117.150 1.00 63.64 B
ATOM 4873 C ALA B 6 -46.085 -25.036-115.106 1.00 63.58 B
ATOM 4874 O ALA B 6 -46.869 -25.991-114.919 1.00 62.77 B
ATOM 4875 N PRO B 7 -46.403 -23.808-114.710 1.00 64.53 B
ATOM 4876 CD PRO B 7 -45.194 -23.029-114.390 1.00 64.82 B
ATOM 4877 CA PRO B 7 -47.486 -23.556-113.756 1.00 65.96 B
ATOM 4878 CB PRO B 7 -46.750 -22.960-112.556 1.00 66.56 B
ATOM 4879 CG PRO B 7 -45.581 -22.253-113.157 1.00 66.22 B
ATOM 4880 C PRO B 7 -48.490 -22.548-114.304 1.00 66.48 B
ATOM 4881 O PRO B 7 -48.806 -21.566-113.632 1.00 65.75 B
ATOM 4882 N GLY B 8 -48.981 -22.792-115.515 1.00 67.03 B
ATOM 4883 CA GLY B 8 -50.408 -22.778-115.776 1.00 67.87 B
ATOM 4884 C GLY B 8 -51.163 -23.769-114.912 1.00 68.52 B
ATOM 4885 O GLY B 8 -50.575 -24.699-114.360 1.00 68.03 B
ATOM 4886 N ALA B 9 -52.471 -23.567-114.794 1.00 69.43 B
ATOM 4887 CA ALA B 9 -53.013 -22.562-113.888 1.00 70.44 B
ATOM 4888 CB ALA B 9 -53.410 -21.312-114.660 1.00 70.17 B
ATOM 4889 C ALA B 9 -54.203 -23.109-113.109 1.00 70.95 B
ATOM 4890 O ALA B 9 -55.263 -23.369-113.679 1.00 72.04 B
ATOM 4891 N PHE B 10 -54.022 -23.282-111.804 1.00 70.87 B
ATOM 4892 CA PHE B 10 -55.099 -23.663-110.941 1.00 70.28 B
ATOM 4893 CB PHE B 10 -54.624 -24.746-110.035 1.00 68.37 B

ATOM 4894 CG PHE B 10 -53.225 -25.162-110.338 1.00 66.20 B
ATOM 4895 CD1 PHE B 10 -52.263 -24.176-110.579 1.00 65.23 B
ATOM 4896 CD2 PHE B 10 -52.852 -26.499-110.382 1.00 65.04 B
ATOM 4897 CE1 PHE B 10 -50.962 -24.478-110.863 1.00 64.80 B
ATOM 4898 CE2 PHE B 10 -51.529 -26.838-110.664 1.00 63.88 B
ATOM 4899 CZ PHE B 10 -50.575 -25.815-110.908 1.00 64.04 B
ATOM 4900 C PHE B 10 -55.667 -22.523-110.181 1.00 71.00 B
ATOM 4901 O PHE B 10 -55.092 -21.444-110.015 1.00 70.65 B
ATOM 4902 N ALA B 11 -56.846 -22.849-109.721 1.00 71.98 B
ATOM 4903 CA ALA B 11 -57.697 -21.934-109.068 1.00 73.27 B
ATOM 4904 CB ALA B 11 -58.954 -22.617-108.684 1.00 72.65 B
ATOM 4905 C ALA B 11 -57.348 -21.031-107.956 1.00 74.33 B
ATOM 4906 O ALA B 11 -56.688 -21.329-106.929 1.00 74.67 B
ATOM 4907 N ALA B 12 -57.887 -19.858-108.193 1.00 74.91 B
ATOM 4908 CA ALA B 12 -57.820 -18.941-107.131 1.00 75.57 B
ATOM 4909 CB ALA B 12 -58.536 -17.639-107.412 1.00 75.09 B
ATOM 4910 C ALA B 12 -58.825 -19.877-106.440 1.00 76.47 B
ATOM 4911 O ALA B 12 -59.707 -20.448-107.051 1.00 77.15 B
ATOM 4912 N ALA B 13 -58.616 -19.979-105.155 1.00 76.65 B
ATOM 4913 CA ALA B 13 -59.407 -20.688-104.125 1.00 76.38 B
ATOM 4914 CB ALA B 13 -59.892 -22.155-104.462 1.00 75.90 B
ATOM 4915 C ALA B 13 -58.309 -20.716-103.160 1.00 76.53 B
ATOM 4916 O ALA B 13 -57.259 -20.160-103.427 1.00 76.56 B
ATOM 4917 N ALA B 14 -58.569 -21.334-102.035 1.00 76.74 B
ATOM 4918 CA ALA B 14 -57.563 -21.448-101.041 1.00 76.83 B
ATOM 4919 CB ALA B 14 -58.166 -21.316-99.638 1.00 77.30 B
ATOM 4920 C ALA B 14 -57.041 -22.834-101.313 1.00 76.85 B
ATOM 4921 O ALA B 14 -55.842 -23.051-101.330 1.00 77.02 B
ATOM 4922 N ALA B 15 -57.945 -23.781-101.565 1.00 76.62 B
ATOM 4923 CA ALA B 15 -57.497 -25.152-101.860 1.00 76.15 B
ATOM 4924 CB ALA B 15 -58.579 -26.206-101.457 1.00 75.90 B
ATOM 4925 C ALA B 15 -57.196 -25.232-103.359 1.00 75.71 B
ATOM 4926 O ALA B 15 -57.082 -26.300-103.963 1.00 75.06 B
ATOM 4927 N GLY B 16 -57.080 -24.045-103.927 1.00 75.38 B

ATOM 4928 CA GLY B 16 -56.723 -23.906-105.314 1.00 74.67 B
ATOM 4929 C GLY B 16 -55.234 -23.726-105.128 1.00 74.10 B
ATOM 4930 O GLY B 16 -54.424 -24.253-105.881 1.00 73.69 B
ATOM 4931 N ALA B 17 -54.881 -22.993-104.072 1.00 73.17 B
ATOM 4932 CA ALA B 17 -53.472 -22.769-103.744 1.00 71.46 B
ATOM 4933 CB ALA B 17 -53.320 -21.758-102.590 1.00 71.37 B
ATOM 4934 C ALA B 17 -52.908 -24.108-103.328 1.00 70.38 B
ATOM 4935 O ALA B 17 -51.725 -24.401-103.522 1.00 70.09 B
ATOM 4936 N ALA B 18 -53.770 -24.935-102.753 1.00 69.44 B
ATOM 4937 CA ALA B 18 -53.341 -26.253-102.316 1.00 68.67 B
ATOM 4938 CB ALA B 18 -54.458 -26.936-101.548 1.00 68.12 B
ATOM 4939 C ALA B 18 -52.932 -27.096-103.507 1.00 67.65 B
ATOM 4940 O ALA B 18 -51.839 -27.660-103.535 1.00 67.84 B
ATOM 4941 N ALA B 19 -53.813 -27.167-104.501 1.00 66.29 B
ATOM 4942 CA ALA B 19 -53.558 -27.949-105.708 1.00 64.37 B
ATOM 4943 CB ALA B 19 -54.721 -27.857-106.644 1.00 64.73 B
ATOM 4944 C ALA B 19 -52.332 -27.354-106.340 1.00 62.91 B
ATOM 4945 O ALA B 19 -51.473 -28.033-106.908 1.00 62.26 B
ATOM 4946 N PHE B 20 -52.252 -26.050-106.197 1.00 60.84 B
ATOM 4947 CA PHE B 20 -51.123 -25.363-106.716 1.00 58.64 B
ATOM 4948 CB PHE B 20 -51.261 -23.877-106.406 1.00 58.63 B
ATOM 4949 CG PHE B 20 -50.021 -23.129-106.652 1.00 58.85 B
ATOM 4950 CD1 PHE B 20 -50.048 -21.779-106.954 1.00 59.18 B
ATOM 4951 CD2 PHE B 20 -48.800 -23.810-106.644 1.00 58.13 B
ATOM 4952 CE1 PHE B 20 -48.869 -21.129-107.237 1.00 58.79 B
ATOM 4953 CE2 PHE B 20 -47.636 -23.202-106.918 1.00 58.40 B
ATOM 4954 CZ PHE B 20 -47.650 -21.860-107.225 1.00 59.48 B
ATOM 4955 C PHE B 20 -49.841 -25.946-106.104 1.00 57.13 B
ATOM 4956 O PHE B 20 -49.024 -26.559-106.793 1.00 56.01 B
ATOM 4957 N ALA B 21 -49.669 -25.725-104.805 1.00 56.00 B
ATOM 4958 CA ALA B 21 -48.485 -26.200-104.076 1.00 55.09 B
ATOM 4959 CB ALA B 21 -48.615 -25.895-102.582 1.00 55.72 B
ATOM 4960 C ALA B 21 -48.243 -27.685-104.262 1.00 55.08 B
ATOM 4961 O ALA B 21 -47.102 -28.168-104.196 1.00 53.10 B

ATOM 4962 N ALA B 22 -49.332 -28.405-104.491 1.00 56.47 B
ATOM 4963 CA ALA B 22 -49.274 -29.842-104.703 1.00 57.59 B
ATOM 4964 CB ALA B 22 -50.698 -30.406-104.908 1.00 57.02 B
ATOM 4965 C ALA B 22 -48.417 -30.083-105.935 1.00 58.43 B
ATOM 4966 O ALA B 22 -47.500 -30.909-105.915 1.00 58.49 B
ATOM 4967 N ALA B 23 -48.719 -29.337-106.996 1.00 58.72 B
ATOM 4968 CA ALA B 23 -47.997 -29.431-108.266 1.00 58.51 B
ATOM 4969 CB ALA B 23 -48.802 -28.735-109.390 1.00 59.19 B
ATOM 4970 C ALA B 23 -46.582 -28.836-108.185 1.00 58.02 B
ATOM 4971 O ALA B 23 -45.606 -29.498-108.561 1.00 57.07 B
ATOM 4972 N ALA B 24 -46.478 -27.595-107.696 1.00 57.06 B
ATOM 4973 CA ALA B 24 -45.186 -26.915-107.571 1.00 56.04 B
ATOM 4974 CB ALA B 24 -45.294 -25.738-106.615 1.00 55.43 B
ATOM 4975 C ALA B 24 -44.133 -27.885-107.073 1.00 55.85 B
ATOM 4976 O ALA B 24 -43.049 -27.994-107.635 1.00 55.58 B
ATOM 4977 N ASN B 25 -44.471 -28.592-106.013 1.00 55.97 B
ATOM 4978 CA ASN B 25 -43.564 -29.541-105.447 1.00 57.10 B
ATOM 4979 CB ASN B 25 -44.285 -30.274-104.341 1.00 58.23 B
ATOM 4980 CG ASN B 25 -43.826 -31.655-104.234 1.00 60.25 B
ATOM 4981 OD1 ASN B 25 -42.621 -31.926-103.994 1.00 60.64 B
ATOM 4982 ND2 ASN B 25 -44.760 -32.581-104.461 1.00 61.43 B
ATOM 4983 C ASN B 25 -42.998 -30.543-106.465 1.00 57.55 B
ATOM 4984 O ASN B 25 -41.779 -30.722-106.588 1.00 57.18 B
ATOM 4985 N ALA B 26 -43.909 -31.176-107.202 1.00 58.74 B
ATOM 4986 CA ALA B 26 -43.563 -32.183-108.206 1.00 59.15 B
ATOM 4987 CB ALA B 26 -44.824 -32.772-108.806 1.00 58.86 B
ATOM 4988 C ALA B 26 -42.666 -31.676-109.313 1.00 59.32 B
ATOM 4989 O ALA B 26 -41.784 -32.397-109.790 1.00 59.30 B
ATOM 4990 N SER B 27 -42.891 -30.436-109.724 1.00 59.61 B
ATOM 4991 CA SER B 27 -42.080 -29.845-110.767 1.00 60.59 B
ATOM 4992 CB SER B 27 -42.771 -28.608-111.296 1.00 60.17 B
ATOM 4993 OG SER B 27 -44.142 -28.856-111.563 1.00 60.23 B
ATOM 4994 C SER B 27 -40.737 -29.469-110.151 1.00 61.24 B
ATOM 4995 O SER B 27 -39.677 -29.736-110.720 1.00 61.83 B

ATOM 4996 N ALA B 28 -40.805 -28.860-108.969 1.00 61.47 B
ATOM 4997 CA ALA B 28 -39.631 -28.416-108.220 1.00 60.58 B
ATOM 4998 CB ALA B 28 -40.068 -27.868-106.872 1.00 60.11 B
ATOM 4999 C ALA B 28 -38.587 -29.514-108.014 1.00 59.86 B
ATOM 5000 O ALA B 28 -37.397 -29.318-108.247 1.00 59.98 B
ATOM 5001 N GLU B 29 -39.040 -30.670-107.560 1.00 59.00 B
ATOM 5002 CA GLU B 29 -38.132 -31.774-107.320 1.00 59.07 B
ATOM 5003 CB GLU B 29 -38.942 -33.003-106.926 1.00 60.44 B
ATOM 5004 CG GLU B 29 -38.198 -33.958-106.051 1.00 62.87 B
ATOM 5005 CD GLU B 29 -39.079 -35.082-105.607 1.00 65.10 B
ATOM 5006 OE1 GLU B 29 -40.283 -34.813-105.508 1.00 67.39 B
ATOM 5007 OE2 GLU B 29 -38.584 -36.214-105.379 1.00 64.80 B
ATOM 5008 C GLU B 29 -37.260 -32.084-108.540 1.00 58.59 B
ATOM 5009 O GLU B 29 -36.115 -32.542-108.424 1.00 57.21 B
ATOM 5010 N GLN B 30 -37.809 -31.813-109.719 1.00 58.53 B
ATOM 5011 CA GLN B 30 -37.083 -32.102-110.951 1.00 58.51 B
ATOM 5012 CB GLN B 30 -38.050 -32.189-112.148 1.00 59.41 B
ATOM 5013 CG GLN B 30 -39.173 -33.192-111.977 1.00 60.95 B
ATOM 5014 CD GLN B 30 -40.032 -33.313-113.218 1.00 61.34 B
ATOM 5015 OE1 GLN B 30 -39.547 -33.681-114.288 1.00 62.52 B
ATOM 5016 NE2 GLN B 30 -41.316 -33.004-113.082 1.00 61.05 B
ATOM 5017 C GLN B 30 -36.018 -31.051-111.211 1.00 57.60 B
ATOM 5018 O GLN B 30 -34.829 -31.366-111.358 1.00 56.81 B
ATOM 5019 N VAL B 31 -36.457 -29.799-111.238 1.00 56.39 B
ATOM 5020 CA VAL B 31 -35.570 -28.676-111.487 1.00 55.44 B
ATOM 5021 CB VAL B 31 -36.389 -27.366-111.624 1.00 55.69 B
ATOM 5022 CG1 VAL B 31 -37.142 -27.088-110.351 1.00 55.79 B
ATOM 5023 CG2 VAL B 31 -35.482 -26.211-111.995 1.00 55.55 B
ATOM 5024 C VAL B 31 -34.513 -28.544-110.393 1.00 54.85 B
ATOM 5025 O VAL B 31 -33.391 -28.115-110.656 1.00 54.90 B
ATOM 5026 N LEU B 32 -34.868 -28.929-109.171 1.00 54.27 B
ATOM 5027 CA LEU B 32 -33.929 -28.874-108.054 1.00 52.35 B
ATOM 5028 CB LEU B 32 -34.685 -28.944-106.725 1.00 51.87 B
ATOM 5029 CG LEU B 32 -35.454 -27.663-106.387 1.00 51.66 B

ATOM 5030 CD1 LEU B 32 -36.587 -27.981-105.435 1.00 52.24 B
ATOM 5031 CD2 LEU B 32 -34.511 -26.631-105.794 1.00 50.62 B
ATOM 5032 C LEU B 32 -32.910 -30.014-108.159 1.00 51.28 B
ATOM 5033 O LEU B 32 -31.707 -29.785-108.021 1.00 51.29 B
ATOM 5034 N PHE B 33 -33.378 -31.237-108.404 1.00 49.52 B
ATOM 5035 CA PHE B 33 -32.452 -32.355-108.542 1.00 47.84 B
ATOM 5036 CB PHE B 33 -33.179 -33.631-108.948 1.00 45.45 B
ATOM 5037 CG PHE B 33 -32.257 -34.795-109.158 1.00 44.26 B
ATOM 5038 CD1 PHE B 33 -31.805 -35.549-108.087 1.00 44.29 B
ATOM 5039 CD2 PHE B 33 -31.803 -35.113-110.424 1.00 44.50 B
ATOM 5040 CE1 PHE B 33 -30.908 -36.607-108.277 1.00 44.09 B
ATOM 5041 CE2 PHE B 33 -30.907 -36.168-110.622 1.00 44.44 B
ATOM 5042 CZ PHE B 33 -30.461 -36.914-109.546 1.00 43.58 B
ATOM 5043 C PHE B 33 -31.480 -31.979-109.650 1.00 48.08 B
ATOM 5044 O PHE B 33 -30.276 -32.236-109.568 1.00 48.04 B
ATOM 5045 N ALA B 34 -32.029 -31.362-110.691 1.00 47.72 B
ATOM 5046 CA ALA B 34 -31.240 -30.938-111.835 1.00 47.26 B
ATOM 5047 CB ALA B 34 -32.125 -30.201-112.828 1.00 47.58 B
ATOM 5048 C ALA B 34 -30.097 -30.037-111.410 1.00 46.71 B
ATOM 5049 O ALA B 34 -28.930 -30.302-111.699 1.00 46.55 B
ATOM 5050 N SER B 35 -30.445 -28.970-110.707 1.00 45.93 B
ATOM 5051 CA SER B 35 -29.461 -27.994-110.266 1.00 45.06 B
ATOM 5052 CB SER B 35 -30.186 -26.780-109.672 1.00 44.93 B
ATOM 5053 OG SER B 35 -29.374 -25.619-109.711 1.00 44.22 B
ATOM 5054 C SER B 35 -28.432 -28.552-109.277 1.00 44.37 B
ATOM 5055 O SER B 35 -27.240 -28.266-109.393 1.00 43.95 B
ATOM 5056 N VAL B 36 -28.890 -29.348-108.312 1.00 43.80 B
ATOM 5057 CA VAL B 36 -27.998 -29.935-107.307 1.00 42.97 B
ATOM 5058 CB VAL B 36 -28.795 -30.709-106.227 1.00 43.80 B
ATOM 5059 CG1 VAL B 36 -27.831 -31.425-105.268 1.00 42.39 B
ATOM 5060 CG2 VAL B 36 -29.714 -29.748-105.471 1.00 43.35 B
ATOM 5061 C VAL B 36 -26.989 -30.905-107.914 1.00 41.91 B
ATOM 5062 O VAL B 36 -25.842 -30.998-107.475 1.00 40.15 B
ATOM 5063 N ALA B 37 -27.436 -31.641-108.921 1.00 41.88 B

ATOM 5064 CA ALA B 37 -26.583 -32.611-109.574 1.00 40.79 B
ATOM 5065 CB ALA B 37 -27.438 -33.545-110.420 1.00 40.70 B
ATOM 5066 C ALA B 37 -25.581 -31.848-110.433 1.00 39.85 B
ATOM 5067 O ALA B 37 -24.426 -32.262-110.597 1.00 37.81 B
ATOM 5068 N ALA B 38 -26.037 -30.713-110.960 1.00 39.58 B
ATOM 5069 CA ALA B 38 -25.196 -29.877-111.806 1.00 39.94 B
ATOM 5070 CB ALA B 38 -26.018 -28.752-112.419 1.00 40.04 B
ATOM 5071 C ALA B 38 -24.079 -29.313-110.955 1.00 39.50 B
ATOM 5072 O ALA B 38 -22.948 -29.147-111.408 1.00 40.21 B
ATOM 5073 N SER B 39 -24.406 -29.029-109.704 1.00 39.32 B
ATOM 5074 CA SER B 39 -23.426 -28.492-108.776 1.00 37.48 B
ATOM 5075 CB SER B 39 -24.130 -27.812-107.604 1.00 37.91 B
ATOM 5076 OG SER B 39 -25.012 -26.800-108.064 1.00 38.32 B
ATOM 5077 C SER B 39 -22.522 -29.608-108.275 1.00 36.52 B
ATOM 5078 O SER B 39 -21.317 -29.427-108.163 1.00 35.35 B
ATOM 5079 N TRP B 40 -23.100 -30.771-107.983 1.00 36.87 B
ATOM 5080 CA TRP B 40 -22.296 -31.887-107.499 1.00 37.39 B
ATOM 5081 CB TRP B 40 -23.159 -33.134-107.244 1.00 36.45 B
ATOM 5082 CG TRP B 40 -22.311 -34.329-106.836 1.00 36.47 B
ATOM 5083 CD2 TRP B 40 -21.980 -34.740-105.497 1.00 37.04 B
ATOM 5084 CE2 TRP B 40 -21.055 -35.804-105.603 1.00 36.57 B
ATOM 5085 CE3 TRP B 40 -22.368 -34.308-104.222 1.00 36.54 B
ATOM 5086 CD1 TRP B 40 -21.600 -35.146-107.664 1.00 35.98 B
ATOM 5087 NE1 TRP B 40 -20.842 -36.032-106.935 1.00 35.97 B
ATOM 5088 CZ2 TRP B 40 -20.515 -36.440-104.484 1.00 37.23 B
ATOM 5089 CZ3 TRP B 40 -21.830 -34.942-103.115 1.00 35.99 B
ATOM 5090 CH2 TRP B 40 -20.914 -35.994-103.251 1.00 36.42 B
ATOM 5091 C TRP B 40 -21.181 -32.236-108.477 1.00 38.87 B
ATOM 5092 O TRP B 40 -20.073 -32.602-108.075 1.00 37.23 B
ATOM 5093 N ALA B 41 -21.483 -32.120-109.766 1.00 41.93 B
ATOM 5094 CA ALA B 41 -20.514 -32.431-110.804 1.00 44.43 B
ATOM 5095 CB ALA B 41 -21.171 -32.344-112.157 1.00 44.72 B
ATOM 5096 C ALA B 41 -19.327 -31.482-110.738 1.00 46.71 B
ATOM 5097 O ALA B 41 -18.174 -31.904-110.860 1.00 47.26 B

ATOM 5098 N HIS B 42 -19.618 -30.198-110.541 1.00 48.60 B
ATOM 5099 CA HIS B 42 -18.588 -29.161-110.454 1.00 50.85 B
ATOM 5100 CB HIS B 42 -19.246 -27.772-110.382 1.00 52.18 B
ATOM 5101 CG HIS B 42 -18.270 -26.638-110.288 1.00 53.82 B
ATOM 5102 CD2 HIS B 42 -17.218 -26.299-111.071 1.00 54.04 B
ATOM 5103 ND1 HIS B 42 -18.340 -25.674-109.304 1.00 54.45 B
ATOM 5104 CE1 HIS B 42 -17.374 -24.790-109.487 1.00 55.13 B
ATOM 5105 NE2 HIS B 42 -16.680 -25.146-110.553 1.00 55.32 B
ATOM 5106 C HIS B 42 -17.653 -29.333-109.249 1.00 51.89 B
ATOM 5107 O HIS B 42 -16.451 -29.555-109.413 1.00 51.29 B
ATOM 5108 N ASP B 43 -18.215 -29.220-108.043 1.00 53.01 B
ATOM 5109 CA ASP B 43 -17.446 -29.336-106.800 1.00 53.43 B
ATOM 5110 CB ASP B 43 -18.380 -29.343-105.584 1.00 53.16 B
ATOM 5111 CG ASP B 43 -19.147 -28.037-105.403 1.00 53.39 B
ATOM 5112 OD1 ASP B 43 -20.054 -28.010-104.540 1.00 55.22 B
ATOM 5113 OD2 ASP B 43 -18.860 -27.035-106.097 1.00 52.15 B
ATOM 5114 C ASP B 43 -16.578 -30.589-106.738 1.00 54.43 B
ATOM 5115 O ASP B 43 -15.486 -30.576-106.157 1.00 54.38 B
ATOM 5116 N THR B 44 -17.075 -31.678-107.319 1.00 55.70 B
ATOM 5117 CA THR B 44 -16.358 -32.954-107.304 1.00 57.36 B
ATOM 5118 CB THR B 44 -17.318 -34.122-107.630 1.00 57.03 B
ATOM 5119 OG1 THR B 44 -18.359 -34.172-106.647 1.00 58.22 B
ATOM 5120 CG2 THR B 44 -16.576 -35.434-107.670 1.00 55.36 B
ATOM 5121 C THR B 44 -15.121 -33.031-108.211 1.00 58.20 B
ATOM 5122 O THR B 44 -14.226 -33.843-107.973 1.00 59.23 B
ATOM 5123 N ASN B 45 -15.089 -32.212-109.258 1.00 58.04 B
ATOM 5124 CA ASN B 45 -13.938 -32.144-110.152 1.00 57.68 B
ATOM 5125 CB ASN B 45 -13.818 -33.361-111.063 1.00 60.07 B
ATOM 5126 CG ASN B 45 -12.840 -33.118-112.210 1.00 61.69 B
ATOM 5127 OD1 ASN B 45 -11.792 -32.479-112.031 1.00 62.52 B
ATOM 5128 ND2 ASN B 45 -13.183 -33.617-113.395 1.00 62.03 B
ATOM 5129 C ASN B 45 -14.043 -30.887-110.987 1.00 56.09 B
ATOM 5130 O ASN B 45 -14.489 -30.908-112.133 1.00 55.67 B
ATOM 5131 N ILE B 46 -13.609 -29.786-110.390 1.00 54.65 B

ATOM 5132 CA ILE B 46 -13.665 -28.490-111.040 1.00 52.34 B
ATOM 5133 CB ILE B 46 -12.996 -27.395-110.171 1.00 52.46 B
ATOM 5134 CG2 ILE B 46 -13.441 -26.001-110.664 1.00 51.65 B
ATOM 5135 CG1 ILE B 46 -13.408 -27.566-108.709 1.00 51.54 B
ATOM 5136 CD1 ILE B 46 -12.388 -27.029-107.730 1.00 51.48 B
ATOM 5137 C ILE B 46 -12.991 -28.451-112.419 1.00 50.82 B
ATOM 5138 O ILE B 46 -11.783 -28.643-112.531 1.00 50.11 B
ATOM 5139 N THR B 47 -13.787 -28.203-113.459 1.00 49.29 B
ATOM 5140 CA THR B 47 -13.279 -28.051-114.825 1.00 46.88 B
ATOM 5141 CB THR B 47 -13.820 -29.123-115.814 1.00 46.61 B
ATOM 5142 OG1 THR B 47 -15.253 -29.149-115.792 1.00 47.11 B
ATOM 5143 CG2 THR B 47 -13.255 -30.479-115.492 1.00 44.28 B
ATOM 5144 C THR B 47 -13.804 -26.688-115.224 1.00 45.95 B
ATOM 5145 O THR B 47 -13.952 -25.831-114.362 1.00 47.51 B
ATOM 5146 N ALA B 48 -14.075 -26.479-116.507 1.00 43.40 B
ATOM 5147 CA ALA B 48 -14.626 -25.202-116.963 1.00 40.92 B
ATOM 5148 CB ALA B 48 -13.708 -24.555-117.994 1.00 39.40 B
ATOM 5149 C ALA B 48 -15.938 -25.613-117.595 1.00 39.63 B
ATOM 5150 O ALA B 48 -16.859 -24.816-117.792 1.00 39.14 B
ATOM 5151 N GLU B 49 -15.985 -26.902-117.908 1.00 38.62 B
ATOM 5152 CA GLU B 49 -17.145 -27.541-118.522 1.00 37.10 B
ATOM 5153 CB GLU B 49 -16.752 -28.927-119.045 1.00 37.28 B
ATOM 5154 CG GLU B 49 -16.900 -29.082-120.538 1.00 38.23 B
ATOM 5155 CD GLU B 49 -18.347 -29.061-120.976 1.00 39.83 B
ATOM 5156 OE1 GLU B 49 -19.090 -29.990-120.592 1.00 40.99 B
ATOM 5157 OE2 GLU B 49 -18.744 -28.115-121.695 1.00 39.64 B
ATOM 5158 C GLU B 49 -18.284 -27.693-117.534 1.00 35.00 B
ATOM 5159 O GLU B 49 -19.421 -27.267-117.764 1.00 33.90 B
ATOM 5160 N ASN B 50 -17.954 -28.329-116.423 1.00 33.65 B
ATOM 5161 CA ASN B 50 -18.919 -28.554-115.376 1.00 31.14 B
ATOM 5162 CB ASN B 50 -18.291 -29.401-114.291 1.00 31.21 B
ATOM 5163 CG ASN B 50 -17.968 -30.786-114.786 1.00 33.67 B
ATOM 5164 OD1 ASN B 50 -18.820 -31.450-115.390 1.00 35.78 B
ATOM 5165 ND2 ASN B 50 -16.740 -31.237-114.548 1.00 34.45 B

ATOM 5166 C ASN B 50 -19.382 -27.224-114.850 1.00 29.03 B
ATOM 5167 O ASN B 50 -20.513 -27.091-114.396 1.00 27.03 B
ATOM 5168 N ALA B 51 -18.512 -26.229-114.968 1.00 28.08 B
ATOM 5169 CA ALA B 51 -18.815 -24.882-114.514 1.00 29.02 B
ATOM 5170 CB ALA B 51 -17.533 -24.045-114.493 1.00 28.55 B
ATOM 5171 C ALA B 51 -19.863 -24.227-115.409 1.00 30.04 B
ATOM 5172 O ALA B 51 -20.747 -23.494-114.942 1.00 29.38 B
ATOM 5173 N ALA B 52 -19.755 -24.497-116.705 1.00 31.01 B
ATOM 5174 CA ALA B 52 -20.688 -23.939-117.656 1.00 31.76 B
ATOM 5175 CB ALA B 52 -20.133 -24.085-119.057 1.00 32.36 B
ATOM 5176 C ALA B 52 -22.012 -24.684-117.507 1.00 32.58 B
ATOM 5177 O ALA B 52 -23.084 -24.103-117.669 1.00 33.26 B
ATOM 5178 N ALA B 53 -21.920 -25.973-117.183 1.00 33.31 B
ATOM 5179 CA ALA B 53 -23.096 -26.826-116.990 1.00 34.16 B
ATOM 5180 CB ALA B 53 -22.672 -28.282-116.889 1.00 33.51 B
ATOM 5181 C ALA B 53 -23.838 -26.401-115.724 1.00 36.04 B
ATOM 5182 O ALA B 53 -25.072 -26.298-115.723 1.00 36.32 B
ATOM 5183 N GLN B 54 -23.083 -26.160-114.650 1.00 35.96 B
ATOM 5184 CA GLN B 54 -23.710 -25.716-113.431 1.00 35.38 B
ATOM 5185 CB GLN B 54 -22.661 -25.566-112.309 1.00 36.71 B
ATOM 5186 CG GLN B 54 -23.224 -25.050-110.994 1.00 38.31 B
ATOM 5187 CD GLN B 54 -22.841 -23.593-110.747 1.00 40.22 B
ATOM 5188 OE1 GLN B 54 -21.665 -23.222-110.879 1.00 42.24 B
ATOM 5189 NE2 GLN B 54 -23.825 -22.758-110.393 1.00 39.69 B
ATOM 5190 C GLN B 54 -24.377 -24.389-113.795 1.00 35.18 B
ATOM 5191 O GLN B 54 -25.595 -24.234-113.648 1.00 35.11 B
ATOM 5192 N GLU B 55 -23.592 -23.454-114.329 1.00 34.46 B
ATOM 5193 CA GLU B 55 -24.137 -22.140-114.709 1.00 35.09 B
ATOM 5194 CB GLU B 55 -23.084 -21.285-115.432 1.00 34.87 B
ATOM 5195 CG GLU B 55 -21.967 -20.814-114.510 1.00 36.42 B
ATOM 5196 CD GLU B 55 -21.047 -19.790-115.149 1.00 36.00 B
ATOM 5197 OE1 GLU B 55 -21.569 -18.766-115.647 1.00 35.05 B
ATOM 5198 OE2 GLU B 55 -19.809 -20.007-115.140 1.00 36.11 B
ATOM 5199 C GLU B 55 -25.414 -22.190-115.549 1.00 35.45 B

ATOM 5200 O GLU B 55 -26.218 -21.246-115.548 1.00 35.37 B
ATOM 5201 N ALA B 56 -25.618 -23.297-116.252 1.00 36.41 B
ATOM 5202 CA ALA B 56 -26.810 -23.446-117.069 1.00 36.95 B
ATOM 5203 CB ALA B 56 -26.576 -24.504-118.141 1.00 37.86 B
ATOM 5204 C ALA B 56 -27.954 -23.844-116.155 1.00 37.24 B
ATOM 5205 O ALA B 56 -29.012 -23.204-116.144 1.00 36.92 B
ATOM 5206 N ALA B 57 -27.725 -24.898-115.378 1.00 36.90 B
ATOM 5207 CA ALA B 57 -28.721 -25.393-114.431 1.00 36.88 B
ATOM 5208 CB ALA B 57 -28.121 -26.498-113.578 1.00 35.78 B
ATOM 5209 C ALA B 57 -29.210 -24.257-113.541 1.00 36.72 B
ATOM 5210 O ALA B 57 -30.383 -24.206-113.157 1.00 37.04 B
ATOM 5211 N ALA B 58 -28.293 -23.345-113.236 1.00 35.96 B
ATOM 5212 CA ALA B 58 -28.588 -22.205-112.402 1.00 36.86 B
ATOM 5213 CB ALA B 58 -27.321 -21.448-112.110 1.00 37.61 B
ATOM 5214 C ALA B 58 -29.588 -21.309-113.092 1.00 37.98 B
ATOM 5215 O ALA B 58 -30.546 -20.861-112.478 1.00 37.27 B
ATOM 5216 N LEU B 59 -29.362 -21.053-114.376 1.00 40.19 B
ATOM 5217 CA LEU B 59 -30.265 -20.210-115.158 1.00 40.62 B
ATOM 5218 CB LEU B 59 -29.693 -19.973-116.561 1.00 42.56 B
ATOM 5219 CG LEU B 59 -28.837 -18.717-116.741 1.00 44.15 B
ATOM 5220 CD1 LEU B 59 -28.382 -18.579-118.182 1.00 44.02 B
ATOM 5221 CD2 LEU B 59 -29.669 -17.506-116.343 1.00 45.95 B
ATOM 5222 C LEU B 59 -31.612 -20.904-115.265 1.00 39.76 B
ATOM 5223 O LEU B 59 -32.668 -20.266-115.308 1.00 39.53 B
ATOM 5224 N LEU B 60 -31.551 -22.229-115.297 1.00 38.76 B
ATOM 5225 CA LEU B 60 -32.736 -23.061-115.409 1.00 38.05 B
ATOM 5226 CB LEU B 60 -32.309 -24.530-115.490 1.00 38.51 B
ATOM 5227 CG LEU B 60 -33.125 -25.461-116.389 1.00 39.15 B
ATOM 5228 CD1 LEU B 60 -32.363 -26.764-116.606 1.00 37.76 B
ATOM 5229 CD2 LEU B 60 -34.484 -25.711-115.762 1.00 39.08 B
ATOM 5230 C LEU B 60 -33.619 -22.835-114.195 1.00 37.12 B
ATOM 5231 O LEU B 60 -34.787 -22.441-114.312 1.00 34.50 B
ATOM 5232 N SER B 61 -33.025 -23.077-113.030 1.00 36.82 B
ATOM 5233 CA SER B 61 -33.716 -22.928-111.766 1.00 36.17 B

ATOM 5234 CB SER B 61 -32.757 -23.193 -110.615 1.00 35.48 B
ATOM 5235 OG SER B 61 -32.153 -24.468 -110.721 1.00 34.12 B
ATOM 5236 C SER B 61 -34.275 -21.533 -111.624 1.00 36.62 B
ATOM 5237 O SER B 61 -35.407 -21.343 -111.189 1.00 35.24 B
ATOM 5238 N GLN B 62 -33.471 -20.548 -111.992 1.00 38.34 B
ATOM 5239 CA GLN B 62 -33.921 -19.179 -111.859 1.00 41.35 B
ATOM 5240 CB GLN B 62 -32.807 -18.220 -112.238 1.00 41.12 B
ATOM 5241 CG GLN B 62 -31.437 -18.672 -111.843 1.00 41.13 B
ATOM 5242 CD GLN B 62 -30.404 -17.608 -112.066 1.00 42.25 B
ATOM 5243 OE1 GLN B 62 -29.211 -17.888 -112.121 1.00 41.88 B
ATOM 5244 NE2 GLN B 62 -30.858 -16.366 -112.196 1.00 41.55 B
ATOM 5245 C GLN B 62 -35.151 -18.909 -112.710 1.00 44.22 B
ATOM 5246 O GLN B 62 -35.962 -18.034 -112.418 1.00 45.16 B
ATOM 5247 N GLU B 63 -35.290 -19.654 -113.788 1.00 47.70 B
ATOM 5248 CA GLU B 63 -36.453 -19.476 -114.647 1.00 51.54 B
ATOM 5249 CB GLU B 63 -36.273 -20.255 -115.929 1.00 53.05 B
ATOM 5250 CG GLU B 63 -35.815 -19.475 -117.103 1.00 54.32 B
ATOM 5251 CD GLU B 63 -35.261 -20.415 -118.124 1.00 55.01 B
ATOM 5252 OE1 GLU B 63 -34.092 -20.225 -118.520 1.00 54.58 B
ATOM 5253 OE2 GLU B 63 -35.991 -21.360 -118.499 1.00 55.17 B
ATOM 5254 C GLU B 63 -37.678 -20.024 -113.948 1.00 52.96 B
ATOM 5255 O GLU B 63 -38.732 -19.388 -113.839 1.00 52.67 B
ATOM 5256 N PHE B 64 -37.503 -21.251 -113.495 1.00 55.00 B
ATOM 5257 CA PHE B 64 -38.529 -21.978 -112.804 1.00 56.81 B
ATOM 5258 CB PHE B 64 -37.907 -23.196 -112.150 1.00 57.60 B
ATOM 5259 CG PHE B 64 -38.888 -24.072 -111.472 1.00 59.84 B
ATOM 5260 CD1 PHE B 64 -39.690 -24.925 -112.210 1.00 60.55 B
ATOM 5261 CD2 PHE B 64 -38.988 -24.078 -110.089 1.00 60.88 B
ATOM 5262 CE1 PHE B 64 -40.572 -25.782 -111.581 1.00 61.08 B
ATOM 5263 CE2 PHE B 64 -39.877 -24.933 -109.441 1.00 61.82 B
ATOM 5264 CZ PHE B 64 -40.668 -25.789 -110.187 1.00 61.93 B
ATOM 5265 C PHE B 64 -39.157 -21.101 -111.752 1.00 58.02 B
ATOM 5266 O PHE B 64 -40.325 -20.739 -111.846 1.00 58.06 B
ATOM 5267 N ALA B 65 -38.351 -20.742 -110.760 1.00 59.87 B

ATOM 5268 CA ALA B 65 -38.809 -19.926-109.644 1.00 61.85 B
ATOM 5269 CB ALA B 65 -37.633 -19.543-108.756 1.00 61.48 B
ATOM 5270 C ALA B 65 -39.550 -18.680-110.074 1.00 63.12 B
ATOM 5271 O ALA B 65 -40.383 -18.155-109.327 1.00 63.55 B
ATOM 5272 N GLU B 66 -39.256 -18.193-111.273 1.00 64.56 B
ATOM 5273 CA GLU B 66 -39.934 -16.987-111.710 1.00 65.54 B
ATOM 5274 CB GLU B 66 -39.136 -16.230-112.741 1.00 64.85 B
ATOM 5275 CG GLU B 66 -39.650 -14.828-112.809 1.00 65.01 B
ATOM 5276 CD GLU B 66 -40.003 -14.414-114.202 0.00 65.23 B
ATOM 5277 OE1 GLU B 66 -39.169 -14.664-115.099 0.00 65.34 B
ATOM 5278 OE2 GLU B 66 -41.102 -13.838-114.392 0.00 65.33 B
ATOM 5279 C GLU B 66 -41.300 -17.254-112.274 1.00 66.50 B
ATOM 5280 O GLU B 66 -42.245 -16.484-112.067 1.00 66.39 B
ATOM 5281 N ALA B 67 -41.397 -18.352-113.006 1.00 67.81 B
ATOM 5282 CA ALA B 67 -42.669 -18.713-113.585 1.00 69.04 B
ATOM 5283 CB ALA B 67 -42.549 -19.975-114.404 1.00 69.31 B
ATOM 5284 C ALA B 67 -43.643 -18.916-112.449 1.00 69.44 B
ATOM 5285 O ALA B 67 -44.562 -18.118-112.286 1.00 69.29 B
ATOM 5286 N TRP B 68 -43.450 -19.942-111.625 1.00 69.55 B
ATOM 5287 CA TRP B 68 -44.432 -20.076-110.570 1.00 69.61 B
ATOM 5288 CB TRP B 68 -44.311 -21.378-109.767 1.00 68.88 B
ATOM 5289 CG TRP B 68 -43.757 -22.544-110.493 1.00 68.64 B
ATOM 5290 CD2 TRP B 68 -44.379 -23.830-110.704 1.00 68.80 B
ATOM 5291 CE2 TRP B 68 -43.410 -24.653-111.304 1.00 68.43 B
ATOM 5292 CE3 TRP B 68 -45.651 -24.369-110.434 1.00 69.63 B
ATOM 5293 CD1 TRP B 68 -42.493 -22.650-110.976 1.00 68.21 B
ATOM 5294 NE1 TRP B 68 -42.275 -23.903-111.455 1.00 67.93 B
ATOM 5295 CZ2 TRP B 68 -43.661 -25.977-111.653 1.00 68.62 B
ATOM 5296 CZ3 TRP B 68 -45.901 -25.710-110.784 1.00 69.54 B
ATOM 5297 CH2 TRP B 68 -44.904 -26.489-111.382 1.00 68.68 B
ATOM 5298 C TRP B 68 -44.366 -18.876-109.630 1.00 69.82 B
ATOM 5299 O TRP B 68 -45.398 -18.296-109.341 1.00 70.46 B
ATOM 5300 N GLY B 69 -43.187 -18.474-109.158 1.00 69.39 B
ATOM 5301 CA GLY B 69 -43.135 -17.312-108.279 1.00 69.46 B

ATOM 5302 C GLY B 69 -44.141 -16.248-108.697 1.00 69.96 B
ATOM 5303 O GLY B 69 -44.962 -15.773-107.901 1.00 70.21 B
ATOM 5304 N ALA B 70 -44.104 -15.887-109.972 1.00 70.47 B
ATOM 5305 CA ALA B 70 -45.032 -14.885-110.500 1.00 71.20 B
ATOM 5306 CB ALA B 70 -44.657 -14.521-111.944 1.00 70.90 B
ATOM 5307 C ALA B 70 -46.470 -15.402-110.430 1.00 71.41 B
ATOM 5308 O ALA B 70 -47.401 -14.647-110.150 1.00 70.89 B
ATOM 5309 N ALA B 71 -46.639 -16.694-110.692 1.00 71.86 B
ATOM 5310 CA ALA B 71 -47.951 -17.323-110.631 1.00 72.53 B
ATOM 5311 CB ALA B 71 -47.858 -18.792-111.063 1.00 72.76 B
ATOM 5312 C ALA B 71 -48.469 -17.220-109.199 1.00 73.12 B
ATOM 5313 O ALA B 71 -49.486 -16.569-108.949 1.00 73.30 B
ATOM 5314 N ALA B 72 -47.755 -17.856-108.267 1.00 73.03 B
ATOM 5315 CA ALA B 72 -48.124 -17.826-106.852 1.00 72.87 B
ATOM 5316 CB ALA B 72 -46.928 -18.191-105.996 1.00 72.93 B
ATOM 5317 C ALA B 72 -48.574 -16.412-106.536 1.00 72.80 B
ATOM 5318 O ALA B 72 -49.655 -16.197-105.984 1.00 73.37 B
ATOM 5319 N ALA B 73 -47.737 -15.452-106.921 1.00 72.62 B
ATOM 5320 CA ALA B 73 -48.062 -14.063-106.695 1.00 72.67 B
ATOM 5321 CB ALA B 73 -46.968 -13.143-107.177 1.00 72.56 B
ATOM 5322 C ALA B 73 -49.323 -13.694-107.383 1.00 72.46 B
ATOM 5323 O ALA B 73 -50.277 -13.299-106.777 1.00 72.39 B
ATOM 5324 N ALA B 74 -49.428 -13.835-108.675 1.00 72.39 B
ATOM 5325 CA ALA B 74 -50.696 -13.271-108.954 1.00 72.72 B
ATOM 5326 CB ALA B 74 -50.626 -12.230-110.073 1.00 71.45 B
ATOM 5327 C ALA B 74 -51.958 -14.053-108.915 1.00 73.24 B
ATOM 5328 O ALA B 74 -53.025 -13.567-109.319 1.00 73.45 B
ATOM 5329 N LEU B 75 -51.870 -15.281-108.555 1.00 73.23 B
ATOM 5330 CA LEU B 75 -53.138 -15.872-108.414 1.00 73.41 B
ATOM 5331 CB LEU B 75 -53.002 -17.401-108.261 1.00 73.14 B
ATOM 5332 CG LEU B 75 -53.317 -18.257-109.461 1.00 72.70 B
ATOM 5333 CD1 LEU B 75 -52.623 -17.645-110.658 1.00 73.67 B
ATOM 5334 CD2 LEU B 75 -52.799 -19.679-109.195 1.00 71.88 B
ATOM 5335 C LEU B 75 -53.443 -15.339-106.986 1.00 74.14 B

ATOM 5336 O LEU B 75 -54.497 -14.788-106.641 1.00 74.87 B
ATOM 5337 N TYR B 76 -52.379 -15.500-106.197 1.00 74.16 B
ATOM 5338 CA TYR B 76 -52.307 -15.373-104.748 1.00 73.62 B
ATOM 5339 CB TYR B 76 -51.818 -16.737-104.351 1.00 72.04 B
ATOM 5340 CG TYR B 76 -52.558 -17.898-104.993 1.00 71.18 B
ATOM 5341 CD1 TYR B 76 -51.927 -19.143-105.131 1.00 70.97 B
ATOM 5342 CE1 TYR B 76 -52.636 -20.283-105.479 1.00 70.98 B
ATOM 5343 CD2 TYR B 76 -53.941 -17.821-105.254 1.00 71.19 B
ATOM 5344 CE2 TYR B 76 -54.658 -18.953-105.605 1.00 71.52 B
ATOM 5345 CZ TYR B 76 -54.000 -20.179-105.706 1.00 71.42 B
ATOM 5346 OH TYR B 76 -54.694 -21.319-106.010 1.00 71.31 B
ATOM 5347 C TYR B 76 -51.653 -14.426-103.741 1.00 74.23 B
ATOM 5348 O TYR B 76 -51.247 -14.910-102.669 1.00 73.57 B
ATOM 5349 N GLU B 77 -51.553 -13.137-103.991 1.00 75.62 B
ATOM 5350 CA GLU B 77 -50.932 -12.263-103.012 1.00 77.67 B
ATOM 5351 CB GLU B 77 -49.723 -11.592-103.611 1.00 77.95 B
ATOM 5352 CG GLU B 77 -49.401 -10.281-102.991 1.00 79.61 B
ATOM 5353 CD GLU B 77 -47.947 -10.025-102.831 1.00 80.46 B
ATOM 5354 OE1 GLU B 77 -47.248 -9.789-103.840 1.00 81.62 B
ATOM 5355 OE2 GLU B 77 -47.526 -10.044-101.664 1.00 81.10 B
ATOM 5356 C GLU B 77 -51.962 -11.378-102.263 1.00 78.60 B
ATOM 5357 O GLU B 77 -51.636 -10.493-101.511 1.00 79.12 B
ATOM 5358 N PRO B 78 -53.258 -11.507-102.607 1.00 78.96 B
ATOM 5359 CD PRO B 78 -53.082 -10.768-103.874 1.00 78.65 B
ATOM 5360 CA PRO B 78 -54.432 -10.882-102.003 1.00 78.91 B
ATOM 5361 CB PRO B 78 -55.292 -10.531-103.218 1.00 78.60 B
ATOM 5362 CG PRO B 78 -54.378 -9.785-103.969 1.00 78.21 B
ATOM 5363 C PRO B 78 -54.856 -12.136-101.216 1.00 79.10 B
ATOM 5364 O PRO B 78 -55.377 -13.090-101.789 1.00 78.20 B
ATOM 5365 N ALA B 79 -54.461 -12.126 -99.932 1.00 80.10 B
ATOM 5366 CA ALA B 79 -54.687 -13.146 -98.882 1.00 81.43 B
ATOM 5367 CB ALA B 79 -56.216 -13.392 -98.641 1.00 81.39 B
ATOM 5368 C ALA B 79 -53.976 -14.485 -98.980 1.00 82.31 B
ATOM 5369 O ALA B 79 -54.595 -15.553 -99.111 1.00 82.95 B

ATOM 5370 N TRP B 80 -52.658 -14.424 -98.929 1.00 82.83 B
ATOM 5371 CA TRP B 80 -51.898 -15.649 -98.944 1.00 83.17 B
ATOM 5372 CB TRP B 80 -50.798 -15.596 -99.992 1.00 83.13 B
ATOM 5373 CG TRP B 80 -49.773 -14.603 -99.709 1.00 82.74 B
ATOM 5374 CD2 TRP B 80 -48.556 -14.855 -99.035 1.00 82.20 B
ATOM 5375 CE2 TRP B 80 -47.822 -13.651 -99.033 1.00 81.90 B
ATOM 5376 CE3 TRP B 80 -48.011 -15.993 -98.424 1.00 81.97 B
ATOM 5377 CD1 TRP B 80 -49.756 -13.290 -100.083 1.00 82.41 B
ATOM 5378 NE1 TRP B 80 -48.578 -12.708 -99.682 1.00 81.69 B
ATOM 5379 CZ2 TRP B 80 -46.560 -13.552 -98.449 1.00 81.84 B
ATOM 5380 CZ3 TRP B 80 -46.767 -15.901 -97.840 1.00 81.85 B
ATOM 5381 CH2 TRP B 80 -46.048 -14.684 -97.854 1.00 82.20 B
ATOM 5382 C TRP B 80 -51.355 -15.729 -97.522 1.00 83.23 B
ATOM 5383 O TRP B 80 -50.916 -16.785 -97.061 1.00 83.47 B
ATOM 5384 N ALA B 81 -51.437 -14.597 -96.821 1.00 82.82 B
ATOM 5385 CA ALA B 81 -51.011 -14.511 -95.429 1.00 81.90 B
ATOM 5386 CB ALA B 81 -50.815 -13.039 -95.026 1.00 81.36 B
ATOM 5387 C ALA B 81 -52.160 -15.109 -94.636 1.00 81.08 B
ATOM 5388 O ALA B 81 -51.969 -15.799 -93.633 1.00 80.62 B
ATOM 5389 N ASN B 82 -53.360 -14.836 -95.141 1.00 80.05 B
ATOM 5390 CA ASN B 82 -54.625 -15.264 -94.545 1.00 78.72 B
ATOM 5391 CB ASN B 82 -55.653 -14.132 -94.684 1.00 78.21 B
ATOM 5392 CG ASN B 82 -55.475 -13.050 -93.632 1.00 77.90 B
ATOM 5393 OD1 ASN B 82 -55.426 -13.338 -92.437 1.00 77.92 B
ATOM 5394 ND2 ASN B 82 -55.387 -11.801 -94.069 1.00 78.08 B
ATOM 5395 C ASN B 82 -55.295 -16.583 -94.974 1.00 77.81 B
ATOM 5396 O ASN B 82 -56.473 -16.590 -95.320 1.00 77.35 B
ATOM 5397 N ALA B 83 -54.568 -17.696 -94.907 1.00 77.46 B
ATOM 5398 CA ALA B 83 -55.117 -19.008 -95.263 1.00 77.49 B
ATOM 5399 CB ALA B 83 -54.013 -19.840 -95.887 1.00 77.71 B
ATOM 5400 C ALA B 83 -55.652 -19.657 -93.977 1.00 77.61 B
ATOM 5401 O ALA B 83 -55.978 -18.962 -93.026 1.00 77.87 B
ATOM 5402 N ALA B 84 -55.797 -20.976 -93.972 1.00 77.53 B
ATOM 5403 CA ALA B 84 -56.217 -21.707 -92.780 1.00 77.46 B

ATOM 5404 CB ALA B 84 -57.526 -22.417 -92.916 1.00 77.04 B
ATOM 5405 C ALA B 84 -55.029 -22.634 -92.809 1.00 77.56 B
ATOM 5406 O ALA B 84 -54.754 -23.367 -91.879 1.00 78.21 B
ATOM 5407 N ASP B 85 -54.283 -22.576 -93.906 1.00 77.32 B
ATOM 5408 CA ASP B 85 -52.861 -22.901 -93.872 1.00 77.31 B
ATOM 5409 CB ASP B 85 -52.463 -23.715 -95.104 1.00 77.90 B
ATOM 5410 CG ASP B 85 -52.727 -25.198 -94.932 1.00 77.93 B
ATOM 5411 OD1 ASP B 85 -51.807 -25.920 -94.494 1.00 78.54 B
ATOM 5412 OD2 ASP B 85 -53.824 -25.729 -95.205 1.00 77.36 B
ATOM 5413 C ASP B 85 -51.994 -21.651 -93.757 1.00 77.12 B
ATOM 5414 O ASP B 85 -52.185 -20.682 -94.493 1.00 77.49 B
ATOM 5415 N PRO B 86 -51.044 -21.679 -92.829 1.00 76.63 B
ATOM 5416 CD PRO B 86 -50.774 -20.428 -92.098 1.00 76.03 B
ATOM 5417 CA PRO B 86 -49.836 -22.497 -92.985 1.00 75.74 B
ATOM 5418 CB PRO B 86 -48.747 -21.646 -92.320 1.00 76.16 B
ATOM 5419 CG PRO B 86 -49.301 -20.264 -92.295 1.00 75.97 B
ATOM 5420 C PRO B 86 -49.964 -23.836 -92.267 1.00 74.65 B
ATOM 5421 O PRO B 86 -50.654 -23.926 -91.252 1.00 73.94 B
ATOM 5422 N GLN B 87 -49.302 -24.861 -92.792 1.00 73.53 B
ATOM 5423 CA GLN B 87 -48.016 -24.685 -93.455 1.00 72.92 B
ATOM 5424 CB GLN B 87 -47.043 -25.791 -93.038 1.00 71.62 B
ATOM 5425 CG GLN B 87 -47.308 -27.133 -93.701 1.00 70.71 B
ATOM 5426 CD GLN B 87 -47.462 -28.258 -92.697 1.00 71.08 B
ATOM 5427 OE1 GLN B 87 -48.384 -28.246 -91.881 1.00 71.06 B
ATOM 5428 NE2 GLN B 87 -46.562 -29.232 -92.753 1.00 70.82 B
ATOM 5429 C GLN B 87 -48.176 -24.672 -94.971 1.00 73.51 B
ATOM 5430 O GLN B 87 -47.222 -24.919 -95.708 1.00 73.83 B
ATOM 5431 N ALA B 88 -49.390 -24.383 -95.429 1.00 73.81 B
ATOM 5432 CA ALA B 88 -49.602 -23.913 -96.793 1.00 73.11 B
ATOM 5433 CB ALA B 88 -51.079 -23.972 -97.151 1.00 73.26 B
ATOM 5434 C ALA B 88 -49.064 -22.498 -96.979 1.00 72.58 B
ATOM 5435 O ALA B 88 -48.307 -22.230 -97.912 1.00 73.26 B
ATOM 5436 N ALA B 89 -49.459 -21.597 -96.086 1.00 71.89 B
ATOM 5437 CA ALA B 89 -48.989 -20.218 -96.131 1.00 71.40 B

ATOM 5438 CB ALA B 89 -49.463 -19.436 -94.929 1.00 70.74 B
ATOM 5439 C ALA B 89 -47.470 -20.221 -96.158 1.00 71.22 B
ATOM 5440 O ALA B 89 -46.854 -19.481 -96.926 1.00 71.28 B
ATOM 5441 N ALA B 90 -46.870 -21.068 -95.325 1.00 71.18 B
ATOM 5442 CA ALA B 90 -45.409 -21.172 -95.255 1.00 71.20 B
ATOM 5443 CB ALA B 90 -45.000 -22.304 -94.290 1.00 71.09 B
ATOM 5444 C ALA B 90 -44.769 -21.413 -96.631 1.00 70.34 B
ATOM 5445 O ALA B 90 -43.688 -20.886 -96.936 1.00 70.73 B
ATOM 5446 N ILE B 91 -45.446 -22.205 -97.457 1.00 68.46 B
ATOM 5447 CA ILE B 91 -44.949 -22.527 -98.785 1.00 66.17 B
ATOM 5448 CB ILE B 91 -45.710 -23.709 -99.376 1.00 65.15 B
ATOM 5449 CG2 ILE B 91 -44.894 -24.328 -100.493 1.00 64.76 B
ATOM 5450 CG1 ILE B 91 -45.992 -24.732 -98.275 1.00 65.30 B
ATOM 5451 CD1 ILE B 91 -45.463 -26.140 -98.559 1.00 64.51 B
ATOM 5452 C ILE B 91 -45.056 -21.368 -99.772 1.00 65.30 B
ATOM 5453 O ILE B 91 -44.068 -20.954 -100.376 1.00 65.15 B
ATOM 5454 N ILE B 92 -46.267 -20.859 -99.945 1.00 63.90 B
ATOM 5455 CA ILE B 92 -46.518 -19.770 -100.882 1.00 63.48 B
ATOM 5456 CB ILE B 92 -48.040 -19.421 -100.903 1.00 62.90 B
ATOM 5457 CG2 ILE B 92 -48.707 -19.934 -99.651 1.00 63.27 B
ATOM 5458 CG1 ILE B 92 -48.260 -17.920 -101.108 1.00 61.72 B
ATOM 5459 CD1 ILE B 92 -49.136 -17.629 -102.267 1.00 60.21 B
ATOM 5460 C ILE B 92 -45.659 -18.515 -100.672 1.00 63.41 B
ATOM 5461 O ILE B 92 -45.370 -17.777 -101.617 1.00 64.04 B
ATOM 5462 N GLY B 93 -45.237 -18.278 -99.439 1.00 63.05 B
ATOM 5463 CA GLY B 93 -44.383 -17.135 -99.195 1.00 61.95 B
ATOM 5464 C GLY B 93 -43.003 -17.563 -99.631 1.00 61.58 B
ATOM 5465 O GLY B 93 -42.218 -16.736 -100.061 1.00 60.97 B
ATOM 5466 N ALA B 94 -42.712 -18.862 -99.518 1.00 61.24 B
ATOM 5467 CA ALA B 94 -41.398 -19.397 -99.908 1.00 61.13 B
ATOM 5468 CB ALA B 94 -41.129 -20.718 -99.194 1.00 61.12 B
ATOM 5469 C ALA B 94 -41.265 -19.610 -101.420 1.00 61.37 B
ATOM 5470 O ALA B 94 -40.171 -19.871 -101.948 1.00 61.84 B
ATOM 5471 N VAL B 95 -42.391 -19.496 -102.113 1.00 60.15 B

ATOM 5472 CA VAL B 95 -42.426 -19.696-103.546 1.00 58.05 B
ATOM 5473 CB VAL B 95 -43.616 -20.625-103.916 1.00 57.51 B
ATOM 5474 CG1 VAL B 95 -44.346 -20.112-105.137 1.00 56.64 B
ATOM 5475 CG2 VAL B 95 -43.099 -22.048-104.166 1.00 56.40 B
ATOM 5476 C VAL B 95 -42.500 -18.373-104.300 1.00 57.08 B
ATOM 5477 O VAL B 95 -42.124 -18.298-105.468 1.00 56.90 B
ATOM 5478 N ARG B 96 -42.962 -17.321-103.639 1.00 55.90 B
ATOM 5479 CA ARG B 96 -43.053 -16.022-104.294 1.00 56.33 B
ATOM 5480 CB ARG B 96 -44.323 -15.279-103.868 1.00 56.81 B
ATOM 5481 CG ARG B 96 -44.460 -15.021-102.366 1.00 57.61 B
ATOM 5482 CD ARG B 96 -45.144 -13.681-102.090 1.00 57.45 B
ATOM 5483 NE ARG B 96 -44.167 -12.603-101.913 1.00 57.83 B
ATOM 5484 CZ ARG B 96 -44.494 -11.331-101.700 1.00 58.52 B
ATOM 5485 NH1 ARG B 96 -43.564 -10.393-101.539 1.00 57.78 B
ATOM 5486 NH2 ARG B 96 -45.765 -10.997-101.654 1.00 58.77 B
ATOM 5487 C ARG B 96 -41.824 -15.219-103.900 1.00 56.59 B
ATOM 5488 O ARG B 96 -41.807 -13.989-103.931 1.00 55.69 B
ATOM 5489 N THR B 97 -40.796 -15.936-103.487 1.00 57.06 B
ATOM 5490 CA THR B 97 -39.568 -15.281-103.105 1.00 57.01 B
ATOM 5491 CB THR B 97 -39.200 -15.682-101.662 1.00 56.85 B
ATOM 5492 OG1 THR B 97 -39.125 -14.499-100.857 1.00 55.37 B
ATOM 5493 CG2 THR B 97 -37.887 -16.454-101.597 1.00 55.98 B
ATOM 5494 C THR B 97 -38.593 -15.773-104.157 1.00 57.35 B
ATOM 5495 O THR B 97 -37.910 -16.784-104.004 1.00 57.52 B
ATOM 5496 N LEU B 98 -38.579 -15.044-105.263 1.00 57.18 B
ATOM 5497 CA LEU B 98 -37.769 -15.409-106.419 1.00 56.31 B
ATOM 5498 CB LEU B 98 -38.103 -14.476-107.590 1.00 56.49 B
ATOM 5499 CG LEU B 98 -39.559 -14.018-107.756 1.00 56.32 B
ATOM 5500 CD1 LEU B 98 -39.689 -13.215-109.040 0.00 56.56 B
ATOM 5501 CD2 LEU B 98 -40.500 -15.222-107.788 0.00 56.48 B
ATOM 5502 C LEU B 98 -36.263 -15.444-106.202 1.00 55.12 B
ATOM 5503 O LEU B 98 -35.565 -16.302-106.748 1.00 54.10 B
ATOM 5504 N GLY B 99 -35.756 -14.519-105.404 1.00 54.64 B
ATOM 5505 CA GLY B 99 -34.328 -14.502-105.171 1.00 54.55 B

ATOM 5506 C GLY B 99 -33.602 -13.916-106.365 1.00 54.21 B
ATOM 5507 O GLY B 99 -33.995 -12.862-106.879 1.00 53.90 B
ATOM 5508 N SER B 100 -32.551 -14.590-106.824 1.00 53.15 B
ATOM 5509 CA SER B 100 -31.784 -14.074-107.952 1.00 52.87 B
ATOM 5510 CB SER B 100 -30.474 -14.858-108.121 1.00 52.10 B
ATOM 5511 OG SER B 100 -30.698 -16.245-108.275 1.00 52.11 B
ATOM 5512 C SER B 100 -32.576 -14.086-109.259 1.00 53.42 B
ATOM 5513 O SER B 100 -32.145 -13.520-110.265 1.00 53.38 B
ATOM 5514 N ALA B 101 -33.746 -14.714-109.236 1.00 53.42 B
ATOM 5515 CA ALA B 101 -34.597 -14.803-110.419 1.00 52.47 B
ATOM 5516 CB ALA B 101 -35.711 -15.796-110.177 1.00 52.98 B
ATOM 5517 C ALA B 101 -35.197 -13.458-110.811 1.00 51.85 B
ATOM 5518 O ALA B 101 -35.754 -13.311-111.889 1.00 51.58 B
ATOM 5519 N ASN B 102 -35.116 -12.488-109.917 1.00 51.53 B
ATOM 5520 CA ASN B 102 -35.651 -11.170-110.213 1.00 52.14 B
ATOM 5521 CB ASN B 102 -35.832 -10.394-108.938 1.00 53.02 B
ATOM 5522 CG ASN B 102 -36.945 -10.921-108.138 1.00 54.19 B
ATOM 5523 OD1 ASN B 102 -37.882 -10.196-107.810 1.00 54.92 B
ATOM 5524 ND2 ASN B 102 -36.884 -12.210-107.832 1.00 54.87 B
ATOM 5525 C ASN B 102 -34.745 -10.390-111.118 1.00 52.15 B
ATOM 5526 O ASN B 102 -35.079 -9.300-111.600 1.00 51.83 B
ATOM 5527 N LEU B 103 -33.584 -10.976-111.339 1.00 51.66 B
ATOM 5528 CA LEU B 103 -32.561 -10.380-112.162 1.00 50.92 B
ATOM 5529 CB LEU B 103 -31.197 -10.872-111.706 1.00 51.83 B
ATOM 5530 CG LEU B 103 -30.616 -10.468-110.361 1.00 51.48 B
ATOM 5531 CD1 LEU B 103 -29.387 -11.336-110.113 1.00 50.77 B
ATOM 5532 CD2 LEU B 103 -30.270 -8.982-110.363 1.00 49.84 B
ATOM 5533 C LEU B 103 -32.728 -10.738-113.618 1.00 49.49 B
ATOM 5534 O LEU B 103 -33.022 -11.890-113.958 1.00 49.67 B
ATOM 5535 N PRO B 104 -32.518 -9.754-114.505 1.00 48.02 B
ATOM 5536 CD PRO B 104 -32.271 -8.334-114.200 1.00 47.68 B
ATOM 5537 CA PRO B 104 -32.636 -9.963-115.952 1.00 46.63 B
ATOM 5538 CB PRO B 104 -32.272 -8.602-116.530 1.00 45.81 B
ATOM 5539 CG PRO B 104 -32.722 -7.658-115.486 1.00 46.58 B

ATOM 5540 C PRO B 104 -31.681 -11.055-116.430 1.00 45.60 B
ATOM 5541 O PRO B 104 -30.687 -11.347-115.770 1.00 45.80 B
ATOM 5542 N ALA B 105 -31.983 -11.644-117.583 1.00 44.64 B
ATOM 5543 CA ALA B 105 -31.158 -12.716-118.147 1.00 43.45 B
ATOM 5544 CB ALA B 105 -31.514 -12.941-119.627 1.00 44.41 B
ATOM 5545 C ALA B 105 -29.667 -12.442-118.021 1.00 41.53 B
ATOM 5546 O ALA B 105 -28.910 -13.248-117.475 1.00 40.13 B
ATOM 5547 N ALA B 106 -29.253 -11.291-118.533 1.00 39.31 B
ATOM 5548 CA ALA B 106 -27.852 -10.909-118.506 1.00 37.58 B
ATOM 5549 CB ALA B 106 -27.680 -9.578-119.201 1.00 38.06 B
ATOM 5550 C ALA B 106 -27.251 -10.844-117.112 1.00 36.08 B
ATOM 5551 O ALA B 106 -26.145 -11.336-116.880 1.00 35.05 B
ATOM 5552 N LYS B 107 -27.961 -10.207-116.187 1.00 34.34 B
ATOM 5553 CA LYS B 107 -27.444 -10.113-114.831 1.00 33.14 B
ATOM 5554 CB LYS B 107 -28.258 -9.141-114.021 1.00 30.54 B
ATOM 5555 CG LYS B 107 -27.650 -7.786-114.058 1.00 29.17 B
ATOM 5556 CD LYS B 107 -28.713 -6.770-113.898 1.00 27.16 B
ATOM 5557 CE LYS B 107 -28.140 -5.478-113.428 1.00 26.78 B
ATOM 5558 NZ LYS B 107 -29.240 -4.635-112.898 1.00 28.81 B
ATOM 5559 C LYS B 107 -27.399 -11.445-114.131 1.00 33.85 B
ATOM 5560 O LYS B 107 -26.480 -11.735-113.368 1.00 34.12 B
ATOM 5561 N ARG B 108 -28.396 -12.267-114.404 1.00 34.44 B
ATOM 5562 CA ARG B 108 -28.436 -13.572-113.795 1.00 35.91 B
ATOM 5563 CB ARG B 108 -29.583 -14.418-114.334 1.00 36.94 B
ATOM 5564 CG ARG B 108 -30.972 -13.990-113.919 1.00 38.39 B
ATOM 5565 CD ARG B 108 -31.985 -14.999-114.442 1.00 38.44 B
ATOM 5566 NE ARG B 108 -33.356 -14.538-114.280 1.00 39.54 B
ATOM 5567 CZ ARG B 108 -34.418 -15.188-114.741 1.00 41.13 B
ATOM 5568 NH1 ARG B 108 -34.270 -16.335-115.398 1.00 41.51 B
ATOM 5569 NH2 ARG B 108 -35.632 -14.691-114.545 1.00 42.42 B
ATOM 5570 C ARG B 108 -27.160 -14.291-114.116 1.00 35.70 B
ATOM 5571 O ARG B 108 -26.551 -14.896-113.247 1.00 37.52 B
ATOM 5572 N GLN B 109 -26.741 -14.243-115.371 1.00 35.72 B
ATOM 5573 CA GLN B 109 -25.522 -14.967-115.684 1.00 35.29 B

ATOM 5574 CB GLN B 109 -25.345 -15.191-117.208 1.00 35.69 B
ATOM 5575 CG GLN B 109 -26.329 -14.495-118.144 1.00 36.78 B
ATOM 5576 CD GLN B 109 -26.181 -14.951-119.618 1.00 38.59 B
ATOM 5577 OE1 GLN B 109 -27.127 -14.834-120.416 1.00 38.13 B
ATOM 5578 NE2 GLN B 109 -25.001 -15.472-119.975 1.00 37.28 B
ATOM 5579 C GLN B 109 -24.279 -14.334-115.061 1.00 34.15 B
ATOM 5580 O GLN B 109 -23.287 -15.026-114.838 1.00 33.35 B
ATOM 5581 N GLN B 110 -24.332 -13.037-114.763 1.00 32.74 B
ATOM 5582 CA GLN B 110 -23.193 -12.394-114.129 1.00 32.34 B
ATOM 5583 CB GLN B 110 -23.383 -10.876-114.074 1.00 31.44 B
ATOM 5584 CG GLN B 110 -23.296 -10.172-115.403 1.00 31.21 B
ATOM 5585 CD GLN B 110 -23.454 -8.672-115.276 1.00 30.80 B
ATOM 5586 OE1 GLN B 110 -22.681 -8.010-114.589 1.00 31.94 B
ATOM 5587 NE2 GLN B 110 -24.460 -8.127-115.942 1.00 30.76 B
ATOM 5588 C GLN B 110 -23.197 -12.977-112.720 1.00 33.81 B
ATOM 5589 O GLN B 110 -22.178 -13.453-112.204 1.00 33.41 B
ATOM 5590 N TYR B 111 -24.378 -12.957-112.112 1.00 34.37 B
ATOM 5591 CA TYR B 111 -24.544 -13.489-110.776 1.00 34.36 B
ATOM 5592 CB TYR B 111 -26.023 -13.494-110.380 1.00 35.20 B
ATOM 5593 CG TYR B 111 -26.245 -13.858-108.929 1.00 36.66 B
ATOM 5594 CD1 TYR B 111 -25.839 -13.001-107.917 1.00 37.31 B
ATOM 5595 CE1 TYR B 111 -25.995 -13.344-106.579 1.00 37.94 B
ATOM 5596 CD2 TYR B 111 -26.822 -15.079-108.567 1.00 37.16 B
ATOM 5597 CE2 TYR B 111 -26.982 -15.432-107.232 1.00 37.49 B
ATOM 5598 CZ TYR B 111 -26.564 -14.561-106.243 1.00 37.22 B
ATOM 5599 OH TYR B 111 -26.706 -14.908-104.919 1.00 36.73 B
ATOM 5600 C TYR B 111 -23.999 -14.911-110.747 1.00 33.81 B
ATOM 5601 O TYR B 111 -22.971 -15.177-110.128 1.00 33.22 B
ATOM 5602 N ASN B 112 -24.684 -15.813-111.446 1.00 33.66 B
ATOM 5603 CA ASN B 112 -24.293 -17.221-111.486 1.00 34.28 B
ATOM 5604 CB ASN B 112 -25.107 -18.003-112.528 1.00 36.20 B
ATOM 5605 CG ASN B 112 -26.603 -17.852-112.349 1.00 38.93 B
ATOM 5606 OD1 ASN B 112 -27.089 -17.702-111.232 1.00 42.82 B
ATOM 5607 ND2 ASN B 112 -27.345 -17.909-113.453 1.00 39.87 B

ATOM 5608 C ASN B 112 -22.823 -17.408-111.799 1.00 34.16 B
ATOM 5609 O ASN B 112 -22.222 -18.404-111.408 1.00 33.78 B
ATOM 5610 N ALA B 113 -22.240 -16.455-112.518 1.00 34.73 B
ATOM 5611 CA ALA B 113 -20.832 -16.572-112.886 1.00 34.04 B
ATOM 5612 CB ALA B 113 -20.546 -15.812-114.182 1.00 33.37 B
ATOM 5613 C ALA B 113 -19.950 -16.057-111.766 1.00 33.16 B
ATOM 5614 O ALA B 113 -18.887 -16.629-111.491 1.00 33.08 B
ATOM 5615 N LEU B 114 -20.386 -14.976-111.121 1.00 31.09 B
ATOM 5616 CA LEU B 114 -19.617 -14.431-110.014 1.00 28.65 B
ATOM 5617 CB LEU B 114 -20.284 -13.176-109.468 1.00 25.81 B
ATOM 5618 CG LEU B 114 -19.967 -11.899-110.235 1.00 24.27 B
ATOM 5619 CD1 LEU B 114 -20.703 -10.716-109.628 1.00 23.05 B
ATOM 5620 CD2 LEU B 114 -18.471 -11.669-110.198 1.00 23.87 B
ATOM 5621 C LEU B 114 -19.502 -15.492-108.917 1.00 28.76 B
ATOM 5622 O LEU B 114 -18.462 -15.631-108.277 1.00 28.49 B
ATOM 5623 N LEU B 115 -20.566 -16.261-108.722 1.00 27.47 B
ATOM 5624 CA LEU B 115 -20.549 -17.293-107.711 1.00 27.81 B
ATOM 5625 CB LEU B 115 -21.933 -17.905-107.573 1.00 27.22 B
ATOM 5626 CG LEU B 115 -22.962 -16.914-107.018 1.00 29.04 B
ATOM 5627 CD1 LEU B 115 -24.359 -17.507-107.094 1.00 27.14 B
ATOM 5628 CD2 LEU B 115 -22.607 -16.546-105.571 1.00 30.30 B
ATOM 5629 C LEU B 115 -19.529 -18.375-108.033 1.00 29.00 B
ATOM 5630 O LEU B 115 -18.689 -18.716-107.195 1.00 30.95 B
ATOM 5631 N SER B 116 -19.597 -18.904-109.254 1.00 28.85 B
ATOM 5632 CA SER B 116 -18.688 -19.975-109.674 1.00 28.96 B
ATOM 5633 CB SER B 116 -19.078 -20.505-111.063 1.00 31.67 B
ATOM 5634 OG SER B 116 -17.955 -21.118-111.678 1.00 33.07 B
ATOM 5635 C SER B 116 -17.222 -19.607-109.689 1.00 27.86 B
ATOM 5636 O SER B 116 -16.343 -20.407-109.383 1.00 26.99 B
ATOM 5637 N ASN B 117 -16.969 -18.380-110.064 1.00 27.49 B
ATOM 5638 CA ASN B 117 -15.629 -17.889-110.139 1.00 27.40 B
ATOM 5639 CB ASN B 117 -15.734 -16.653-110.926 1.00 30.47 B
ATOM 5640 CG ASN B 117 -15.570 -16.968-112.290 1.00 34.60 B
ATOM 5641 OD1 ASN B 117 -14.444 -17.044-112.711 1.00 37.62 B

ATOM 5642 ND2 ASN B 117 -16.650 -17.303-113.006 1.00 37.21 B
ATOM 5643 C ASN B 117 -14.958 -17.694-108.821 1.00 24.84 B
ATOM 5644 O ASN B 117 -13.787 -18.056-108.620 1.00 23.03 B
ATOM 5645 N MET B 118 -15.749 -17.150-107.910 1.00 22.45 B
ATOM 5646 CA MET B 118 -15.293 -16.910-106.567 1.00 20.78 B
ATOM 5647 CB MET B 118 -16.387 -16.192-105.775 1.00 18.76 B
ATOM 5648 CG MET B 118 -15.964 -14.810-105.372 1.00 15.13 B
ATOM 5649 SD MET B 118 -17.169 -13.570-104.846 1.00 16.98 B
ATOM 5650 CE MET B 118 -18.617 -14.395-104.748 1.00 15.12 B
ATOM 5651 C MET B 118 -14.928 -18.234-105.932 1.00 21.25 B
ATOM 5652 O MET B 118 -13.834 -18.403-105.385 1.00 21.30 B
ATOM 5653 N SER B 119 -15.853 -19.179-106.038 1.00 20.97 B
ATOM 5654 CA SER B 119 -15.658 -20.519-105.504 1.00 21.91 B
ATOM 5655 CB SER B 119 -16.897 -21.366-105.799 1.00 21.77 B
ATOM 5656 OG SER B 119 -16.687 -22.719-105.445 1.00 23.72 B
ATOM 5657 C SER B 119 -14.412 -21.175-106.109 1.00 23.13 B
ATOM 5658 O SER B 119 -13.641 -21.846-105.418 1.00 22.93 B
ATOM 5659 N ARG B 120 -14.220 -20.952-107.409 1.00 25.21 B
ATOM 5660 CA ARG B 120 -13.093 -21.502-108.146 1.00 25.74 B
ATOM 5661 CB ARG B 120 -13.251 -21.191-109.640 1.00 25.73 B
ATOM 5662 CG ARG B 120 -12.309 -21.966-110.587 1.00 25.39 B
ATOM 5663 CD ARG B 120 -11.172 -21.117-111.090 1.00 23.39 B
ATOM 5664 NE ARG B 120 -11.668 -19.937-111.762 1.00 23.57 B
ATOM 5665 CZ ARG B 120 -10.902 -18.910-112.091 1.00 25.78 B
ATOM 5666 NH1 ARG B 120 -9.600 -18.904-111.813 1.00 24.31 B
ATOM 5667 NH2 ARG B 120 -11.442 -17.890-112.716 1.00 28.15 B
ATOM 5668 C ARG B 120 -11.802 -20.905-107.614 1.00 27.01 B
ATOM 5669 O ARG B 120 -10.863 -21.624-107.284 1.00 27.86 B
ATOM 5670 N ILE B 121 -11.767 -19.584-107.523 1.00 27.98 B
ATOM 5671 CA ILE B 121 -10.590 -18.887-107.035 1.00 30.63 B
ATOM 5672 CB ILE B 121 -10.854 -17.371-106.971 1.00 30.62 B
ATOM 5673 CG2 ILE B 121 -9.676 -16.648-106.322 1.00 30.68 B
ATOM 5674 CG1 ILE B 121 -11.097 -16.840-108.378 1.00 28.20 B
ATOM 5675 CD1 ILE B 121 -11.667 -15.458-108.401 1.00 27.91 B

ATOM 5676 C ILE B 121 -10.159 -19.372-105.651 1.00 32.49 B
ATOM 5677 O ILE B 121 -8.967 -19.617-105.403 1.00 33.30 B
ATOM 5678 N TYR B 122 -11.134 -19.518-104.760 1.00 32.97 B
ATOM 5679 CA TYR B 122 -10.864 -19.950-103.397 1.00 34.17 B
ATOM 5680 CB TYR B 122 -12.146 -19.903-102.567 1.00 35.64 B
ATOM 5681 CG TYR B 122 -11.945 -20.281-101.115 1.00 38.34 B
ATOM 5682 CD1 TYR B 122 -11.444 -19.365-100.185 1.00 38.30 B
ATOM 5683 CE1 TYR B 122 -11.223 -19.734 -98.860 1.00 39.31 B
ATOM 5684 CD2 TYR B 122 -12.220 -21.570-100.676 1.00 40.00 B
ATOM 5685 CE2 TYR B 122 -12.000 -21.945 -99.349 1.00 41.03 B
ATOM 5686 CZ TYR B 122 -11.501 -21.028 -98.452 1.00 40.13 B
ATOM 5687 OH TYR B 122 -11.257 -21.437 -97.164 1.00 40.45 B
ATOM 5688 C TYR B 122 -10.256 -21.338-103.298 1.00 34.42 B
ATOM 5689 O TYR B 122 -9.246 -21.517-102.616 1.00 35.92 B
ATOM 5690 N SER B 123 -10.866 -22.314-103.973 1.00 33.77 B
ATOM 5691 CA SER B 123 -10.388 -23.701-103.928 1.00 33.55 B
ATOM 5692 CB SER B 123 -11.537 -24.673-104.241 1.00 33.68 B
ATOM 5693 OG SER B 123 -12.574 -24.581-103.271 1.00 34.62 B
ATOM 5694 C SER B 123 -9.223 -23.975-104.862 1.00 32.06 B
ATOM 5695 O SER B 123 -8.863 -25.123-105.099 1.00 32.51 B
ATOM 5696 N THR B 124 -8.613 -22.911-105.358 1.00 31.24 B
ATOM 5697 CA THR B 124 -7.506 -23.038-106.286 1.00 31.51 B
ATOM 5698 CB THR B 124 -7.898 -22.438-107.654 1.00 31.90 B
ATOM 5699 OG1 THR B 124 -8.831 -23.313-108.298 1.00 31.44 B
ATOM 5700 CG2 THR B 124 -6.675 -22.233-108.536 1.00 31.66 B
ATOM 5701 C THR B 124 -6.258 -22.343-105.774 1.00 31.04 B
ATOM 5702 O THR B 124 -5.137 -22.724-106.132 1.00 31.83 B
ATOM 5703 N ALA B 125 -6.448 -21.325-104.936 1.00 30.07 B
ATOM 5704 CA ALA B 125 -5.329 -20.549-104.385 1.00 29.02 B
ATOM 5705 CB ALA B 125 -5.818 -19.571-103.351 1.00 28.34 B
ATOM 5706 C ALA B 125 -4.309 -21.479-103.778 1.00 27.72 B
ATOM 5707 O ALA B 125 -4.639 -22.454-103.141 1.00 28.36 B
ATOM 5708 N ALA B 126 -3.051 -21.147-103.977 1.00 26.77 B
ATOM 5709 CA ALA B 126 -1.980 -21.985-103.498 1.00 26.51 B

ATOM 5710 CB ALA B 126 -1.432 -22.783-104.677 1.00 26.27 B
ATOM 5711 C ALA B 126 -0.910 -21.075-102.923 1.00 27.37 B
ATOM 5712 O ALA B 126 -0.938 -19.875-103.146 1.00 27.53 B
ATOM 5713 N VAL B 127 0.028 -21.639-102.166 1.00 28.67 B
ATOM 5714 CA VAL B 127 1.097 -20.833-101.592 1.00 29.91 B
ATOM 5715 CB VAL B 127 1.063 -20.816-100.034 1.00 27.52 B
ATOM 5716 CG1 VAL B 127 2.187 -19.938 -99.506 1.00 24.68 B
ATOM 5717 CG2 VAL B 127 -0.275 -20.325 -99.528 1.00 22.63 B
ATOM 5718 C VAL B 127 2.426 -21.419-102.029 1.00 33.85 B
ATOM 5719 O VAL B 127 2.705 -22.596-101.774 1.00 33.92 B
ATOM 5720 N CYS B 128 3.249 -20.595-102.666 1.00 37.95 B
ATOM 5721 CA CYS B 128 4.547 -21.044-103.140 1.00 43.60 B
ATOM 5722 C CYS B 128 5.642 -20.398-102.359 1.00 45.21 B
ATOM 5723 O CYS B 128 5.414 -19.375-101.737 1.00 45.13 B
ATOM 5724 CB CYS B 128 4.709 -20.693-104.606 1.00 46.94 B
ATOM 5725 SG CYS B 128 3.323 -21.287-105.616 1.00 52.34 B
ATOM 5726 N LEU B 129 6.836 -20.971-102.417 1.00 48.44 B
ATOM 5727 CA LEU B 129 7.936 -20.418-101.662 1.00 52.64 B
ATOM 5728 CB LEU B 129 8.456 -21.433-100.655 1.00 53.11 B
ATOM 5729 CG LEU B 129 7.327 -22.366-100.244 1.00 53.80 B
ATOM 5730 CD1 LEU B 129 6.918 -23.245-101.426 1.00 53.79 B
ATOM 5731 CD2 LEU B 129 7.810 -23.230 -99.125 1.00 53.33 B
ATOM 5732 C LEU B 129 9.047 -20.023-102.544 1.00 55.54 B
ATOM 5733 O LEU B 129 9.117 -20.470-103.686 1.00 57.08 B
ATOM 5734 N PRO B 130 9.972 -19.204-101.999 1.00 58.08 B
ATOM 5735 CD PRO B 130 9.930 -18.694-100.615 1.00 58.54 B
ATOM 5736 CA PRO B 130 11.152 -18.706-102.718 1.00 60.19 B
ATOM 5737 CB PRO B 130 12.049 -18.158-101.618 1.00 59.42 B
ATOM 5738 CG PRO B 130 11.058 -17.700-100.575 1.00 58.82 B
ATOM 5739 C PRO B 130 11.776 -19.863-103.480 1.00 62.12 B
ATOM 5740 O PRO B 130 12.856 -19.775-104.059 1.00 62.59 B
ATOM 5741 N ASN B 131 11.049 -20.957-103.479 1.00 64.06 B
ATOM 5742 CA ASN B 131 11.471 -22.068-104.234 1.00 65.71 B
ATOM 5743 CB ASN B 131 11.098 -23.461-103.638 1.00 66.38 B

ATOM 5744 CG ASN B 131 12.193 -24.512-103.861 1.00 67.38 B
ATOM 5745 OD1 ASN B 131 11.966 -25.727-103.807 1.00 68.05 B
ATOM 5746 ND2 ASN B 131 13.404 -24.027-104.080 1.00 67.87 B
ATOM 5747 C ASN B 131 10.672 -22.001-105.463 1.00 66.69 B
ATOM 5748 O ASN B 131 9.463 -22.075-105.398 1.00 67.26 B
ATOM 5749 N ALA B 132 11.227 -21.652-106.581 1.00 67.16 B
ATOM 5750 CA ALA B 132 10.255 -22.159-107.506 1.00 67.33 B
ATOM 5751 CB ALA B 132 9.390 -21.126-108.354 1.00 66.62 B
ATOM 5752 C ALA B 132 10.763 -23.365-108.252 1.00 67.37 B
ATOM 5753 O ALA B 132 11.735 -23.394-109.042 1.00 67.58 B
ATOM 5754 N ALA B 133 10.194 -24.343-107.586 1.00 67.26 B
ATOM 5755 CA ALA B 133 10.275 -25.689-107.863 1.00 67.32 B
ATOM 5756 CB ALA B 133 10.494 -26.416-106.519 1.00 66.25 B
ATOM 5757 C ALA B 133 8.861 -25.859-108.307 1.00 67.45 B
ATOM 5758 O ALA B 133 8.577 -26.737-109.063 1.00 67.53 B
ATOM 5759 N ALA B 134 8.026 -24.951-107.808 1.00 67.10 B
ATOM 5760 CA ALA B 134 6.573 -25.000-107.947 1.00 65.84 B
ATOM 5761 CB ALA B 134 6.023 -25.225-109.428 1.00 65.93 B
ATOM 5762 C ALA B 134 6.236 -26.219-107.045 1.00 65.03 B
ATOM 5763 O ALA B 134 5.698 -27.243-107.469 1.00 66.17 B
ATOM 5764 N ALA B 135 6.666 -26.064-105.803 1.00 62.77 B
ATOM 5765 CA ALA B 135 6.280 -26.950-104.732 1.00 59.80 B
ATOM 5766 CB ALA B 135 7.456 -27.324-103.750 1.00 59.17 B
ATOM 5767 C ALA B 135 5.501 -25.744-104.227 1.00 58.27 B
ATOM 5768 O ALA B 135 6.053 -24.650-104.120 1.00 58.10 B
ATOM 5769 N CYS B 136 4.209 -25.951-104.036 1.00 55.72 B
ATOM 5770 CA CYS B 136 3.310 -24.885-103.616 1.00 52.97 B
ATOM 5771 C CYS B 136 2.195 -25.549-102.795 1.00 51.69 B
ATOM 5772 O CYS B 136 1.553 -26.494-103.264 1.00 51.48 B
ATOM 5773 CB CYS B 136 2.688 -24.161-104.844 1.00 52.40 B
ATOM 5774 SG CYS B 136 3.707 -23.250-106.033 1.00 53.08 B
ATOM 5775 N TRP B 137 1.951 -25.047-101.590 1.00 49.65 B
ATOM 5776 CA TRP B 137 0.952 -25.656-100.731 1.00 47.06 B
ATOM 5777 CB TRP B 137 1.263 -25.386 -99.256 1.00 47.69 B

ATOM 5778 CG TRP B 137 2.634 -25.690 -98.839 1.00 47.40 B
ATOM 5779 CD2 TRP B 137 3.453 -24.908 -97.956 1.00 47.20 B
ATOM 5780 CE2 TRP B 137 4.688 -25.578 -97.833 1.00 47.33 B
ATOM 5781 CE3 TRP B 137 3.264 -23.704 -97.258 1.00 47.17 B
ATOM 5782 CD1 TRP B 137 3.374 -26.772 -99.199 1.00 47.43 B
ATOM 5783 NE1 TRP B 137 4.611 -26.712 -98.598 1.00 47.60 B
ATOM 5784 CZ2 TRP B 137 5.739 -25.090 -97.039 1.00 47.49 B
ATOM 5785 CZ3 TRP B 137 4.321 -23.210 -96.455 1.00 47.17 B
ATOM 5786 CH2 TRP B 137 5.541 -23.911 -96.361 1.00 47.32 B
ATOM 5787 C TRP B 137 -0.460 -25.183 -100.877 1.00 45.29 B
ATOM 5788 O TRP B 137 -0.715 -24.005 -101.056 1.00 44.54 B
ATOM 5789 N SER B 138 -1.412 -26.093 -100.819 1.00 44.03 B
ATOM 5790 CA SER B 138 -2.722 -25.519 -100.717 1.00 43.59 B
ATOM 5791 CB SER B 138 -3.791 -25.863 -101.745 1.00 43.73 B
ATOM 5792 OG SER B 138 -4.888 -24.985 -101.427 1.00 42.72 B
ATOM 5793 C SER B 138 -3.248 -25.851 -99.348 1.00 43.38 B
ATOM 5794 O SER B 138 -2.709 -26.640 -98.567 1.00 42.24 B
ATOM 5795 N LEU B 139 -4.327 -25.160 -99.089 1.00 43.42 B
ATOM 5796 CA LEU B 139 -5.006 -25.197 -97.826 1.00 43.54 B
ATOM 5797 CB LEU B 139 -6.275 -24.384 -97.948 1.00 41.68 B
ATOM 5798 CG LEU B 139 -6.963 -24.026 -96.642 1.00 40.74 B
ATOM 5799 CD1 LEU B 139 -6.207 -22.929 -95.887 1.00 39.99 B
ATOM 5800 CD2 LEU B 139 -8.341 -23.514 -97.009 1.00 40.34 B
ATOM 5801 C LEU B 139 -5.332 -26.504 -97.141 1.00 44.54 B
ATOM 5802 O LEU B 139 -5.147 -26.623 -95.936 1.00 45.29 B
ATOM 5803 N ASP B 140 -5.769 -27.504 -97.881 1.00 46.00 B
ATOM 5804 CA ASP B 140 -6.149 -28.746 -97.237 1.00 47.11 B
ATOM 5805 CB ASP B 140 -7.657 -28.767 -97.235 1.00 48.18 B
ATOM 5806 CG ASP B 140 -8.189 -30.128 -97.053 1.00 49.18 B
ATOM 5807 OD1 ASP B 140 -7.352 -31.061 -96.904 1.00 48.84 B
ATOM 5808 OD2 ASP B 140 -9.429 -30.287 -97.053 1.00 49.76 B
ATOM 5809 C ASP B 140 -5.621 -29.790 -98.177 1.00 47.20 B
ATOM 5810 O ASP B 140 -6.223 -30.114 -99.175 1.00 47.38 B
ATOM 5811 N PRO B 141 -4.454 -30.328 -97.837 1.00 47.38 B

ATOM 5812 CD PRO B 141 -4.018 -31.498 -98.618 1.00 47.68 B
ATOM 5813 CA PRO B 141 -4.021 -30.405 -96.437 1.00 46.46 B
ATOM 5814 CB PRO B 141 -3.417 -31.807 -96.337 1.00 46.13 B
ATOM 5815 CG PRO B 141 -2.994 -32.133 -97.724 1.00 46.66 B
ATOM 5816 C PRO B 141 -2.967 -29.353 -96.106 1.00 45.29 B
ATOM 5817 O PRO B 141 -2.902 -28.884 -94.969 1.00 44.04 B
ATOM 5818 N ASP B 142 -2.153 -28.990 -97.092 1.00 45.65 B
ATOM 5819 CA ASP B 142 -0.745 -28.692 -96.853 1.00 45.20 B
ATOM 5820 CB ASP B 142 -0.079 -28.189 -98.135 1.00 46.45 B
ATOM 5821 CG ASP B 142 0.274 -29.314 -99.088 1.00 48.42 B
ATOM 5822 OD1 ASP B 142 1.105 -30.170 -98.719 1.00 49.44 B
ATOM 5823 OD2 ASP B 142 -0.229 -29.423 -100.227 1.00 50.76 B
ATOM 5824 C ASP B 142 -0.574 -27.668 -95.735 1.00 43.66 B
ATOM 5825 O ASP B 142 0.264 -27.836 -94.850 1.00 43.82 B
ATOM 5826 N LEU B 143 -1.373 -26.607 -95.783 1.00 41.10 B
ATOM 5827 CA LEU B 143 -1.259 -25.518 -94.820 1.00 37.75 B
ATOM 5828 CB LEU B 143 -1.809 -24.219 -95.413 1.00 35.53 B
ATOM 5829 CG LEU B 143 -1.179 -23.749 -96.725 1.00 33.01 B
ATOM 5830 CD1 LEU B 143 -1.911 -22.531 -97.267 1.00 32.08 B
ATOM 5831 CD2 LEU B 143 0.300 -23.450 -96.535 1.00 31.16 B
ATOM 5832 C LEU B 143 -1.990 -25.851 -93.523 1.00 36.35 B
ATOM 5833 O LEU B 143 -1.434 -25.716 -92.433 1.00 34.32 B
ATOM 5834 N THR B 144 -3.239 -26.286 -93.651 1.00 35.86 B
ATOM 5835 CA THR B 144 -4.046 -26.620 -92.513 1.00 35.38 B
ATOM 5836 CB THR B 144 -5.186 -27.530 -92.950 1.00 34.30 B
ATOM 5837 OG1 THR B 144 -6.279 -26.736 -93.435 1.00 32.32 B
ATOM 5838 CG2 THR B 144 -5.620 -28.391 -91.814 1.00 33.32 B
ATOM 5839 C THR B 144 -3.153 -27.332 -91.505 1.00 37.14 B
ATOM 5840 O THR B 144 -3.275 -27.118 -90.305 1.00 38.04 B
ATOM 5841 N ASN B 145 -2.238 -28.163 -91.995 1.00 37.94 B
ATOM 5842 CA ASN B 145 -1.338 -28.902 -91.114 1.00 38.94 B
ATOM 5843 CB ASN B 145 -0.686 -30.082 -91.845 1.00 40.12 B
ATOM 5844 CG ASN B 145 -1.695 -31.075 -92.375 1.00 42.10 B
ATOM 5845 OD1 ASN B 145 -2.827 -31.162 -91.892 1.00 42.58 B

ATOM 5846 ND2 ASN B 145 -1.283 -31.848 -93.366 1.00 44.53 B
ATOM 5847 C ASN B 145 -0.236 -28.040 -90.530 1.00 39.09 B
ATOM 5848 O ASN B 145 0.185 -28.252 -89.394 1.00 41.07 B
ATOM 5849 N ILE B 146 0.248 -27.077 -91.306 1.00 38.15 B
ATOM 5850 CA ILE B 146 1.315 -26.210 -90.831 1.00 36.86 B
ATOM 5851 CB ILE B 146 1.850 -25.309 -91.955 1.00 36.90 B
ATOM 5852 CG2 ILE B 146 3.047 -24.517 -91.463 1.00 35.77 B
ATOM 5853 CG1 ILE B 146 2.273 -26.175 -93.143 1.00 37.96 B
ATOM 5854 CD1 ILE B 146 2.910 -25.412 -94.289 1.00 36.94 B
ATOM 5855 C ILE B 146 0.787 -25.343 -89.707 1.00 36.23 B
ATOM 5856 O ILE B 146 1.492 -25.049 -88.747 1.00 35.93 B
ATOM 5857 N LEU B 147 -0.474 -24.951 -89.823 1.00 35.36 B
ATOM 5858 CA LEU B 147 -1.093 -24.114 -88.814 1.00 33.98 B
ATOM 5859 CB LEU B 147 -2.169 -23.227 -89.436 1.00 32.42 B
ATOM 5860 CG LEU B 147 -1.659 -21.802 -89.635 1.00 31.81 B
ATOM 5861 CD1 LEU B 147 -1.236 -21.608 -91.074 1.00 30.71 B
ATOM 5862 CD2 LEU B 147 -2.752 -20.811 -89.238 1.00 31.32 B
ATOM 5863 C LEU B 147 -1.706 -24.922 -87.702 1.00 34.01 B
ATOM 5864 O LEU B 147 -2.329 -24.374 -86.799 1.00 33.89 B
ATOM 5865 N ALA B 148 -1.537 -26.231 -87.756 1.00 34.92 B
ATOM 5866 CA ALA B 148 -2.117 -27.064 -86.723 1.00 36.08 B
ATOM 5867 CB ALA B 148 -2.936 -28.173 -87.339 1.00 36.24 B
ATOM 5868 C ALA B 148 -1.044 -27.648 -85.845 1.00 36.35 B
ATOM 5869 O ALA B 148 -1.274 -27.874 -84.660 1.00 38.39 B
ATOM 5870 N SER B 149 0.137 -27.870 -86.406 1.00 35.31 B
ATOM 5871 CA SER B 149 1.213 -28.468 -85.628 1.00 35.07 B
ATOM 5872 CB SER B 149 1.330 -29.940 -86.002 1.00 36.81 B
ATOM 5873 OG SER B 149 1.332 -30.077 -87.410 1.00 39.45 B
ATOM 5874 C SER B 149 2.586 -27.809 -85.713 1.00 32.93 B
ATOM 5875 O SER B 149 3.526 -28.208 -85.020 1.00 33.67 B
ATOM 5876 N SER B 150 2.731 -26.821 -86.571 1.00 30.68 B
ATOM 5877 CA SER B 150 4.015 -26.154 -86.637 1.00 28.07 B
ATOM 5878 CB SER B 150 4.167 -25.404 -87.965 1.00 27.41 B
ATOM 5879 OG SER B 150 5.348 -24.617 -87.961 1.00 26.86 B

ATOM 5880 C SER B 150 4.106 -25.134 -85.488 1.00 26.21 B
ATOM 5881 O SER B 150 3.117 -24.490 -85.130 1.00 23.45 B
ATOM 5882 N ARG B 151 5.274 -25.015 -84.869 1.00 24.81 B
ATOM 5883 CA ARG B 151 5.426 -23.984 -83.834 1.00 23.44 B
ATOM 5884 CB ARG B 151 5.674 -24.495 -82.411 1.00 22.35 B
ATOM 5885 CG ARG B 151 4.863 -25.631 -81.897 1.00 19.00 B
ATOM 5886 CD ARG B 151 3.429 -25.466 -82.183 1.00 17.38 B
ATOM 5887 NE ARG B 151 2.644 -26.329 -81.319 1.00 18.84 B
ATOM 5888 CZ ARG B 151 1.359 -26.581 -81.500 1.00 20.59 B
ATOM 5889 NH1 ARG B 151 0.702 -27.375 -80.660 1.00 19.94 B
ATOM 5890 NH2 ARG B 151 0.750 -26.031 -82.529 1.00 20.90 B
ATOM 5891 C ARG B 151 6.637 -23.163 -84.179 1.00 23.24 B
ATOM 5892 O ARG B 151 7.458 -22.897 -83.317 1.00 22.68 B
ATOM 5893 N SER B 152 6.767 -22.814 -85.452 1.00 25.14 B
ATOM 5894 CA SER B 152 7.854 -21.959 -85.910 1.00 26.02 B
ATOM 5895 CB SER B 152 8.498 -22.482 -87.193 1.00 24.52 B
ATOM 5896 OG SER B 152 9.526 -21.591 -87.576 1.00 25.70 B
ATOM 5897 C SER B 152 7.096 -20.675 -86.188 1.00 26.21 B
ATOM 5898 O SER B 152 6.195 -20.667 -87.022 1.00 26.48 B
ATOM 5899 N TYR B 153 7.412 -19.606 -85.466 1.00 25.35 B
ATOM 5900 CA TYR B 153 6.669 -18.377 -85.680 1.00 25.67 B
ATOM 5901 CB TYR B 153 7.195 -17.244 -84.785 1.00 25.00 B
ATOM 5902 CG TYR B 153 6.384 -15.961 -84.851 1.00 24.26 B
ATOM 5903 CD1 TYR B 153 5.300 -15.745 -83.997 1.00 23.67 B
ATOM 5904 CE1 TYR B 153 4.550 -14.571 -84.076 1.00 24.17 B
ATOM 5905 CD2 TYR B 153 6.692 -14.971 -85.786 1.00 23.89 B
ATOM 5906 CE2 TYR B 153 5.947 -13.804 -85.876 1.00 23.80 B
ATOM 5907 CZ TYR B 153 4.884 -13.611 -85.020 1.00 24.60 B
ATOM 5908 OH TYR B 153 4.157 -12.456 -85.112 1.00 26.11 B
ATOM 5909 C TYR B 153 6.750 -17.962 -87.140 1.00 26.14 B
ATOM 5910 O TYR B 153 5.741 -17.604 -87.745 1.00 26.74 B
ATOM 5911 N ALA B 154 7.954 -18.032 -87.705 1.00 26.03 B
ATOM 5912 CA ALA B 154 8.176 -17.643 -89.097 1.00 25.11 B
ATOM 5913 CB ALA B 154 9.643 -17.786 -89.451 1.00 25.63 B

ATOM 5914 C ALA B 154 7.332 -18.474 -90.042 1.00 24.46 B
ATOM 5915 O ALA B 154 6.552 -17.943 -90.828 1.00 25.21 B
ATOM 5916 N MET B 155 7.478 -19.787 -89.955 1.00 23.21 B
ATOM 5917 CA MET B 155 6.717 -20.652 -90.836 1.00 22.99 B
ATOM 5918 CB MET B 155 7.124 -22.091 -90.626 1.00 24.03 B
ATOM 5919 CG MET B 155 6.973 -22.855 -91.884 1.00 27.92 B
ATOM 5920 SD MET B 155 7.763 -24.399 -91.607 1.00 34.80 B
ATOM 5921 CE MET B 155 6.332 -25.360 -91.370 1.00 31.67 B
ATOM 5922 C MET B 155 5.208 -20.526 -90.714 1.00 21.32 B
ATOM 5923 O MET B 155 4.449 -20.726 -91.662 1.00 21.92 B
ATOM 5924 N LEU B 156 4.764 -20.187 -89.527 1.00 20.58 B
ATOM 5925 CA LEU B 156 3.341 -20.047 -89.316 1.00 20.10 B
ATOM 5926 CB LEU B 156 3.033 -20.058 -87.802 1.00 19.59 B
ATOM 5927 CG LEU B 156 3.079 -21.416 -87.103 1.00 18.72 B
ATOM 5928 CD1 LEU B 156 3.091 -21.224 -85.611 1.00 19.74 B
ATOM 5929 CD2 LEU B 156 1.861 -22.236 -87.522 1.00 19.83 B
ATOM 5930 C LEU B 156 2.913 -18.734 -89.987 1.00 19.88 B
ATOM 5931 O LEU B 156 1.869 -18.646 -90.636 1.00 18.49 B
ATOM 5932 N LEU B 157 3.759 -17.722 -89.862 1.00 18.50 B
ATOM 5933 CA LEU B 157 3.469 -16.424 -90.446 1.00 18.33 B
ATOM 5934 CB LEU B 157 4.531 -15.417 -90.011 1.00 16.86 B
ATOM 5935 CG LEU B 157 4.506 -13.997 -90.574 1.00 15.26 B
ATOM 5936 CD1 LEU B 157 3.256 -13.275 -90.112 1.00 13.77 B
ATOM 5937 CD2 LEU B 157 5.772 -13.261 -90.122 1.00 13.31 B
ATOM 5938 C LEU B 157 3.453 -16.510 -91.961 1.00 19.77 B
ATOM 5939 O LEU B 157 2.628 -15.885 -92.647 1.00 20.73 B
ATOM 5940 N PHE B 158 4.382 -17.290 -92.492 1.00 20.75 B
ATOM 5941 CA PHE B 158 4.486 -17.446 -93.934 1.00 20.62 B
ATOM 5942 CB PHE B 158 5.712 -18.287 -94.293 1.00 21.27 B
ATOM 5943 CG PHE B 158 6.148 -18.134 -95.723 1.00 21.65 B
ATOM 5944 CD1 PHE B 158 6.842 -17.009 -96.129 1.00 22.91 B
ATOM 5945 CD2 PHE B 158 5.847 -19.099 -96.665 1.00 21.76 B
ATOM 5946 CE1 PHE B 158 7.227 -16.843 -97.450 1.00 23.63 B
ATOM 5947 CE2 PHE B 158 6.231 -18.939 -97.991 1.00 23.17 B

ATOM 5948 CZ PHE B 158 6.920 -17.810 -98.382 1.00 22.93 B
ATOM 5949 C PHE B 158 3.233 -18.084 -94.527 1.00 20.35 B
ATOM 5950 O PHE B 158 2.730 -17.633 -95.560 1.00 21.75 B
ATOM 5951 N ALA B 159 2.733 -19.129 -93.873 1.00 17.82 B
ATOM 5952 CA ALA B 159 1.547 -19.814 -94.347 1.00 16.04 B
ATOM 5953 CB ALA B 159 1.406 -21.129 -93.634 1.00 15.87 B
ATOM 5954 C ALA B 159 0.294 -18.973 -94.143 1.00 15.38 B
ATOM 5955 O ALA B 159 -0.616 -18.991 -94.966 1.00 15.77 B
ATOM 5956 N TRP B 160 0.248 -18.242 -93.036 1.00 14.96 B
ATOM 5957 CA TRP B 160 -0.904 -17.394 -92.729 1.00 14.33 B
ATOM 5958 CB TRP B 160 -0.800 -16.794 -91.308 1.00 11.80 B
ATOM 5959 CG TRP B 160 -2.037 -15.990 -90.915 1.00 7.97 B
ATOM 5960 CD2 TRP B 160 -2.274 -14.599 -91.168 1.00 5.92 B
ATOM 5961 CE2 TRP B 160 -3.594 -14.313 -90.743 1.00 5.43 B
ATOM 5962 CE3 TRP B 160 -1.500 -13.565 -91.716 1.00 5.24 B
ATOM 5963 CD1 TRP B 160 -3.190 -16.472 -90.351 1.00 7.96 B
ATOM 5964 NE1 TRP B 160 -4.129 -15.471 -90.248 1.00 5.08 B
ATOM 5965 CZ2 TRP B 160 -4.157 -13.037 -90.852 1.00 6.08 B
ATOM 5966 CZ3 TRP B 160 -2.060 -12.295 -91.825 1.00 4.61 B
ATOM 5967 CH2 TRP B 160 -3.378 -12.043 -91.394 1.00 4.70 B
ATOM 5968 C TRP B 160 -0.994 -16.250 -93.725 1.00 14.41 B
ATOM 5969 O TRP B 160 -2.037 -16.027 -94.333 1.00 14.43 B
ATOM 5970 N GLU B 161 0.098 -15.504 -93.853 1.00 14.31 B
ATOM 5971 CA GLU B 161 0.144 -14.380 -94.773 1.00 16.03 B
ATOM 5972 CB GLU B 161 1.520 -13.716 -94.708 1.00 15.97 B
ATOM 5973 CG GLU B 161 1.640 -12.496 -95.590 1.00 16.70 B
ATOM 5974 CD GLU B 161 3.048 -11.947 -95.640 1.00 19.47 B
ATOM 5975 OE1 GLU B 161 3.213 -10.762 -96.004 1.00 20.43 B
ATOM 5976 OE2 GLU B 161 3.995 -12.699 -95.327 1.00 21.38 B
ATOM 5977 C GLU B 161 -0.104 -14.907 -96.189 1.00 17.13 B
ATOM 5978 O GLU B 161 -1.006 -14.453 -96.897 1.00 16.80 B
ATOM 5979 N GLY B 162 0.711 -15.880 -96.581 1.00 17.05 B
ATOM 5980 CA GLY B 162 0.586 -16.472 -97.888 1.00 17.04 B
ATOM 5981 C GLY B 162 -0.829 -16.848 -98.286 1.00 18.03 B

ATOM 5982 O GLY B 162 -1.265 -16.505 -99.388 1.00 18.42 B
ATOM 5983 N TRP B 163 -1.548 -17.555 -97.419 1.00 17.52 B
ATOM 5984 CA TRP B 163 -2.902 -17.957 -97.764 1.00 18.08 B
ATOM 5985 CB TRP B 163 -3.496 -18.906 -96.709 1.00 16.49 B
ATOM 5986 CG TRP B 163 -4.976 -19.095 -96.852 1.00 13.46 B
ATOM 5987 CD2 TRP B 163 -5.651 -19.771 -97.910 1.00 13.66 B
ATOM 5988 CE2 TRP B 163 -7.039 -19.583 -97.708 1.00 14.48 B
ATOM 5989 CE3 TRP B 163 -5.223 -20.512 -99.017 1.00 10.96 B
ATOM 5990 CD1 TRP B 163 -5.942 -18.551 -96.070 1.00 14.60 B
ATOM 5991 NE1 TRP B 163 -7.189 -18.834 -96.573 1.00 14.20 B
ATOM 5992 CZ2 TRP B 163 -8.004 -20.108 -98.575 1.00 14.21 B
ATOM 5993 CZ3 TRP B 163 -6.174 -21.030 -99.874 1.00 11.79 B
ATOM 5994 CH2 TRP B 163 -7.554 -20.826 -99.651 1.00 12.59 B
ATOM 5995 C TRP B 163 -3.803 -16.747 -97.933 1.00 19.46 B
ATOM 5996 O TRP B 163 -4.588 -16.667 -98.879 1.00 22.02 B
ATOM 5997 N HIS B 164 -3.678 -15.798 -97.016 1.00 19.18 B
ATOM 5998 CA HIS B 164 -4.490 -14.581 -97.043 1.00 18.48 B
ATOM 5999 CB HIS B 164 -4.286 -13.797 -95.757 1.00 17.79 B
ATOM 6000 CG HIS B 164 -5.084 -14.330 -94.622 1.00 17.15 B
ATOM 6001 CD2 HIS B 164 -6.268 -13.925 -94.103 1.00 16.44 B
ATOM 6002 ND1 HIS B 164 -4.735 -15.486 -93.954 1.00 16.64 B
ATOM 6003 CE1 HIS B 164 -5.679 -15.771 -93.077 1.00 17.30 B
ATOM 6004 NE2 HIS B 164 -6.620 -14.843 -93.147 1.00 14.62 B
ATOM 6005 C HIS B 164 -4.257 -13.659 -98.223 1.00 18.08 B
ATOM 6006 O HIS B 164 -5.165 -12.968 -98.705 1.00 17.84 B
ATOM 6007 N ASN B 165 -3.020 -13.619 -98.663 1.00 16.42 B
ATOM 6008 CA ASN B 165 -2.732 -12.805 -99.792 1.00 16.43 B
ATOM 6009 CB ASN B 165 -1.244 -12.595 -99.889 1.00 15.71 B
ATOM 6010 CG ASN B 165 -0.783 -11.491 -98.999 1.00 16.39 B
ATOM 6011 OD1 ASN B 165 -1.602 -10.757 -98.419 1.00 16.67 B
ATOM 6012 ND2 ASN B 165 0.537 -11.334 -98.891 1.00 15.39 B
ATOM 6013 C ASN B 165 -3.241 -13.467-101.033 1.00 16.71 B
ATOM 6014 O ASN B 165 -3.905 -12.860-101.869 1.00 14.68 B
ATOM 6015 N ALA B 166 -2.933 -14.748-101.115 1.00 18.16 B

ATOM 6016 CA ALA B 166 -3.304 -15.543-102.254 1.00 19.26 B
ATOM 6017 CB ALA B 166 -2.647 -16.892-102.151 1.00 17.91 B
ATOM 6018 C ALA B 166 -4.800 -15.709-102.477 1.00 20.39 B
ATOM 6019 O ALA B 166 -5.260 -15.720-103.616 1.00 23.38 B
ATOM 6020 N ALA B 167 -5.568 -15.789-101.403 1.00 21.05 B
ATOM 6021 CA ALA B 167 -7.004 -16.004-101.525 1.00 21.95 B
ATOM 6022 CB ALA B 167 -7.457 -16.933-100.402 1.00 21.71 B
ATOM 6023 C ALA B 167 -7.937 -14.787-101.586 1.00 22.54 B
ATOM 6024 O ALA B 167 -8.875 -14.765-102.376 1.00 24.93 B
ATOM 6025 N GLY B 168 -7.700 -13.779-100.761 1.00 21.69 B
ATOM 6026 CA GLY B 168 -8.601 -12.644-100.751 1.00 21.51 B
ATOM 6027 C GLY B 168 -8.350 -11.499-101.711 1.00 21.46 B
ATOM 6028 O GLY B 168 -9.292 -10.838-102.137 1.00 23.65 B
ATOM 6029 N ILE B 169 -7.097 -11.228-102.041 1.00 19.19 B
ATOM 6030 CA ILE B 169 -6.810 -10.146-102.964 1.00 16.92 B
ATOM 6031 CB ILE B 169 -5.282 -10.039-103.185 1.00 16.07 B
ATOM 6032 CG2 ILE B 169 -4.957 -9.110-104.358 1.00 14.72 B
ATOM 6033 CG1 ILE B 169 -4.626 -9.540-101.895 1.00 13.20 B
ATOM 6034 CD1 ILE B 169 -3.120 -9.333-102.002 1.00 9.19 B
ATOM 6035 C ILE B 169 -7.551 -10.281-104.313 1.00 17.04 B
ATOM 6036 O ILE B 169 -8.325 -9.403-104.696 1.00 18.15 B
ATOM 6037 N PRO B 170 -7.351 -11.393-105.032 1.00 16.50 B
ATOM 6038 CD PRO B 170 -6.653 -12.632-104.627 1.00 16.26 B
ATOM 6039 CA PRO B 170 -8.022 -11.573-106.323 1.00 15.16 B
ATOM 6040 CB PRO B 170 -7.409 -12.862-106.834 1.00 16.08 B
ATOM 6041 CG PRO B 170 -7.262 -13.668-105.542 1.00 15.82 B
ATOM 6042 C PRO B 170 -9.531 -11.703-106.218 1.00 15.25 B
ATOM 6043 O PRO B 170 -10.248 -11.497-107.180 1.00 15.75 B
ATOM 6044 N LEU B 171 -10.016 -12.037-105.038 1.00 14.89 B
ATOM 6045 CA LEU B 171 -11.438 -12.268-104.831 1.00 14.34 B
ATOM 6046 CB LEU B 171 -11.556 -13.226-103.661 1.00 15.47 B
ATOM 6047 CG LEU B 171 -12.733 -14.165-103.467 1.00 17.14 B
ATOM 6048 CD1 LEU B 171 -13.199 -14.699-104.806 1.00 16.80 B
ATOM 6049 CD2 LEU B 171 -12.289 -15.295-102.540 1.00 14.00 B

ATOM 6050 C LEU B 171 -12.243 -11.008-104.548 1.00 14.28 B
ATOM 6051 O LEU B 171 -13.471 -10.946-104.674 1.00 13.62 B
ATOM 6052 N LYS B 172 -11.528 -9.978-104.159 1.00 14.49 B
ATOM 6053 CA LYS B 172 -12.196 -8.757-103.794 1.00 15.69 B
ATOM 6054 CB LYS B 172 -11.172 -7.794-103.275 1.00 19.13 B
ATOM 6055 CG LYS B 172 -11.795 -6.621-102.668 1.00 21.33 B
ATOM 6056 CD LYS B 172 -10.740 -5.862-102.020 1.00 23.56 B
ATOM 6057 CE LYS B 172 -11.326 -4.620-101.467 1.00 26.63 B
ATOM 6058 NZ LYS B 172 -10.464 -4.152-100.352 1.00 31.83 B
ATOM 6059 C LYS B 172 -13.047 -8.071-104.837 1.00 15.02 B
ATOM 6060 O LYS B 172 -14.225 -7.768-104.607 1.00 13.18 B
ATOM 6061 N PRO B 173 -12.454 -7.793-106.001 1.00 15.76 B
ATOM 6062 CD PRO B 173 -11.124 -8.182-106.494 1.00 15.07 B
ATOM 6063 CA PRO B 173 -13.225 -7.130-107.042 1.00 15.15 B
ATOM 6064 CB PRO B 173 -12.279 -7.150-108.228 1.00 15.18 B
ATOM 6065 CG PRO B 173 -11.364 -8.319-107.929 1.00 15.16 B
ATOM 6066 C PRO B 173 -14.527 -7.865-107.288 1.00 15.62 B
ATOM 6067 O PRO B 173 -15.555 -7.234-107.499 1.00 15.44 B
ATOM 6068 N LEU B 174 -14.527 -9.189-107.203 1.00 16.26 B
ATOM 6069 CA LEU B 174 -15.793 -9.845-107.463 1.00 18.34 B
ATOM 6070 CB LEU B 174 -15.641 -11.284-107.965 1.00 17.37 B
ATOM 6071 CG LEU B 174 -14.270 -11.917-108.149 1.00 16.97 B
ATOM 6072 CD1 LEU B 174 -14.310 -12.767-109.392 1.00 16.23 B
ATOM 6073 CD2 LEU B 174 -13.203 -10.885-108.353 1.00 17.87 B
ATOM 6074 C LEU B 174 -16.778 -9.859-106.339 1.00 20.94 B
ATOM 6075 O LEU B 174 -17.981 -9.921-106.607 1.00 21.59 B
ATOM 6076 N TYR B 175 -16.303 -9.845-105.089 1.00 21.63 B
ATOM 6077 CA TYR B 175 -17.243 -9.869-103.972 1.00 19.63 B
ATOM 6078 CB TYR B 175 -16.528 -9.958-102.611 1.00 22.02 B
ATOM 6079 CG TYR B 175 -17.449 -10.340-101.459 1.00 22.88 B
ATOM 6080 CD1 TYR B 175 -17.957 -11.636-101.353 1.00 24.34 B
ATOM 6081 CE1 TYR B 175 -18.857 -11.985-100.356 1.00 24.46 B
ATOM 6082 CD2 TYR B 175 -17.864 -9.398-100.525 1.00 22.88 B
ATOM 6083 CE2 TYR B 175 -18.769 -9.738 -99.520 1.00 25.41 B

ATOM 6084 CZ TYR B 175 -19.259 -11.034 -99.448 1.00 25.17 B
ATOM 6085 OH TYR B 175 -20.161 -11.384 -98.478 1.00 27.04 B
ATOM 6086 C TYR B 175 -18.080 -8.603-104.029 1.00 19.04 B
ATOM 6087 O TYR B 175 -19.234 -8.607-103.632 1.00 18.41 B
ATOM 6088 N GLU B 176 -17.498 -7.524-104.544 1.00 18.85 B
ATOM 6089 CA GLU B 176 -18.204 -6.251-104.657 1.00 20.88 B
ATOM 6090 CB GLU B 176 -17.235 -5.140-105.030 1.00 20.56 B
ATOM 6091 CG GLU B 176 -15.997 -5.124-104.177 1.00 21.30 B
ATOM 6092 CD GLU B 176 -14.932 -4.210-104.728 1.00 21.50 B
ATOM 6093 OE1 GLU B 176 -15.292 -3.119-105.208 1.00 20.65 B
ATOM 6094 OE2 GLU B 176 -13.738 -4.575-104.669 1.00 23.24 B
ATOM 6095 C GLU B 176 -19.313 -6.304-105.698 1.00 22.76 B
ATOM 6096 O GLU B 176 -20.404 -5.775-105.473 1.00 24.42 B
ATOM 6097 N ASP B 177 -19.041 -6.936-106.840 1.00 23.23 B
ATOM 6098 CA ASP B 177 -20.059 -7.030-107.895 1.00 24.19 B
ATOM 6099 CB ASP B 177 -19.459 -7.546-109.201 1.00 24.95 B
ATOM 6100 CG ASP B 177 -18.441 -6.586-109.798 1.00 25.37 B
ATOM 6101 OD1 ASP B 177 -18.601 -5.359-109.638 1.00 25.89 B
ATOM 6102 OD2 ASP B 177 -17.479 -7.053-110.446 1.00 26.47 B
ATOM 6103 C ASP B 177 -21.168 -7.961-107.454 1.00 24.03 B
ATOM 6104 O ASP B 177 -22.359 -7.697-107.653 1.00 23.46 B
ATOM 6105 N PHE B 178 -20.749 -9.054-106.843 1.00 23.99 B
ATOM 6106 CA PHE B 178 -21.689 -10.015-106.342 1.00 25.53 B
ATOM 6107 CB PHE B 178 -20.971 -11.114-105.607 1.00 26.15 B
ATOM 6108 CG PHE B 178 -21.841 -11.776-104.609 1.00 28.38 B
ATOM 6109 CD1 PHE B 178 -22.821 -12.677-105.035 1.00 29.65 B
ATOM 6110 CD2 PHE B 178 -21.735 -11.465-103.251 1.00 28.21 B
ATOM 6111 CE1 PHE B 178 -23.700 -13.278-104.127 1.00 30.32 B
ATOM 6112 CE2 PHE B 178 -22.601 -12.051-102.318 1.00 27.79 B
ATOM 6113 CZ PHE B 178 -23.592 -12.969-102.754 1.00 28.25 B
ATOM 6114 C PHE B 178 -22.638 -9.367-105.347 1.00 27.01 B
ATOM 6115 O PHE B 178 -23.857 -9.556-105.375 1.00 27.99 B
ATOM 6116 N THR B 179 -22.040 -8.621-104.432 1.00 27.45 B
ATOM 6117 CA THR B 179 -22.795 -7.955-103.389 1.00 28.19 B

ATOM 6118 CB THR B 179 -21.847 -7.180-102.427 1.00 28.41 B
ATOM 6119 OG1 THR B 179 -20.866 -8.087-101.915 1.00 31.13 B
ATOM 6120 CG2 THR B 179 -22.609 -6.607-101.242 1.00 25.51 B
ATOM 6121 C THR B 179 -23.852 -7.019-103.958 1.00 28.32 B
ATOM 6122 O THR B 179 -25.011 -7.057-103.545 1.00 30.70 B
ATOM 6123 N ALA B 180 -23.481 -6.210-104.938 1.00 27.54 B
ATOM 6124 CA ALA B 180 -24.446 -5.272-105.504 1.00 26.94 B
ATOM 6125 CB ALA B 180 -23.778 -4.371-106.514 1.00 26.45 B
ATOM 6126 C ALA B 180 -25.591 -5.992-106.157 1.00 26.26 B
ATOM 6127 O ALA B 180 -26.738 -5.572-106.066 1.00 27.75 B
ATOM 6128 N LEU B 181 -25.265 -7.069-106.846 1.00 24.98 B
ATOM 6129 CA LEU B 181 -26.281 -7.838-107.529 1.00 26.64 B
ATOM 6130 CB LEU B 181 -25.619 -8.861-108.438 1.00 26.94 B
ATOM 6131 CG LEU B 181 -25.288 -8.251-109.794 1.00 26.14 B
ATOM 6132 CD1 LEU B 181 -24.381 -9.175-110.579 1.00 26.43 B
ATOM 6133 CD2 LEU B 181 -26.594 -8.035-110.543 1.00 24.93 B
ATOM 6134 C LEU B 181 -27.246 -8.534-106.597 1.00 27.92 B
ATOM 6135 O LEU B 181 -28.479 -8.437-106.756 1.00 27.29 B
ATOM 6136 N SER B 182 -26.663 -9.241-105.628 1.00 28.74 B
ATOM 6137 CA SER B 182 -27.411 -9.983-104.627 1.00 27.40 B
ATOM 6138 CB SER B 182 -26.447 -10.610-103.623 1.00 27.80 B
ATOM 6139 OG SER B 182 -27.144 -11.513-102.785 1.00 28.99 B
ATOM 6140 C SER B 182 -28.398 -9.060-103.921 1.00 25.74 B
ATOM 6141 O SER B 182 -29.453 -9.485-103.459 1.00 25.91 B
ATOM 6142 N ASN B 183 -28.060 -7.786-103.873 1.00 23.38 B
ATOM 6143 CA ASN B 183 -28.926 -6.827-103.242 1.00 25.63 B
ATOM 6144 CB ASN B 183 -28.124 -5.606-102.815 1.00 26.92 B
ATOM 6145 CG ASN B 183 -27.634 -5.706-101.388 1.00 27.35 B
ATOM 6146 OD1 ASN B 183 -26.767 -6.509-101.071 1.00 28.63 B
ATOM 6147 ND2 ASN B 183 -28.203 -4.893-100.515 1.00 29.53 B
ATOM 6148 C ASN B 183 -30.072 -6.411-104.160 1.00 26.80 B
ATOM 6149 O ASN B 183 -31.244 -6.396-103.744 1.00 28.18 B
ATOM 6150 N ALA B 184 -29.742 -6.068-105.405 1.00 27.50 B
ATOM 6151 CA ALA B 184 -30.771 -5.673-106.373 1.00 27.02 B

ATOM 6152 CB ALA B 184 -30.160 -5.507-107.717 1.00 26.16 B
ATOM 6153 C ALA B 184 -31.761 -6.794-106.412 1.00 26.89 B
ATOM 6154 O ALA B 184 -32.975 -6.610-106.374 1.00 26.84 B
ATOM 6155 N ALA B 185 -31.219 -7.996-106.474 1.00 26.51 B
ATOM 6156 CA ALA B 185 -32.050 -9.174-106.502 1.00 26.65 B
ATOM 6157 CB ALA B 185 -31.219 -10.420-106.352 1.00 24.51 B
ATOM 6158 C ALA B 185 -33.106 -9.121-105.406 1.00 27.66 B
ATOM 6159 O ALA B 185 -34.289 -8.851-105.674 1.00 27.89 B
ATOM 6160 N TYR B 186 -32.659 -9.322-104.167 1.00 28.04 B
ATOM 6161 CA TYR B 186 -33.549 -9.347-103.018 1.00 27.62 B
ATOM 6162 CB TYR B 186 -32.794 -9.895-101.814 1.00 22.75 B
ATOM 6163 CG TYR B 186 -32.556 -11.382-101.912 1.00 18.32 B
ATOM 6164 CD1 TYR B 186 -31.280 -11.895-102.118 1.00 16.44 B
ATOM 6165 CE1 TYR B 186 -31.067 -13.270-102.221 1.00 15.23 B
ATOM 6166 CD2 TYR B 186 -33.621 -12.281-101.814 1.00 17.38 B
ATOM 6167 CE2 TYR B 186 -33.424 -13.657-101.923 1.00 15.86 B
ATOM 6168 CZ TYR B 186 -32.143 -14.144-102.126 1.00 15.68 B
ATOM 6169 OH TYR B 186 -31.926 -15.500-102.249 1.00 13.48 B
ATOM 6170 C TYR B 186 -34.295 -8.075-102.646 1.00 29.86 B
ATOM 6171 O TYR B 186 -35.322 -8.161-101.981 1.00 31.18 B
ATOM 6172 N ALA B 187 -33.827 -6.909-103.082 1.00 31.67 B
ATOM 6173 CA ALA B 187 -34.519 -5.669-102.734 1.00 34.85 B
ATOM 6174 CB ALA B 187 -33.754 -4.464-103.242 1.00 32.98 B
ATOM 6175 C ALA B 187 -35.873 -5.705-103.380 1.00 37.16 B
ATOM 6176 O ALA B 187 -36.764 -4.915-103.078 1.00 38.06 B
ATOM 6177 N GLN B 188 -36.013 -6.636-104.304 1.00 39.96 B
ATOM 6178 CA GLN B 188 -37.258 -6.767-105.028 1.00 42.59 B
ATOM 6179 CB GLN B 188 -36.973 -7.171-106.413 1.00 44.22 B
ATOM 6180 CG GLN B 188 -37.274 -6.146-107.390 1.00 45.43 B
ATOM 6181 CD GLN B 188 -36.797 -6.667-108.674 1.00 46.75 B
ATOM 6182 OE1 GLN B 188 -36.847 -7.890-108.894 1.00 46.68 B
ATOM 6183 NE2 GLN B 188 -36.289 -5.786-109.535 1.00 48.06 B
ATOM 6184 C GLN B 188 -38.194 -7.779-104.437 1.00 43.81 B
ATOM 6185 O GLN B 188 -39.337 -7.936-104.881 1.00 43.95 B

ATOM 6186 N ASP B 189 -37.688 -8.477-103.436 1.00 45.04 B
ATOM 6187 CA ASP B 189 -38.478 -9.457-102.748 1.00 45.92 B
ATOM 6188 CB ASP B 189 -37.633 -10.671-102.409 1.00 46.57 B
ATOM 6189 CG ASP B 189 -37.180 -11.392-103.642 1.00 48.30 B
ATOM 6190 OD1 ASP B 189 -37.531 -10.890-104.733 1.00 47.98 B
ATOM 6191 OD2 ASP B 189 -36.489 -12.434-103.511 1.00 49.18 B
ATOM 6192 C ASP B 189 -38.998 -8.788-101.516 1.00 46.02 B
ATOM 6193 O ASP B 189 -39.673 -9.407-100.712 1.00 46.10 B
ATOM 6194 N GLY B 190 -38.685 -7.502-101.393 1.00 45.80 B
ATOM 6195 CA GLY B 190 -39.159 -6.742-100.258 1.00 46.37 B
ATOM 6196 C GLY B 190 -38.188 -6.334 -99.158 1.00 46.23 B
ATOM 6197 O GLY B 190 -38.523 -5.455 -98.354 1.00 46.49 B
ATOM 6198 N PHE B 191 -36.998 -6.933 -99.109 1.00 45.08 B
ATOM 6199 CA PHE B 191 -36.037 -6.600 -98.060 1.00 44.58 B
ATOM 6200 CB PHE B 191 -35.190 -7.818 -97.729 1.00 45.22 B
ATOM 6201 CG PHE B 191 -35.982 -9.081 -97.585 1.00 46.24 B
ATOM 6202 CD1 PHE B 191 -36.299 -9.843 -98.695 1.00 46.21 B
ATOM 6203 CD2 PHE B 191 -36.367 -9.540 -96.334 1.00 46.78 B
ATOM 6204 CE1 PHE B 191 -36.979 -11.051 -98.559 1.00 46.61 B
ATOM 6205 CE2 PHE B 191 -37.051 -10.751 -96.195 1.00 47.13 B
ATOM 6206 CZ PHE B 191 -37.352 -11.503 -97.309 1.00 46.28 B
ATOM 6207 C PHE B 191 -35.119 -5.438 -98.399 1.00 43.78 B
ATOM 6208 O PHE B 191 -34.889 -5.157 -99.571 1.00 43.28 B
ATOM 6209 N THR B 192 -34.597 -4.769 -97.368 1.00 42.67 B
ATOM 6210 CA THR B 192 -33.685 -3.637 -97.560 1.00 41.56 B
ATOM 6211 CB THR B 192 -33.314 -2.974 -96.216 1.00 41.69 B
ATOM 6212 OG1 THR B 192 -34.413 -2.175 -95.764 1.00 43.45 B
ATOM 6213 CG2 THR B 192 -32.072 -2.091 -96.369 1.00 42.62 B
ATOM 6214 C THR B 192 -32.396 -4.059 -98.262 1.00 40.18 B
ATOM 6215 O THR B 192 -31.895 -3.352 -99.133 1.00 39.63 B
ATOM 6216 N ASP B 193 -31.860 -5.210 -97.874 1.00 39.26 B
ATOM 6217 CA ASP B 193 -30.641 -5.727 -98.474 1.00 38.67 B
ATOM 6218 CB ASP B 193 -29.420 -5.010 -97.906 1.00 40.02 B
ATOM 6219 CG ASP B 193 -29.367 -5.045 -96.390 1.00 42.23 B

ATOM 6220 OD1 ASP B 193 -29.086 -6.126 -95.824 1.00 41.78 B
ATOM 6221 OD2 ASP B 193 -29.607 -3.985 -95.762 1.00 43.01 B
ATOM 6222 C ASP B 193 -30.540 -7.219 -98.225 1.00 38.48 B
ATOM 6223 O ASP B 193 -31.352 -7.779 -97.489 1.00 38.00 B
ATOM 6224 N THR B 194 -29.558 -7.868 -98.844 1.00 38.23 B
ATOM 6225 CA THR B 194 -29.406 -9.306 -98.665 1.00 38.64 B
ATOM 6226 CB THR B 194 -28.119 -9.828 -99.303 1.00 38.15 B
ATOM 6227 OG1 THR B 194 -28.139 -9.546 -100.701 1.00 38.57 B
ATOM 6228 CG2 THR B 194 -28.010 -11.329 -99.108 1.00 38.32 B
ATOM 6229 C THR B 194 -29.378 -9.645 -97.188 1.00 38.85 B
ATOM 6230 O THR B 194 -29.977 -10.629 -96.754 1.00 38.83 B
ATOM 6231 N GLY B 195 -28.680 -8.817 -96.419 1.00 39.06 B
ATOM 6232 CA GLY B 195 -28.583 -9.040 -94.991 1.00 39.66 B
ATOM 6233 C GLY B 195 -29.916 -9.300 -94.310 1.00 39.72 B
ATOM 6234 O GLY B 195 -30.059 -10.241 -93.537 1.00 40.01 B
ATOM 6235 N ALA B 196 -30.904 -8.469 -94.606 1.00 39.43 B
ATOM 6236 CA ALA B 196 -32.216 -8.615 -93.998 1.00 38.88 B
ATOM 6237 CB ALA B 196 -33.086 -7.439 -94.372 1.00 38.98 B
ATOM 6238 C ALA B 196 -32.916 -9.910 -94.372 1.00 38.56 B
ATOM 6239 O ALA B 196 -33.716 -10.426 -93.603 1.00 38.94 B
ATOM 6240 N TYR B 197 -32.649 -10.411 -95.570 1.00 38.57 B
ATOM 6241 CA TYR B 197 -33.269 -11.647 -95.995 1.00 39.09 B
ATOM 6242 CB TYR B 197 -33.025 -11.868 -97.484 1.00 38.92 B
ATOM 6243 CG TYR B 197 -33.439 -13.243 -97.953 1.00 37.98 B
ATOM 6244 CD1 TYR B 197 -34.791 -13.575 -98.125 1.00 36.35 B
ATOM 6245 CE1 TYR B 197 -35.162 -14.863 -98.527 1.00 36.15 B
ATOM 6246 CD2 TYR B 197 -32.466 -14.230 -98.198 1.00 37.12 B
ATOM 6247 CE2 TYR B 197 -32.816 -15.507 -98.595 1.00 35.41 B
ATOM 6248 CZ TYR B 197 -34.160 -15.823 -98.761 1.00 35.75 B
ATOM 6249 OH TYR B 197 -34.481 -17.111 -99.132 1.00 36.39 B
ATOM 6250 C TYR B 197 -32.703 -12.807 -95.189 1.00 39.86 B
ATOM 6251 O TYR B 197 -33.440 -13.661 -94.690 1.00 40.36 B
ATOM 6252 N TRP B 198 -31.384 -12.824 -95.058 1.00 40.80 B
ATOM 6253 CA TRP B 198 -30.718 -13.885 -94.310 1.00 42.70 B

ATOM 6254 CB TRP B 198 -29.214 -13.643 -94.307 1.00 43.40 B
ATOM 6255 CG TRP B 198 -28.568 -13.983 -95.595 1.00 43.89 B
ATOM 6256 CD2 TRP B 198 -27.164 -14.088 -95.840 1.00 44.96 B
ATOM 6257 CE2 TRP B 198 -27.002 -14.435 -97.198 1.00 44.59 B
ATOM 6258 CE3 TRP B 198 -26.022 -13.920 -95.043 1.00 44.46 B
ATOM 6259 CD1 TRP B 198 -29.187 -14.261 -96.779 1.00 44.44 B
ATOM 6260 NE1 TRP B 198 -28.252 -14.535 -97.750 1.00 44.69 B
ATOM 6261 CZ2 TRP B 198 -25.744 -14.617 -97.774 1.00 44.63 B
ATOM 6262 CZ3 TRP B 198 -24.772 -14.100 -95.616 1.00 43.97 B
ATOM 6263 CH2 TRP B 198 -24.644 -14.445 -96.968 1.00 44.36 B
ATOM 6264 C TRP B 198 -31.238 -13.955 -92.880 1.00 43.16 B
ATOM 6265 O TRP B 198 -31.622 -15.025 -92.395 1.00 41.98 B
ATOM 6266 N ARG B 199 -31.251 -12.811 -92.204 1.00 43.72 B
ATOM 6267 CA ARG B 199 -31.799 -12.725 -90.856 1.00 45.13 B
ATOM 6268 CB ARG B 199 -31.740 -11.285 -90.344 1.00 43.47 B
ATOM 6269 CG ARG B 199 -30.525 -10.981 -89.484 1.00 41.80 B
ATOM 6270 CD ARG B 199 -29.712 -9.788 -89.959 1.00 40.41 B
ATOM 6271 NE ARG B 199 -30.563 -8.663 -90.336 1.00 40.34 B
ATOM 6272 CZ ARG B 199 -30.116 -7.542 -90.885 1.00 41.30 B
ATOM 6273 NH1 ARG B 199 -30.963 -6.570 -91.196 1.00 41.01 B
ATOM 6274 NH2 ARG B 199 -28.820 -7.389 -91.126 1.00 42.14 B
ATOM 6275 C ARG B 199 -33.234 -13.241 -90.810 1.00 46.37 B
ATOM 6276 O ARG B 199 -33.610 -13.974 -89.896 1.00 46.68 B
ATOM 6277 N ALA B 200 -34.030 -12.853 -91.801 1.00 47.55 B
ATOM 6278 CA ALA B 200 -35.473 -13.057 -91.749 1.00 48.87 B
ATOM 6279 CB ALA B 200 -36.134 -12.484 -92.993 1.00 47.82 B
ATOM 6280 C ALA B 200 -35.817 -14.534 -91.594 1.00 50.27 B
ATOM 6281 O ALA B 200 -36.989 -14.912 -91.589 1.00 51.03 B
ATOM 6282 N TRP B 201 -34.788 -15.366 -91.466 1.00 51.51 B
ATOM 6283 CA TRP B 201 -34.973 -16.811 -91.415 1.00 53.05 B
ATOM 6284 CB TRP B 201 -33.720 -17.530 -91.920 1.00 55.30 B
ATOM 6285 CG TRP B 201 -33.630 -17.600 -93.414 1.00 58.49 B
ATOM 6286 CD2 TRP B 201 -32.438 -17.719 -94.198 1.00 59.80 B
ATOM 6287 CE2 TRP B 201 -32.825 -17.749 -95.553 1.00 60.50 B

ATOM 6288 CE3 TRP B 201 -31.075 -17.805 -93.892 1.00 60.69 B
ATOM 6289 CD1 TRP B 201 -34.666 -17.563 -94.302 1.00 59.93 B
ATOM 6290 NE1 TRP B 201 -34.192 -17.651 -95.589 1.00 60.92 B
ATOM 6291 CZ2 TRP B 201 -31.905 -17.860 -96.593 1.00 61.42 B
ATOM 6292 CZ3 TRP B 201 -30.164 -17.914 -94.926 1.00 61.56 B
ATOM 6293 CH2 TRP B 201 -30.583 -17.941 -96.259 1.00 61.51 B
ATOM 6294 C TRP B 201 -35.308 -17.274 -90.001 1.00 53.41 B
ATOM 6295 O TRP B 201 -35.789 -18.389 -89.800 1.00 54.91 B
ATOM 6296 N TYR B 202 -35.051 -16.410 -89.025 1.00 52.85 B
ATOM 6297 CA TYR B 202 -35.253 -16.746 -87.650 1.00 51.35 B
ATOM 6298 CB TYR B 202 -34.039 -16.289 -86.846 1.00 51.25 B
ATOM 6299 CG TYR B 202 -32.753 -16.970 -87.265 1.00 49.67 B
ATOM 6300 CD1 TYR B 202 -31.926 -16.404 -88.233 1.00 48.37 B
ATOM 6301 CE1 TYR B 202 -30.753 -17.023 -88.618 1.00 46.70 B
ATOM 6302 CD2 TYR B 202 -32.368 -18.185 -86.694 1.00 48.75 B
ATOM 6303 CE2 TYR B 202 -31.199 -18.814 -87.072 1.00 47.27 B
ATOM 6304 CZ TYR B 202 -30.394 -18.224 -88.033 1.00 47.21 B
ATOM 6305 OH TYR B 202 -29.218 -18.829 -88.398 1.00 48.08 B
ATOM 6306 C TYR B 202 -36.545 -16.096 -87.153 1.00 50.76 B
ATOM 6307 O TYR B 202 -36.892 -16.188 -86.003 1.00 51.07 B
ATOM 6308 N ALA B 203 -37.269 -15.418 -88.025 1.00 49.79 B
ATOM 6309 CA ALA B 203 -38.530 -14.809 -87.604 1.00 48.41 B
ATOM 6310 CB ALA B 203 -39.664 -15.805 -87.806 1.00 48.09 B
ATOM 6311 C ALA B 203 -38.543 -14.313 -86.153 1.00 47.62 B
ATOM 6312 O ALA B 203 -39.176 -14.917 -85.284 1.00 48.83 B
ATOM 6313 N ALA B 204 -37.839 -13.215 -85.901 1.00 45.65 B
ATOM 6314 CA ALA B 204 -37.780 -12.612 -84.575 1.00 43.38 B
ATOM 6315 CB ALA B 204 -36.710 -13.282 -83.737 1.00 42.68 B
ATOM 6316 C ALA B 204 -37.462 -11.137 -84.733 1.00 42.34 B
ATOM 6317 O ALA B 204 -36.386 -10.781 -85.200 1.00 42.74 B
ATOM 6318 N PRO B 205 -38.396 -10.254 -84.346 1.00 41.48 B
ATOM 6319 CD PRO B 205 -39.704 -10.553 -83.748 1.00 41.24 B
ATOM 6320 CA PRO B 205 -38.192 -8.805 -84.456 1.00 41.26 B
ATOM 6321 CB PRO B 205 -39.530 -8.221 -83.998 1.00 39.86 B

ATOM 6322 CG PRO B 205 -40.498 -9.343 -84.155 1.00 40.42 B
ATOM 6323 C PRO B 205 -37.060 -8.369 -83.536 1.00 42.21 B
ATOM 6324 O PRO B 205 -36.700 -7.195 -83.489 1.00 42.36 B
ATOM 6325 N THR B 206 -36.501 -9.335 -82.812 1.00 43.25 B
ATOM 6326 CA THR B 206 -35.449 -9.075 -81.838 1.00 43.96 B
ATOM 6327 CB THR B 206 -35.962 -9.395 -80.423 1.00 44.54 B
ATOM 6328 OG1 THR B 206 -36.676 -10.641 -80.453 1.00 45.16 B
ATOM 6329 CG2 THR B 206 -36.881 -8.278 -79.916 1.00 44.18 B
ATOM 6330 C THR B 206 -34.163 -9.858 -82.045 1.00 44.19 B
ATOM 6331 O THR B 206 -33.227 -9.719 -81.258 1.00 43.98 B
ATOM 6332 N PHE B 207 -34.112 -10.672 -83.095 1.00 44.62 B
ATOM 6333 CA PHE B 207 -32.933 -11.497 -83.372 1.00 44.82 B
ATOM 6334 CB PHE B 207 -32.946 -11.968 -84.824 1.00 42.35 B
ATOM 6335 CG PHE B 207 -31.886 -12.978 -85.136 1.00 40.27 B
ATOM 6336 CD1 PHE B 207 -31.778 -14.144 -84.388 1.00 40.59 B
ATOM 6337 CD2 PHE B 207 -31.001 -12.777 -86.183 1.00 39.60 B
ATOM 6338 CE1 PHE B 207 -30.801 -15.104 -84.682 1.00 39.44 B
ATOM 6339 CE2 PHE B 207 -30.019 -13.730 -86.486 1.00 38.94 B
ATOM 6340 CZ PHE B 207 -29.923 -14.896 -85.731 1.00 38.34 B
ATOM 6341 C PHE B 207 -31.580 -10.834 -83.075 1.00 45.77 B
ATOM 6342 O PHE B 207 -30.750 -11.387 -82.343 1.00 46.99 B
ATOM 6343 N GLU B 208 -31.349 -9.658 -83.646 1.00 45.60 B
ATOM 6344 CA GLU B 208 -30.083 -8.972 -83.409 1.00 46.28 B
ATOM 6345 CB GLU B 208 -29.980 -7.719 -84.277 1.00 47.16 B
ATOM 6346 CG GLU B 208 -29.333 -7.964 -85.636 1.00 48.31 B
ATOM 6347 CD GLU B 208 -29.476 -6.778 -86.571 1.00 48.23 B
ATOM 6348 OE1 GLU B 208 -28.510 -5.995 -86.700 1.00 48.15 B
ATOM 6349 OE2 GLU B 208 -30.571 -6.625 -87.161 1.00 47.56 B
ATOM 6350 C GLU B 208 -29.853 -8.600 -81.951 1.00 46.25 B
ATOM 6351 O GLU B 208 -28.741 -8.710 -81.430 1.00 45.65 B
ATOM 6352 N ASP B 209 -30.913 -8.157 -81.294 1.00 46.78 B
ATOM 6353 CA ASP B 209 -30.803 -7.778 -79.898 1.00 46.91 B
ATOM 6354 CB ASP B 209 -32.045 -6.997 -79.445 1.00 47.71 B
ATOM 6355 CG ASP B 209 -31.967 -5.521 -79.794 1.00 48.68 B

ATOM 6356 OD1 ASP B 209 -32.934 -4.786 -79.493 1.00 50.57 B
ATOM 6357 OD2 ASP B 209 -30.940 -5.090 -80.360 1.00 48.29 B
ATOM 6358 C ASP B 209 -30.630 -9.020 -79.045 1.00 45.51 B
ATOM 6359 O ASP B 209 -29.870 -9.015 -78.086 1.00 45.60 B
ATOM 6360 N ASP B 210 -31.327 -10.090 -79.403 1.00 43.59 B
ATOM 6361 CA ASP B 210 -31.224 -11.308 -78.632 1.00 43.00 B
ATOM 6362 CB ASP B 210 -32.205 -12.372 -79.132 1.00 43.70 B
ATOM 6363 CG ASP B 210 -33.666 -11.992 -78.893 1.00 45.10 B
ATOM 6364 OD1 ASP B 210 -33.941 -11.270 -77.907 1.00 44.76 B
ATOM 6365 OD2 ASP B 210 -34.541 -12.431 -79.680 1.00 45.07 B
ATOM 6366 C ASP B 210 -29.817 -11.861 -78.674 1.00 42.00 B
ATOM 6367 O ASP B 210 -29.335 -12.405 -77.687 1.00 42.44 B
ATOM 6368 N LEU B 211 -29.123 -11.734 -79.795 1.00 40.90 B
ATOM 6369 CA LEU B 211 -27.776 -12.293 -79.779 1.00 40.09 B
ATOM 6370 CB LEU B 211 -27.282 -12.735 -81.133 1.00 40.20 B
ATOM 6371 CG LEU B 211 -28.142 -13.664 -81.965 1.00 39.22 B
ATOM 6372 CD1 LEU B 211 -28.473 -12.861 -83.203 1.00 38.56 B
ATOM 6373 CD2 LEU B 211 -27.407 -14.946 -82.344 1.00 36.79 B
ATOM 6374 C LEU B 211 -26.773 -11.343 -79.246 1.00 39.98 B
ATOM 6375 O LEU B 211 -25.596 -11.682 -79.112 1.00 39.82 B
ATOM 6376 N GLU B 212 -27.202 -10.127 -78.985 1.00 39.88 B
ATOM 6377 CA GLU B 212 -26.265 -9.204 -78.405 1.00 40.12 B
ATOM 6378 CB GLU B 212 -26.730 -7.778 -78.582 1.00 41.37 B
ATOM 6379 CG GLU B 212 -25.807 -6.824 -77.930 1.00 44.34 B
ATOM 6380 CD GLU B 212 -25.483 -5.719 -78.858 1.00 46.60 B
ATOM 6381 OE1 GLU B 212 -24.509 -5.856 -79.623 1.00 49.47 B
ATOM 6382 OE2 GLU B 212 -26.231 -4.729 -78.844 1.00 47.59 B
ATOM 6383 C GLU B 212 -26.290 -9.607 -76.915 1.00 39.79 B
ATOM 6384 O GLU B 212 -25.227 -9.936 -76.345 1.00 40.12 B
ATOM 6385 N HIS B 213 -27.489 -9.636 -76.324 1.00 38.47 B
ATOM 6386 CA HIS B 213 -27.668 -9.999 -74.908 1.00 36.84 B
ATOM 6387 CB HIS B 213 -29.158 -10.308 -74.537 1.00 40.07 B
ATOM 6388 CG HIS B 213 -30.095 -9.130 -74.656 1.00 44.14 B
ATOM 6389 CD2 HIS B 213 -31.349 -8.917 -74.173 1.00 45.30 B

ATOM 6390 ND1 HIS B 213 -29.791 -8.014 -75.409 1.00 46.29 B
ATOM 6391 CE1 HIS B 213 -30.809 -7.167 -75.388 1.00 46.56 B
ATOM 6392 NE2 HIS B 213 -31.768 -7.690 -74.645 1.00 46.93 B
ATOM 6393 C HIS B 213 -26.896 -11.294 -74.709 1.00 34.16 B
ATOM 6394 O HIS B 213 -26.105 -11.466 -73.790 1.00 35.00 B
ATOM 6395 N LEU B 214 -27.174 -12.229 -75.593 1.00 30.34 B
ATOM 6396 CA LEU B 214 -26.565 -13.534 -75.494 1.00 27.26 B
ATOM 6397 CB LEU B 214 -27.157 -14.442 -76.534 1.00 26.67 B
ATOM 6398 CG LEU B 214 -27.690 -15.662 -75.827 1.00 26.70 B
ATOM 6399 CD1 LEU B 214 -29.207 -15.707 -76.003 1.00 25.47 B
ATOM 6400 CD2 LEU B 214 -27.016 -16.894 -76.406 1.00 26.59 B
ATOM 6401 C LEU B 214 -25.063 -13.651 -75.558 1.00 26.14 B
ATOM 6402 O LEU B 214 -24.480 -14.606 -75.045 1.00 25.57 B
ATOM 6403 N TYR B 215 -24.420 -12.690 -76.199 1.00 25.39 B
ATOM 6404 CA TYR B 215 -22.975 -12.755 -76.300 1.00 23.37 B
ATOM 6405 CB TYR B 215 -22.458 -12.022 -77.549 1.00 20.12 B
ATOM 6406 CG TYR B 215 -20.967 -12.171 -77.681 1.00 15.82 B
ATOM 6407 CD1 TYR B 215 -20.388 -13.423 -77.918 1.00 13.74 B
ATOM 6408 CE1 TYR B 215 -19.016 -13.586 -77.884 1.00 11.58 B
ATOM 6409 CD2 TYR B 215 -20.132 -11.094 -77.432 1.00 11.92 B
ATOM 6410 CE2 TYR B 215 -18.771 -11.249 -77.398 1.00 10.43 B
ATOM 6411 CZ TYR B 215 -18.217 -12.492 -77.616 1.00 10.68 B
ATOM 6412 OH TYR B 215 -16.862 -12.640 -77.512 1.00 11.97 B
ATOM 6413 C TYR B 215 -22.472 -12.111 -75.027 1.00 22.93 B
ATOM 6414 O TYR B 215 -21.394 -12.439 -74.537 1.00 21.84 B
ATOM 6415 N GLN B 216 -23.302 -11.216 -74.489 1.00 22.93 B
ATOM 6416 CA GLN B 216 -23.013 -10.506 -73.236 1.00 23.05 B
ATOM 6417 CB GLN B 216 -24.288 -9.869 -72.683 1.00 24.47 B
ATOM 6418 CG GLN B 216 -24.694 -8.629 -73.371 1.00 29.21 B
ATOM 6419 CD GLN B 216 -23.672 -7.544 -73.125 1.00 31.52 B
ATOM 6420 OE1 GLN B 216 -23.969 -6.519 -72.492 1.00 32.54 B
ATOM 6421 NE2 GLN B 216 -22.440 -7.777 -73.589 1.00 32.32 B
ATOM 6422 C GLN B 216 -22.537 -11.486 -72.186 1.00 20.90 B
ATOM 6423 O GLN B 216 -21.512 -11.327 -71.509 1.00 18.45 B

ATOM 6424 N GLN B 217 -23.372 -12.495 -72.066 1.00 18.20 B
ATOM 6425 CA GLN B 217 -23.186 -13.557 -71.137 1.00 18.07 B
ATOM 6426 CB GLN B 217 -24.346 -14.448 -71.213 1.00 19.08 B
ATOM 6427 CG GLN B 217 -25.546 -13.797 -70.874 1.00 21.85 B
ATOM 6428 CD GLN B 217 -26.568 -14.817 -70.709 1.00 24.02 B
ATOM 6429 OE1 GLN B 217 -26.240 -15.971 -70.452 1.00 24.02 B
ATOM 6430 NE2 GLN B 217 -27.827 -14.435 -70.861 1.00 26.55 B
ATOM 6431 C GLN B 217 -22.005 -14.424 -71.347 1.00 19.05 B
ATOM 6432 O GLN B 217 -21.313 -14.837 -70.425 1.00 19.42 B
ATOM 6433 N LEU B 218 -21.785 -14.765 -72.589 1.00 17.95 B
ATOM 6434 CA LEU B 218 -20.668 -15.627 -72.827 1.00 16.83 B
ATOM 6435 CB LEU B 218 -20.950 -16.496 -74.017 1.00 20.95 B
ATOM 6436 CG LEU B 218 -21.933 -17.635 -73.832 1.00 23.66 B
ATOM 6437 CD1 LEU B 218 -22.683 -17.766 -75.129 1.00 25.79 B
ATOM 6438 CD2 LEU B 218 -21.210 -18.928 -73.490 1.00 23.92 B
ATOM 6439 C LEU B 218 -19.335 -14.971 -73.023 1.00 14.88 B
ATOM 6440 O LEU B 218 -18.317 -15.659 -73.052 1.00 12.83 B
ATOM 6441 N GLU B 219 -19.323 -13.650 -73.163 1.00 12.74 B
ATOM 6442 CA GLU B 219 -18.059 -12.962 -73.409 1.00 11.14 B
ATOM 6443 CB GLU B 219 -18.253 -11.457 -73.613 1.00 11.46 B
ATOM 6444 CG GLU B 219 -16.928 -10.714 -73.697 1.00 13.01 B
ATOM 6445 CD GLU B 219 -17.064 -9.301 -74.224 1.00 15.27 B
ATOM 6446 OE1 GLU B 219 -18.083 -8.633 -73.940 1.00 17.73 B
ATOM 6447 OE2 GLU B 219 -16.132 -8.844 -74.915 1.00 15.96 B
ATOM 6448 C GLU B 219 -17.023 -13.200 -72.338 1.00 10.84 B
ATOM 6449 O GLU B 219 -15.819 -13.297 -72.632 1.00 7.64 B
ATOM 6450 N PRO B 220 -17.471 -13.289 -71.069 1.00 11.14 B
ATOM 6451 CD PRO B 220 -18.814 -12.986 -70.542 1.00 9.06 B
ATOM 6452 CA PRO B 220 -16.521 -13.523 -69.977 1.00 10.37 B
ATOM 6453 CB PRO B 220 -17.420 -13.603 -68.756 1.00 11.84 B
ATOM 6454 CG PRO B 220 -18.518 -12.637 -69.105 1.00 11.86 B
ATOM 6455 C PRO B 220 -15.757 -14.809 -70.213 1.00 10.20 B
ATOM 6456 O PRO B 220 -14.538 -14.865 -70.069 1.00 10.04 B
ATOM 6457 N LEU B 221 -16.501 -15.837 -70.596 1.00 11.06 B

ATOM 6458 CA LEU B 221 -15.928 -17.140 -70.891 1.00 11.29 B
ATOM 6459 CB LEU B 221 -16.962 -18.032 -71.577 1.00 12.13 B
ATOM 6460 CG LEU B 221 -17.794 -19.007 -70.742 1.00 12.68 B
ATOM 6461 CD1 LEU B 221 -16.854 -19.997 -70.055 1.00 12.92 B
ATOM 6462 CD2 LEU B 221 -18.638 -18.249 -69.717 1.00 12.45 B
ATOM 6463 C LEU B 221 -14.742 -16.996 -71.812 1.00 12.10 B
ATOM 6464 O LEU B 221 -13.650 -17.484 -71.506 1.00 11.43 B
ATOM 6465 N TYR B 222 -14.961 -16.319 -72.938 1.00 12.11 B
ATOM 6466 CA TYR B 222 -13.901 -16.148 -73.921 1.00 13.44 B
ATOM 6467 CB TYR B 222 -14.424 -15.401 -75.178 1.00 12.98 B
ATOM 6468 CG TYR B 222 -13.427 -15.374 -76.309 1.00 11.47 B
ATOM 6469 CD1 TYR B 222 -12.982 -16.564 -76.891 1.00 11.72 B
ATOM 6470 CE1 TYR B 222 -11.970 -16.570 -77.836 1.00 12.48 B
ATOM 6471 CD2 TYR B 222 -12.839 -14.187 -76.716 1.00 11.90 B
ATOM 6472 CE2 TYR B 222 -11.821 -14.183 -77.670 1.00 13.30 B
ATOM 6473 CZ TYR B 222 -11.395 -15.374 -78.220 1.00 14.21 B
ATOM 6474 OH TYR B 222 -10.406 -15.359 -79.172 1.00 17.95 B
ATOM 6475 C TYR B 222 -12.708 -15.415 -73.317 1.00 14.03 B
ATOM 6476 O TYR B 222 -11.579 -15.914 -73.342 1.00 13.33 B
ATOM 6477 N LEU B 223 -12.963 -14.239 -72.755 1.00 14.96 B
ATOM 6478 CA LEU B 223 -11.895 -13.452 -72.166 1.00 16.21 B
ATOM 6479 CB LEU B 223 -12.474 -12.242 -71.436 1.00 15.94 B
ATOM 6480 CG LEU B 223 -13.298 -11.279 -72.286 1.00 16.71 B
ATOM 6481 CD1 LEU B 223 -13.619 -10.049 -71.466 1.00 17.34 B
ATOM 6482 CD2 LEU B 223 -12.521 -10.891 -73.528 1.00 17.55 B
ATOM 6483 C LEU B 223 -11.026 -14.266 -71.212 1.00 17.64 B
ATOM 6484 O LEU B 223 -9.812 -14.056 -71.149 1.00 18.70 B
ATOM 6485 N ASN B 224 -11.627 -15.198 -70.477 1.00 17.39 B
ATOM 6486 CA ASN B 224 -10.837 -15.978 -69.545 1.00 18.77 B
ATOM 6487 CB ASN B 224 -11.710 -16.587 -68.433 1.00 19.76 B
ATOM 6488 CG ASN B 224 -11.891 -15.643 -67.248 1.00 19.57 B
ATOM 6489 OD1 ASN B 224 -10.916 -15.242 -66.602 1.00 18.55 B
ATOM 6490 ND2 ASN B 224 -13.135 -15.284 -66.963 1.00 19.52 B
ATOM 6491 C ASN B 224 -10.032 -17.041 -70.257 1.00 18.99 B

ATOM 6492 O ASN B 224 -8.874 -17.259 -69.906 1.00 20.08 B
ATOM 6493 N LEU B 225 -10.622 -17.699 -71.256 1.00 18.45 B
ATOM 6494 CA LEU B 225 -9.884 -18.721 -72.009 1.00 17.59 B
ATOM 6495 CB LEU B 225 -10.819 -19.471 -72.958 1.00 17.30 B
ATOM 6496 CG LEU B 225 -10.192 -20.561 -73.836 1.00 17.72 B
ATOM 6497 CD1 LEU B 225 -9.536 -21.643 -72.977 1.00 18.51 B
ATOM 6498 CD2 LEU B 225 -11.282 -21.165 -74.719 1.00 18.71 B
ATOM 6499 C LEU B 225 -8.771 -18.013 -72.806 1.00 16.90 B
ATOM 6500 O LEU B 225 -7.641 -18.498 -72.927 1.00 17.32 B
ATOM 6501 N HIS B 226 -9.106 -16.830 -73.304 1.00 15.29 B
ATOM 6502 CA HIS B 226 -8.172 -16.027 -74.079 1.00 15.22 B
ATOM 6503 CB HIS B 226 -8.919 -14.817 -74.680 1.00 15.00 B
ATOM 6504 CG HIS B 226 -8.036 -13.862 -75.422 1.00 15.43 B
ATOM 6505 CD2 HIS B 226 -7.748 -13.754 -76.742 1.00 15.27 B
ATOM 6506 ND1 HIS B 226 -7.340 -12.851 -74.789 1.00 13.51 B
ATOM 6507 CE1 HIS B 226 -6.670 -12.158 -75.689 1.00 13.29 B
ATOM 6508 NE2 HIS B 226 -6.902 -12.684 -76.880 1.00 16.17 B
ATOM 6509 C HIS B 226 -6.938 -15.572 -73.297 1.00 15.65 B
ATOM 6510 O HIS B 226 -5.805 -15.732 -73.750 1.00 15.10 B
ATOM 6511 N ALA B 227 -7.144 -14.998 -72.117 1.00 17.13 B
ATOM 6512 CA ALA B 227 -5.996 -14.549 -71.318 1.00 15.67 B
ATOM 6513 CB ALA B 227 -6.449 -13.826 -70.086 1.00 16.26 B
ATOM 6514 C ALA B 227 -5.172 -15.751 -70.920 1.00 14.61 B
ATOM 6515 O ALA B 227 -3.932 -15.713 -70.939 1.00 13.44 B
ATOM 6516 N PHE B 228 -5.870 -16.829 -70.572 1.00 14.34 B
ATOM 6517 CA PHE B 228 -5.206 -18.066 -70.180 1.00 15.84 B
ATOM 6518 CB PHE B 228 -6.217 -19.149 -69.804 1.00 15.31 B
ATOM 6519 CG PHE B 228 -5.577 -20.421 -69.288 1.00 16.22 B
ATOM 6520 CD1 PHE B 228 -4.905 -20.434 -68.077 1.00 14.89 B
ATOM 6521 CD2 PHE B 228 -5.629 -21.597 -70.032 1.00 16.73 B
ATOM 6522 CE1 PHE B 228 -4.298 -21.583 -67.620 1.00 15.36 B
ATOM 6523 CE2 PHE B 228 -5.023 -22.750 -69.582 1.00 16.71 B
ATOM 6524 CZ PHE B 228 -4.353 -22.741 -68.370 1.00 16.55 B
ATOM 6525 C PHE B 228 -4.296 -18.616 -71.263 1.00 17.76 B

ATOM 6526 O PHE B 228 -3.155 -19.001 -70.981 1.00 18.70 B
ATOM 6527 N VAL B 229 -4.803 -18.665 -72.496 1.00 18.16 B
ATOM 6528 CA VAL B 229 -4.019 -19.176 -73.611 1.00 18.59 B
ATOM 6529 CB VAL B 229 -4.896 -19.400 -74.860 1.00 19.83 B
ATOM 6530 CG1 VAL B 229 -4.040 -19.871 -76.027 1.00 18.80 B
ATOM 6531 CG2 VAL B 229 -5.960 -20.441 -74.544 1.00 23.48 B
ATOM 6532 C VAL B 229 -2.881 -18.235 -73.964 1.00 18.04 B
ATOM 6533 O VAL B 229 -1.759 -18.682 -74.226 1.00 20.10 B
ATOM 6534 N ARG B 230 -3.158 -16.935 -73.955 1.00 16.34 B
ATOM 6535 CA ARG B 230 -2.140 -15.956 -74.301 1.00 17.18 B
ATOM 6536 CB ARG B 230 -2.685 -14.542 -74.127 1.00 16.61 B
ATOM 6537 CG ARG B 230 -1.678 -13.444 -74.452 1.00 17.64 B
ATOM 6538 CD ARG B 230 -2.349 -12.073 -74.431 1.00 18.71 B
ATOM 6539 NE ARG B 230 -3.018 -11.839 -73.159 1.00 19.52 B
ATOM 6540 CZ ARG B 230 -3.861 -10.841 -72.922 1.00 20.33 B
ATOM 6541 NH1 ARG B 230 -4.149 -9.963 -73.868 1.00 22.46 B
ATOM 6542 NH2 ARG B 230 -4.443 -10.742 -71.743 1.00 19.77 B
ATOM 6543 C ARG B 230 -0.908 -16.160 -73.440 1.00 18.14 B
ATOM 6544 O ARG B 230 0.218 -16.260 -73.941 1.00 18.49 B
ATOM 6545 N ARG B 231 -1.130 -16.239 -72.136 1.00 19.03 B
ATOM 6546 CA ARG B 231 -0.038 -16.445 -71.207 1.00 19.37 B
ATOM 6547 CB ARG B 231 -0.601 -16.620 -69.792 1.00 21.35 B
ATOM 6548 CG ARG B 231 0.388 -17.169 -68.770 1.00 23.22 B
ATOM 6549 CD ARG B 231 1.524 -16.213 -68.488 1.00 24.50 B
ATOM 6550 NE ARG B 231 1.339 -15.537 -67.214 1.00 26.31 B
ATOM 6551 CZ ARG B 231 2.277 -15.457 -66.276 1.00 26.79 B
ATOM 6552 NH1 ARG B 231 2.020 -14.825 -65.148 1.00 26.51 B
ATOM 6553 NH2 ARG B 231 3.468 -16.006 -66.462 1.00 26.80 B
ATOM 6554 C ARG B 231 0.765 -17.678 -71.630 1.00 18.96 B
ATOM 6555 O ARG B 231 1.985 -17.726 -71.479 1.00 17.36 B
ATOM 6556 N ALA B 232 0.070 -18.670 -72.174 1.00 19.59 B
ATOM 6557 CA ALA B 232 0.730 -19.889 -72.601 1.00 20.26 B
ATOM 6558 CB ALA B 232 -0.296 -20.976 -72.894 1.00 19.44 B
ATOM 6559 C ALA B 232 1.555 -19.596 -73.831 1.00 20.99 B

ATOM 6560 O ALA B 232 2.707 -20.037 -73.936 1.00 21.80 B
ATOM 6561 N LEU B 233 0.980 -18.838 -74.760 1.00 20.47 B
ATOM 6562 CA LEU B 233 1.711 -18.520 -75.975 1.00 20.68 B
ATOM 6563 CB LEU B 233 0.789 -17.826 -76.982 1.00 21.01 B
ATOM 6564 CG LEU B 233 -0.334 -18.688 -77.584 1.00 20.85 B
ATOM 6565 CD1 LEU B 233 -1.283 -17.814 -78.391 1.00 21.34 B
ATOM 6566 CD2 LEU B 233 0.264 -19.776 -78.460 1.00 20.42 B
ATOM 6567 C LEU B 233 2.934 -17.663 -75.648 1.00 20.09 B
ATOM 6568 O LEU B 233 3.980 -17.785 -76.282 1.00 18.44 B
ATOM 6569 N HIS B 234 2.806 -16.823 -74.626 1.00 21.56 B
ATOM 6570 CA HIS B 234 3.903 -15.950 -74.201 1.00 23.36 B
ATOM 6571 CB HIS B 234 3.439 -15.025 -73.077 1.00 24.97 B
ATOM 6572 CG HIS B 234 4.519 -14.132 -72.537 1.00 28.52 B
ATOM 6573 CD2 HIS B 234 4.781 -12.817 -72.744 1.00 28.46 B
ATOM 6574 ND1 HIS B 234 5.507 -14.586 -71.688 1.00 30.18 B
ATOM 6575 CE1 HIS B 234 6.329 -13.590 -71.398 1.00 29.27 B
ATOM 6576 NE2 HIS B 234 5.911 -12.507 -72.027 1.00 27.64 B
ATOM 6577 C HIS B 234 5.046 -16.807 -73.727 1.00 23.67 B
ATOM 6578 O HIS B 234 6.217 -16.577 -74.027 1.00 23.50 B
ATOM 6579 N ARG B 235 4.662 -17.808 -72.964 1.00 25.07 B
ATOM 6580 CA ARG B 235 5.614 -18.768 -72.462 1.00 27.61 B
ATOM 6581 CB ARG B 235 4.876 -19.956 -71.902 1.00 30.88 B
ATOM 6582 CG ARG B 235 5.435 -20.488 -70.643 1.00 34.45 B
ATOM 6583 CD ARG B 235 4.614 -19.907 -69.527 1.00 36.12 B
ATOM 6584 NE ARG B 235 3.264 -20.478 -69.445 1.00 38.10 B
ATOM 6585 CZ ARG B 235 2.510 -20.422 -68.351 1.00 38.59 B
ATOM 6586 NH1 ARG B 235 2.993 -19.829 -67.273 1.00 37.24 B
ATOM 6587 NH2 ARG B 235 1.280 -20.935 -68.335 1.00 38.30 B
ATOM 6588 C ARG B 235 6.458 -19.298 -73.613 1.00 28.03 B
ATOM 6589 O ARG B 235 7.646 -19.114 -73.670 1.00 27.05 B
ATOM 6590 N ARG B 236 5.773 -19.939 -74.552 1.00 28.58 B
ATOM 6591 CA ARG B 236 6.531 -20.531 -75.608 1.00 27.36 B
ATOM 6592 CB ARG B 236 5.796 -21.815 -76.129 1.00 27.53 B
ATOM 6593 CG ARG B 236 5.127 -21.731 -77.527 1.00 28.73 B

ATOM 6594 CD ARG B 236 5.845 -22.770 -78.402 1.00 30.00 B
ATOM 6595 NE ARG B 236 5.552 -24.177 -78.062 1.00 29.70 B
ATOM 6596 CZ ARG B 236 6.359 -25.203 -78.321 1.00 30.63 B
ATOM 6597 NH1 ARG B 236 7.520 -24.956 -78.901 1.00 30.51 B
ATOM 6598 NH2 ARG B 236 5.983 -26.466 -78.070 1.00 31.03 B
ATOM 6599 C ARG B 236 7.120 -19.645 -76.688 1.00 25.85 B
ATOM 6600 O ARG B 236 8.260 -19.846 -77.088 1.00 25.97 B
ATOM 6601 N TYR B 237 6.430 -18.613 -77.140 1.00 24.00 B
ATOM 6602 CA TYR B 237 7.037 -17.740 -78.183 1.00 22.64 B
ATOM 6603 CB TYR B 237 5.990 -17.192 -79.185 1.00 18.72 B
ATOM 6604 CG TYR B 237 5.274 -18.286 -79.918 1.00 17.26 B
ATOM 6605 CD1 TYR B 237 3.939 -18.557 -79.654 1.00 16.39 B
ATOM 6606 CE1 TYR B 237 3.264 -19.582 -80.316 1.00 16.88 B
ATOM 6607 CD2 TYR B 237 5.935 -19.071 -80.868 1.00 16.55 B
ATOM 6608 CE2 TYR B 237 5.274 -20.101 -81.539 1.00 15.04 B
ATOM 6609 CZ TYR B 237 3.936 -20.353 -81.258 1.00 16.86 B
ATOM 6610 OH TYR B 237 3.259 -21.374 -81.898 1.00 16.32 B
ATOM 6611 C TYR B 237 7.895 -16.572 -77.697 1.00 23.11 B
ATOM 6612 O TYR B 237 8.721 -16.005 -78.425 1.00 21.90 B
ATOM 6613 N GLY B 238 7.722 -16.192 -76.451 1.00 24.38 B
ATOM 6614 CA GLY B 238 8.579 -15.138 -75.951 1.00 25.83 B
ATOM 6615 C GLY B 238 7.985 -13.759 -75.947 1.00 27.22 B
ATOM 6616 O GLY B 238 7.060 -13.429 -76.692 1.00 28.58 B
ATOM 6617 N ASP B 239 8.554 -12.931 -75.091 1.00 28.53 B
ATOM 6618 CA ASP B 239 8.062 -11.579 -74.927 1.00 29.26 B
ATOM 6619 CB ASP B 239 8.867 -10.860 -73.860 1.00 30.18 B
ATOM 6620 CG ASP B 239 8.072 -9.761 -73.236 1.00 30.99 B
ATOM 6621 OD1 ASP B 239 6.869 -10.006 -72.962 1.00 31.98 B
ATOM 6622 OD2 ASP B 239 8.633 -8.665 -73.039 1.00 33.53 B
ATOM 6623 C ASP B 239 7.989 -10.706 -76.167 1.00 28.64 B
ATOM 6624 O ASP B 239 7.264 -9.706 -76.219 1.00 28.11 B
ATOM 6625 N ARG B 240 8.719 -11.102 -77.185 1.00 29.08 B
ATOM 6626 CA ARG B 240 8.734 -10.329 -78.392 1.00 28.62 B
ATOM 6627 CB ARG B 240 9.887 -10.729 -79.227 1.00 31.33 B

ATOM 6628 CG ARG B 240 10.011 -9.839 -80.363 1.00 34.98 B
ATOM 6629 CD ARG B 240 11.341 -10.063 -80.907 1.00 38.10 B
ATOM 6630 NE ARG B 240 11.737 -8.960 -81.749 1.00 41.91 B
ATOM 6631 CZ ARG B 240 11.743 -9.004 -83.069 1.00 43.55 B
ATOM 6632 NH1 ARG B 240 11.371 -10.109 -83.699 1.00 43.42 B
ATOM 6633 NH2 ARG B 240 12.129 -7.933 -83.743 1.00 44.43 B
ATOM 6634 C ARG B 240 7.515 -10.452 -79.250 1.00 28.00 B
ATOM 6635 O ARG B 240 7.068 -9.484 -79.856 1.00 28.21 B
ATOM 6636 N TYR B 241 6.984 -11.657 -79.325 1.00 26.84 B
ATOM 6637 CA TYR B 241 5.815 -11.855 -80.152 1.00 26.80 B
ATOM 6638 CB TYR B 241 5.950 -13.126 -80.942 1.00 27.51 B
ATOM 6639 CG TYR B 241 7.095 -13.027 -81.859 1.00 29.95 B
ATOM 6640 CD1 TYR B 241 8.148 -13.920 -81.749 1.00 32.02 B
ATOM 6641 CE1 TYR B 241 9.249 -13.817 -82.549 1.00 33.87 B
ATOM 6642 CD2 TYR B 241 7.155 -12.008 -82.810 1.00 31.15 B
ATOM 6643 CE2 TYR B 241 8.247 -11.874 -83.625 1.00 32.46 B
ATOM 6644 CZ TYR B 241 9.298 -12.791 -83.493 1.00 34.00 B
ATOM 6645 OH TYR B 241 10.411 -12.717 -84.294 1.00 35.39 B
ATOM 6646 C TYR B 241 4.476 -11.860 -79.521 1.00 25.75 B
ATOM 6647 O TYR B 241 3.467 -11.776 -80.204 1.00 25.47 B
ATOM 6648 N ILE B 242 4.447 -11.994 -78.216 1.00 24.90 B
ATOM 6649 CA ILE B 242 3.173 -12.000 -77.548 1.00 22.87 B
ATOM 6650 CB ILE B 242 2.995 -13.295 -76.759 1.00 22.48 B
ATOM 6651 CG2 ILE B 242 1.673 -13.273 -76.043 1.00 23.33 B
ATOM 6652 CG1 ILE B 242 3.065 -14.496 -77.700 1.00 23.31 B
ATOM 6653 CD1 ILE B 242 1.835 -14.668 -78.568 1.00 24.81 B
ATOM 6654 C ILE B 242 3.114 -10.812 -76.610 1.00 22.58 B
ATOM 6655 O ILE B 242 4.103 -10.485 -75.957 1.00 22.63 B
ATOM 6656 N ASN B 243 1.984 -10.118 -76.577 1.00 22.41 B
ATOM 6657 CA ASN B 243 1.855 -9.001 -75.643 1.00 22.53 B
ATOM 6658 CB ASN B 243 1.441 -7.714 -76.343 1.00 24.30 B
ATOM 6659 CG ASN B 243 1.295 -6.555 -75.372 1.00 26.51 B
ATOM 6660 OD1 ASN B 243 0.616 -6.668 -74.353 1.00 28.88 B
ATOM 6661 ND2 ASN B 243 1.932 -5.437 -75.682 1.00 26.05 B

ATOM 6662 C ASN B 243 0.789 -9.396 -74.631 1.00 21.44 B
ATOM 6663 O ASN B 243 -0.375 -9.562 -74.977 1.00 21.88 B
ATOM 6664 N LEU B 244 1.202 -9.552 -73.379 1.00 20.62 B
ATOM 6665 CA LEU B 244 0.306 -9.974 -72.298 1.00 19.32 B
ATOM 6666 CB LEU B 244 1.106 -10.147 -71.014 1.00 17.79 B
ATOM 6667 CG LEU B 244 1.989 -11.389 -71.091 1.00 16.76 B
ATOM 6668 CD1 LEU B 244 3.015 -11.374 -69.988 1.00 17.60 B
ATOM 6669 CD2 LEU B 244 1.103 -12.623 -71.020 1.00 13.89 B
ATOM 6670 C LEU B 244 -0.830 -9.022 -72.064 1.00 17.78 B
ATOM 6671 O LEU B 244 -1.780 -9.312 -71.345 1.00 14.85 B
ATOM 6672 N ARG B 245 -0.722 -7.870 -72.699 1.00 18.36 B
ATOM 6673 CA ARG B 245 -1.732 -6.844 -72.565 1.00 19.43 B
ATOM 6674 CB ARG B 245 -1.136 -5.647 -71.857 1.00 22.45 B
ATOM 6675 CG ARG B 245 -1.653 -5.473 -70.445 1.00 25.43 B
ATOM 6676 CD ARG B 245 -0.508 -5.598 -69.490 1.00 27.69 B
ATOM 6677 NE ARG B 245 0.598 -4.723 -69.878 1.00 31.94 B
ATOM 6678 CZ ARG B 245 0.923 -3.599 -69.244 1.00 35.05 B
ATOM 6679 NH1 ARG B 245 0.210 -3.235 -68.193 1.00 37.17 B
ATOM 6680 NH2 ARG B 245 1.963 -2.852 -69.641 1.00 35.20 B
ATOM 6681 C ARG B 245 -2.316 -6.416 -73.907 1.00 19.13 B
ATOM 6682 O ARG B 245 -3.158 -5.522 -73.995 1.00 18.43 B
ATOM 6683 N GLY B 246 -1.856 -7.070 -74.962 1.00 18.76 B
ATOM 6684 CA GLY B 246 -2.336 -6.747 -76.287 1.00 16.52 B
ATOM 6685 C GLY B 246 -3.080 -7.919 -76.868 1.00 14.60 B
ATOM 6686 O GLY B 246 -3.239 -8.918 -76.183 1.00 13.35 B
ATOM 6687 N PRO B 247 -3.562 -7.826 -78.119 1.00 14.07 B
ATOM 6688 CD PRO B 247 -3.552 -6.661 -79.014 1.00 14.51 B
ATOM 6689 CA PRO B 247 -4.287 -8.931 -78.741 1.00 13.48 B
ATOM 6690 CB PRO B 247 -4.998 -8.261 -79.896 1.00 13.37 B
ATOM 6691 CG PRO B 247 -4.022 -7.263 -80.318 1.00 14.35 B
ATOM 6692 C PRO B 247 -3.320 -10.004 -79.200 1.00 12.95 B
ATOM 6693 O PRO B 247 -2.110 -9.784 -79.238 1.00 13.18 B
ATOM 6694 N ILE B 248 -3.849 -11.172 -79.535 1.00 13.49 B
ATOM 6695 CA ILE B 248 -2.999 -12.277 -79.969 1.00 13.02 B

ATOM 6696 CB ILE B 248 -3.612 -13.637 -79.564 1.00 11.84 B
ATOM 6697 CG2 ILE B 248 -2.636 -14.766 -79.878 1.00 11.81 B
ATOM 6698 CG1 ILE B 248 -3.950 -13.641 -78.075 1.00 10.79 B
ATOM 6699 CD1 ILE B 248 -4.563 -14.941 -77.618 1.00 13.73 B
ATOM 6700 C ILE B 248 -2.756 -12.306 -81.477 1.00 12.55 B
ATOM 6701 O ILE B 248 -3.634 -11.993 -82.269 1.00 12.59 B
ATOM 6702 N PRO B 249 -1.540 -12.650 -81.889 1.00 12.56 B
ATOM 6703 CD PRO B 249 -0.314 -12.748 -81.079 1.00 13.21 B
ATOM 6704 CA PRO B 249 -1.229 -12.725 -83.313 1.00 13.41 B
ATOM 6705 CB PRO B 249 0.240 -13.131 -83.301 1.00 14.23 B
ATOM 6706 CG PRO B 249 0.760 -12.434 -82.073 1.00 13.06 B
ATOM 6707 C PRO B 249 -2.133 -13.811 -83.935 1.00 13.90 B
ATOM 6708 O PRO B 249 -2.071 -14.978 -83.535 1.00 13.46 B
ATOM 6709 N ALA B 250 -2.958 -13.426 -84.909 1.00 13.89 B
ATOM 6710 CA ALA B 250 -3.908 -14.330 -85.575 1.00 12.68 B
ATOM 6711 CB ALA B 250 -4.620 -13.581 -86.673 1.00 12.05 B
ATOM 6712 C ALA B 250 -3.428 -15.682 -86.124 1.00 12.63 B
ATOM 6713 O ALA B 250 -4.252 -16.510 -86.507 1.00 13.95 B
ATOM 6714 N HIS B 251 -2.128 -15.934 -86.161 1.00 11.34 B
ATOM 6715 CA HIS B 251 -1.659 -17.214 -86.675 1.00 11.82 B
ATOM 6716 CB HIS B 251 -0.618 -16.962 -87.737 1.00 11.39 B
ATOM 6717 CG HIS B 251 0.631 -16.358 -87.197 1.00 10.97 B
ATOM 6718 CD2 HIS B 251 1.913 -16.793 -87.212 1.00 12.66 B
ATOM 6719 ND1 HIS B 251 0.641 -15.151 -86.539 1.00 11.04 B
ATOM 6720 CE1 HIS B 251 1.877 -14.865 -86.170 1.00 12.19 B
ATOM 6721 NE2 HIS B 251 2.669 -15.844 -86.568 1.00 13.23 B
ATOM 6722 C HIS B 251 -1.046 -18.180 -85.646 1.00 12.91 B
ATOM 6723 O HIS B 251 -0.337 -19.124 -86.021 1.00 13.83 B
ATOM 6724 N LEU B 252 -1.312 -17.972 -84.362 1.00 13.60 B
ATOM 6725 CA LEU B 252 -0.715 -18.824 -83.334 1.00 12.98 B
ATOM 6726 CB LEU B 252 -0.060 -17.960 -82.274 1.00 14.71 B
ATOM 6727 CG LEU B 252 0.913 -16.965 -82.885 1.00 18.36 B
ATOM 6728 CD1 LEU B 252 1.446 -16.043 -81.812 1.00 21.21 B
ATOM 6729 CD2 LEU B 252 2.045 -17.725 -83.556 1.00 20.12 B

ATOM 6730 C LEU B 252 -1.690 -19.760 -82.659 1.00 11.60 B
ATOM 6731 O LEU B 252 -1.303 -20.655 -81.925 1.00 10.92 B
ATOM 6732 N LEU B 253 -2.964 -19.538 -82.910 1.00 11.25 B
ATOM 6733 CA LEU B 253 -3.996 -20.353 -82.318 1.00 11.56 B
ATOM 6734 CB LEU B 253 -5.320 -19.611 -82.302 1.00 11.93 B
ATOM 6735 CG LEU B 253 -5.635 -18.492 -81.300 1.00 12.89 B
ATOM 6736 CD1 LEU B 253 -5.248 -18.888 -79.898 1.00 11.42 B
ATOM 6737 CD2 LEU B 253 -4.868 -17.272 -81.674 1.00 13.79 B
ATOM 6738 C LEU B 253 -4.239 -21.687 -82.995 1.00 14.25 B
ATOM 6739 O LEU B 253 -5.326 -22.241 -82.879 1.00 14.17 B
ATOM 6740 N GLY B 254 -3.256 -22.198 -83.724 1.00 18.48 B
ATOM 6741 CA GLY B 254 -3.416 -23.488 -84.387 1.00 21.29 B
ATOM 6742 C GLY B 254 -4.531 -23.652 -85.429 1.00 23.12 B
ATOM 6743 O GLY B 254 -5.013 -24.766 -85.649 1.00 24.72 B
ATOM 6744 N ASP B 255 -4.936 -22.564 -86.078 1.00 22.79 B
ATOM 6745 CA ASP B 255 -5.974 -22.614 -87.100 1.00 22.67 B
ATOM 6746 CB ASP B 255 -7.346 -22.691 -86.458 1.00 23.78 B
ATOM 6747 CG ASP B 255 -8.463 -22.544 -87.461 1.00 26.28 B
ATOM 6748 OD1 ASP B 255 -8.459 -21.560 -88.225 1.00 27.66 B
ATOM 6749 OD2 ASP B 255 -9.360 -23.410 -87.486 1.00 28.48 B
ATOM 6750 C ASP B 255 -5.873 -21.354 -87.943 1.00 22.89 B
ATOM 6751 O ASP B 255 -5.741 -20.260 -87.407 1.00 24.59 B
ATOM 6752 N MET B 256 -5.936 -21.521 -89.260 1.00 21.81 B
ATOM 6753 CA MET B 256 -5.840 -20.422 -90.217 1.00 20.15 B
ATOM 6754 CB MET B 256 -6.325 -20.902 -91.598 1.00 18.38 B
ATOM 6755 CG MET B 256 -6.168 -19.904 -92.743 1.00 13.23 B
ATOM 6756 SD MET B 256 -4.469 -19.318 -92.867 1.00 11.20 B
ATOM 6757 CE MET B 256 -3.616 -20.795 -93.312 1.00 10.75 B
ATOM 6758 C MET B 256 -6.630 -19.188 -89.795 1.00 20.67 B
ATOM 6759 O MET B 256 -6.151 -18.058 -89.916 1.00 20.75 B
ATOM 6760 N TRP B 257 -7.833 -19.408 -89.285 1.00 20.68 B
ATOM 6761 CA TRP B 257 -8.700 -18.310 -88.870 1.00 23.25 B
ATOM 6762 CB TRP B 257 -10.099 -18.559 -89.432 1.00 24.87 B
ATOM 6763 CG TRP B 257 -10.076 -18.769 -90.897 1.00 29.08 B

ATOM 6764 CD2 TRP B 257 -9.895 -20.012 -91.581 1.00 31.15 B
ATOM 6765 CE2 TRP B 257 -9.888 -19.731 -92.962 1.00 30.49 B
ATOM 6766 CE3 TRP B 257 -9.735 -21.339 -91.161 1.00 32.60 B
ATOM 6767 CD1 TRP B 257 -10.169 -17.811 -91.867 1.00 30.27 B
ATOM 6768 NE1 TRP B 257 -10.058 -18.381 -93.107 1.00 30.44 B
ATOM 6769 CZ2 TRP B 257 -9.731 -20.724 -93.924 1.00 30.74 B
ATOM 6770 CZ3 TRP B 257 -9.576 -22.330 -92.127 1.00 31.07 B
ATOM 6771 CH2 TRP B 257 -9.576 -22.014 -93.489 1.00 29.77 B
ATOM 6772 C TRP B 257 -8.780 -18.059 -87.350 1.00 22.27 B
ATOM 6773 O TRP B 257 -9.453 -17.125 -86.909 1.00 20.13 B
ATOM 6774 N ALA B 258 -8.093 -18.894 -86.569 1.00 21.98 B
ATOM 6775 CA ALA B 258 -8.083 -18.770 -85.109 1.00 22.66 B
ATOM 6776 CB ALA B 258 -7.559 -17.410 -84.703 1.00 22.90 B
ATOM 6777 C ALA B 258 -9.507 -18.923 -84.614 1.00 22.92 B
ATOM 6778 O ALA B 258 -9.967 -18.171 -83.759 1.00 22.21 B
ATOM 6779 N GLN B 259 -10.208 -19.906 -85.150 1.00 23.74 B
ATOM 6780 CA GLN B 259 -11.597 -20.082 -84.780 1.00 24.99 B
ATOM 6781 CB GLN B 259 -12.413 -20.193 -86.051 1.00 27.46 B
ATOM 6782 CG GLN B 259 -11.927 -21.252 -87.011 1.00 30.23 B
ATOM 6783 CD GLN B 259 -12.926 -21.431 -88.135 1.00 33.53 B
ATOM 6784 OE1 GLN B 259 -12.628 -21.181 -89.317 1.00 37.36 B
ATOM 6785 NE2 GLN B 259 -14.140 -21.835 -87.773 1.00 31.66 B
ATOM 6786 C GLN B 259 -11.891 -21.269 -83.872 1.00 24.57 B
ATOM 6787 O GLN B 259 -13.010 -21.460 -83.377 1.00 23.16 B
ATOM 6788 N SER B 260 -10.861 -22.069 -83.667 1.00 24.17 B
ATOM 6789 CA SER B 260 -10.945 -23.235 -82.821 1.00 24.31 B
ATOM 6790 CB SER B 260 -11.429 -24.445 -83.586 1.00 23.79 B
ATOM 6791 OG SER B 260 -10.378 -25.389 -83.590 1.00 26.36 B
ATOM 6792 C SER B 260 -9.514 -23.460 -82.405 1.00 24.77 B
ATOM 6793 O SER B 260 -8.634 -23.604 -83.259 1.00 23.68 B
ATOM 6794 N TRP B 261 -9.286 -23.514 -81.096 1.00 26.50 B
ATOM 6795 CA TRP B 261 -7.930 -23.677 -80.588 1.00 27.42 B
ATOM 6796 CB TRP B 261 -7.674 -22.640 -79.485 1.00 30.21 B
ATOM 6797 CG TRP B 261 -8.061 -21.222 -79.861 1.00 32.14 B

ATOM 6798 CD2 TRP B 261 -8.051 -20.067 -79.005 1.00 33.52 B
ATOM 6799 CE2 TRP B 261 -8.458 -18.964 -79.789 1.00 33.15 B
ATOM 6800 CE3 TRP B 261 -7.733 -19.858 -77.653 1.00 33.19 B
ATOM 6801 CD1 TRP B 261 -8.463 -20.781 -81.084 1.00 33.09 B
ATOM 6802 NE1 TRP B 261 -8.704 -19.429 -81.051 1.00 34.15 B
ATOM 6803 CZ2 TRP B 261 -8.559 -17.669 -79.270 1.00 32.64 B
ATOM 6804 CZ3 TRP B 261 -7.833 -18.568 -77.136 1.00 32.58 B
ATOM 6805 CH2 TRP B 261 -8.244 -17.490 -77.946 1.00 32.02 B
ATOM 6806 C TRP B 261 -7.486 -25.053 -80.089 1.00 25.61 B
ATOM 6807 O TRP B 261 -6.380 -25.181 -79.558 1.00 26.20 B
ATOM 6808 N ALA B 262 -8.309 -26.077 -80.280 1.00 23.69 B
ATOM 6809 CA ALA B 262 -7.962 -27.413 -79.805 1.00 23.00 B
ATOM 6810 CB ALA B 262 -9.075 -28.389 -80.119 1.00 22.45 B
ATOM 6811 C ALA B 262 -6.660 -27.958 -80.347 1.00 23.14 B
ATOM 6812 O ALA B 262 -6.098 -28.867 -79.767 1.00 22.92 B
ATOM 6813 N ASN B 263 -6.172 -27.405 -81.448 1.00 25.32 B
ATOM 6814 CA ASN B 263 -4.939 -27.897 -82.065 1.00 26.60 B
ATOM 6815 CB ASN B 263 -4.872 -27.438 -83.513 1.00 29.50 B
ATOM 6816 CG ASN B 263 -5.644 -28.330 -84.419 1.00 32.87 B
ATOM 6817 OD1 ASN B 263 -5.287 -29.490 -84.591 1.00 35.83 B
ATOM 6818 ND2 ASN B 263 -6.729 -27.819 -84.987 1.00 35.39 B
ATOM 6819 C ASN B 263 -3.732 -27.397 -81.356 1.00 26.63 B
ATOM 6820 O ASN B 263 -2.594 -27.549 -81.793 1.00 27.39 B
ATOM 6821 N ILE B 264 -3.975 -26.813 -80.218 1.00 27.40 B
ATOM 6822 CA ILE B 264 -2.876 -26.223 -79.533 1.00 29.12 B
ATOM 6823 CB ILE B 264 -2.974 -24.768 -79.813 1.00 29.27 B
ATOM 6824 CG2 ILE B 264 -3.215 -23.977 -78.534 1.00 28.89 B
ATOM 6825 CG1 ILE B 264 -1.766 -24.347 -80.601 1.00 28.67 B
ATOM 6826 CD1 ILE B 264 -1.335 -23.018 -80.138 1.00 29.89 B
ATOM 6827 C ILE B 264 -2.981 -26.545 -78.065 1.00 29.77 B
ATOM 6828 O ILE B 264 -2.479 -25.867 -77.178 1.00 30.81 B
ATOM 6829 N TYR B 265 -3.675 -27.626 -77.838 1.00 31.10 B
ATOM 6830 CA TYR B 265 -3.910 -28.097 -76.521 1.00 31.78 B
ATOM 6831 CB TYR B 265 -4.879 -29.249 -76.678 1.00 32.08 B

ATOM 6832 CG TYR B 265 -5.365 -29.848 -75.430 1.00 32.73 B
ATOM 6833 CD1 TYR B 265 -6.583 -29.457 -74.860 1.00 32.99 B
ATOM 6834 CE1 TYR B 265 -7.064 -30.092 -73.725 1.00 32.96 B
ATOM 6835 CD2 TYR B 265 -4.639 -30.869 -74.849 1.00 33.82 B
ATOM 6836 CE2 TYR B 265 -5.092 -31.506 -73.730 1.00 33.62 B
ATOM 6837 CZ TYR B 265 -6.307 -31.121 -73.167 1.00 33.58 B
ATOM 6838 OH TYR B 265 -6.715 -31.752 -72.022 1.00 33.44 B
ATOM 6839 C TYR B 265 -2.584 -28.469 -75.866 1.00 32.56 B
ATOM 6840 O TYR B 265 -2.297 -28.048 -74.754 1.00 32.26 B
ATOM 6841 N ASP B 266 -1.739 -29.201 -76.572 1.00 33.82 B
ATOM 6842 CA ASP B 266 -0.460 -29.576 -75.985 1.00 35.82 B
ATOM 6843 CB ASP B 266 0.400 -30.377 -76.982 1.00 37.81 B
ATOM 6844 CG ASP B 266 0.768 -29.582 -78.216 1.00 39.78 B
ATOM 6845 OD1 ASP B 266 -0.151 -29.155 -78.952 1.00 42.13 B
ATOM 6846 OD2 ASP B 266 1.981 -29.384 -78.448 1.00 39.57 B
ATOM 6847 C ASP B 266 0.350 -28.394 -75.446 1.00 35.70 B
ATOM 6848 O ASP B 266 1.433 -28.606 -74.930 1.00 35.37 B
ATOM 6849 N MET B 267 -0.159 -27.164 -75.549 1.00 36.45 B
ATOM 6850 CA MET B 267 0.569 -25.994 -75.031 1.00 36.70 B
ATOM 6851 CB MET B 267 0.783 -24.943 -76.109 1.00 36.90 B
ATOM 6852 CG MET B 267 1.411 -25.456 -77.368 1.00 38.15 B
ATOM 6853 SD MET B 267 1.837 -24.049 -78.342 1.00 39.80 B
ATOM 6854 CE MET B 267 3.334 -24.283 -78.451 1.00 37.08 B
ATOM 6855 C MET B 267 -0.180 -25.329 -73.893 1.00 36.72 B
ATOM 6856 O MET B 267 0.363 -24.467 -73.206 1.00 36.35 B
ATOM 6857 N VAL B 268 -1.431 -25.723 -73.704 1.00 36.36 B
ATOM 6858 CA VAL B 268 -2.231 -25.138 -72.654 1.00 37.48 B
ATOM 6859 CB VAL B 268 -3.389 -24.352 -73.242 1.00 37.13 B
ATOM 6860 CG1 VAL B 268 -2.855 -23.191 -74.048 1.00 36.73 B
ATOM 6861 CG2 VAL B 268 -4.232 -25.258 -74.106 1.00 37.03 B
ATOM 6862 C VAL B 268 -2.780 -26.148 -71.668 1.00 38.86 B
ATOM 6863 O VAL B 268 -3.132 -25.784 -70.552 1.00 39.42 B
ATOM 6864 N ALA B 269 -2.860 -27.412 -72.073 1.00 41.04 B
ATOM 6865 CA ALA B 269 -3.368 -28.462 -71.188 1.00 42.17 B

ATOM 6866 CB ALA B 269 -2.908 -29.849 -71.669 1.00 41.94 B
ATOM 6867 C ALA B 269 -2.891 -28.217 -69.757 1.00 42.97 B
ATOM 6868 O ALA B 269 -1.681 -28.243 -69.467 1.00 42.61 B
ATOM 6869 N PRO B 270 -3.846 -27.953 -68.851 1.00 43.04 B
ATOM 6870 CD PRO B 270 -5.277 -27.819 -69.178 1.00 42.25 B
ATOM 6871 CA PRO B 270 -3.617 -27.689 -67.430 1.00 44.61 B
ATOM 6872 CB PRO B 270 -5.021 -27.725 -66.855 1.00 43.46 B
ATOM 6873 CG PRO B 270 -5.821 -27.118 -67.962 1.00 42.58 B
ATOM 6874 C PRO B 270 -2.689 -28.693 -66.757 1.00 46.80 B
ATOM 6875 O PRO B 270 -1.598 -28.335 -66.315 1.00 48.42 B
ATOM 6876 N PHE B 271 -3.119 -29.949 -66.684 1.00 48.07 B
ATOM 6877 CA PHE B 271 -2.310 -30.980 -66.048 1.00 49.74 B
ATOM 6878 CB PHE B 271 -3.128 -31.679 -64.970 1.00 49.89 B
ATOM 6879 CG PHE B 271 -3.841 -30.724 -64.063 1.00 49.89 B
ATOM 6880 CD1 PHE B 271 -5.216 -30.590 -64.128 1.00 49.45 B
ATOM 6881 CD2 PHE B 271 -3.129 -29.918 -63.180 1.00 49.05 B
ATOM 6882 CE1 PHE B 271 -5.875 -29.668 -63.330 1.00 48.97 B
ATOM 6883 CE2 PHE B 271 -3.779 -28.994 -62.383 1.00 49.05 B
ATOM 6884 CZ PHE B 271 -5.157 -28.868 -62.457 1.00 48.75 B
ATOM 6885 C PHE B 271 -1.789 -31.982 -67.057 1.00 51.31 B
ATOM 6886 O PHE B 271 -2.463 -32.955 -67.396 1.00 51.25 B
ATOM 6887 N PRO B 272 -0.567 -31.745 -67.553 1.00 52.83 B
ATOM 6888 CD PRO B 272 0.246 -30.578 -67.180 1.00 52.95 B
ATOM 6889 CA PRO B 272 0.143 -32.561 -68.536 1.00 55.07 B
ATOM 6890 CB PRO B 272 1.471 -31.823 -68.696 1.00 54.48 B
ATOM 6891 CG PRO B 272 1.122 -30.413 -68.380 1.00 53.29 B
ATOM 6892 C PRO B 272 0.347 -33.991 -68.072 1.00 57.26 B
ATOM 6893 O PRO B 272 0.323 -34.925 -68.882 1.00 58.36 B
ATOM 6894 N ASP B 273 0.560 -34.140 -66.766 1.00 59.48 B
ATOM 6895 CA ASP B 273 0.785 -35.441 -66.138 1.00 62.15 B
ATOM 6896 CB ASP B 273 0.619 -35.317 -64.617 1.00 63.50 B
ATOM 6897 CG ASP B 273 1.395 -36.383 -63.851 1.00 65.13 B
ATOM 6898 OD1 ASP B 273 2.642 -36.402 -63.948 1.00 66.36 B
ATOM 6899 OD2 ASP B 273 0.756 -37.197 -63.148 1.00 65.64 B

ATOM 6900 C ASP B 273 -0.189 -36.468 -66.708 1.00 63.25 B
ATOM 6901 O ASP B 273 0.219 -37.471 -67.297 1.00 64.12 B
ATOM 6902 N ALA B 274 -1.482 -36.205 -66.539 1.00 64.05 B
ATOM 6903 CA ALA B 274 -2.508 -37.097 -67.079 1.00 64.93 B
ATOM 6904 CB ALA B 274 -3.906 -36.630 -66.662 1.00 65.41 B
ATOM 6905 C ALA B 274 -2.343 -37.068 -68.591 1.00 64.95 B
ATOM 6906 O ALA B 274 -2.085 -36.013 -69.175 1.00 65.82 B
ATOM 6907 N PRO B 275 -2.467 -38.229 -69.234 1.00 64.36 B
ATOM 6908 CD PRO B 275 -2.163 -39.480 -68.509 1.00 63.84 B
ATOM 6909 CA PRO B 275 -2.336 -38.404 -70.686 1.00 64.32 B
ATOM 6910 CB PRO B 275 -1.462 -39.648 -70.787 1.00 64.22 B
ATOM 6911 CG PRO B 275 -1.912 -40.455 -69.612 1.00 63.57 B
ATOM 6912 C PRO B 275 -3.648 -38.544 -71.477 1.00 64.02 B
ATOM 6913 O PRO B 275 -4.747 -38.598 -70.910 1.00 63.67 B
ATOM 6914 N ALA B 277 -6.428 -37.769 -74.633 1.00 62.63 B
ATOM 6915 CA ALA B 277 -6.023 -36.338 -74.792 1.00 64.37 B
ATOM 6916 CB ALA B 277 -4.526 -36.258 -74.835 1.00 63.05 B
ATOM 6917 C ALA B 277 -6.693 -35.940 -76.134 1.00 65.64 B
ATOM 6918 O ALA B 277 -7.580 -35.100 -76.195 1.00 66.45 B
ATOM 6919 N ASP B 278 -6.210 -36.515 -77.254 1.00 66.30 B
ATOM 6920 CA ASP B 278 -7.066 -36.907 -78.387 1.00 67.06 B
ATOM 6921 CB ASP B 278 -7.135 -35.891 -79.519 1.00 67.17 B
ATOM 6922 CG ASP B 278 -8.493 -35.867 -80.186 1.00 67.15 B
ATOM 6923 OD1 ASP B 278 -8.988 -34.789 -80.476 1.00 67.04 B
ATOM 6924 OD2 ASP B 278 -9.181 -36.855 -80.441 1.00 66.54 B
ATOM 6925 C ASP B 278 -6.799 -38.221 -79.028 1.00 67.70 B
ATOM 6926 O ASP B 278 -5.689 -38.707 -79.028 1.00 68.28 B
ATOM 6927 N VAL B 279 -7.823 -38.764 -79.667 1.00 67.41 B
ATOM 6928 CA VAL B 279 -7.957 -40.216 -79.652 1.00 66.62 B
ATOM 6929 CB VAL B 279 -9.436 -40.647 -79.643 1.00 66.52 B
ATOM 6930 CG1 VAL B 279 -9.810 -41.292 -80.968 1.00 66.53 B
ATOM 6931 CG2 VAL B 279 -9.707 -41.594 -78.485 1.00 66.62 B
ATOM 6932 C VAL B 279 -7.267 -40.835 -80.863 1.00 66.08 B
ATOM 6933 O VAL B 279 -7.614 -41.935 -81.293 1.00 66.85 B

ATOM 6934 N THR B 280 -6.288 -40.119 -81.408 1.00 64.96 B
ATOM 6935 CA THR B 280 -6.032 -40.141 -82.843 1.00 64.19 B
ATOM 6936 CB THR B 280 -5.902 -38.707 -83.389 1.00 63.59 B
ATOM 6937 OG1 THR B 280 -7.119 -38.331 -84.045 1.00 62.69 B
ATOM 6938 CG2 THR B 280 -4.871 -38.655 -84.506 1.00 62.14 B
ATOM 6939 C THR B 280 -4.772 -40.938 -83.160 1.00 64.54 B
ATOM 6940 O THR B 280 -4.788 -41.832 -84.006 1.00 64.46 B
ATOM 6941 N SER B 281 -3.682 -40.610 -82.473 1.00 65.12 B
ATOM 6942 CA SER B 281 -2.464 -41.358 -82.596 1.00 64.97 B
ATOM 6943 CB SER B 281 -1.487 -40.863 -81.544 1.00 64.60 B
ATOM 6944 OG SER B 281 -2.073 -39.887 -80.717 1.00 64.32 B
ATOM 6945 C SER B 281 -2.791 -42.767 -82.325 1.00 64.96 B
ATOM 6946 O SER B 281 -1.998 -43.670 -82.509 1.00 65.04 B
ATOM 6947 N THR B 282 -3.998 -42.908 -81.842 1.00 65.22 B
ATOM 6948 CA THR B 282 -4.545 -44.154 -81.434 1.00 65.54 B
ATOM 6949 CB THR B 282 -5.004 -43.869 -80.022 1.00 65.02 B
ATOM 6950 OG1 THR B 282 -3.852 -43.901 -79.182 1.00 64.68 B
ATOM 6951 CG2 THR B 282 -6.028 -44.776 -79.563 1.00 64.32 B
ATOM 6952 C THR B 282 -5.602 -44.594 -82.461 1.00 65.82 B
ATOM 6953 O THR B 282 -6.013 -45.758 -82.516 1.00 66.47 B
ATOM 6954 N MET B 283 -6.006 -43.654 -83.303 1.00 65.90 B
ATOM 6955 CA MET B 283 -6.929 -43.960 -84.371 1.00 65.65 B
ATOM 6956 CB MET B 283 -7.615 -42.698 -84.908 1.00 65.47 B
ATOM 6957 CG MET B 283 -8.694 -42.117 -84.048 1.00 65.33 B
ATOM 6958 SD MET B 283 -9.489 -40.679 -84.786 1.00 67.34 B
ATOM 6959 CE MET B 283 -11.160 -41.271 -85.033 1.00 65.16 B
ATOM 6960 C MET B 283 -5.962 -44.488 -85.401 1.00 66.10 B
ATOM 6961 O MET B 283 -6.077 -45.619 -85.840 1.00 65.37 B
ATOM 6962 N ALA B 284 -4.974 -43.667 -85.748 1.00 66.59 B
ATOM 6963 CA ALA B 284 -3.980 -44.062 -86.749 1.00 66.93 B
ATOM 6964 CB ALA B 284 -2.850 -43.014 -86.860 1.00 66.63 B
ATOM 6965 C ALA B 284 -3.364 -45.426 -86.471 1.00 67.17 B
ATOM 6966 O ALA B 284 -3.020 -46.164 -87.386 1.00 67.44 B
ATOM 6967 N ALA B 285 -3.223 -45.782 -85.207 1.00 67.51 B

ATOM 6968 CA ALA B 285 -2.602 -47.068 -84.958 1.00 67.99 B
ATOM 6969 CB ALA B 285 -1.794 -46.997 -83.675 1.00 67.56 B
ATOM 6970 C ALA B 285 -3.437 -48.344 -84.974 1.00 68.23 B
ATOM 6971 O ALA B 285 -2.889 -49.418 -84.815 1.00 68.47 B
ATOM 6972 N GLN B 286 -4.738 -48.235 -85.166 1.00 68.29 B
ATOM 6973 CA GLN B 286 -5.568 -49.410 -85.203 1.00 69.02 B
ATOM 6974 CB GLN B 286 -6.451 -49.461 -83.962 1.00 69.18 B
ATOM 6975 CG GLN B 286 -7.917 -49.546 -84.209 1.00 69.65 B
ATOM 6976 CD GLN B 286 -8.661 -49.383 -82.942 1.00 69.48 B
ATOM 6977 OE1 GLN B 286 -9.880 -49.500 -82.908 1.00 69.14 B
ATOM 6978 NE2 GLN B 286 -7.931 -49.103 -81.868 1.00 69.41 B
ATOM 6979 C GLN B 286 -6.297 -49.560 -86.525 1.00 69.58 B
ATOM 6980 O GLN B 286 -7.443 -49.974 -86.595 1.00 70.27 B
ATOM 6981 N GLY B 287 -5.653 -49.029 -87.554 1.00 69.72 B
ATOM 6982 CA GLY B 287 -6.202 -49.104 -88.893 1.00 69.09 B
ATOM 6983 C GLY B 287 -7.507 -48.358 -89.110 1.00 68.90 B
ATOM 6984 O GLY B 287 -8.473 -48.943 -89.585 1.00 68.74 B
ATOM 6985 N TRP B 288 -7.604 -47.100 -88.693 1.00 68.81 B
ATOM 6986 CA TRP B 288 -8.840 -46.363 -88.957 1.00 69.20 B
ATOM 6987 CB TRP B 288 -8.952 -45.284 -87.894 1.00 70.10 B
ATOM 6988 CG TRP B 288 -9.755 -45.817 -86.718 1.00 70.41 B
ATOM 6989 CD2 TRP B 288 -11.015 -45.324 -86.282 1.00 70.51 B
ATOM 6990 CE2 TRP B 288 -11.450 -46.139 -85.206 1.00 70.70 B
ATOM 6991 CE3 TRP B 288 -11.825 -44.265 -86.697 1.00 70.69 B
ATOM 6992 CD1 TRP B 288 -9.464 -46.900 -85.907 1.00 70.63 B
ATOM 6993 NE1 TRP B 288 -10.488 -47.097 -84.997 1.00 71.13 B
ATOM 6994 CZ2 TRP B 288 -12.672 -45.914 -84.543 1.00 70.66 B
ATOM 6995 CZ3 TRP B 288 -13.033 -44.038 -86.044 1.00 70.57 B
ATOM 6996 CH2 TRP B 288 -13.445 -44.858 -84.976 1.00 70.38 B
ATOM 6997 C TRP B 288 -8.958 -45.875 -90.406 1.00 69.11 B
ATOM 6998 O TRP B 288 -8.000 -45.453 -91.049 1.00 69.26 B
ATOM 6999 N ASN B 289 -10.166 -46.002 -90.902 1.00 68.07 B
ATOM 7000 CA ASN B 289 -10.480 -45.815 -92.287 1.00 66.51 B
ATOM 7001 CB ASN B 289 -11.234 -47.064 -92.610 1.00 66.71 B

ATOM 7002 CG ASN B 289 -11.114 -47.469 -94.003 1.00 66.51 B
ATOM 7003 OD1 ASN B 289 -12.121 -47.704 -94.658 1.00 65.95 B
ATOM 7004 ND2 ASN B 289 -9.881 -47.617 -94.481 1.00 66.97 B
ATOM 7005 C ASN B 289 -11.320 -44.633 -92.685 1.00 65.62 B
ATOM 7006 O ASN B 289 -12.372 -44.427 -92.100 1.00 65.09 B
ATOM 7007 N ALA B 290 -10.936 -43.888 -93.709 1.00 64.68 B
ATOM 7008 CA ALA B 290 -11.797 -42.781 -94.081 1.00 64.60 B
ATOM 7009 CB ALA B 290 -11.403 -42.230 -95.425 1.00 64.19 B
ATOM 7010 C ALA B 290 -13.255 -43.291 -94.107 1.00 64.69 B
ATOM 7011 O ALA B 290 -14.181 -42.567 -93.736 1.00 64.69 B
ATOM 7012 N THR B 291 -13.455 -44.553 -94.480 1.00 64.31 B
ATOM 7013 CA THR B 291 -14.805 -45.102 -94.548 1.00 63.95 B
ATOM 7014 CB THR B 291 -14.873 -46.197 -95.625 1.00 64.10 B
ATOM 7015 OG1 THR B 291 -14.087 -45.801 -96.755 1.00 64.73 B
ATOM 7016 CG2 THR B 291 -16.283 -46.383 -96.088 1.00 63.89 B
ATOM 7017 C THR B 291 -15.287 -45.656 -93.206 1.00 63.30 B
ATOM 7018 O THR B 291 -16.482 -45.577 -92.882 1.00 63.74 B
ATOM 7019 N ALA B 292 -14.359 -46.208 -92.426 1.00 61.75 B
ATOM 7020 CA ALA B 292 -14.703 -46.758 -91.118 1.00 59.86 B
ATOM 7021 CB ALA B 292 -13.483 -47.444 -90.490 1.00 59.78 B
ATOM 7022 C ALA B 292 -15.196 -45.618 -90.233 1.00 58.45 B
ATOM 7023 O ALA B 292 -16.102 -45.798 -89.415 1.00 57.55 B
ATOM 7024 N MET B 293 -14.601 -44.441 -90.412 1.00 56.89 B
ATOM 7025 CA MET B 293 -14.983 -43.263 -89.641 1.00 55.42 B
ATOM 7026 CB MET B 293 -14.112 -42.044 -90.023 1.00 54.65 B
ATOM 7027 CG MET B 293 -12.657 -42.138 -89.520 1.00 54.28 B
ATOM 7028 SD MET B 293 -11.525 -40.813 -89.993 1.00 53.64 B
ATOM 7029 CE MET B 293 -12.135 -39.497 -88.954 1.00 54.97 B
ATOM 7030 C MET B 293 -16.463 -42.954 -89.856 1.00 54.83 B
ATOM 7031 O MET B 293 -17.217 -42.816 -88.898 1.00 54.28 B
ATOM 7032 N PHE B 294 -16.888 -42.871 -91.112 1.00 55.02 B
ATOM 7033 CA PHE B 294 -18.287 -42.575 -91.413 1.00 55.00 B
ATOM 7034 CB PHE B 294 -18.493 -42.360 -92.911 1.00 53.03 B
ATOM 7035 CG PHE B 294 -17.970 -41.053 -93.415 1.00 51.02 B

ATOM 7036 CD1 PHE B 294 -16.624 -40.897 -93.712 1.00 50.73 B
ATOM 7037 CD2 PHE B 294 -18.825 -39.969 -93.575 1.00 50.22 B
ATOM 7038 CE1 PHE B 294 -16.129 -39.670 -94.161 1.00 50.93 B
ATOM 7039 CE2 PHE B 294 -18.347 -38.741 -94.021 1.00 50.43 B
ATOM 7040 CZ PHE B 294 -16.993 -38.591 -94.316 1.00 51.21 B
ATOM 7041 C PHE B 294 -19.235 -43.668 -90.958 1.00 55.86 B
ATOM 7042 O PHE B 294 -20.437 -43.424 -90.795 1.00 55.64 B
ATOM 7043 N ALA B 295 -18.700 -44.873 -90.767 1.00 56.45 B
ATOM 7044 CA ALA B 295 -19.511 -46.012 -90.333 1.00 57.05 B
ATOM 7045 CB ALA B 295 -18.930 -47.309 -90.888 1.00 56.83 B
ATOM 7046 C ALA B 295 -19.602 -46.074 -88.818 1.00 56.93 B
ATOM 7047 O ALA B 295 -20.398 -46.829 -88.256 1.00 57.50 B
ATOM 7048 N VAL B 296 -18.768 -45.275 -88.159 1.00 56.86 B
ATOM 7049 CA VAL B 296 -18.752 -45.185 -86.704 1.00 55.23 B
ATOM 7050 CB VAL B 296 -17.388 -44.697 -86.180 1.00 55.07 B
ATOM 7051 CG1 VAL B 296 -17.501 -44.319 -84.724 1.00 55.02 B
ATOM 7052 CG2 VAL B 296 -16.332 -45.776 -86.376 1.00 54.49 B
ATOM 7053 C VAL B 296 -19.800 -44.148 -86.352 1.00 54.53 B
ATOM 7054 O VAL B 296 -20.538 -44.280 -85.381 1.00 53.86 B
ATOM 7055 N ALA B 297 -19.854 -43.105 -87.165 1.00 54.40 B
ATOM 7056 CA ALA B 297 -20.826 -42.049 -86.963 1.00 55.05 B
ATOM 7057 CB ALA B 297 -20.581 -40.911 -87.949 1.00 55.52 B
ATOM 7058 C ALA B 297 -22.179 -42.675 -87.226 1.00 55.26 B
ATOM 7059 O ALA B 297 -23.173 -42.367 -86.557 1.00 54.88 B
ATOM 7060 N GLU B 298 -22.222 -43.567 -88.211 1.00 55.78 B
ATOM 7061 CA GLU B 298 -23.426 -44.339 -88.494 1.00 56.70 B
ATOM 7062 CB GLU B 298 -23.166 -45.342 -89.621 1.00 56.92 B
ATOM 7063 CG GLU B 298 -24.088 -46.549 -89.604 1.00 56.79 B
ATOM 7064 CD GLU B 298 -24.714 -46.825 -90.957 1.00 57.86 B
ATOM 7065 OE1 GLU B 298 -25.817 -46.303 -91.221 1.00 57.18 B
ATOM 7066 OE2 GLU B 298 -24.102 -47.564 -91.757 1.00 56.75 B
ATOM 7067 C GLU B 298 -23.941 -45.131 -87.299 1.00 57.33 B
ATOM 7068 O GLU B 298 -25.109 -45.021 -86.925 1.00 57.07 B
ATOM 7069 N ALA B 299 -23.063 -45.930 -86.701 1.00 57.32 B

ATOM 7070 CA ALA B 299 -23.385 -46.635 -85.467 1.00 57.22 B
ATOM 7071 CB ALA B 299 -22.095 -47.079 -84.793 1.00 58.06 B
ATOM 7072 C ALA B 299 -24.129 -45.834 -84.404 1.00 57.10 B
ATOM 7073 O ALA B 299 -25.147 -46.281 -83.875 1.00 56.95 B
ATOM 7074 N PHE B 300 -23.614 -44.647 -84.097 1.00 56.39 B
ATOM 7075 CA PHE B 300 -24.132 -43.850 -82.991 1.00 56.19 B
ATOM 7076 CB PHE B 300 -23.281 -42.598 -82.769 1.00 54.76 B
ATOM 7077 CG PHE B 300 -23.490 -41.954 -81.428 1.00 52.57 B
ATOM 7078 CD1 PHE B 300 -22.539 -42.081 -80.428 1.00 51.83 B
ATOM 7079 CD2 PHE B 300 -24.635 -41.221 -81.167 1.00 52.47 B
ATOM 7080 CE1 PHE B 300 -22.728 -41.490 -79.194 1.00 52.24 B
ATOM 7081 CE2 PHE B 300 -24.830 -40.627 -79.934 1.00 52.06 B
ATOM 7082 CZ PHE B 300 -23.875 -40.762 -78.946 1.00 52.27 B
ATOM 7083 C PHE B 300 -25.556 -43.457 -83.367 1.00 56.47 B
ATOM 7084 O PHE B 300 -26.464 -43.505 -82.536 1.00 57.48 B
ATOM 7085 N PHE B 301 -25.745 -43.067 -84.623 1.00 56.08 B
ATOM 7086 CA PHE B 301 -27.034 -42.568 -85.086 1.00 54.99 B
ATOM 7087 CB PHE B 301 -26.927 -42.059 -86.524 1.00 51.82 B
ATOM 7088 CG PHE B 301 -26.625 -40.591 -86.627 1.00 48.59 B
ATOM 7089 CD1 PHE B 301 -25.325 -40.149 -86.805 1.00 46.62 B
ATOM 7090 CD2 PHE B 301 -27.640 -39.653 -86.544 1.00 47.71 B
ATOM 7091 CE1 PHE B 301 -25.043 -38.799 -86.898 1.00 45.51 B
ATOM 7092 CE2 PHE B 301 -27.365 -38.302 -86.638 1.00 46.23 B
ATOM 7093 CZ PHE B 301 -26.065 -37.875 -86.816 1.00 45.08 B
ATOM 7094 C PHE B 301 -28.109 -43.646 -84.990 1.00 56.01 B
ATOM 7095 O PHE B 301 -29.228 -43.384 -84.551 1.00 55.37 B
ATOM 7096 N THR B 302 -27.760 -44.860 -85.405 1.00 57.60 B
ATOM 7097 CA THR B 302 -28.708 -45.968 -85.417 1.00 59.21 B
ATOM 7098 CB THR B 302 -28.134 -47.189 -86.187 1.00 59.26 B
ATOM 7099 OG1 THR B 302 -26.802 -47.470 -85.735 1.00 59.58 B
ATOM 7100 CG2 THR B 302 -28.109 -46.910 -87.674 1.00 59.80 B
ATOM 7101 C THR B 302 -29.108 -46.408 -84.014 1.00 59.83 B
ATOM 7102 O THR B 302 -30.278 -46.707 -83.762 1.00 59.87 B
ATOM 7103 N SER B 303 -28.134 -46.436 -83.107 1.00 59.89 B

ATOM 7104 CA SER B 303 -28.374 -46.858 -81.733 1.00 60.15 B
ATOM 7105 CB SER B 303 -27.077 -46.744 -80.922 1.00 60.51 B
ATOM 7106 OG SER B 303 -26.002 -47.344 -81.631 1.00 60.90 B
ATOM 7107 C SER B 303 -29.494 -46.053 -81.067 1.00 59.62 B
ATOM 7108 O SER B 303 -30.102 -46.509 -80.101 1.00 60.33 B
ATOM 7109 N LEU B 304 -29.755 -44.860 -81.591 1.00 58.87 B
ATOM 7110 CA LEU B 304 -30.843 -44.026 -81.095 1.00 58.79 B
ATOM 7111 CB LEU B 304 -30.492 -42.544 -81.240 1.00 57.66 B
ATOM 7112 CG LEU B 304 -29.027 -42.169 -81.009 1.00 56.81 B
ATOM 7113 CD1 LEU B 304 -28.921 -40.840 -80.277 1.00 57.06 B
ATOM 7114 CD2 LEU B 304 -28.305 -43.267 -80.242 1.00 56.23 B
ATOM 7115 C LEU B 304 -32.146 -44.330 -81.826 1.00 59.74 B
ATOM 7116 O LEU B 304 -33.206 -43.819 -81.464 1.00 58.82 B
ATOM 7117 N GLU B 305 -32.060 -45.165 -82.857 1.00 61.39 B
ATOM 7118 CA GLU B 305 -33.233 -45.546 -83.634 1.00 63.42 B
ATOM 7119 CB GLU B 305 -34.288 -46.190 -82.732 1.00 63.64 B
ATOM 7120 CG GLU B 305 -33.979 -47.626 -82.342 1.00 62.75 B
ATOM 7121 CD GLU B 305 -35.044 -48.229 -81.448 1.00 62.51 B
ATOM 7122 OE1 GLU B 305 -34.762 -49.255 -80.794 1.00 61.41 B
ATOM 7123 OE2 GLU B 305 -36.163 -47.677 -81.398 1.00 61.90 B
ATOM 7124 C GLU B 305 -34.271 -44.874 -84.525 1.00 64.50 B
ATOM 7125 O GLU B 305 -35.473 -45.066 -84.347 1.00 64.61 B
ATOM 7126 N ALA B 306 -33.798 -44.085 -85.484 1.00 65.48 B
ATOM 7127 CA ALA B 306 -34.679 -43.455 -86.461 1.00 65.58 B
ATOM 7128 CB ALA B 306 -36.180 -43.455 -86.214 1.00 66.06 B
ATOM 7129 C ALA B 306 -34.383 -43.631 -87.947 1.00 65.21 B
ATOM 7130 O ALA B 306 -35.281 -43.543 -88.783 1.00 66.01 B
ATOM 7131 N SER B 307 -33.115 -43.879 -88.265 1.00 64.27 B
ATOM 7132 CA SER B 307 -32.690 -44.096 -89.644 1.00 62.79 B
ATOM 7133 CB SER B 307 -33.163 -42.948 -90.538 1.00 61.45 B
ATOM 7134 OG SER B 307 -32.439 -42.919 -91.755 1.00 61.25 B
ATOM 7135 C SER B 307 -31.271 -44.660 -89.665 1.00 61.99 B
ATOM 7136 O SER B 307 -30.723 -45.021 -88.624 1.00 62.33 B
ATOM 7137 N PRO B 308 -30.684 -44.747 -90.854 1.00 61.13 B

ATOM 7138 CD PRO B 308 -31.277 -46.066 -91.115 1.00 60.35 B
ATOM 7139 CA PRO B 308 -29.249 -44.727 -91.146 1.00 60.85 B
ATOM 7140 CB PRO B 308 -28.844 -46.180 -90.899 1.00 59.86 B
ATOM 7141 CG PRO B 308 -30.076 -46.978 -91.240 1.00 59.97 B
ATOM 7142 C PRO B 308 -28.945 -44.341 -92.591 1.00 61.32 B
ATOM 7143 O PRO B 308 -29.811 -43.806 -93.284 1.00 61.99 B
ATOM 7144 N MET B 309 -27.721 -44.614 -93.033 1.00 61.33 B
ATOM 7145 CA MET B 309 -27.263 -44.184 -94.315 1.00 62.09 B
ATOM 7146 CB MET B 309 -25.797 -43.821 -94.128 1.00 63.12 B
ATOM 7147 CG MET B 309 -25.638 -42.765 -92.991 1.00 63.27 B
ATOM 7148 SD MET B 309 -26.037 -41.064 -93.518 1.00 63.23 B
ATOM 7149 CE MET B 309 -27.736 -41.001 -93.089 1.00 62.74 B
ATOM 7150 C MET B 309 -27.499 -44.959 -95.595 1.00 61.92 B
ATOM 7151 O MET B 309 -26.699 -45.821 -95.964 1.00 62.66 B
ATOM 7152 N PRO B 310 -28.554 -44.566 -96.362 1.00 61.28 B
ATOM 7153 CD PRO B 310 -29.215 -43.254 -96.207 1.00 61.13 B
ATOM 7154 CA PRO B 310 -28.952 -45.186 -97.641 1.00 60.92 B
ATOM 7155 CB PRO B 310 -29.770 -44.083 -98.313 1.00 60.35 B
ATOM 7156 CG PRO B 310 -30.406 -43.367 -97.125 1.00 60.30 B
ATOM 7157 C PRO B 310 -27.740 -45.655 -98.488 1.00 61.27 B
ATOM 7158 O PRO B 310 -26.657 -45.052 -98.470 1.00 60.75 B
ATOM 7159 N PRO B 311 -27.908 -46.752 -99.258 1.00 62.27 B
ATOM 7160 CD PRO B 311 -29.041 -47.677 -99.405 1.00 62.33 B
ATOM 7161 CA PRO B 311 -26.761 -47.223 -100.061 1.00 62.20 B
ATOM 7162 CB PRO B 311 -27.201 -48.593 -100.564 1.00 61.60 B
ATOM 7163 CG PRO B 311 -28.319 -48.994 -99.617 1.00 61.67 B
ATOM 7164 C PRO B 311 -26.509 -46.254 -101.192 1.00 61.92 B
ATOM 7165 O PRO B 311 -25.452 -46.253 -101.827 1.00 61.30 B
ATOM 7166 N ALA B 312 -27.522 -45.438 -101.431 1.00 61.41 B
ATOM 7167 CA ALA B 312 -27.382 -44.419 -102.422 1.00 61.52 B
ATOM 7168 CB ALA B 312 -28.497 -43.441 -102.263 1.00 60.45 B
ATOM 7169 C ALA B 312 -26.082 -43.793 -101.910 1.00 62.15 B
ATOM 7170 O ALA B 312 -25.067 -43.634 -102.607 1.00 62.15 B
ATOM 7171 N PHE B 313 -26.158 -43.452 -100.637 1.00 62.69 B

ATOM 7172 CA PHE B 313 -25.087 -42.782 -99.922 1.00 62.22 B
ATOM 7173 CB PHE B 313 -25.548 -42.559 -98.481 1.00 63.70 B
ATOM 7174 CG PHE B 313 -24.482 -41.999 -97.591 1.00 65.14 B
ATOM 7175 CD1 PHE B 313 -24.541 -40.670 -97.177 1.00 65.64 B
ATOM 7176 CD2 PHE B 313 -23.411 -42.799 -97.168 1.00 65.63 B
ATOM 7177 CE1 PHE B 313 -23.556 -40.137 -96.359 1.00 65.44 B
ATOM 7178 CE2 PHE B 313 -22.410 -42.282 -96.353 1.00 65.85 B
ATOM 7179 CZ PHE B 313 -22.483 -40.948 -95.943 1.00 65.80 B
ATOM 7180 C PHE B 313 -23.680 -43.354 -99.882 1.00 61.21 B
ATOM 7181 O PHE B 313 -22.684 -42.633 -99.890 1.00 61.11 B
ATOM 7182 N TRP B 314 -23.607 -44.659 -99.838 1.00 60.77 B
ATOM 7183 CA TRP B 314 -22.337 -45.277 -99.728 1.00 60.10 B
ATOM 7184 CB TRP B 314 -22.586 -46.619 -99.107 1.00 61.65 B
ATOM 7185 CG TRP B 314 -22.562 -46.389 -97.629 1.00 63.81 B
ATOM 7186 CD2 TRP B 314 -21.385 -46.399 -96.854 1.00 64.75 B
ATOM 7187 CE2 TRP B 314 -21.722 -45.985 -95.539 1.00 65.09 B
ATOM 7188 CE3 TRP B 314 -20.056 -46.715 -97.148 1.00 65.23 B
ATOM 7189 CD1 TRP B 314 -23.587 -45.981 -96.782 1.00 63.94 B
ATOM 7190 NE1 TRP B 314 -23.075 -45.735 -95.516 1.00 64.11 B
ATOM 7191 CZ2 TRP B 314 -20.754 -45.887 -94.519 1.00 65.79 B
ATOM 7192 CZ3 TRP B 314 -19.111 -46.619 -96.157 1.00 65.76 B
ATOM 7193 CH2 TRP B 314 -19.454 -46.207 -94.851 1.00 65.96 B
ATOM 7194 C TRP B 314 -21.424 -45.273 -100.928 1.00 58.82 B
ATOM 7195 O TRP B 314 -20.223 -45.491 -100.812 1.00 57.67 B
ATOM 7196 N ALA B 315 -22.007 -44.961 -102.073 1.00 58.47 B
ATOM 7197 CA ALA B 315 -21.267 -44.825 -103.304 1.00 57.94 B
ATOM 7198 CB ALA B 315 -21.531 -46.019 -104.246 1.00 57.11 B
ATOM 7199 C ALA B 315 -21.686 -43.486 -103.941 1.00 57.53 B
ATOM 7200 O ALA B 315 -20.898 -42.895 -104.631 1.00 57.48 B
ATOM 7201 N GLY B 316 -22.895 -42.982 -103.707 1.00 57.06 B
ATOM 7202 CA GLY B 316 -23.228 -41.715 -104.371 1.00 57.02 B
ATOM 7203 C GLY B 316 -22.498 -40.614 -103.630 1.00 56.83 B
ATOM 7204 O GLY B 316 -22.934 -39.483 -103.506 1.00 56.15 B
ATOM 7205 N ALA B 317 -21.358 -41.026 -103.098 1.00 56.76 B

ATOM 7206 CA ALA B 317 -20.576 -40.174-102.215 1.00 56.10 B
ATOM 7207 CB ALA B 317 -21.034 -40.494-100.851 1.00 56.66 B
ATOM 7208 C ALA B 317 -19.040 -40.098-102.156 1.00 55.74 B
ATOM 7209 O ALA B 317 -18.354 -41.108-102.104 1.00 55.43 B
ATOM 7210 N MET B 318 -18.519 -38.875-102.072 1.00 55.43 B
ATOM 7211 CA MET B 318 -17.069 -38.632-101.958 1.00 54.89 B
ATOM 7212 CB MET B 318 -16.676 -37.328-102.651 1.00 54.72 B
ATOM 7213 CG MET B 318 -15.452 -37.473-103.532 1.00 53.70 B
ATOM 7214 SD MET B 318 -14.290 -36.071-103.561 1.00 54.24 B
ATOM 7215 CE MET B 318 -15.343 -34.715-103.112 1.00 52.78 B
ATOM 7216 C MET B 318 -16.692 -38.529-100.474 1.00 54.94 B
ATOM 7217 O MET B 318 -17.060 -37.566 -99.798 1.00 55.22 B
ATOM 7218 N LEU B 319 -15.955 -39.519 -99.979 1.00 54.59 B
ATOM 7219 CA LEU B 319 -15.538 -39.533 -98.586 1.00 55.29 B
ATOM 7220 CB LEU B 319 -16.017 -40.811 -97.899 1.00 54.21 B
ATOM 7221 CG LEU B 319 -17.481 -41.194 -98.094 1.00 54.32 B
ATOM 7222 CD1 LEU B 319 -17.743 -42.480 -97.327 1.00 53.87 B
ATOM 7223 CD2 LEU B 319 -18.393 -40.074 -97.615 1.00 53.93 B
ATOM 7224 C LEU B 319 -14.031 -39.444 -98.463 1.00 56.28 B
ATOM 7225 O LEU B 319 -13.502 -39.444 -97.363 1.00 57.34 B
ATOM 7226 N GLU B 320 -13.351 -39.367 -99.595 1.00 57.16 B
ATOM 7227 CA GLU B 320 -11.893 -39.299 -99.619 1.00 59.09 B
ATOM 7228 CB GLU B 320 -11.332 -40.685 -99.977 1.00 59.51 B
ATOM 7229 CG GLU B 320 -11.174 -41.613 -98.764 1.00 60.81 B
ATOM 7230 CD GLU B 320 -11.198 -43.121 -99.100 1.00 61.97 B
ATOM 7231 OE1 GLU B 320 -12.292 -43.652 -99.409 1.00 61.81 B
ATOM 7232 OE2 GLU B 320 -10.122 -43.773 -99.040 1.00 61.38 B
ATOM 7233 C GLU B 320 -11.474 -38.272-100.674 1.00 60.38 B
ATOM 7234 O GLU B 320 -12.296 -37.912-101.515 1.00 61.57 B
ATOM 7235 N LYS B 321 -10.232 -37.778-100.634 1.00 60.82 B
ATOM 7236 CA LYS B 321 -9.789 -36.803-101.644 1.00 60.77 B
ATOM 7237 CB LYS B 321 -8.608 -35.937-101.144 1.00 60.22 B
ATOM 7238 CG LYS B 321 -8.001 -34.958-102.192 1.00 58.93 B
ATOM 7239 CD LYS B 321 -6.977 -34.001-101.564 1.00 58.55 B

ATOM 7240 CE LYS B 321 -6.367 -33.061-102.598 1.00 58.55 B
ATOM 7241 NZ LYS B 321 -5.452 -32.050-101.988 1.00 57.65 B
ATOM 7242 C LYS B 321 -9.365 -37.588-102.864 1.00 61.24 B
ATOM 7243 O LYS B 321 -8.517 -38.477-102.770 1.00 61.39 B
ATOM 7244 N PRO B 322 -9.966 -37.283-104.035 1.00 61.25 B
ATOM 7245 CD PRO B 322 -11.161 -36.464-104.278 1.00 61.50 B
ATOM 7246 CA PRO B 322 -9.591 -37.997-105.244 1.00 60.23 B
ATOM 7247 CB PRO B 322 -10.373 -37.298-106.341 1.00 60.24 B
ATOM 7248 CG PRO B 322 -11.619 -36.940-105.648 1.00 60.42 B
ATOM 7249 C PRO B 322 -8.096 -37.955-105.412 1.00 59.90 B
ATOM 7250 O PRO B 322 -7.401 -36.940-105.279 1.00 60.79 B
ATOM 7251 N ALA B 323 -7.748 -39.203-105.659 1.00 59.12 B
ATOM 7252 CA ALA B 323 -6.484 -39.881-105.859 1.00 59.45 B
ATOM 7253 CB ALA B 323 -6.834 -41.335-105.909 1.00 58.67 B
ATOM 7254 C ALA B 323 -5.563 -39.634-107.077 1.00 59.76 B
ATOM 7255 O ALA B 323 -4.345 -39.667-107.004 1.00 59.86 B
ATOM 7256 N ASP B 324 -6.246 -39.649-108.206 1.00 60.05 B
ATOM 7257 CA ASP B 324 -5.782 -39.624-109.593 1.00 59.44 B
ATOM 7258 CB ASP B 324 -7.019 -40.024-110.355 1.00 58.86 B
ATOM 7259 CG ASP B 324 -8.302 -39.185-110.022 1.00 58.77 B
ATOM 7260 OD1 ASP B 324 -8.306 -38.004-110.422 1.00 57.93 B
ATOM 7261 OD2 ASP B 324 -9.312 -39.688-109.440 1.00 58.04 B
ATOM 7262 C ASP B 324 -5.328 -38.357-109.884 1.00 59.14 B
ATOM 7263 O ASP B 324 -4.364 -37.988-110.719 1.00 59.01 B
ATOM 7264 N GLY B 325 -6.373 -37.704-109.406 1.00 58.86 B
ATOM 7265 CA GLY B 325 -6.264 -36.345-109.214 1.00 57.45 B
ATOM 7266 C GLY B 325 -7.038 -35.164-109.280 1.00 56.02 B
ATOM 7267 O GLY B 325 -6.366 -34.192-109.140 1.00 55.83 B
ATOM 7268 N ARG B 326 -8.337 -35.196-109.306 1.00 54.37 B
ATOM 7269 CA ARG B 326 -9.034 -33.972-109.646 1.00 53.11 B
ATOM 7270 CB ARG B 326 -10.160 -34.447-110.488 1.00 51.57 B
ATOM 7271 CG ARG B 326 -10.223 -35.929-110.277 1.00 49.38 B
ATOM 7272 CD ARG B 326 -11.601 -36.324-110.109 1.00 47.45 B
ATOM 7273 NE ARG B 326 -11.737 -37.743-109.886 1.00 45.09 B

ATOM 7274 CZ ARG B 326 -12.829 -38.268-109.366 1.00 45.42 B
ATOM 7275 NH1 ARG B 326 -13.823 -37.464-109.035 1.00 45.31 B
ATOM 7276 NH2 ARG B 326 -12.924 -39.576-109.190 1.00 46.40 B
ATOM 7277 C ARG B 326 -9.495 -32.836-108.787 1.00 53.25 B
ATOM 7278 O ARG B 326 -10.492 -32.917-108.074 1.00 53.12 B
ATOM 7279 N GLU B 327 -8.807 -31.717-108.945 1.00 53.06 B
ATOM 7280 CA GLU B 327 -9.151 -30.583-108.130 1.00 53.29 B
ATOM 7281 CB GLU B 327 -8.628 -29.268-108.693 1.00 55.03 B
ATOM 7282 CG GLU B 327 -7.726 -28.689-107.602 1.00 57.64 B
ATOM 7283 CD GLU B 327 -6.594 -27.839-108.117 1.00 59.57 B
ATOM 7284 OE1 GLU B 327 -6.263 -27.958-109.321 1.00 59.77 B
ATOM 7285 OE2 GLU B 327 -6.032 -27.062-107.303 1.00 60.73 B
ATOM 7286 C GLU B 327 -10.632 -30.558-107.809 1.00 52.50 B
ATOM 7287 O GLU B 327 -11.517 -30.726-108.660 1.00 51.86 B
ATOM 7288 N VAL B 328 -10.868 -30.448-106.508 1.00 51.94 B
ATOM 7289 CA VAL B 328 -12.208 -30.456-105.923 1.00 50.48 B
ATOM 7290 CB VAL B 328 -12.546 -31.842-105.340 1.00 50.24 B
ATOM 7291 CG1 VAL B 328 -12.498 -32.887-106.406 1.00 50.39 B
ATOM 7292 CG2 VAL B 328 -11.546 -32.196-104.253 1.00 49.64 B
ATOM 7293 C VAL B 328 -12.348 -29.494-104.756 1.00 49.47 B
ATOM 7294 O VAL B 328 -11.351 -29.038-104.206 1.00 49.69 B
ATOM 7295 N VAL B 329 -13.594 -29.213-104.375 1.00 47.96 B
ATOM 7296 CA VAL B 329 -13.870 -28.343-103.237 1.00 47.07 B
ATOM 7297 CB VAL B 329 -15.296 -27.758-103.283 1.00 46.64 B
ATOM 7298 CG1 VAL B 329 -15.553 -26.937-102.039 1.00 46.75 B
ATOM 7299 CG2 VAL B 329 -15.478 -26.911-104.514 1.00 47.01 B
ATOM 7300 C VAL B 329 -13.781 -29.299-102.065 1.00 46.97 B
ATOM 7301 O VAL B 329 -14.702 -30.061-101.839 1.00 46.62 B
ATOM 7302 N CYS B 330 -12.653 -29.283-101.355 1.00 46.87 B
ATOM 7303 CA CYS B 330 -12.421 -30.184-100.218 1.00 46.74 B
ATOM 7304 C CYS B 330 -13.221 -29.892 -98.954 1.00 46.65 B
ATOM 7305 O CYS B 330 -13.315 -30.721 -98.040 1.00 46.31 B
ATOM 7306 CB CYS B 330 -10.947 -30.196 -99.845 1.00 46.46 B
ATOM 7307 SG CYS B 330 -10.024 -31.588-100.549 1.00 48.65 B

ATOM 7308 N HIS B 331 -13.768 -28.694 -98.881 1.00 46.72 B
ATOM 7309 CA HIS B 331 -14.554 -28.357 -97.731 1.00 46.46 B
ATOM 7310 CB HIS B 331 -15.195 -27.008 -97.913 1.00 46.93 B
ATOM 7311 CG HIS B 331 -15.406 -26.300 -96.624 1.00 47.72 B
ATOM 7312 CD2 HIS B 331 -14.511 -25.764 -95.764 1.00 47.74 B
ATOM 7313 ND1 HIS B 331 -16.653 -26.082 -96.074 1.00 48.14 B
ATOM 7314 CE1 HIS B 331 -16.514 -25.435 -94.932 1.00 48.43 B
ATOM 7315 NE2 HIS B 331 -15.225 -25.230 -94.721 1.00 48.63 B
ATOM 7316 C HIS B 331 -15.649 -29.390 -97.531 1.00 45.82 B
ATOM 7317 O HIS B 331 -16.351 -29.753 -98.471 1.00 45.56 B
ATOM 7318 N ALA B 332 -15.799 -29.842 -96.292 1.00 44.68 B
ATOM 7319 CA ALA B 332 -16.817 -30.829 -95.957 1.00 43.26 B
ATOM 7320 CB ALA B 332 -16.702 -31.201 -94.519 1.00 43.65 B
ATOM 7321 C ALA B 332 -18.219 -30.310 -96.242 1.00 42.85 B
ATOM 7322 O ALA B 332 -18.554 -29.198 -95.848 1.00 41.84 B
ATOM 7323 N ALA B 333 -19.037 -31.117 -96.919 1.00 42.45 B
ATOM 7324 CA ALA B 333 -20.400 -30.709 -97.249 1.00 41.69 B
ATOM 7325 CB ALA B 333 -20.409 -30.019 -98.623 1.00 42.62 B
ATOM 7326 C ALA B 333 -21.411 -31.873 -97.224 1.00 41.29 B
ATOM 7327 O ALA B 333 -21.048 -33.034 -97.437 1.00 40.61 B
ATOM 7328 N ALA B 334 -22.673 -31.544 -96.948 1.00 41.13 B
ATOM 7329 CA ALA B 334 -23.768 -32.508 -96.895 1.00 42.47 B
ATOM 7330 CB ALA B 334 -24.414 -32.505 -95.553 1.00 43.02 B
ATOM 7331 C ALA B 334 -24.779 -32.123 -97.951 1.00 44.08 B
ATOM 7332 O ALA B 334 -25.285 -30.997 -97.986 1.00 44.24 B
ATOM 7333 N TRP B 335 -25.100 -33.117 -98.770 1.00 46.47 B
ATOM 7334 CA TRP B 335 -25.973 -32.977 -99.918 1.00 47.69 B
ATOM 7335 CB TRP B 335 -25.167 -33.489 -101.102 1.00 49.12 B
ATOM 7336 CG TRP B 335 -24.188 -32.467 -101.309 1.00 50.20 B
ATOM 7337 CD2 TRP B 335 -24.497 -31.091 -101.339 1.00 50.43 B
ATOM 7338 CE2 TRP B 335 -23.279 -30.386 -101.378 1.00 51.19 B
ATOM 7339 CE3 TRP B 335 -25.705 -30.375 -101.321 1.00 50.03 B
ATOM 7340 CD1 TRP B 335 -22.822 -32.573 -101.345 1.00 49.91 B
ATOM 7341 NE1 TRP B 335 -22.263 -31.315 -101.384 1.00 50.36 B

ATOM 7342 CZ2 TRP B 335 -23.237 -28.988-101.402 1.00 51.99 B
ATOM 7343 CZ3 TRP B 335 -25.669 -29.009-101.339 1.00 50.89 B
ATOM 7344 CH2 TRP B 335 -24.444 -28.319-101.377 1.00 51.44 B
ATOM 7345 C TRP B 335 -27.384 -33.498-100.003 1.00 47.67 B
ATOM 7346 O TRP B 335 -27.612 -34.695 -99.906 1.00 46.77 B
ATOM 7347 N ASP B 336 -28.335 -32.601-100.230 1.00 48.26 B
ATOM 7348 CA ASP B 336 -29.714 -33.036-100.364 1.00 49.29 B
ATOM 7349 CB ASP B 336 -30.599 -32.340 -99.337 1.00 51.04 B
ATOM 7350 CG ASP B 336 -32.058 -32.652 -99.535 1.00 53.78 B
ATOM 7351 OD1 ASP B 336 -32.369 -33.776 -99.991 1.00 56.55 B
ATOM 7352 OD2 ASP B 336 -32.893 -31.776 -99.224 1.00 54.94 B
ATOM 7353 C ASP B 336 -30.211 -32.767-101.786 1.00 49.48 B
ATOM 7354 O ASP B 336 -30.652 -31.663-102.107 1.00 48.45 B
ATOM 7355 N PHE B 337 -30.125 -33.796-102.629 1.00 49.75 B
ATOM 7356 CA PHE B 337 -30.545 -33.707-104.019 1.00 49.63 B
ATOM 7357 CB PHE B 337 -30.109 -34.947-104.781 1.00 48.95 B
ATOM 7358 CG PHE B 337 -28.639 -35.024-105.013 1.00 49.88 B
ATOM 7359 CD1 PHE B 337 -27.772 -35.367-103.984 1.00 50.25 B
ATOM 7360 CD2 PHE B 337 -28.118 -34.785-106.279 1.00 50.65 B
ATOM 7361 CE1 PHE B 337 -26.393 -35.480-104.221 1.00 51.12 B
ATOM 7362 CE2 PHE B 337 -26.745 -34.894-106.529 1.00 50.59 B
ATOM 7363 CZ PHE B 337 -25.882 -35.243-105.500 1.00 51.11 B
ATOM 7364 C PHE B 337 -32.037 -33.510-104.217 1.00 49.75 B
ATOM 7365 O PHE B 337 -32.532 -33.638-105.326 1.00 50.07 B
ATOM 7366 N TYR B 338 -32.756 -33.213-103.144 1.00 50.23 B
ATOM 7367 CA TYR B 338 -34.194 -32.984-103.241 1.00 51.49 B
ATOM 7368 CB TYR B 338 -34.444 -31.622-103.814 1.00 51.95 B
ATOM 7369 CG TYR B 338 -34.300 -30.569-102.799 1.00 53.95 B
ATOM 7370 CD1 TYR B 338 -33.033 -30.146-102.378 1.00 53.66 B
ATOM 7371 CE1 TYR B 338 -32.902 -29.146-101.436 1.00 53.99 B
ATOM 7372 CD2 TYR B 338 -35.433 -29.980-102.252 1.00 54.42 B
ATOM 7373 CE2 TYR B 338 -35.326 -28.989-101.316 1.00 54.85 B
ATOM 7374 CZ TYR B 338 -34.062 -28.565-100.906 1.00 54.68 B
ATOM 7375 OH TYR B 338 -34.004 -27.543 -99.980 1.00 54.34 B

ATOM 7376 C TYR B 338 -35.027 -33.956-104.065 1.00 52.21 B
ATOM 7377 O TYR B 338 -35.967 -33.532-104.748 1.00 52.01 B
ATOM 7378 N ASN B 339 -34.693 -35.242-104.004 1.00 52.03 B
ATOM 7379 CA ASN B 339 -35.412 -36.274-104.753 1.00 50.68 B
ATOM 7380 CB ASN B 339 -34.523 -36.802-105.890 1.00 50.32 B
ATOM 7381 CG ASN B 339 -33.542 -37.870-105.422 1.00 50.33 B
ATOM 7382 OD1 ASN B 339 -33.062 -37.831-104.297 1.00 52.55 B
ATOM 7383 ND2 ASN B 339 -33.235 -38.820-106.292 1.00 49.18 B
ATOM 7384 C ASN B 339 -35.794 -37.446-103.841 1.00 51.03 B
ATOM 7385 O ASN B 339 -36.140 -38.526-104.327 1.00 52.04 B
ATOM 7386 N ARG B 340 -35.709 -37.228-102.527 1.00 50.26 B
ATOM 7387 CA ARG B 340 -36.016 -38.241-101.509 1.00 48.27 B
ATOM 7388 CB ARG B 340 -37.504 -38.507-101.492 1.00 48.01 B
ATOM 7389 CG ARG B 340 -38.256 -37.375-102.114 1.00 50.62 B
ATOM 7390 CD ARG B 340 -39.546 -37.884-102.557 1.00 52.31 B
ATOM 7391 NE ARG B 340 -39.332 -39.212-103.123 1.00 54.77 B
ATOM 7392 CZ ARG B 340 -39.916 -39.563-104.250 1.00 55.51 B
ATOM 7393 NH1 ARG B 340 -39.773 -40.763-104.822 1.00 56.00 B
ATOM 7394 NH2 ARG B 340 -40.649 -38.629-104.792 1.00 55.38 B
ATOM 7395 C ARG B 340 -35.277 -39.548-101.689 1.00 46.88 B
ATOM 7396 O ARG B 340 -35.638 -40.558-101.104 1.00 47.95 B
ATOM 7397 N ALA B 341 -34.249 -39.553-102.517 1.00 44.65 B
ATOM 7398 CA ALA B 341 -33.532 -40.795-102.702 1.00 44.03 B
ATOM 7399 CB ALA B 341 -34.046 -41.522-103.944 1.00 44.42 B
ATOM 7400 C ALA B 341 -32.040 -40.613-102.782 1.00 43.72 B
ATOM 7401 O ALA B 341 -31.295 -41.592-102.727 1.00 43.06 B
ATOM 7402 N ASP B 342 -31.593 -39.366-102.888 1.00 43.64 B
ATOM 7403 CA ASP B 342 -30.159 -39.105-102.971 1.00 44.13 B
ATOM 7404 CB ASP B 342 -29.760 -38.658-104.385 1.00 46.70 B
ATOM 7405 CG ASP B 342 -28.940 -39.711-105.116 1.00 48.97 B
ATOM 7406 OD1 ASP B 342 -27.851 -40.087-104.616 1.00 50.10 B
ATOM 7407 OD2 ASP B 342 -29.391 -40.167-106.188 1.00 49.73 B
ATOM 7408 C ASP B 342 -29.641 -38.097-101.960 1.00 42.77 B
ATOM 7409 O ASP B 342 -30.063 -36.937-101.933 1.00 41.99 B

ATOM 7410 N PHE B 343 -28.720 -38.570-101.124 1.00 41.35 B
ATOM 7411 CA PHE B 343 -28.094 -37.755-100.095 1.00 39.23 B
ATOM 7412 CB PHE B 343 -28.734 -37.962 -98.723 1.00 36.28 B
ATOM 7413 CG PHE B 343 -30.213 -38.116 -98.749 1.00 32.81 B
ATOM 7414 CD1 PHE B 343 -30.781 -39.355 -99.017 1.00 32.07 B
ATOM 7415 CD2 PHE B 343 -31.037 -37.033 -98.493 1.00 31.63 B
ATOM 7416 CE1 PHE B 343 -32.152 -39.520 -99.024 1.00 31.53 B
ATOM 7417 CE2 PHE B 343 -32.413 -37.179 -98.496 1.00 32.35 B
ATOM 7418 CZ PHE B 343 -32.975 -38.430 -98.764 1.00 31.91 B
ATOM 7419 C PHE B 343 -26.656 -38.216 -99.997 1.00 39.73 B
ATOM 7420 O PHE B 343 -26.389 -39.410 -99.818 1.00 39.03 B
ATOM 7421 N ALA B 344 -25.730 -37.272-100.095 1.00 40.67 B
ATOM 7422 CA ALA B 344 -24.322 -37.617-100.000 1.00 41.90 B
ATOM 7423 CB ALA B 344 -23.716 -37.737-101.399 1.00 44.06 B
ATOM 7424 C ALA B 344 -23.551 -36.592 -99.186 1.00 41.99 B
ATOM 7425 O ALA B 344 -24.099 -35.588 -98.728 1.00 41.47 B
ATOM 7426 N ALA B 345 -22.266 -36.863 -99.011 1.00 41.69 B
ATOM 7427 CA ALA B 345 -21.413 -35.969 -98.267 1.00 42.29 B
ATOM 7428 CB ALA B 345 -21.218 -36.477 -96.833 1.00 43.62 B
ATOM 7429 C ALA B 345 -20.077 -35.885 -98.977 1.00 42.58 B
ATOM 7430 O ALA B 345 -19.434 -36.899 -99.252 1.00 41.94 B
ATOM 7431 N LYS B 346 -19.686 -34.650 -99.264 1.00 43.18 B
ATOM 7432 CA LYS B 346 -18.440 -34.344 -99.937 1.00 43.96 B
ATOM 7433 CB LYS B 346 -18.663 -33.161-100.867 1.00 44.74 B
ATOM 7434 CG LYS B 346 -17.629 -32.986-101.943 1.00 45.55 B
ATOM 7435 CD LYS B 346 -17.769 -31.609-102.538 1.00 46.37 B
ATOM 7436 CE LYS B 346 -17.094 -30.581-101.660 1.00 46.22 B
ATOM 7437 NZ LYS B 346 -18.006 -29.732-100.850 1.00 49.77 B
ATOM 7438 C LYS B 346 -17.498 -33.934 -98.832 1.00 44.09 B
ATOM 7439 O LYS B 346 -17.782 -32.968 -98.134 1.00 43.93 B
ATOM 7440 N GLN B 347 -16.397 -34.655 -98.652 1.00 43.71 B
ATOM 7441 CA GLN B 347 -15.454 -34.289 -97.601 1.00 44.56 B
ATOM 7442 CB GLN B 347 -16.066 -34.552 -96.217 1.00 46.56 B
ATOM 7443 CG GLN B 347 -15.196 -34.101 -95.031 1.00 47.41 B

ATOM 7444 CD GLN B 347 -15.511 -34.864 -93.752 1.00 47.10 B
ATOM 7445 OE1 GLN B 347 -16.670 -35.183 -93.480 1.00 46.83 B
ATOM 7446 NE2 GLN B 347 -14.479 -35.151 -92.957 1.00 45.69 B
ATOM 7447 C GLN B 347 -14.148 -35.050 -97.722 1.00 43.98 B
ATOM 7448 O GLN B 347 -14.138 -36.266 -97.633 1.00 42.17 B
ATOM 7449 N CYS B 348 -13.052 -34.327 -97.934 1.00 45.41 B
ATOM 7450 CA CYS B 348 -11.732 -34.941 -98.060 1.00 46.98 B
ATOM 7451 C CYS B 348 -11.272 -35.437 -96.689 1.00 48.03 B
ATOM 7452 O CYS B 348 -10.263 -34.976 -96.158 1.00 48.81 B
ATOM 7453 CB CYS B 348 -10.727 -33.924 -98.616 1.00 46.56 B
ATOM 7454 SG CYS B 348 -11.214 -33.230 -100.226 1.00 47.87 B
ATOM 7455 N THR B 349 -12.021 -36.387 -96.133 1.00 48.58 B
ATOM 7456 CA THR B 349 -11.757 -36.957 -94.812 1.00 49.34 B
ATOM 7457 CB THR B 349 -12.769 -38.079 -94.496 1.00 48.96 B
ATOM 7458 OG1 THR B 349 -14.089 -37.526 -94.417 1.00 49.37 B
ATOM 7459 CG2 THR B 349 -12.428 -38.741 -93.177 1.00 49.52 B
ATOM 7460 C THR B 349 -10.360 -37.511 -94.523 1.00 49.96 B
ATOM 7461 O THR B 349 -9.932 -38.491 -95.126 1.00 49.60 B
ATOM 7462 N ALA B 350 -9.665 -36.881 -93.579 1.00 51.30 B
ATOM 7463 CA ALA B 350 -8.336 -37.324 -93.163 1.00 52.64 B
ATOM 7464 CB ALA B 350 -7.403 -36.118 -92.996 1.00 52.79 B
ATOM 7465 C ALA B 350 -8.566 -38.030 -91.816 1.00 53.80 B
ATOM 7466 O ALA B 350 -9.686 -38.018 -91.301 1.00 54.03 B
ATOM 7467 N VAL B 351 -7.539 -38.652 -91.243 1.00 54.42 B
ATOM 7468 CA VAL B 351 -7.723 -39.331 -89.961 1.00 54.67 B
ATOM 7469 CB VAL B 351 -6.982 -40.659 -89.943 1.00 54.18 B
ATOM 7470 CG1 VAL B 351 -7.373 -41.445 -88.711 1.00 54.52 B
ATOM 7471 CG2 VAL B 351 -7.309 -41.436 -91.198 1.00 53.96 B
ATOM 7472 C VAL B 351 -7.269 -38.493 -88.754 1.00 55.83 B
ATOM 7473 O VAL B 351 -6.098 -38.532 -88.366 1.00 55.53 B
ATOM 7474 N THR B 352 -8.215 -37.742 -88.177 1.00 56.43 B
ATOM 7475 CA THR B 352 -7.986 -36.877 -87.017 1.00 56.63 B
ATOM 7476 CB THR B 352 -7.747 -35.407 -87.433 1.00 57.74 B
ATOM 7477 OG1 THR B 352 -6.773 -35.351 -88.478 1.00 59.81 B

ATOM 7478 CG2 THR B 352 -7.246 -34.587 -86.242 1.00 59.47 B
ATOM 7479 C THR B 352 -9.253 -36.891 -86.170 1.00 56.35 B
ATOM 7480 O THR B 352 -10.336 -37.214 -86.666 1.00 55.92 B
ATOM 7481 N ALA B 353 -9.134 -36.532 -84.898 1.00 55.47 B
ATOM 7482 CA ALA B 353 -10.313 -36.497 -84.051 1.00 54.51 B
ATOM 7483 CB ALA B 353 -9.923 -36.258 -82.651 1.00 55.76 B
ATOM 7484 C ALA B 353 -11.232 -35.385 -84.523 1.00 53.72 B
ATOM 7485 O ALA B 353 -12.445 -35.565 -84.611 1.00 53.61 B
ATOM 7486 N ALA B 354 -10.649 -34.229 -84.816 1.00 52.83 B
ATOM 7487 CA ALA B 354 -11.434 -33.094 -85.292 1.00 51.70 B
ATOM 7488 CB ALA B 354 -10.507 -31.948 -85.692 1.00 51.84 B
ATOM 7489 C ALA B 354 -12.240 -33.557 -86.486 1.00 50.82 B
ATOM 7490 O ALA B 354 -13.418 -33.235 -86.633 1.00 50.30 B
ATOM 7491 N ALA B 355 -11.592 -34.343 -87.337 1.00 49.96 B
ATOM 7492 CA ALA B 355 -12.230 -34.864 -88.532 1.00 48.94 B
ATOM 7493 CB ALA B 355 -11.237 -35.687 -89.342 1.00 49.03 B
ATOM 7494 C ALA B 355 -13.457 -35.705 -88.177 1.00 48.26 B
ATOM 7495 O ALA B 355 -14.574 -35.441 -88.650 1.00 47.06 B
ATOM 7496 N ALA B 356 -13.247 -36.704 -87.325 1.00 46.91 B
ATOM 7497 CA ALA B 356 -14.328 -37.579 -86.903 1.00 46.49 B
ATOM 7498 CB ALA B 356 -13.840 -38.520 -85.811 1.00 46.75 B
ATOM 7499 C ALA B 356 -15.527 -36.775 -86.410 1.00 46.74 B
ATOM 7500 O ALA B 356 -16.681 -37.139 -86.662 1.00 47.05 B
ATOM 7501 N SER B 357 -15.262 -35.675 -85.711 1.00 46.38 B
ATOM 7502 CA SER B 357 -16.355 -34.859 -85.203 1.00 46.14 B
ATOM 7503 CB SER B 357 -15.856 -33.850 -84.166 1.00 46.95 B
ATOM 7504 OG SER B 357 -15.047 -32.862 -84.766 1.00 49.31 B
ATOM 7505 C SER B 357 -16.999 -34.135 -86.366 1.00 45.15 B
ATOM 7506 O SER B 357 -18.177 -33.785 -86.321 1.00 45.41 B
ATOM 7507 N THR B 358 -16.223 -33.905 -87.418 1.00 44.31 B
ATOM 7508 CA THR B 358 -16.763 -33.234 -88.589 1.00 42.73 B
ATOM 7509 CB THR B 358 -15.647 -32.721 -89.528 1.00 43.93 B
ATOM 7510 OG1 THR B 358 -15.043 -31.552 -88.956 1.00 45.01 B
ATOM 7511 CG2 THR B 358 -16.213 -32.360 -90.903 1.00 44.23 B

ATOM 7512 C THR B 358 -17.625 -34.247 -89.306 1.00 40.78 B
ATOM 7513 O THR B 358 -18.611 -33.889 -89.949 1.00 39.93 B
ATOM 7514 N VAL B 359 -17.257 -35.521 -89.172 1.00 39.08 B
ATOM 7515 CA VAL B 359 -18.024 -36.592 -89.800 1.00 37.54 B
ATOM 7516 CB VAL B 359 -17.302 -37.949 -89.712 1.00 35.19 B
ATOM 7517 CG1 VAL B 359 -18.197 -39.039 -90.237 1.00 35.10 B
ATOM 7518 CG2 VAL B 359 -16.035 -37.916 -90.519 1.00 35.17 B
ATOM 7519 C VAL B 359 -19.367 -36.676 -89.093 1.00 37.70 B
ATOM 7520 O VAL B 359 -20.385 -37.008 -89.700 1.00 37.47 B
ATOM 7521 N HIS B 360 -19.368 -36.367 -87.802 1.00 37.81 B
ATOM 7522 CA HIS B 360 -20.613 -36.384 -87.058 1.00 38.35 B
ATOM 7523 CB HIS B 360 -20.352 -36.382 -85.545 1.00 37.24 B
ATOM 7524 CG HIS B 360 -20.069 -37.737 -84.985 1.00 35.58 B
ATOM 7525 CD2 HIS B 360 -20.863 -38.604 -84.311 1.00 34.78 B
ATOM 7526 ND1 HIS B 360 -18.858 -38.376 -85.153 1.00 35.47 B
ATOM 7527 CE1 HIS B 360 -18.919 -39.578 -84.607 1.00 34.90 B
ATOM 7528 NE2 HIS B 360 -20.125 -39.742 -84.091 1.00 34.15 B
ATOM 7529 C HIS B 360 -21.448 -35.169 -87.452 1.00 38.68 B
ATOM 7530 O HIS B 360 -22.652 -35.291 -87.692 1.00 37.44 B
ATOM 7531 N HIS B 361 -20.796 -34.007 -87.537 1.00 39.78 B
ATOM 7532 CA HIS B 361 -21.484 -32.766 -87.894 1.00 41.00 B
ATOM 7533 CB HIS B 361 -20.515 -31.573 -87.926 1.00 38.62 B
ATOM 7534 CG HIS B 361 -21.094 -30.352 -88.579 1.00 36.25 B
ATOM 7535 CD2 HIS B 361 -20.923 -29.847 -89.825 1.00 34.80 B
ATOM 7536 ND1 HIS B 361 -22.041 -29.555 -87.973 1.00 35.18 B
ATOM 7537 CE1 HIS B 361 -22.433 -28.617 -88.818 1.00 33.88 B
ATOM 7538 NE2 HIS B 361 -21.769 -28.773 -89.949 1.00 33.28 B
ATOM 7539 C HIS B 361 -22.137 -32.892 -89.256 1.00 42.72 B
ATOM 7540 O HIS B 361 -23.300 -32.492 -89.444 1.00 41.85 B
ATOM 7541 N GLU B 362 -21.384 -33.452 -90.204 1.00 44.34 B
ATOM 7542 CA GLU B 362 -21.892 -33.615 -91.562 1.00 45.27 B
ATOM 7543 CB GLU B 362 -20.771 -34.054 -92.515 1.00 45.43 B
ATOM 7544 CG GLU B 362 -19.704 -32.965 -92.786 1.00 46.67 B
ATOM 7545 CD GLU B 362 -20.282 -31.652 -93.331 1.00 47.41 B

ATOM 7546 OE1 GLU B 362 -21.506 -31.571 -93.583 1.00 47.21 B
ATOM 7547 OE2 GLU B 362 -19.499 -30.692 -93.506 1.00 48.63 B
ATOM 7548 C GLU B 362 -23.049 -34.590 -91.614 1.00 44.95 B
ATOM 7549 O GLU B 362 -24.094 -34.297 -92.197 1.00 45.35 B
ATOM 7550 N MET B 363 -22.882 -35.735 -90.972 1.00 44.64 B
ATOM 7551 CA MET B 363 -23.935 -36.738 -90.979 1.00 45.28 B
ATOM 7552 CB MET B 363 -23.451 -38.009 -90.297 1.00 46.07 B
ATOM 7553 CG MET B 363 -24.294 -39.221 -90.594 1.00 47.67 B
ATOM 7554 SD MET B 363 -23.356 -40.718 -90.232 1.00 52.42 B
ATOM 7555 CE MET B 363 -22.284 -40.822 -91.675 1.00 52.19 B
ATOM 7556 C MET B 363 -25.192 -36.232 -90.299 1.00 44.69 B
ATOM 7557 O MET B 363 -26.304 -36.639 -90.640 1.00 45.39 B
ATOM 7558 N GLY B 364 -25.013 -35.341 -89.334 1.00 43.90 B
ATOM 7559 CA GLY B 364 -26.160 -34.808 -88.639 1.00 42.98 B
ATOM 7560 C GLY B 364 -27.046 -34.133 -89.651 1.00 42.29 B
ATOM 7561 O GLY B 364 -28.272 -34.161 -89.539 1.00 43.18 B
ATOM 7562 N HIS B 365 -26.427 -33.523 -90.655 1.00 41.70 B
ATOM 7563 CA HIS B 365 -27.170 -32.880 -91.733 1.00 40.18 B
ATOM 7564 CB HIS B 365 -26.213 -32.186 -92.704 1.00 39.92 B
ATOM 7565 CG HIS B 365 -25.728 -30.853 -92.225 1.00 38.95 B
ATOM 7566 CD2 HIS B 365 -24.476 -30.387 -92.003 1.00 39.86 B
ATOM 7567 ND1 HIS B 365 -26.583 -29.818 -91.915 1.00 37.46 B
ATOM 7568 CE1 HIS B 365 -25.879 -28.771 -91.522 1.00 38.79 B
ATOM 7569 NE2 HIS B 365 -24.598 -29.090 -91.566 1.00 41.04 B
ATOM 7570 C HIS B 365 -28.047 -33.879 -92.481 1.00 39.34 B
ATOM 7571 O HIS B 365 -29.248 -33.665 -92.644 1.00 37.69 B
ATOM 7572 N ILE B 366 -27.439 -34.972 -92.933 1.00 39.09 B
ATOM 7573 CA ILE B 366 -28.180 -36.046 -93.582 1.00 39.31 B
ATOM 7574 CB ILE B 366 -27.275 -37.274 -93.798 1.00 37.97 B
ATOM 7575 CG2 ILE B 366 -28.067 -38.420 -94.408 1.00 36.99 B
ATOM 7576 CG1 ILE B 366 -26.083 -36.908 -94.684 1.00 38.34 B
ATOM 7577 CD1 ILE B 366 -24.957 -37.919 -94.640 1.00 36.48 B
ATOM 7578 C ILE B 366 -29.409 -36.439 -92.768 1.00 40.17 B
ATOM 7579 O ILE B 366 -30.543 -36.192 -93.179 1.00 39.40 B

ATOM 7580 N GLN B 367 -29.175 -37.050 -91.612 1.00 40.98 B
ATOM 7581 CA GLN B 367 -30.257 -37.593 -90.799 1.00 41.88 B
ATOM 7582 CB GLN B 367 -29.747 -37.949 -89.401 1.00 42.59 B
ATOM 7583 CG GLN B 367 -30.807 -38.538 -88.485 1.00 42.95 B
ATOM 7584 CD GLN B 367 -31.158 -39.968 -88.845 1.00 43.21 B
ATOM 7585 OE1 GLN B 367 -32.332 -40.337 -88.867 1.00 43.61 B
ATOM 7586 NE2 GLN B 367 -30.143 -40.776 -89.128 1.00 41.63 B
ATOM 7587 C GLN B 367 -31.419 -36.610 -90.699 1.00 41.99 B
ATOM 7588 O GLN B 367 -32.580 -37.012 -90.619 1.00 42.71 B
ATOM 7589 N TYR B 368 -31.097 -35.321 -90.703 1.00 41.08 B
ATOM 7590 CA TYR B 368 -32.104 -34.278 -90.855 1.00 41.60 B
ATOM 7591 CB TYR B 368 -31.473 -32.895 -90.678 1.00 40.16 B
ATOM 7592 CG TYR B 368 -32.368 -31.899 -89.976 1.00 38.91 B
ATOM 7593 CD1 TYR B 368 -31.831 -30.840 -89.256 1.00 39.15 B
ATOM 7594 CE1 TYR B 368 -32.645 -29.927 -88.614 1.00 39.24 B
ATOM 7595 CD2 TYR B 368 -33.750 -32.017 -90.034 1.00 39.30 B
ATOM 7596 CE2 TYR B 368 -34.572 -31.109 -89.395 1.00 40.76 B
ATOM 7597 CZ TYR B 368 -34.014 -30.066 -88.686 1.00 40.94 B
ATOM 7598 OH TYR B 368 -34.828 -29.159 -88.047 1.00 41.20 B
ATOM 7599 C TYR B 368 -32.792 -34.370 -92.213 1.00 42.96 B
ATOM 7600 O TYR B 368 -34.015 -34.266 -92.309 1.00 44.36 B
ATOM 7601 N TYR B 369 -31.998 -34.565 -93.261 1.00 42.87 B
ATOM 7602 CA TYR B 369 -32.535 -34.697 -94.626 1.00 42.57 B
ATOM 7603 CB TYR B 369 -31.388 -34.838 -95.651 1.00 40.92 B
ATOM 7604 CG TYR B 369 -30.491 -33.615 -95.833 1.00 38.06 B
ATOM 7605 CD1 TYR B 369 -29.147 -33.774 -96.193 1.00 35.18 B
ATOM 7606 CE1 TYR B 369 -28.310 -32.683 -96.367 1.00 35.00 B
ATOM 7607 CD2 TYR B 369 -30.984 -32.306 -95.654 1.00 36.73 B
ATOM 7608 CE2 TYR B 369 -30.153 -31.194 -95.831 1.00 36.63 B
ATOM 7609 CZ TYR B 369 -28.809 -31.390 -96.187 1.00 37.00 B
ATOM 7610 OH TYR B 369 -27.957 -30.303 -96.346 1.00 37.06 B
ATOM 7611 C TYR B 369 -33.449 -35.928 -94.721 1.00 42.54 B
ATOM 7612 O TYR B 369 -34.578 -35.860 -95.229 1.00 41.12 B
ATOM 7613 N LEU B 370 -32.942 -37.051 -94.223 1.00 43.16 B

ATOM 7614 CA LEU B 370 -33.677 -38.302 -94.231 1.00 44.01 B
ATOM 7615 CB LEU B 370 -32.809 -39.396 -93.620 1.00 42.34 B
ATOM 7616 CG LEU B 370 -31.492 -39.662 -94.345 1.00 44.04 B
ATOM 7617 CD1 LEU B 370 -30.622 -40.550 -93.501 1.00 44.65 B
ATOM 7618 CD2 LEU B 370 -31.754 -40.334 -95.676 1.00 45.35 B
ATOM 7619 C LEU B 370 -35.003 -38.207 -93.470 1.00 45.45 B
ATOM 7620 O LEU B 370 -35.988 -38.823 -93.858 1.00 47.12 B
ATOM 7621 N GLN B 371 -35.032 -37.424 -92.398 1.00 46.08 B
ATOM 7622 CA GLN B 371 -36.229 -37.299 -91.579 1.00 46.67 B
ATOM 7623 CB GLN B 371 -35.869 -36.813 -90.174 1.00 46.32 B
ATOM 7624 CG GLN B 371 -35.137 -37.842 -89.327 1.00 44.57 B
ATOM 7625 CD GLN B 371 -35.933 -39.119 -89.159 1.00 43.24 B
ATOM 7626 OE1 GLN B 371 -37.165 -39.095 -89.104 1.00 42.76 B
ATOM 7627 NE2 GLN B 371 -35.233 -40.242 -89.059 1.00 41.74 B
ATOM 7628 C GLN B 371 -37.350 -36.439 -92.132 1.00 48.29 B
ATOM 7629 O GLN B 371 -38.501 -36.662 -91.808 1.00 49.15 B
ATOM 7630 N TYR B 372 -37.064 -35.440 -92.946 1.00 50.27 B
ATOM 7631 CA TYR B 372 -38.206 -34.670 -93.464 1.00 52.48 B
ATOM 7632 CB TYR B 372 -38.175 -33.223 -92.973 1.00 54.18 B
ATOM 7633 CG TYR B 372 -36.918 -32.497 -93.357 1.00 57.16 B
ATOM 7634 CD1 TYR B 372 -36.790 -31.125 -93.116 1.00 58.43 B
ATOM 7635 CE1 TYR B 372 -35.627 -30.460 -93.418 1.00 60.35 B
ATOM 7636 CD2 TYR B 372 -35.835 -33.195 -93.925 1.00 57.99 B
ATOM 7637 CE2 TYR B 372 -34.666 -32.557 -94.237 1.00 59.46 B
ATOM 7638 CZ TYR B 372 -34.560 -31.188 -93.986 1.00 61.21 B
ATOM 7639 OH TYR B 372 -33.387 -30.547 -94.324 1.00 62.37 B
ATOM 7640 C TYR B 372 -38.313 -34.680 -94.998 1.00 52.53 B
ATOM 7641 O TYR B 372 -38.765 -33.721 -95.616 1.00 52.42 B
ATOM 7642 N LYS B 373 -37.895 -35.781 -95.601 1.00 52.54 B
ATOM 7643 CA LYS B 373 -37.981 -35.910 -97.042 1.00 52.46 B
ATOM 7644 CB LYS B 373 -37.185 -37.127 -97.493 1.00 50.60 B
ATOM 7645 CG LYS B 373 -37.815 -38.402 -97.092 1.00 48.34 B
ATOM 7646 CD LYS B 373 -36.810 -39.454 -97.279 1.00 47.39 B
ATOM 7647 CE LYS B 373 -37.471 -40.777 -97.328 1.00 46.82 B

ATOM 7648 NZ LYS B 373 -36.457 -41.836 -97.493 1.00 46.70 B
ATOM 7649 C LYS B 373 -39.486 -36.094 -97.304 1.00 52.86 B
ATOM 7650 O LYS B 373 -39.979 -35.894 -98.405 1.00 52.79 B
ATOM 7651 N ALA B 374 -40.191 -36.460 -96.237 1.00 53.01 B
ATOM 7652 CA ALA B 374 -41.629 -36.695 -96.259 1.00 53.19 B
ATOM 7653 CB ALA B 374 -42.072 -37.185 -94.902 1.00 53.57 B
ATOM 7654 C ALA B 374 -42.418 -35.437 -96.600 1.00 53.82 B
ATOM 7655 O ALA B 374 -43.591 -35.511 -97.013 1.00 53.40 B
ATOM 7656 N ALA B 375 -41.775 -34.283 -96.459 1.00 54.76 B
ATOM 7657 CA ALA B 375 -42.476 -33.022 -96.705 1.00 56.30 B
ATOM 7658 CB ALA B 375 -42.044 -32.012 -95.633 1.00 56.09 B
ATOM 7659 C ALA B 375 -42.343 -32.355 -98.063 1.00 57.37 B
ATOM 7660 O ALA B 375 -41.690 -32.856 -98.959 1.00 57.29 B
ATOM 7661 N PRO B 376 -43.089 -31.247 -98.249 1.00 58.33 B
ATOM 7662 CD PRO B 376 -44.396 -31.016 -97.604 1.00 58.47 B
ATOM 7663 CA PRO B 376 -43.011 -30.506 -99.508 1.00 59.58 B
ATOM 7664 CB PRO B 376 -44.089 -29.424 -99.349 1.00 58.21 B
ATOM 7665 CG PRO B 376 -45.131 -30.093 -98.599 1.00 57.76 B
ATOM 7666 C PRO B 376 -41.623 -29.916 -99.453 1.00 61.08 B
ATOM 7667 O PRO B 376 -41.362 -29.167 -98.539 1.00 63.63 B
ATOM 7668 N ALA B 377 -40.734 -30.281 -100.378 1.00 61.03 B
ATOM 7669 CA ALA B 377 -39.362 -29.752 -100.394 1.00 60.20 B
ATOM 7670 CB ALA B 377 -38.785 -29.808 -101.796 1.00 60.98 B
ATOM 7671 C ALA B 377 -39.271 -28.310 -99.880 1.00 59.38 B
ATOM 7672 O ALA B 377 -38.395 -27.965 -99.081 1.00 59.07 B
ATOM 7673 N SER B 378 -40.167 -27.462 -100.360 1.00 57.62 B
ATOM 7674 CA SER B 378 -40.168 -26.078 -99.935 1.00 57.92 B
ATOM 7675 CB SER B 378 -41.411 -25.431 -100.478 1.00 57.61 B
ATOM 7676 OG SER B 378 -41.797 -26.212 -101.580 1.00 57.96 B
ATOM 7677 C SER B 378 -40.104 -25.939 -98.412 1.00 58.48 B
ATOM 7678 O SER B 378 -39.912 -24.840 -97.891 1.00 59.25 B
ATOM 7679 N LEU B 379 -40.258 -27.062 -97.712 1.00 58.65 B
ATOM 7680 CA LEU B 379 -40.201 -27.111 -96.254 1.00 57.48 B
ATOM 7681 CB LEU B 379 -41.542 -27.595 -95.680 1.00 56.73 B

ATOM 7682 CG LEU B 379 -42.766 -26.716 -95.928 1.00 56.38 B
ATOM 7683 CD1 LEU B 379 -43.978 -27.313 -95.244 1.00 57.07 B
ATOM 7684 CD2 LEU B 379 -42.496 -25.329 -95.392 1.00 56.16 B
ATOM 7685 C LEU B 379 -39.116 -28.055 -95.739 1.00 57.18 B
ATOM 7686 O LEU B 379 -38.880 -28.082 -94.542 1.00 58.07 B
ATOM 7687 N SER B 380 -38.482 -28.826 -96.634 1.00 57.17 B
ATOM 7688 CA SER B 380 -37.408 -29.774 -96.280 1.00 57.19 B
ATOM 7689 CB SER B 380 -37.079 -30.668 -97.457 1.00 56.90 B
ATOM 7690 OG SER B 380 -36.157 -31.661 -97.056 1.00 56.71 B
ATOM 7691 C SER B 380 -36.256 -28.872 -95.959 1.00 57.54 B
ATOM 7692 O SER B 380 -35.139 -28.944 -96.505 1.00 57.58 B
ATOM 7693 N ARG B 381 -36.571 -28.040 -94.992 1.00 57.81 B
ATOM 7694 CA ARG B 381 -35.709 -26.982 -94.570 1.00 57.43 B
ATOM 7695 CB ARG B 381 -36.372 -25.685 -95.035 1.00 57.96 B
ATOM 7696 CG ARG B 381 -35.511 -24.729 -95.825 1.00 60.11 B
ATOM 7697 CD ARG B 381 -36.227 -24.385 -97.151 1.00 61.73 B
ATOM 7698 NE ARG B 381 -36.126 -22.971 -97.510 1.00 63.11 B
ATOM 7699 CZ ARG B 381 -36.029 -22.515 -98.758 1.00 64.02 B
ATOM 7700 NH1 ARG B 381 -36.016 -23.372 -99.772 1.00 64.88 B
ATOM 7701 NH2 ARG B 381 -35.942 -21.205 -98.991 1.00 62.61 B
ATOM 7702 C ARG B 381 -35.577 -26.914 -93.055 1.00 56.81 B
ATOM 7703 O ARG B 381 -36.564 -26.758 -92.340 1.00 57.24 B
ATOM 7704 N GLY B 382 -34.331 -26.889 -92.608 1.00 55.49 B
ATOM 7705 CA GLY B 382 -34.058 -26.808 -91.192 1.00 52.24 B
ATOM 7706 C GLY B 382 -35.083 -25.826 -90.660 1.00 49.92 B
ATOM 7707 O GLY B 382 -35.634 -24.962 -91.373 1.00 49.08 B
ATOM 7708 N ALA B 383 -35.318 -25.961 -89.365 1.00 47.91 B
ATOM 7709 CA ALA B 383 -36.307 -25.156 -88.637 1.00 45.59 B
ATOM 7710 CB ALA B 383 -36.425 -25.679 -87.280 1.00 46.85 B
ATOM 7711 C ALA B 383 -35.890 -23.696 -88.632 1.00 43.95 B
ATOM 7712 O ALA B 383 -36.695 -22.779 -88.605 1.00 43.14 B
ATOM 7713 N ASN B 384 -34.586 -23.564 -88.524 1.00 42.36 B
ATOM 7714 CA ASN B 384 -33.865 -22.336 -88.705 1.00 40.61 B
ATOM 7715 CB ASN B 384 -33.782 -21.309 -87.544 1.00 41.99 B

ATOM 7716 CG ASN B 384 -33.111 -21.812 -86.317 1.00 43.19 B
ATOM 7717 OD1 ASN B 384 -32.140 -22.572 -86.347 1.00 43.14 B
ATOM 7718 ND2 ASN B 384 -33.625 -21.367 -85.196 1.00 42.37 B
ATOM 7719 C ASN B 384 -32.550 -22.935 -89.020 1.00 38.82 B
ATOM 7720 O ASN B 384 -32.214 -24.066 -88.613 1.00 37.29 B
ATOM 7721 N PRO B 385 -31.811 -22.204 -89.816 1.00 37.20 B
ATOM 7722 CD PRO B 385 -32.204 -20.897 -90.376 1.00 36.46 B
ATOM 7723 CA PRO B 385 -30.490 -22.616 -90.250 1.00 36.74 B
ATOM 7724 CB PRO B 385 -29.918 -21.331 -90.831 1.00 35.97 B
ATOM 7725 CG PRO B 385 -31.150 -20.670 -91.404 1.00 36.87 B
ATOM 7726 C PRO B 385 -29.662 -23.182 -89.106 1.00 36.78 B
ATOM 7727 O PRO B 385 -28.886 -24.121 -89.293 1.00 35.52 B
ATOM 7728 N GLY B 386 -29.871 -22.620 -87.917 1.00 37.45 B
ATOM 7729 CA GLY B 386 -29.145 -23.058 -86.746 1.00 36.99 B
ATOM 7730 C GLY B 386 -29.327 -24.521 -86.403 1.00 38.23 B
ATOM 7731 O GLY B 386 -28.347 -25.275 -86.291 1.00 38.11 B
ATOM 7732 N PHE B 387 -30.585 -24.921 -86.234 1.00 38.54 B
ATOM 7733 CA PHE B 387 -30.917 -26.297 -85.900 1.00 39.37 B
ATOM 7734 CB PHE B 387 -32.384 -26.584 -86.185 1.00 41.55 B
ATOM 7735 CG PHE B 387 -33.319 -26.070 -85.141 1.00 43.41 B
ATOM 7736 CD1 PHE B 387 -33.386 -24.714 -84.850 1.00 44.06 B
ATOM 7737 CD2 PHE B 387 -34.155 -26.946 -84.461 1.00 44.35 B
ATOM 7738 CE1 PHE B 387 -34.275 -24.233 -83.895 1.00 45.80 B
ATOM 7739 CE2 PHE B 387 -35.044 -26.483 -83.508 1.00 46.42 B
ATOM 7740 CZ PHE B 387 -35.106 -25.119 -83.223 1.00 46.95 B
ATOM 7741 C PHE B 387 -30.090 -27.286 -86.685 1.00 40.73 B
ATOM 7742 O PHE B 387 -29.663 -28.305 -86.137 1.00 41.64 B
ATOM 7743 N HIS B 388 -29.875 -26.986 -87.967 1.00 40.90 B
ATOM 7744 CA HIS B 388 -29.113 -27.861 -88.852 1.00 40.52 B
ATOM 7745 CB HIS B 388 -29.114 -27.296 -90.267 1.00 42.26 B
ATOM 7746 CG HIS B 388 -29.787 -28.184 -91.266 1.00 42.70 B
ATOM 7747 CD2 HIS B 388 -31.003 -28.095 -91.858 1.00 41.45 B
ATOM 7748 ND1 HIS B 388 -29.217 -29.358 -91.721 1.00 42.44 B
ATOM 7749 CE1 HIS B 388 -30.059 -29.956 -92.546 1.00 43.07 B

ATOM 7750 NE2 HIS B 388 -31.148 -29.211 -92.645 1.00 43.62 B
ATOM 7751 C HIS B 388 -27.688 -28.095 -88.406 1.00 40.96 B
ATOM 7752 O HIS B 388 -27.283 -29.234 -88.178 1.00 40.66 B
ATOM 7753 N GLU B 389 -26.919 -27.020 -88.285 1.00 41.98 B
ATOM 7754 CA GLU B 389 -25.526 -27.147 -87.873 1.00 43.15 B
ATOM 7755 CB GLU B 389 -24.845 -25.772 -87.849 1.00 44.43 B
ATOM 7756 CG GLU B 389 -25.030 -24.922 -89.122 1.00 44.85 B
ATOM 7757 CD GLU B 389 -24.982 -25.738 -90.416 1.00 43.10 B
ATOM 7758 OE1 GLU B 389 -24.275 -26.759 -90.465 1.00 41.77 B
ATOM 7759 OE2 GLU B 389 -25.643 -25.348 -91.394 1.00 41.54 B
ATOM 7760 C GLU B 389 -25.419 -27.783 -86.492 1.00 43.04 B
ATOM 7761 O GLU B 389 -24.380 -28.347 -86.131 1.00 43.18 B
ATOM 7762 N ALA B 390 -26.511 -27.703 -85.735 1.00 42.53 B
ATOM 7763 CA ALA B 390 -26.552 -28.216 -84.372 1.00 41.89 B
ATOM 7764 CB ALA B 390 -27.716 -27.588 -83.643 1.00 42.83 B
ATOM 7765 C ALA B 390 -26.609 -29.727 -84.235 1.00 41.27 B
ATOM 7766 O ALA B 390 -25.775 -30.346 -83.578 1.00 41.01 B
ATOM 7767 N ILE B 391 -27.609 -30.317 -84.846 1.00 39.83 B
ATOM 7768 CA ILE B 391 -27.757 -31.741 -84.774 1.00 38.85 B
ATOM 7769 CB ILE B 391 -28.500 -32.167 -85.952 1.00 36.23 B
ATOM 7770 CG2 ILE B 391 -28.904 -33.628 -85.813 1.00 34.08 B
ATOM 7771 CG1 ILE B 391 -29.690 -31.250 -86.062 1.00 34.56 B
ATOM 7772 CD1 ILE B 391 -30.858 -31.845 -85.422 1.00 34.76 B
ATOM 7773 C ILE B 391 -26.508 -32.597 -84.652 1.00 40.08 B
ATOM 7774 O ILE B 391 -26.300 -33.285 -83.673 1.00 41.10 B
ATOM 7775 N GLY B 392 -25.657 -32.559 -85.648 1.00 41.70 B
ATOM 7776 CA GLY B 392 -24.494 -33.408 -85.572 1.00 43.71 B
ATOM 7777 C GLY B 392 -23.637 -33.129 -84.371 1.00 44.83 B
ATOM 7778 O GLY B 392 -23.054 -34.045 -83.796 1.00 45.03 B
ATOM 7779 N ASP B 393 -23.546 -31.861 -83.981 1.00 46.53 B
ATOM 7780 CA ASP B 393 -22.687 -31.521 -82.848 1.00 47.43 B
ATOM 7781 CB ASP B 393 -22.439 -29.981 -82.797 1.00 47.56 B
ATOM 7782 CG ASP B 393 -21.268 -29.536 -83.741 1.00 46.94 B
ATOM 7783 OD1 ASP B 393 -20.445 -30.414 -84.114 1.00 45.82 B

ATOM 7784 OD2 ASP B 393 -21.165 -28.329 -84.093 1.00 45.52 B
ATOM 7785 C ASP B 393 -23.136 -32.141 -81.500 1.00 46.95 B
ATOM 7786 O ASP B 393 -22.303 -32.675 -80.753 1.00 46.93 B
ATOM 7787 N VAL B 394 -24.444 -32.140 -81.240 1.00 46.08 B
ATOM 7788 CA VAL B 394 -25.014 -32.726 -80.027 1.00 45.22 B
ATOM 7789 CB VAL B 394 -26.560 -32.754 -80.110 1.00 44.80 B
ATOM 7790 CG1 VAL B 394 -27.157 -33.043 -78.749 1.00 44.91 B
ATOM 7791 CG2 VAL B 394 -27.070 -31.429 -80.634 1.00 44.26 B
ATOM 7792 C VAL B 394 -24.505 -34.157 -79.843 1.00 44.93 B
ATOM 7793 O VAL B 394 -24.034 -34.528 -78.766 1.00 45.89 B
ATOM 7794 N LEU B 395 -24.594 -34.963 -80.893 1.00 43.94 B
ATOM 7795 CA LEU B 395 -24.136 -36.343 -80.805 1.00 44.05 B
ATOM 7796 CB LEU B 395 -24.522 -37.116 -82.069 1.00 44.18 B
ATOM 7797 CG LEU B 395 -25.977 -37.597 -82.106 1.00 44.50 B
ATOM 7798 CD1 LEU B 395 -26.930 -36.418 -81.873 1.00 44.22 B
ATOM 7799 CD2 LEU B 395 -26.259 -38.263 -83.430 1.00 44.12 B
ATOM 7800 C LEU B 395 -22.639 -36.439 -80.581 1.00 44.01 B
ATOM 7801 O LEU B 395 -22.159 -37.314 -79.861 1.00 44.83 B
ATOM 7802 N ALA B 396 -21.896 -35.531 -81.193 1.00 44.29 B
ATOM 7803 CA ALA B 396 -20.443 -35.542 -81.053 1.00 44.52 B
ATOM 7804 CB ALA B 396 -19.821 -34.542 -82.012 1.00 45.16 B
ATOM 7805 C ALA B 396 -20.045 -35.219 -79.618 1.00 43.93 B
ATOM 7806 O ALA B 396 -18.959 -35.578 -79.161 1.00 42.72 B
ATOM 7807 N LEU B 397 -20.933 -34.528 -78.915 1.00 44.27 B
ATOM 7808 CA LEU B 397 -20.680 -34.178 -77.525 1.00 44.74 B
ATOM 7809 CB LEU B 397 -21.800 -33.278 -76.979 1.00 43.83 B
ATOM 7810 CG LEU B 397 -21.739 -31.804 -77.384 1.00 44.20 B
ATOM 7811 CD1 LEU B 397 -23.018 -31.095 -76.984 1.00 45.03 B
ATOM 7812 CD2 LEU B 397 -20.533 -31.156 -76.728 1.00 44.20 B
ATOM 7813 C LEU B 397 -20.588 -35.439 -76.677 1.00 44.66 B
ATOM 7814 O LEU B 397 -19.823 -35.493 -75.718 1.00 45.87 B
ATOM 7815 N SER B 398 -21.356 -36.459 -77.050 1.00 43.67 B
ATOM 7816 CA SER B 398 -21.381 -37.713 -76.307 1.00 41.85 B
ATOM 7817 CB SER B 398 -22.772 -38.322 -76.400 1.00 39.18 B

ATOM 7818 OG SER B 398 -23.744 -37.291 -76.337 1.00 36.03 B
ATOM 7819 C SER B 398 -20.323 -38.696 -76.796 1.00 43.02 B
ATOM 7820 O SER B 398 -20.066 -39.714 -76.152 1.00 44.75 B
ATOM 7821 N VAL B 399 -19.708 -38.393 -77.932 1.00 42.91 B
ATOM 7822 CA VAL B 399 -18.661 -39.249 -78.455 1.00 43.29 B
ATOM 7823 CB VAL B 399 -18.612 -39.225 -80.012 1.00 43.95 B
ATOM 7824 CG1 VAL B 399 -17.455 -40.090 -80.510 1.00 43.28 B
ATOM 7825 CG2 VAL B 399 -19.920 -39.698 -80.600 1.00 42.33 B
ATOM 7826 C VAL B 399 -17.357 -38.674 -77.918 1.00 44.15 B
ATOM 7827 O VAL B 399 -16.390 -39.402 -77.710 1.00 43.53 B
ATOM 7828 N ALA B 400 -17.350 -37.360 -77.687 1.00 45.77 B
ATOM 7829 CA ALA B 400 -16.161 -36.672 -77.181 1.00 47.14 B
ATOM 7830 CB ALA B 400 -16.361 -35.154 -77.238 1.00 46.92 B
ATOM 7831 C ALA B 400 -15.813 -37.096 -75.754 1.00 48.11 B
ATOM 7832 O ALA B 400 -14.654 -37.008 -75.332 1.00 47.86 B
ATOM 7833 N THR B 401 -16.823 -37.567 -75.021 1.00 49.29 B
ATOM 7834 CA THR B 401 -16.636 -38.002 -73.637 1.00 50.13 B
ATOM 7835 CB THR B 401 -17.973 -38.354 -72.969 1.00 49.45 B
ATOM 7836 OG1 THR B 401 -18.546 -39.489 -73.621 1.00 50.61 B
ATOM 7837 CG2 THR B 401 -18.938 -37.182 -73.047 1.00 47.58 B
ATOM 7838 C THR B 401 -15.704 -39.203 -73.499 1.00 51.23 B
ATOM 7839 O THR B 401 -15.783 -40.168 -74.263 1.00 51.06 B
ATOM 7840 N PRO B 402 -14.798 -39.146 -72.512 1.00 52.34 B
ATOM 7841 CD PRO B 402 -14.542 -37.961 -71.673 1.00 52.35 B
ATOM 7842 CA PRO B 402 -13.818 -40.199 -72.230 1.00 53.15 B
ATOM 7843 CB PRO B 402 -13.070 -39.649 -71.017 1.00 53.50 B
ATOM 7844 CG PRO B 402 -13.099 -38.171 -71.258 1.00 52.92 B
ATOM 7845 C PRO B 402 -14.456 -41.556 -71.964 1.00 53.89 B
ATOM 7846 O PRO B 402 -13.850 -42.597 -72.205 1.00 53.29 B
ATOM 7847 N ALA B 403 -15.688 -41.538 -71.474 1.00 55.42 B
ATOM 7848 CA ALA B 403 -16.395 -42.777 -71.176 1.00 57.00 B
ATOM 7849 CB ALA B 403 -17.589 -42.486 -70.254 1.00 57.58 B
ATOM 7850 C ALA B 403 -16.859 -43.495 -72.451 1.00 57.43 B
ATOM 7851 O ALA B 403 -16.929 -44.723 -72.496 1.00 57.43 B

ATOM 7852 N HIS B 404 -17.164 -42.725 -73.490 1.00 58.02 B
ATOM 7853 CA HIS B 404 -17.618 -43.296 -74.754 1.00 57.16 B
ATOM 7854 CB HIS B 404 -18.413 -42.264 -75.541 1.00 57.50 B
ATOM 7855 CG HIS B 404 -19.073 -42.821 -76.762 1.00 58.12 B
ATOM 7856 CD2 HIS B 404 -18.607 -43.004 -78.020 1.00 58.01 B
ATOM 7857 ND1 HIS B 404 -20.364 -43.305 -76.757 1.00 57.82 B
ATOM 7858 CE1 HIS B 404 -20.664 -43.763 -77.960 1.00 57.48 B
ATOM 7859 NE2 HIS B 404 -19.615 -43.594 -78.745 1.00 57.57 B
ATOM 7860 C HIS B 404 -16.424 -43.741 -75.579 1.00 56.78 B
ATOM 7861 O HIS B 404 -16.467 -44.764 -76.251 1.00 56.35 B
ATOM 7862 N ALA B 405 -15.358 -42.952 -75.523 1.00 57.56 B
ATOM 7863 CA ALA B 405 -14.151 -43.276 -76.267 1.00 58.33 B
ATOM 7864 CB ALA B 405 -13.043 -42.232 -76.008 1.00 57.74 B
ATOM 7865 C ALA B 405 -13.688 -44.672 -75.870 1.00 58.52 B
ATOM 7866 O ALA B 405 -13.588 -45.537 -76.724 1.00 58.89 B
ATOM 7867 N HIS B 406 -13.425 -44.904 -74.587 1.00 58.47 B
ATOM 7868 CA HIS B 406 -12.991 -46.242 -74.185 1.00 58.12 B
ATOM 7869 CB HIS B 406 -12.591 -46.288 -72.703 1.00 57.75 B
ATOM 7870 CG HIS B 406 -13.065 -47.509 -71.984 1.00 57.89 B
ATOM 7871 CD2 HIS B 406 -12.393 -48.499 -71.347 1.00 57.46 B
ATOM 7872 ND1 HIS B 406 -14.405 -47.781 -71.814 1.00 57.56 B
ATOM 7873 CE1 HIS B 406 -14.541 -48.881 -71.099 1.00 56.66 B
ATOM 7874 NE2 HIS B 406 -13.336 -49.337 -70.801 1.00 56.67 B
ATOM 7875 C HIS B 406 -14.098 -47.231 -74.452 1.00 58.20 B
ATOM 7876 O HIS B 406 -13.833 -48.406 -74.701 1.00 58.09 B
ATOM 7877 N LYS B 407 -15.341 -46.759 -74.404 1.00 58.11 B
ATOM 7878 CA LYS B 407 -16.452 -47.653 -74.666 1.00 58.01 B
ATOM 7879 CB LYS B 407 -17.734 -46.901 -74.866 1.00 56.66 B
ATOM 7880 CG LYS B 407 -18.891 -47.731 -74.504 1.00 55.52 B
ATOM 7881 CD LYS B 407 -20.051 -46.830 -74.346 1.00 55.21 B
ATOM 7882 CE LYS B 407 -20.643 -46.976 -72.971 1.00 53.80 B
ATOM 7883 NZ LYS B 407 -22.070 -47.381 -73.075 1.00 53.45 B
ATOM 7884 C LYS B 407 -16.088 -48.333 -75.952 1.00 59.00 B
ATOM 7885 O LYS B 407 -16.117 -49.562 -76.083 1.00 60.31 B

ATOM 7886 N ILE B 408 -15.744 -47.530 -76.935 1.00 58.40 B
ATOM 7887 CA ILE B 408 -15.329 -48.155 -78.149 1.00 56.98 B
ATOM 7888 CB ILE B 408 -15.646 -47.320 -79.350 1.00 55.70 B
ATOM 7889 CG2 ILE B 408 -17.031 -46.790 -79.200 1.00 54.34 B
ATOM 7890 CG1 ILE B 408 -14.623 -46.199 -79.493 1.00 54.63 B
ATOM 7891 CD1 ILE B 408 -15.255 -44.887 -79.603 0.00 55.13 B
ATOM 7892 C ILE B 408 -13.861 -48.157 -77.934 1.00 57.37 B
ATOM 7893 O ILE B 408 -13.375 -47.916 -76.855 1.00 57.37 B
ATOM 7894 N GLY B 409 -13.125 -48.437 -79.004 1.00 58.19 B
ATOM 7895 CA GLY B 409 -11.680 -48.551 -78.928 1.00 59.90 B
ATOM 7896 C GLY B 409 -11.040 -47.215 -78.604 1.00 61.28 B
ATOM 7897 O GLY B 409 -11.690 -46.171 -78.670 1.00 62.22 B
ATOM 7898 N ALA B 410 -9.759 -47.248 -78.253 1.00 62.24 B
ATOM 7899 CA ALA B 410 -8.944 -46.041 -78.205 1.00 62.64 B
ATOM 7900 CB ALA B 410 -8.807 -45.280 -79.515 1.00 61.78 B
ATOM 7901 C ALA B 410 -9.598 -45.162 -77.143 1.00 62.77 B
ATOM 7902 O ALA B 410 -9.727 -43.950 -77.318 1.00 62.49 B
ATOM 7903 N LEU B 411 -10.009 -45.782 -76.042 1.00 63.84 B
ATOM 7904 CA LEU B 411 -9.627 -45.320 -74.713 1.00 64.50 B
ATOM 7905 CB LEU B 411 -10.668 -44.340 -74.169 1.00 63.34 B
ATOM 7906 CG LEU B 411 -10.146 -42.986 -73.683 1.00 62.33 B
ATOM 7907 CD1 LEU B 411 -11.006 -42.457 -72.545 1.00 61.95 B
ATOM 7908 CD2 LEU B 411 -8.691 -43.092 -73.256 1.00 60.85 B
ATOM 7909 C LEU B 411 -9.470 -46.497 -73.755 1.00 64.97 B
ATOM 7910 O LEU B 411 -10.444 -47.173 -73.426 1.00 64.70 B
ATOM 7911 N ALA B 412 -8.240 -46.738 -73.312 1.00 65.10 B
ATOM 7912 CA ALA B 412 -7.912 -47.979 -72.634 1.00 66.09 B
ATOM 7913 CB ALA B 412 -6.397 -48.272 -72.749 1.00 65.25 B
ATOM 7914 C ALA B 412 -8.259 -47.746 -71.174 1.00 66.63 B
ATOM 7915 O ALA B 412 -8.962 -48.512 -70.510 1.00 67.10 B
ATOM 7916 N ALA B 413 -7.736 -46.605 -70.744 1.00 66.93 B
ATOM 7917 CA ALA B 413 -7.801 -46.058 -69.396 1.00 66.23 B
ATOM 7918 CB ALA B 413 -6.384 -45.646 -68.990 1.00 66.58 B
ATOM 7919 C ALA B 413 -8.748 -44.870 -69.163 1.00 65.78 B

ATOM 7920 O ALA B 413 -8.404 -43.734 -69.489 1.00 65.77 B
ATOM 7921 N VAL B 414 -9.923 -45.130 -68.585 1.00 65.30 B
ATOM 7922 CA VAL B 414 -10.900 -44.075 -68.260 1.00 64.96 B
ATOM 7923 CB VAL B 414 -12.345 -44.599 -68.252 1.00 64.34 B
ATOM 7924 CG1 VAL B 414 -13.284 -43.560 -68.859 1.00 63.31 B
ATOM 7925 CG2 VAL B 414 -12.422 -45.925 -68.992 1.00 63.98 B
ATOM 7926 C VAL B 414 -10.546 -43.644 -66.836 1.00 65.56 B
ATOM 7927 O VAL B 414 -10.950 -44.279 -65.861 1.00 65.95 B
ATOM 7928 N THR B 415 -9.774 -42.569 -66.732 1.00 65.71 B
ATOM 7929 CA THR B 415 -9.310 -42.066 -65.447 1.00 65.07 B
ATOM 7930 CB THR B 415 -8.499 -40.765 -65.633 1.00 65.07 B
ATOM 7931 OG1 THR B 415 -9.079 -39.962 -66.675 1.00 65.35 B
ATOM 7932 CG2 THR B 415 -7.059 -41.113 -65.984 1.00 64.69 B
ATOM 7933 C THR B 415 -10.352 -41.814 -64.356 1.00 64.81 B
ATOM 7934 O THR B 415 -10.334 -42.459 -63.302 1.00 64.73 B
ATOM 7935 N ASP B 416 -11.257 -40.876 -64.614 1.00 64.24 B
ATOM 7936 CA ASP B 416 -12.142 -40.360 -63.577 1.00 64.16 B
ATOM 7937 CB ASP B 416 -12.988 -41.489 -62.984 1.00 65.07 B
ATOM 7938 CG ASP B 416 -14.362 -41.020 -62.549 1.00 66.08 B
ATOM 7939 OD1 ASP B 416 -14.471 -40.429 -61.454 1.00 67.97 B
ATOM 7940 OD2 ASP B 416 -15.391 -41.199 -63.235 1.00 66.60 B
ATOM 7941 C ASP B 416 -11.348 -39.667 -62.474 1.00 63.53 B
ATOM 7942 O ASP B 416 -11.702 -39.746 -61.298 1.00 62.94 B
ATOM 7943 N ASP B 417 -10.273 -38.989 -62.863 1.00 63.11 B
ATOM 7944 CA ASP B 417 -9.689 -37.939 -62.037 1.00 62.18 B
ATOM 7945 CB ASP B 417 -8.411 -37.399 -62.681 1.00 63.97 B
ATOM 7946 CG ASP B 417 -7.272 -37.265 -61.690 1.00 66.06 B
ATOM 7947 OD1 ASP B 417 -7.545 -36.991 -60.502 1.00 67.83 B
ATOM 7948 OD2 ASP B 417 -6.073 -37.416 -62.007 1.00 68.43 B
ATOM 7949 C ASP B 417 -10.675 -36.777 -62.096 1.00 60.98 B
ATOM 7950 O ASP B 417 -11.679 -36.838 -62.806 1.00 62.21 B
ATOM 7951 N THR B 418 -10.381 -35.719 -61.348 1.00 58.46 B
ATOM 7952 CA THR B 418 -10.784 -34.373 -61.734 1.00 55.97 B
ATOM 7953 CB THR B 418 -11.397 -33.721 -60.481 1.00 56.24 B

ATOM 7954 OG1 THR B 418 -11.318 -34.632 -59.377 1.00 56.68 B
ATOM 7955 CG2 THR B 418 -12.894 -33.520 -60.663 1.00 55.07 B
ATOM 7956 C THR B 418 -9.780 -33.424 -62.381 1.00 54.03 B
ATOM 7957 O THR B 418 -10.150 -32.361 -62.879 1.00 53.12 B
ATOM 7958 N GLU B 419 -8.509 -33.814 -62.371 1.00 52.23 B
ATOM 7959 CA GLU B 419 -7.462 -32.964 -62.851 1.00 50.42 B
ATOM 7960 CB GLU B 419 -6.058 -33.436 -62.431 1.00 49.50 B
ATOM 7961 CG GLU B 419 -5.629 -33.163 -61.024 1.00 49.02 B
ATOM 7962 CD GLU B 419 -4.141 -32.849 -60.920 1.00 48.95 B
ATOM 7963 OE1 GLU B 419 -3.340 -33.379 -61.727 1.00 47.91 B
ATOM 7964 OE2 GLU B 419 -3.779 -32.072 -60.008 1.00 48.03 B
ATOM 7965 C GLU B 419 -7.717 -33.312 -64.302 1.00 49.98 B
ATOM 7966 O GLU B 419 -7.743 -32.456 -65.163 1.00 50.39 B
ATOM 7967 N SER B 420 -7.960 -34.596 -64.555 1.00 48.66 B
ATOM 7968 CA SER B 420 -8.227 -35.068 -65.919 1.00 45.87 B
ATOM 7969 CB SER B 420 -8.158 -36.600 -66.014 1.00 46.10 B
ATOM 7970 OG SER B 420 -9.234 -37.200 -65.317 1.00 47.54 B
ATOM 7971 C SER B 420 -9.586 -34.620 -66.450 1.00 43.96 B
ATOM 7972 O SER B 420 -9.853 -34.698 -67.643 1.00 44.80 B
ATOM 7973 N ASP B 421 -10.454 -34.155 -65.571 1.00 41.70 B
ATOM 7974 CA ASP B 421 -11.765 -33.704 -66.008 1.00 41.21 B
ATOM 7975 CB ASP B 421 -12.749 -33.766 -64.842 1.00 42.75 B
ATOM 7976 CG ASP B 421 -14.213 -33.630 -65.279 1.00 44.83 B
ATOM 7977 OD1 ASP B 421 -15.094 -33.452 -64.407 1.00 46.60 B
ATOM 7978 OD2 ASP B 421 -14.499 -33.713 -66.488 1.00 45.76 B
ATOM 7979 C ASP B 421 -11.568 -32.266 -66.429 1.00 41.12 B
ATOM 7980 O ASP B 421 -12.295 -31.712 -67.260 1.00 42.14 B
ATOM 7981 N ILE B 422 -10.569 -31.658 -65.809 1.00 40.16 B
ATOM 7982 CA ILE B 422 -10.234 -30.269 -66.074 1.00 38.83 B
ATOM 7983 CB ILE B 422 -9.280 -29.753 -64.943 1.00 38.36 B
ATOM 7984 CG2 ILE B 422 -7.949 -29.303 -65.486 1.00 38.74 B
ATOM 7985 CG1 ILE B 422 -9.935 -28.569 -64.248 1.00 37.97 B
ATOM 7986 CD1 ILE B 422 -11.447 -28.680 -64.168 1.00 36.80 B
ATOM 7987 C ILE B 422 -9.642 -30.158 -67.479 1.00 37.59 B

ATOM 7988 O ILE B 422 -9.953 -29.250 -68.253 1.00 37.16 B
ATOM 7989 N ASN B 423 -8.801 -31.127 -67.800 1.00 36.28 B
ATOM 7990 CA ASN B 423 -8.189 -31.211 -69.105 1.00 35.53 B
ATOM 7991 CB ASN B 423 -7.264 -32.425 -69.159 1.00 34.67 B
ATOM 7992 CG ASN B 423 -5.955 -32.166 -68.485 1.00 35.28 B
ATOM 7993 OD1 ASN B 423 -5.461 -31.046 -68.500 1.00 36.94 B
ATOM 7994 ND2 ASN B 423 -5.367 -33.197 -67.907 1.00 36.64 B
ATOM 7995 C ASN B 423 -9.292 -31.339 -70.163 1.00 35.39 B
ATOM 7996 O ASN B 423 -9.384 -30.538 -71.100 1.00 34.09 B
ATOM 7997 N TYR B 424 -10.140 -32.346 -69.996 1.00 34.87 B
ATOM 7998 CA TYR B 424 -11.223 -32.574 -70.932 1.00 34.62 B
ATOM 7999 CB TYR B 424 -12.218 -33.597 -70.376 1.00 33.29 B
ATOM 8000 CG TYR B 424 -13.402 -33.853 -71.285 1.00 31.12 B
ATOM 8001 CD1 TYR B 424 -13.232 -34.463 -72.529 1.00 29.85 B
ATOM 8002 CE1 TYR B 424 -14.312 -34.680 -73.380 1.00 29.23 B
ATOM 8003 CD2 TYR B 424 -14.685 -33.467 -70.909 1.00 30.92 B
ATOM 8004 CE2 TYR B 424 -15.770 -33.677 -71.747 1.00 31.92 B
ATOM 8005 CZ TYR B 424 -15.580 -34.285 -72.985 1.00 30.59 B
ATOM 8006 OH TYR B 424 -16.668 -34.487 -73.807 1.00 29.32 B
ATOM 8007 C TYR B 424 -11.956 -31.283 -71.229 1.00 35.02 B
ATOM 8008 O TYR B 424 -12.002 -30.835 -72.374 1.00 36.35 B
ATOM 8009 N LEU B 425 -12.530 -30.687 -70.196 1.00 35.01 B
ATOM 8010 CA LEU B 425 -13.281 -29.453 -70.369 1.00 35.38 B
ATOM 8011 CB LEU B 425 -13.785 -28.953 -69.017 1.00 37.48 B
ATOM 8012 CG LEU B 425 -14.897 -29.805 -68.415 1.00 37.05 B
ATOM 8013 CD1 LEU B 425 -15.315 -29.248 -67.081 1.00 38.56 B
ATOM 8014 CD2 LEU B 425 -16.072 -29.810 -69.365 1.00 36.72 B
ATOM 8015 C LEU B 425 -12.519 -28.341 -71.076 1.00 34.49 B
ATOM 8016 O LEU B 425 -13.086 -27.661 -71.926 1.00 33.99 B
ATOM 8017 N LEU B 426 -11.246 -28.143 -70.732 1.00 33.40 B
ATOM 8018 CA LEU B 426 -10.479 -27.090 -71.389 1.00 32.55 B
ATOM 8019 CB LEU B 426 -9.027 -27.031 -70.907 1.00 31.03 B
ATOM 8020 CG LEU B 426 -8.302 -25.918 -71.684 1.00 29.78 B
ATOM 8021 CD1 LEU B 426 -8.820 -24.575 -71.194 1.00 27.95 B

ATOM 8022 CD2 LEU B 426 -6.799 -26.004 -71.523 1.00 29.05 B
ATOM 8023 C LEU B 426 -10.467 -27.376 -72.879 1.00 32.52 B
ATOM 8024 O LEU B 426 -10.743 -26.493 -73.704 1.00 31.88 B
ATOM 8025 N LYS B 427 -10.144 -28.626 -73.217 1.00 32.14 B
ATOM 8026 CA LYS B 427 -10.103 -29.024 -74.621 1.00 30.63 B
ATOM 8027 CB LYS B 427 -9.848 -30.493 -74.785 1.00 29.19 B
ATOM 8028 CG LYS B 427 -9.288 -30.733 -76.127 1.00 28.16 B
ATOM 8029 CD LYS B 427 -8.982 -32.166 -76.311 0.00 28.50 B
ATOM 8030 CE LYS B 427 -9.806 -32.723 -77.446 0.00 28.40 B
ATOM 8031 NZ LYS B 427 -11.098 -33.308 -76.996 0.00 28.34 B
ATOM 8032 C LYS B 427 -11.413 -28.723 -75.294 1.00 30.24 B
ATOM 8033 O LYS B 427 -11.481 -28.215 -76.407 1.00 30.12 B
ATOM 8034 N MET B 428 -12.478 -29.060 -74.614 1.00 29.28 B
ATOM 8035 CA MET B 428 -13.743 -28.756 -75.196 1.00 30.06 B
ATOM 8036 CB MET B 428 -14.845 -29.292 -74.308 1.00 30.96 B
ATOM 8037 CG MET B 428 -15.800 -30.111 -75.072 1.00 31.63 B
ATOM 8038 SD MET B 428 -15.085 -31.391 -76.080 1.00 33.07 B
ATOM 8039 CE MET B 428 -16.499 -31.733 -76.842 1.00 32.02 B
ATOM 8040 C MET B 428 -13.843 -27.245 -75.323 1.00 30.16 B
ATOM 8041 O MET B 428 -14.369 -26.710 -76.295 1.00 30.86 B
ATOM 8042 N ALA B 429 -13.305 -26.554 -74.329 1.00 30.18 B
ATOM 8043 CA ALA B 429 -13.369 -25.095 -74.324 1.00 29.75 B
ATOM 8044 CB ALA B 429 -12.736 -24.537 -73.050 1.00 28.84 B
ATOM 8045 C ALA B 429 -12.665 -24.530 -75.541 1.00 29.10 B
ATOM 8046 O ALA B 429 -13.186 -23.648 -76.239 1.00 27.33 B
ATOM 8047 N LEU B 430 -11.480 -25.074 -75.787 1.00 28.95 B
ATOM 8048 CA LEU B 430 -10.641 -24.672 -76.897 1.00 30.18 B
ATOM 8049 CB LEU B 430 -9.354 -25.483 -76.885 1.00 28.10 B
ATOM 8050 CG LEU B 430 -8.303 -25.213 -75.818 1.00 27.94 B
ATOM 8051 CD1 LEU B 430 -7.063 -26.036 -76.118 1.00 27.48 B
ATOM 8052 CD2 LEU B 430 -7.945 -23.742 -75.815 1.00 27.57 B
ATOM 8053 C LEU B 430 -11.297 -24.867 -78.257 1.00 31.93 B
ATOM 8054 O LEU B 430 -10.846 -24.341 -79.278 1.00 32.62 B
ATOM 8055 N GLU B 431 -12.368 -25.629 -78.271 1.00 32.20 B

ATOM 8056 CA GLU B 431 -13.009 -25.913 -79.521 1.00 32.58 B
ATOM 8057 CB GLU B 431 -13.088 -27.407 -79.635 1.00 34.24 B
ATOM 8058 CG GLU B 431 -14.041 -27.939 -80.611 1.00 37.60 B
ATOM 8059 CD GLU B 431 -14.231 -29.413 -80.383 1.00 39.86 B
ATOM 8060 OE1 GLU B 431 -13.360 -30.009 -79.697 1.00 39.77 B
ATOM 8061 OE2 GLU B 431 -15.237 -29.962 -80.885 1.00 41.54 B
ATOM 8062 C GLU B 431 -14.367 -25.284 -79.586 1.00 32.59 B
ATOM 8063 O GLU B 431 -14.809 -24.816 -80.625 1.00 33.76 B
ATOM 8064 N LYS B 432 -15.030 -25.248 -78.452 1.00 33.76 B
ATOM 8065 CA LYS B 432 -16.355 -24.676 -78.420 1.00 34.88 B
ATOM 8066 CB LYS B 432 -17.245 -25.476 -77.467 1.00 35.05 B
ATOM 8067 CG LYS B 432 -17.398 -26.941 -77.849 1.00 36.12 B
ATOM 8068 CD LYS B 432 -18.136 -27.109 -79.151 1.00 35.97 B
ATOM 8069 CE LYS B 432 -18.214 -28.577 -79.538 1.00 38.08 B
ATOM 8070 NZ LYS B 432 -19.021 -28.774 -80.784 1.00 38.61 B
ATOM 8071 C LYS B 432 -16.341 -23.211 -78.026 1.00 34.74 B
ATOM 8072 O LYS B 432 -16.804 -22.354 -78.782 1.00 35.29 B
ATOM 8073 N ILE B 433 -15.788 -22.908 -76.863 1.00 33.82 B
ATOM 8074 CA ILE B 433 -15.794 -21.528 -76.427 1.00 33.68 B
ATOM 8075 CB ILE B 433 -15.363 -21.422 -74.940 1.00 34.06 B
ATOM 8076 CG2 ILE B 433 -15.092 -19.971 -74.555 1.00 34.37 B
ATOM 8077 CG1 ILE B 433 -16.494 -21.951 -74.056 1.00 33.29 B
ATOM 8078 CD1 ILE B 433 -16.110 -22.125 -72.622 1.00 34.52 B
ATOM 8079 C ILE B 433 -14.984 -20.580 -77.310 1.00 33.18 B
ATOM 8080 O ILE B 433 -15.464 -19.498 -77.656 1.00 34.23 B
ATOM 8081 N ALA B 434 -13.777 -20.978 -77.700 1.00 31.10 B
ATOM 8082 CA ALA B 434 -12.936 -20.121 -78.542 1.00 29.87 B
ATOM 8083 CB ALA B 434 -11.674 -20.880 -78.953 1.00 28.78 B
ATOM 8084 C ALA B 434 -13.654 -19.598 -79.806 1.00 28.98 B
ATOM 8085 O ALA B 434 -13.396 -18.477 -80.283 1.00 28.78 B
ATOM 8086 N PHE B 435 -14.546 -20.422 -80.328 1.00 26.84 B
ATOM 8087 CA PHE B 435 -15.273 -20.109 -81.534 1.00 25.75 B
ATOM 8088 CB PHE B 435 -16.122 -21.300 -81.933 1.00 25.49 B
ATOM 8089 CG PHE B 435 -16.831 -21.107 -83.242 1.00 23.10 B

ATOM 8090 CD1 PHE B 435 -16.206 -21.493 -84.415 1.00 21.06 B
ATOM 8091 CD2 PHE B 435 -18.125 -20.575 -83.302 1.00 22.98 B
ATOM 8092 CE1 PHE B 435 -16.833 -21.367 -85.654 1.00 20.91 B
ATOM 8093 CE2 PHE B 435 -18.790 -20.430 -84.544 1.00 22.51 B
ATOM 8094 CZ PHE B 435 -18.133 -20.842 -85.736 1.00 20.85 B
ATOM 8095 C PHE B 435 -16.236 -18.952 -81.530 1.00 25.45 B
ATOM 8096 O PHE B 435 -16.327 -18.164 -82.470 1.00 27.28 B
ATOM 8097 N LEU B 436 -17.022 -18.924 -80.469 1.00 25.43 B
ATOM 8098 CA LEU B 436 -18.122 -17.958 -80.365 1.00 24.79 B
ATOM 8099 CB LEU B 436 -18.652 -17.862 -78.963 1.00 25.37 B
ATOM 8100 CG LEU B 436 -19.004 -19.080 -78.140 1.00 26.31 B
ATOM 8101 CD1 LEU B 436 -18.756 -18.628 -76.728 1.00 27.20 B
ATOM 8102 CD2 LEU B 436 -20.454 -19.544 -78.266 1.00 25.73 B
ATOM 8103 C LEU B 436 -17.952 -16.552 -80.850 1.00 24.86 B
ATOM 8104 O LEU B 436 -18.847 -16.007 -81.494 1.00 23.58 B
ATOM 8105 N PRO B 437 -16.858 -15.896 -80.453 1.00 24.50 B
ATOM 8106 CD PRO B 437 -15.973 -16.266 -79.344 1.00 24.01 B
ATOM 8107 CA PRO B 437 -16.603 -14.524 -80.882 1.00 24.63 B
ATOM 8108 CB PRO B 437 -15.291 -14.178 -80.167 1.00 24.04 B
ATOM 8109 CG PRO B 437 -14.725 -15.548 -79.712 1.00 24.90 B
ATOM 8110 C PRO B 437 -16.510 -14.489 -82.398 1.00 24.82 B
ATOM 8111 O PRO B 437 -17.087 -13.623 -83.031 1.00 25.40 B
ATOM 8112 N PHE B 438 -15.825 -15.468 -82.979 1.00 24.15 B
ATOM 8113 CA PHE B 438 -15.678 -15.495 -84.424 1.00 24.89 B
ATOM 8114 CB PHE B 438 -14.579 -16.482 -84.871 1.00 26.13 B
ATOM 8115 CG PHE B 438 -14.434 -16.586 -86.381 1.00 27.43 B
ATOM 8116 CD1 PHE B 438 -14.037 -15.486 -87.135 1.00 27.56 B
ATOM 8117 CD2 PHE B 438 -14.708 -17.779 -87.044 1.00 28.35 B
ATOM 8118 CE1 PHE B 438 -13.912 -15.572 -88.529 1.00 28.42 B
ATOM 8119 CE2 PHE B 438 -14.586 -17.871 -88.443 1.00 29.06 B
ATOM 8120 CZ PHE B 438 -14.186 -16.763 -89.182 1.00 27.63 B
ATOM 8121 C PHE B 438 -16.971 -15.830 -85.148 1.00 23.38 B
ATOM 8122 O PHE B 438 -17.254 -15.277 -86.209 1.00 23.91 B
ATOM 8123 N GLY B 439 -17.747 -16.735 -84.572 1.00 21.26 B

ATOM 8124 CA GLY B 439 -18.991 -17.133 -85.194 1.00 19.53 B
ATOM 8125 C GLY B 439 -20.076 -16.092 -85.047 1.00 19.17 B
ATOM 8126 O GLY B 439 -21.152 -16.222 -85.605 1.00 20.76 B
ATOM 8127 N TYR B 440 -19.792 -15.041 -84.300 1.00 18.91 B
ATOM 8128 CA TYR B 440 -20.775 -13.987 -84.076 1.00 18.78 B
ATOM 8129 CB TYR B 440 -20.816 -13.652 -82.575 1.00 16.19 B
ATOM 8130 CG TYR B 440 -21.637 -12.438 -82.193 1.00 12.19 B
ATOM 8131 CD1 TYR B 440 -23.022 -12.506 -82.120 1.00 11.52 B
ATOM 8132 CE1 TYR B 440 -23.780 -11.392 -81.785 1.00 9.97 B
ATOM 8133 CD2 TYR B 440 -21.027 -11.218 -81.918 1.00 12.07 B
ATOM 8134 CE2 TYR B 440 -21.778 -10.096 -81.584 1.00 10.64 B
ATOM 8135 CZ TYR B 440 -23.150 -10.190 -81.522 1.00 10.41 B
ATOM 8136 OH TYR B 440 -23.894 -9.075 -81.228 1.00 10.52 B
ATOM 8137 C TYR B 440 -20.312 -12.777 -84.850 1.00 19.52 B
ATOM 8138 O TYR B 440 -21.095 -11.921 -85.253 1.00 19.75 B
ATOM 8139 N LEU B 441 -19.004 -12.732 -85.034 1.00 21.68 B
ATOM 8140 CA LEU B 441 -18.314 -11.646 -85.701 1.00 23.31 B
ATOM 8141 CB LEU B 441 -16.832 -11.786 -85.329 1.00 23.63 B
ATOM 8142 CG LEU B 441 -15.559 -11.488 -86.112 1.00 25.20 B
ATOM 8143 CD1 LEU B 441 -14.415 -12.070 -85.276 1.00 23.68 B
ATOM 8144 CD2 LEU B 441 -15.557 -12.114 -87.500 1.00 22.81 B
ATOM 8145 C LEU B 441 -18.555 -11.627 -87.207 1.00 23.96 B
ATOM 8146 O LEU B 441 -19.067 -10.646 -87.750 1.00 23.83 B
ATOM 8147 N VAL B 442 -18.228 -12.737 -87.859 1.00 24.97 B
ATOM 8148 CA VAL B 442 -18.362 -12.889 -89.307 1.00 26.58 B
ATOM 8149 CB VAL B 442 -18.336 -14.370 -89.716 1.00 26.78 B
ATOM 8150 CG1 VAL B 442 -18.551 -14.495 -91.218 1.00 27.58 B
ATOM 8151 CG2 VAL B 442 -17.005 -14.994 -89.324 1.00 26.92 B
ATOM 8152 C VAL B 442 -19.569 -12.267 -89.993 1.00 27.65 B
ATOM 8153 O VAL B 442 -19.431 -11.428 -90.882 1.00 28.39 B
ATOM 8154 N ASP B 443 -20.758 -12.695 -89.607 1.00 29.08 B
ATOM 8155 CA ASP B 443 -21.944 -12.163 -90.249 1.00 30.69 B
ATOM 8156 CB ASP B 443 -23.115 -13.093 -90.059 1.00 31.66 B
ATOM 8157 CG ASP B 443 -23.369 -13.917 -91.266 1.00 30.76 B

ATOM 8158 OD1 ASP B 443 -22.427 -14.631 -91.701 1.00 28.61 B
ATOM 8159 OD2 ASP B 443 -24.517 -13.817 -91.749 1.00 31.75 B
ATOM 8160 C ASP B 443 -22.394 -10.777 -89.918 1.00 31.35 B
ATOM 8161 O ASP B 443 -23.290 -10.256 -90.576 1.00 32.39 B
ATOM 8162 N ALA B 444 -21.819 -10.155 -88.907 1.00 31.54 B
ATOM 8163 CA ALA B 444 -22.270 -8.810 -88.640 1.00 31.35 B
ATOM 8164 CB ALA B 444 -22.191 -8.467 -87.133 1.00 32.36 B
ATOM 8165 C ALA B 444 -21.340 -7.975 -89.469 1.00 29.92 B
ATOM 8166 O ALA B 444 -21.527 -6.781 -89.606 1.00 29.77 B
ATOM 8167 N TRP B 445 -20.327 -8.624 -90.025 1.00 28.78 B
ATOM 8168 CA TRP B 445 -19.416 -7.942 -90.921 1.00 28.35 B
ATOM 8169 CB TRP B 445 -18.142 -8.753 -91.187 1.00 27.63 B
ATOM 8170 CG TRP B 445 -17.245 -8.121 -92.234 1.00 27.61 B
ATOM 8171 CD2 TRP B 445 -17.145 -8.500 -93.612 1.00 27.55 B
ATOM 8172 CE2 TRP B 445 -16.249 -7.600 -94.231 1.00 26.71 B
ATOM 8173 CE3 TRP B 445 -17.729 -9.512 -94.384 1.00 27.44 B
ATOM 8174 CD1 TRP B 445 -16.421 -7.036 -92.079 1.00 27.03 B
ATOM 8175 NE1 TRP B 445 -15.822 -6.719 -93.274 1.00 26.02 B
ATOM 8176 CZ2 TRP B 445 -15.925 -7.684 -95.582 1.00 26.57 B
ATOM 8177 CZ3 TRP B 445 -17.407 -9.595 -95.722 1.00 27.37 B
ATOM 8178 CH2 TRP B 445 -16.513 -8.685 -96.310 1.00 27.49 B
ATOM 8179 C TRP B 445 -20.216 -7.861 -92.217 1.00 28.10 B
ATOM 8180 O TRP B 445 -20.450 -6.776 -92.758 1.00 28.07 B
ATOM 8181 N ARG B 446 -20.673 -9.022 -92.684 1.00 27.92 B
ATOM 8182 CA ARG B 446 -21.446 -9.104 -93.925 1.00 28.22 B
ATOM 8183 CB ARG B 446 -21.719 -10.564 -94.319 1.00 26.93 B
ATOM 8184 CG ARG B 446 -20.529 -11.241 -94.978 1.00 26.39 B
ATOM 8185 CD ARG B 446 -20.877 -12.547 -95.670 1.00 25.54 B
ATOM 8186 NE ARG B 446 -21.443 -13.534 -94.765 1.00 26.51 B
ATOM 8187 CZ ARG B 446 -21.274 -14.847 -94.900 1.00 28.04 B
ATOM 8188 NH1 ARG B 446 -20.552 -15.331 -95.896 1.00 28.97 B
ATOM 8189 NH2 ARG B 446 -21.838 -15.687 -94.046 1.00 28.42 B
ATOM 8190 C ARG B 446 -22.754 -8.332 -93.949 1.00 28.10 B
ATOM 8191 O ARG B 446 -23.181 -7.886 -95.011 1.00 29.58 B

ATOM 8192 N TRP B 447 -23.413 -8.177 -92.809 1.00 27.47 B
ATOM 8193 CA TRP B 447 -24.652 -7.411 -92.822 1.00 27.09 B
ATOM 8194 CB TRP B 447 -25.392 -7.516 -91.477 1.00 30.41 B
ATOM 8195 CG TRP B 447 -25.809 -8.905 -91.106 1.00 33.86 B
ATOM 8196 CD2 TRP B 447 -26.144 -9.380 -89.798 1.00 36.09 B
ATOM 8197 CE2 TRP B 447 -26.467 -10.748 -89.921 1.00 36.50 B
ATOM 8198 CE3 TRP B 447 -26.199 -8.783 -88.532 1.00 38.05 B
ATOM 8199 CD1 TRP B 447 -25.946 -9.968 -91.942 1.00 34.58 B
ATOM 8200 NE1 TRP B 447 -26.339 -11.084 -91.240 1.00 35.57 B
ATOM 8201 CZ2 TRP B 447 -26.840 -11.530 -88.829 1.00 37.81 B
ATOM 8202 CZ3 TRP B 447 -26.571 -9.563 -87.441 1.00 38.18 B
ATOM 8203 CH2 TRP B 447 -26.886 -10.922 -87.599 1.00 38.72 B
ATOM 8204 C TRP B 447 -24.292 -5.953 -93.089 1.00 25.01 B
ATOM 8205 O TRP B 447 -25.074 -5.206 -93.666 1.00 21.75 B
ATOM 8206 N GLY B 448 -23.086 -5.574 -92.669 1.00 24.18 B
ATOM 8207 CA GLY B 448 -22.629 -4.201 -92.819 1.00 24.09 B
ATOM 8208 C GLY B 448 -22.315 -3.868 -94.248 1.00 23.45 B
ATOM 8209 O GLY B 448 -22.481 -2.736 -94.711 1.00 23.05 B
ATOM 8210 N VAL B 449 -21.853 -4.907 -94.925 1.00 23.12 B
ATOM 8211 CA VAL B 449 -21.506 -4.866 -96.322 1.00 21.16 B
ATOM 8212 CB VAL B 449 -20.701 -6.112 -96.624 1.00 21.77 B
ATOM 8213 CG1 VAL B 449 -20.594 -6.338 -98.128 1.00 21.10 B
ATOM 8214 CG2 VAL B 449 -19.332 -5.973 -95.958 1.00 20.88 B
ATOM 8215 C VAL B 449 -22.790 -4.820 -97.109 1.00 19.65 B
ATOM 8216 O VAL B 449 -23.048 -3.887 -97.840 1.00 19.35 B
ATOM 8217 N PHE B 450 -23.623 -5.824 -96.915 1.00 18.54 B
ATOM 8218 CA PHE B 450 -24.903 -5.832 -97.594 1.00 18.03 B
ATOM 8219 CB PHE B 450 -25.729 -7.044 -97.141 1.00 16.53 B
ATOM 8220 CG PHE B 450 -25.237 -8.357 -97.690 1.00 17.14 B
ATOM 8221 CD1 PHE B 450 -25.327 -9.522 -96.936 1.00 16.57 B
ATOM 8222 CD2 PHE B 450 -24.723 -8.440 -98.986 1.00 17.94 B
ATOM 8223 CE1 PHE B 450 -24.914 -10.751 -97.463 1.00 16.47 B
ATOM 8224 CE2 PHE B 450 -24.308 -9.664 -99.526 1.00 16.59 B
ATOM 8225 CZ PHE B 450 -24.405 -10.819 -98.765 1.00 16.19 B

ATOM 8226 C PHE B 450 -25.688 -4.532 -97.331 1.00 18.27 B
ATOM 8227 O PHE B 450 -26.480 -4.108 -98.159 1.00 17.78 B
ATOM 8228 N ALA B 451 -25.442 -3.890 -96.196 1.00 20.59 B
ATOM 8229 CA ALA B 451 -26.164 -2.670 -95.828 1.00 22.16 B
ATOM 8230 CB ALA B 451 -26.322 -2.608 -94.313 1.00 23.27 B
ATOM 8231 C ALA B 451 -25.521 -1.382 -96.335 1.00 22.89 B
ATOM 8232 O ALA B 451 -26.155 -0.318 -96.358 1.00 21.86 B
ATOM 8233 N GLY B 452 -24.249 -1.487 -96.709 1.00 23.51 B
ATOM 8234 CA GLY B 452 -23.539 -0.342 -97.245 1.00 26.27 B
ATOM 8235 C GLY B 452 -22.743 0.434 -96.229 1.00 28.57 B
ATOM 8236 O GLY B 452 -22.056 1.412 -96.539 1.00 29.16 B
ATOM 8237 N ARG B 453 -22.843 0.009 -94.984 1.00 31.09 B
ATOM 8238 CA ARG B 453 -22.101 0.710 -93.973 1.00 31.94 B
ATOM 8239 CB ARG B 453 -22.720 0.453 -92.621 1.00 35.39 B
ATOM 8240 CG ARG B 453 -23.723 1.566 -92.378 1.00 39.90 B
ATOM 8241 CD ARG B 453 -25.150 1.103 -92.266 1.00 42.86 B
ATOM 8242 NE ARG B 453 -26.053 2.253 -92.263 1.00 45.10 B
ATOM 8243 CZ ARG B 453 -27.260 2.254 -91.708 1.00 46.20 B
ATOM 8244 NH1 ARG B 453 -27.689 1.157 -91.111 1.00 45.68 B
ATOM 8245 NH2 ARG B 453 -28.030 3.341 -91.750 1.00 46.35 B
ATOM 8246 C ARG B 453 -20.627 0.390 -94.046 1.00 30.62 B
ATOM 8247 O ARG B 453 -19.771 1.213 -93.712 1.00 30.49 B
ATOM 8248 N THR B 454 -20.341 -0.804 -94.531 1.00 29.31 B
ATOM 8249 CA THR B 454 -18.980 -1.221 -94.747 1.00 28.90 B
ATOM 8250 CB THR B 454 -18.669 -2.581 -94.095 1.00 29.00 B
ATOM 8251 OG1 THR B 454 -18.810 -2.498 -92.667 1.00 28.05 B
ATOM 8252 CG2 THR B 454 -17.250 -2.983 -94.428 1.00 29.80 B
ATOM 8253 C THR B 454 -18.887 -1.362 -96.271 1.00 29.03 B
ATOM 8254 O THR B 454 -19.242 -2.404 -96.824 1.00 31.15 B
ATOM 8255 N PRO B 455 -18.465 -0.293 -96.968 1.00 27.39 B
ATOM 8256 CD PRO B 455 -18.318 1.058 -96.401 1.00 27.69 B
ATOM 8257 CA PRO B 455 -18.311 -0.263 -98.429 1.00 26.16 B
ATOM 8258 CB PRO B 455 -18.287 1.226 -98.740 1.00 26.84 B
ATOM 8259 CG PRO B 455 -17.641 1.802 -97.519 1.00 26.75 B

ATOM 8260 C PRO B 455 -17.012 -0.964 -98.827 1.00 25.11 B
ATOM 8261 O PRO B 455 -16.260 -1.408 -97.965 1.00 27.57 B
ATOM 8262 N PRO B 456 -16.716 -1.072 -100.125 1.00 22.92 B
ATOM 8263 CD PRO B 456 -17.495 -0.978 -101.370 1.00 22.30 B
ATOM 8264 CA PRO B 456 -15.454 -1.769 -100.354 1.00 21.07 B
ATOM 8265 CB PRO B 456 -15.436 -1.939 -101.873 1.00 21.25 B
ATOM 8266 CG PRO B 456 -16.873 -2.067 -102.208 1.00 21.34 B
ATOM 8267 C PRO B 456 -14.236 -1.014 -99.821 1.00 19.75 B
ATOM 8268 O PRO B 456 -13.196 -1.606 -99.544 1.00 19.52 B
ATOM 8269 N SER B 457 -14.374 0.290 -99.646 1.00 18.19 B
ATOM 8270 CA SER B 457 -13.249 1.092 -99.193 1.00 17.57 B
ATOM 8271 CB SER B 457 -13.533 2.586 -99.447 1.00 17.15 B
ATOM 8272 OG SER B 457 -14.432 3.172 -98.520 1.00 15.07 B
ATOM 8273 C SER B 457 -12.868 0.852 -97.731 1.00 18.99 B
ATOM 8274 O SER B 457 -11.911 1.440 -97.223 1.00 19.95 B
ATOM 8275 N ARG B 458 -13.635 -0.015 -97.065 1.00 19.37 B
ATOM 8276 CA ARG B 458 -13.436 -0.398 -95.649 1.00 18.91 B
ATOM 8277 CB ARG B 458 -14.382 0.333 -94.733 1.00 17.47 B
ATOM 8278 CG ARG B 458 -13.987 1.682 -94.430 1.00 16.79 B
ATOM 8279 CD ARG B 458 -14.910 2.230 -93.423 1.00 13.45 B
ATOM 8280 NE ARG B 458 -15.432 3.502 -93.888 1.00 11.82 B
ATOM 8281 CZ ARG B 458 -16.720 3.751 -94.051 1.00 10.28 B
ATOM 8282 NH1 ARG B 458 -17.585 2.799 -93.778 1.00 8.61 B
ATOM 8283 NH2 ARG B 458 -17.132 4.941 -94.476 1.00 9.95 B
ATOM 8284 C ARG B 458 -13.735 -1.859 -95.418 1.00 18.80 B
ATOM 8285 O ARG B 458 -14.377 -2.209 -94.435 1.00 18.99 B
ATOM 8286 N TYR B 459 -13.287 -2.716 -96.314 1.00 17.72 B
ATOM 8287 CA TYR B 459 -13.554 -4.126 -96.156 1.00 16.97 B
ATOM 8288 CB TYR B 459 -13.365 -4.883 -97.479 1.00 18.60 B
ATOM 8289 CG TYR B 459 -14.590 -5.038 -98.344 1.00 18.17 B
ATOM 8290 CD1 TYR B 459 -14.546 -5.838 -99.478 1.00 18.28 B
ATOM 8291 CE1 TYR B 459 -15.662 -5.984 -100.306 1.00 18.06 B
ATOM 8292 CD2 TYR B 459 -15.784 -4.378 -98.046 1.00 18.79 B
ATOM 8293 CE2 TYR B 459 -16.906 -4.513 -98.858 1.00 18.58 B

ATOM 8294 CZ TYR B 459 -16.838 -5.322 -99.988 1.00 19.11 B
ATOM 8295 OH TYR B 459 -17.952 -5.495 -100.781 1.00 19.92 B
ATOM 8296 C TYR B 459 -12.647 -4.736 -95.104 1.00 16.53 B
ATOM 8297 O TYR B 459 -13.109 -5.492 -94.254 1.00 18.21 B
ATOM 8298 N ASN B 460 -11.358 -4.410 -95.164 1.00 13.67 B
ATOM 8299 CA ASN B 460 -10.387 -4.951 -94.220 1.00 12.17 B
ATOM 8300 CB ASN B 460 -9.015 -5.033 -94.875 1.00 9.92 B
ATOM 8301 CG ASN B 460 -8.423 -6.422 -94.802 1.00 9.97 B
ATOM 8302 OD1 ASN B 460 -9.098 -7.415 -95.109 1.00 11.28 B
ATOM 8303 ND2 ASN B 460 -7.158 -6.510 -94.395 1.00 10.20 B
ATOM 8304 C ASN B 460 -10.297 -4.159 -92.912 1.00 12.45 B
ATOM 8305 O ASN B 460 -9.934 -4.700 -91.858 1.00 12.68 B
ATOM 8306 N PHE B 461 -10.633 -2.880 -92.999 1.00 11.59 B
ATOM 8307 CA PHE B 461 -10.643 -1.987 -91.851 1.00 11.11 B
ATOM 8308 CB PHE B 461 -10.969 -0.575 -92.337 1.00 10.20 B
ATOM 8309 CG PHE B 461 -11.096 0.450 -91.247 1.00 8.06 B
ATOM 8310 CD1 PHE B 461 -10.039 0.733 -90.396 1.00 7.57 B
ATOM 8311 CD2 PHE B 461 -12.254 1.199 -91.131 1.00 8.86 B
ATOM 8312 CE1 PHE B 461 -10.139 1.758 -89.455 1.00 6.51 B
ATOM 8313 CE2 PHE B 461 -12.353 2.220 -90.190 1.00 9.42 B
ATOM 8314 CZ PHE B 461 -11.292 2.499 -89.355 1.00 6.98 B
ATOM 8315 C PHE B 461 -11.693 -2.454 -90.828 1.00 11.45 B
ATOM 8316 O PHE B 461 -11.388 -2.583 -89.633 1.00 12.79 B
ATOM 8317 N ASP B 462 -12.915 -2.718 -91.297 1.00 10.69 B
ATOM 8318 CA ASP B 462 -13.997 -3.144 -90.421 1.00 9.65 B
ATOM 8319 CB ASP B 462 -15.361 -2.834 -91.046 1.00 8.87 B
ATOM 8320 CG ASP B 462 -15.729 -1.363 -90.947 1.00 10.25 B
ATOM 8321 OD1 ASP B 462 -15.140 -0.658 -90.110 1.00 12.71 B
ATOM 8322 OD2 ASP B 462 -16.618 -0.895 -91.685 1.00 10.71 B
ATOM 8323 C ASP B 462 -13.916 -4.613 -90.070 1.00 9.90 B
ATOM 8324 O ASP B 462 -14.607 -5.074 -89.172 1.00 10.30 B
ATOM 8325 N TRP B 463 -13.069 -5.350 -90.779 1.00 10.85 B
ATOM 8326 CA TRP B 463 -12.911 -6.778 -90.518 1.00 10.82 B
ATOM 8327 CB TRP B 463 -12.174 -7.462 -91.687 1.00 6.60 B

ATOM 8328 CG TRP B 463 -11.847 -8.949 -91.525 1.00 2.24 B
ATOM 8329 CD2 TRP B 463 -12.777 -10.038 -91.422 1.00 1.00 B
ATOM 8330 CE2 TRP B 463 -12.020 -11.236 -91.340 1.00 1.00 B
ATOM 8331 CE3 TRP B 463 -14.173 -10.119 -91.393 1.00 1.24 B
ATOM 8332 CD1 TRP B 463 -10.597 -9.518 -91.500 1.00 1.00 B
ATOM 8333 NE1 TRP B 463 -10.697 -10.891 -91.391 1.00 1.00 B
ATOM 8334 CZ2 TRP B 463 -12.613 -12.493 -91.229 1.00 1.00 B
ATOM 8335 CZ3 TRP B 463 -14.762 -11.376 -91.282 1.00 1.00 B
ATOM 8336 CH2 TRP B 463 -13.976 -12.546 -91.201 1.00 1.00 B
ATOM 8337 C TRP B 463 -12.092 -6.829 -89.255 1.00 12.31 B
ATOM 8338 O TRP B 463 -12.524 -7.384 -88.261 1.00 14.39 B
ATOM 8339 N TRP B 464 -10.919 -6.215 -89.282 1.00 13.97 B
ATOM 8340 CA TRP B 464 -10.077 -6.217 -88.109 1.00 15.84 B
ATOM 8341 CB TRP B 464 -8.669 -5.760 -88.499 1.00 16.92 B
ATOM 8342 CG TRP B 464 -8.033 -6.773 -89.426 1.00 18.63 B
ATOM 8343 CD2 TRP B 464 -7.526 -8.066 -89.061 1.00 18.56 B
ATOM 8344 CE2 TRP B 464 -7.190 -8.731 -90.257 1.00 18.17 B
ATOM 8345 CE3 TRP B 464 -7.333 -8.729 -87.836 1.00 18.64 B
ATOM 8346 CD1 TRP B 464 -7.970 -6.712 -90.794 1.00 18.34 B
ATOM 8347 NE1 TRP B 464 -7.468 -7.884 -91.296 1.00 17.12 B
ATOM 8348 CZ2 TRP B 464 -6.672 -10.022 -90.268 1.00 19.67 B
ATOM 8349 CZ3 TRP B 464 -6.821 -10.009 -87.849 1.00 19.25 B
ATOM 8350 CH2 TRP B 464 -6.496 -10.645 -89.061 1.00 19.84 B
ATOM 8351 C TRP B 464 -10.650 -5.430 -86.915 1.00 17.32 B
ATOM 8352 O TRP B 464 -10.269 -5.696 -85.770 1.00 17.63 B
ATOM 8353 N TYR B 465 -11.553 -4.472 -87.152 1.00 17.56 B
ATOM 8354 CA TYR B 465 -12.157 -3.777 -86.017 1.00 17.31 B
ATOM 8355 CB TYR B 465 -13.174 -2.718 -86.443 1.00 16.68 B
ATOM 8356 CG TYR B 465 -14.106 -2.288 -85.315 1.00 16.09 B
ATOM 8357 CD1 TYR B 465 -13.764 -1.258 -84.440 1.00 15.26 B
ATOM 8358 CE1 TYR B 465 -14.614 -0.891 -83.398 1.00 15.31 B
ATOM 8359 CD2 TYR B 465 -15.323 -2.937 -85.114 1.00 15.98 B
ATOM 8360 CE2 TYR B 465 -16.175 -2.578 -84.077 1.00 16.08 B
ATOM 8361 CZ TYR B 465 -15.816 -1.561 -83.223 1.00 14.98 B

ATOM 8362 OH TYR B 465 -16.656 -1.235 -82.192 1.00 14.24 B
ATOM 8363 C TYR B 465 -12.903 -4.906 -85.327 1.00 17.91 B
ATOM 8364 O TYR B 465 -12.767 -5.122 -84.127 1.00 20.45 B
ATOM 8365 N LEU B 466 -13.680 -5.649 -86.105 1.00 16.73 B
ATOM 8366 CA LEU B 466 -14.454 -6.754 -85.551 1.00 15.95 B
ATOM 8367 CB LEU B 466 -15.457 -7.273 -86.584 1.00 12.27 B
ATOM 8368 CG LEU B 466 -16.527 -6.248 -86.964 1.00 12.62 B
ATOM 8369 CD1 LEU B 466 -17.332 -6.727 -88.139 1.00 13.39 B
ATOM 8370 CD2 LEU B 466 -17.431 -6.009 -85.802 1.00 13.73 B
ATOM 8371 C LEU B 466 -13.617 -7.911 -85.033 1.00 16.17 B
ATOM 8372 O LEU B 466 -13.953 -8.512 -84.021 1.00 18.06 B
ATOM 8373 N ARG B 467 -12.531 -8.226 -85.720 1.00 15.77 B
ATOM 8374 CA ARG B 467 -11.695 -9.336 -85.314 1.00 15.15 B
ATOM 8375 CB ARG B 467 -10.672 -9.649 -86.400 1.00 13.73 B
ATOM 8376 CG ARG B 467 -11.282 -10.268 -87.652 1.00 10.77 B
ATOM 8377 CD ARG B 467 -11.322 -11.799 -87.586 1.00 9.35 B
ATOM 8378 NE ARG B 467 -10.023 -12.381 -87.904 1.00 6.18 B
ATOM 8379 CZ ARG B 467 -9.776 -13.680 -87.936 1.00 5.10 B
ATOM 8380 NH1 ARG B 467 -8.565 -14.111 -88.243 1.00 6.30 B
ATOM 8381 NH2 ARG B 467 -10.733 -14.545 -87.653 1.00 2.97 B
ATOM 8382 C ARG B 467 -11.009 -8.994 -84.022 1.00 16.80 B
ATOM 8383 O ARG B 467 -10.925 -9.822 -83.130 1.00 19.19 B
ATOM 8384 N THR B 468 -10.519 -7.770 -83.909 1.00 17.47 B
ATOM 8385 CA THR B 468 -9.861 -7.369 -82.681 1.00 18.21 B
ATOM 8386 CB THR B 468 -9.012 -6.105 -82.896 1.00 18.35 B
ATOM 8387 OG1 THR B 468 -7.881 -6.437 -83.707 1.00 19.75 B
ATOM 8388 CG2 THR B 468 -8.514 -5.550 -81.570 1.00 19.08 B
ATOM 8389 C THR B 468 -10.927 -7.126 -81.611 1.00 18.21 B
ATOM 8390 O THR B 468 -10.761 -7.509 -80.454 1.00 18.55 B
ATOM 8391 N LYS B 469 -12.040 -6.525 -82.008 1.00 17.94 B
ATOM 8392 CA LYS B 469 -13.096 -6.252 -81.050 1.00 17.69 B
ATOM 8393 CB LYS B 469 -14.272 -5.531 -81.694 1.00 17.39 B
ATOM 8394 CG LYS B 469 -15.495 -5.463 -80.777 1.00 15.93 B
ATOM 8395 CD LYS B 469 -16.515 -4.481 -81.308 1.00 15.70 B

ATOM 8396 CE LYS B 469 -17.760 -4.498 -80.482 1.00 14.28 B
ATOM 8397 NZ LYS B 469 -18.665 -3.386 -80.878 1.00 16.10 B
ATOM 8398 C LYS B 469 -13.632 -7.478 -80.361 1.00 17.72 B
ATOM 8399 O LYS B 469 -13.901 -7.429 -79.176 1.00 20.51 B
ATOM 8400 N TYR B 470 -13.803 -8.575 -81.087 1.00 16.97 B
ATOM 8401 CA TYR B 470 -14.337 -9.778 -80.476 1.00 16.42 B
ATOM 8402 CB TYR B 470 -15.442 -10.358 -81.330 1.00 14.53 B
ATOM 8403 CG TYR B 470 -16.686 -9.514 -81.338 1.00 14.21 B
ATOM 8404 CD1 TYR B 470 -16.846 -8.464 -82.237 1.00 15.23 B
ATOM 8405 CE1 TYR B 470 -18.000 -7.687 -82.218 1.00 15.28 B
ATOM 8406 CD2 TYR B 470 -17.702 -9.755 -80.434 1.00 13.36 B
ATOM 8407 CE2 TYR B 470 -18.842 -8.984 -80.408 1.00 12.62 B
ATOM 8408 CZ TYR B 470 -18.989 -7.956 -81.291 1.00 14.24 B
ATOM 8409 OH TYR B 470 -20.118 -7.181 -81.218 1.00 16.73 B
ATOM 8410 C TYR B 470 -13.331 -10.868 -80.149 1.00 18.28 B
ATOM 8411 O TYR B 470 -13.201 -11.258 -78.991 1.00 20.26 B
ATOM 8412 N GLN B 471 -12.626 -11.376 -81.148 1.00 17.89 B
ATOM 8413 CA GLN B 471 -11.644 -12.427 -80.891 1.00 18.49 B
ATOM 8414 CB GLN B 471 -11.126 -13.025 -82.195 1.00 19.17 B
ATOM 8415 CG GLN B 471 -12.047 -14.007 -82.856 1.00 20.51 B
ATOM 8416 CD GLN B 471 -11.431 -14.582 -84.095 1.00 20.23 B
ATOM 8417 OE1 GLN B 471 -11.146 -13.851 -85.050 1.00 21.58 B
ATOM 8418 NE2 GLN B 471 -11.200 -15.893 -84.092 1.00 17.72 B
ATOM 8419 C GLN B 471 -10.435 -11.942 -80.105 1.00 18.59 B
ATOM 8420 O GLN B 471 -9.758 -12.744 -79.445 1.00 19.35 B
ATOM 8421 N GLY B 472 -10.148 -10.644 -80.193 1.00 16.68 B
ATOM 8422 CA GLY B 472 -8.993 -10.115 -79.500 1.00 15.88 B
ATOM 8423 C GLY B 472 -7.710 -10.660 -80.091 1.00 15.90 B
ATOM 8424 O GLY B 472 -6.778 -11.044 -79.366 1.00 13.76 B
ATOM 8425 N ILE B 473 -7.681 -10.731 -81.423 1.00 16.35 B
ATOM 8426 CA ILE B 473 -6.498 -11.188 -82.139 1.00 15.07 B
ATOM 8427 CB ILE B 473 -6.737 -12.499 -82.851 1.00 15.51 B
ATOM 8428 CG2 ILE B 473 -7.143 -13.561 -81.842 1.00 15.44 B
ATOM 8429 CG1 ILE B 473 -7.801 -12.316 -83.924 1.00 16.05 B

ATOM 8430 CD1 ILE B 473 -7.915 -13.512 -84.850 1.00 18.20 B
ATOM 8431 C ILE B 473 -6.107 -10.136 -83.157 1.00 14.70 B
ATOM 8432 O ILE B 473 -6.859 -9.201 -83.410 1.00 12.10 B
ATOM 8433 N CYS B 474 -4.927 -10.292 -83.742 1.00 16.48 B
ATOM 8434 CA CYS B 474 -4.442 -9.323 -84.714 1.00 17.71 B
ATOM 8435 CB CYS B 474 -3.744 -8.193 -83.972 1.00 18.07 B
ATOM 8436 SG CYS B 474 -2.212 -8.726 -83.184 1.00 20.09 B
ATOM 8437 C CYS B 474 -3.483 -9.902 -85.764 1.00 17.70 B
ATOM 8438 O CYS B 474 -2.756 -10.860 -85.507 1.00 17.70 B
ATOM 8439 N PRO B 475 -3.465 -9.306 -86.962 1.00 17.89 B
ATOM 8440 CD PRO B 475 -4.305 -8.166 -87.362 1.00 17.90 B
ATOM 8441 CA PRO B 475 -2.604 -9.747 -88.062 1.00 17.02 B
ATOM 8442 CB PRO B 475 -3.037 -8.842 -89.217 1.00 18.67 B
ATOM 8443 CG PRO B 475 -3.547 -7.600 -88.514 1.00 18.70 B
ATOM 8444 C PRO B 475 -1.135 -9.605 -87.698 1.00 16.05 B
ATOM 8445 O PRO B 475 -0.700 -8.549 -87.231 1.00 14.46 B
ATOM 8446 N PRO B 476 -0.358 -10.681 -87.899 1.00 15.95 B
ATOM 8447 CD PRO B 476 -0.865 -11.943 -88.480 1.00 15.73 B
ATOM 8448 CA PRO B 476 1.085 -10.772 -87.615 1.00 15.07 B
ATOM 8449 CB PRO B 476 1.346 -12.265 -87.662 1.00 15.45 B
ATOM 8450 CG PRO B 476 0.405 -12.724 -88.746 1.00 17.46 B
ATOM 8451 C PRO B 476 1.881 -10.071 -88.670 1.00 14.61 B
ATOM 8452 O PRO B 476 3.098 -10.212 -88.748 1.00 14.00 B
ATOM 8453 N VAL B 477 1.167 -9.267 -89.444 1.00 14.82 B
ATOM 8454 CA VAL B 477 1.763 -8.601 -90.574 1.00 14.52 B
ATOM 8455 CB VAL B 477 1.819 -9.732 -91.645 1.00 15.30 B
ATOM 8456 CG1 VAL B 477 0.546 -9.732 -92.477 1.00 16.78 B
ATOM 8457 CG2 VAL B 477 3.078 -9.686 -92.424 1.00 15.89 B
ATOM 8458 C VAL B 477 0.890 -7.358 -90.954 1.00 13.07 B
ATOM 8459 O VAL B 477 -0.332 -7.404 -90.843 1.00 12.31 B
ATOM 8460 N THR B 478 1.483 -6.240 -91.372 1.00 11.02 B
ATOM 8461 CA THR B 478 0.633 -5.086 -91.692 1.00 9.02 B
ATOM 8462 CB THR B 478 1.450 -3.873 -92.188 1.00 8.65 B
ATOM 8463 OG1 THR B 478 2.386 -3.475 -91.189 1.00 11.08 B

ATOM 8464 CG2 THR B 478 0.532 -2.712 -92.462 1.00 6.02 B
ATOM 8465 C THR B 478 -0.379 -5.463 -92.770 1.00 8.96 B
ATOM 8466 O THR B 478 -0.077 -6.288 -93.633 1.00 9.75 B
ATOM 8467 N ARG B 479 -1.572 -4.868 -92.717 1.00 7.90 B
ATOM 8468 CA ARG B 479 -2.610 -5.144 -93.708 1.00 9.39 B
ATOM 8469 CB ARG B 479 -3.658 -6.099 -93.135 1.00 7.72 B
ATOM 8470 CG ARG B 479 -3.067 -7.248 -92.354 1.00 8.20 B
ATOM 8471 CD ARG B 479 -2.291 -8.147 -93.224 1.00 7.53 B
ATOM 8472 NE ARG B 479 -3.159 -8.787 -94.201 1.00 9.07 B
ATOM 8473 CZ ARG B 479 -2.724 -9.311 -95.339 1.00 6.98 B
ATOM 8474 NH1 ARG B 479 -1.434 -9.268 -95.654 1.00 7.74 B
ATOM 8475 NH2 ARG B 479 -3.577 -9.895 -96.147 1.00 5.52 B
ATOM 8476 C ARG B 479 -3.319 -3.870 -94.191 1.00 11.44 B
ATOM 8477 O ARG B 479 -3.859 -3.124 -93.383 1.00 12.74 B
ATOM 8478 N ASN B 480 -3.311 -3.640 -95.510 1.00 12.94 B
ATOM 8479 CA ASN B 480 -3.981 -2.487 -96.135 1.00 13.94 B
ATOM 8480 CB ASN B 480 -3.190 -1.931 -97.296 1.00 16.63 B
ATOM 8481 CG ASN B 480 -1.769 -2.242 -97.203 1.00 21.39 B
ATOM 8482 OD1 ASN B 480 -1.010 -1.724 -96.356 1.00 24.90 B
ATOM 8483 ND2 ASN B 480 -1.367 -3.121 -98.082 1.00 20.28 B
ATOM 8484 C ASN B 480 -5.327 -2.838 -96.708 1.00 14.17 B
ATOM 8485 O ASN B 480 -5.736 -3.983 -96.723 1.00 14.02 B
ATOM 8486 N GLU B 481 -6.009 -1.832 -97.229 1.00 15.62 B
ATOM 8487 CA GLU B 481 -7.314 -2.072 -97.812 1.00 15.81 B
ATOM 8488 CB GLU B 481 -8.115 -0.772 -97.898 1.00 15.49 B
ATOM 8489 CG GLU B 481 -9.602 -1.014 -97.878 1.00 18.87 B
ATOM 8490 CD GLU B 481 -10.075 -1.563 -96.548 1.00 18.51 B
ATOM 8491 OE1 GLU B 481 -9.914 -0.858 -95.540 1.00 20.66 B
ATOM 8492 OE2 GLU B 481 -10.609 -2.690 -96.501 1.00 18.67 B
ATOM 8493 C GLU B 481 -7.189 -2.725 -99.203 1.00 16.12 B
ATOM 8494 O GLU B 481 -8.190 -2.898 -99.901 1.00 16.49 B
ATOM 8495 N THR B 482 -5.969 -3.071 -99.625 1.00 14.70 B
ATOM 8496 CA THR B 482 -5.829 -3.742 -100.916 1.00 13.52 B
ATOM 8497 CB THR B 482 -4.464 -3.442 -101.639 1.00 14.10 B

ATOM 8498 OG1 THR B 482 -3.470 -4.396-101.260 1.00 13.63 B
ATOM 8499 CG2 THR B 482 -3.986 -2.055-101.313 1.00 14.07 B
ATOM 8500 C THR B 482 -5.956 -5.225-100.601 1.00 12.40 B
ATOM 8501 O THR B 482 -5.955 -6.080-101.482 1.00 12.07 B
ATOM 8502 N HIS B 483 -6.075 -5.508 -99.306 1.00 11.64 B
ATOM 8503 CA HIS B 483 -6.247 -6.862 -98.805 1.00 9.40 B
ATOM 8504 CB HIS B 483 -5.513 -7.042 -97.497 1.00 10.34 B
ATOM 8505 CG HIS B 483 -4.027 -6.945 -97.616 1.00 11.88 B
ATOM 8506 CD2 HIS B 483 -3.156 -7.528 -98.471 1.00 12.72 B
ATOM 8507 ND1 HIS B 483 -3.266 -6.208 -96.739 1.00 12.69 B
ATOM 8508 CE1 HIS B 483 -1.989 -6.339 -97.046 1.00 13.00 B
ATOM 8509 NE2 HIS B 483 -1.894 -7.136 -98.093 1.00 14.49 B
ATOM 8510 C HIS B 483 -7.726 -7.148 -98.587 1.00 9.29 B
ATOM 8511 O HIS B 483 -8.549 -6.234 -98.483 1.00 7.69 B
ATOM 8512 N PHE B 484 -8.055 -8.430 -98.518 1.00 9.68 B
ATOM 8513 CA PHE B 484 -9.424 -8.847 -98.331 1.00 11.24 B
ATOM 8514 CB PHE B 484 -10.086 -9.105 -99.679 1.00 15.27 B
ATOM 8515 CG PHE B 484 -11.563 -9.370 -99.586 1.00 18.23 B
ATOM 8516 CD1 PHE B 484 -12.172 -10.335-100.402 1.00 17.97 B
ATOM 8517 CD2 PHE B 484 -12.348 -8.642 -98.698 1.00 17.09 B
ATOM 8518 CE1 PHE B 484 -13.542 -10.565-100.331 1.00 18.75 B
ATOM 8519 CE2 PHE B 484 -13.710 -8.865 -98.621 1.00 18.71 B
ATOM 8520 CZ PHE B 484 -14.313 -9.832 -99.443 1.00 19.35 B
ATOM 8521 C PHE B 484 -9.363 -10.129 -97.534 1.00 11.99 B
ATOM 8522 O PHE B 484 -9.655 -11.220 -98.042 1.00 11.29 B
ATOM 8523 N ASP B 485 -8.994 -9.985 -96.265 1.00 12.10 B
ATOM 8524 CA ASP B 485 -8.858 -11.130 -95.387 1.00 10.66 B
ATOM 8525 CB ASP B 485 -8.129 -10.697 -94.129 1.00 9.65 B
ATOM 8526 CG ASP B 485 -6.736 -10.190 -94.425 1.00 10.06 B
ATOM 8527 OD1 ASP B 485 -6.003 -10.880 -95.171 1.00 7.73 B
ATOM 8528 OD2 ASP B 485 -6.370 -9.112 -93.907 1.00 11.79 B
ATOM 8529 C ASP B 485 -10.173 -11.843 -95.074 1.00 9.83 B
ATOM 8530 O ASP B 485 -10.164 -13.029 -94.783 1.00 9.23 B
ATOM 8531 N ALA B 486 -11.296 -11.132 -95.148 1.00 9.55 B

ATOM 8532 CA ALA B 486 -12.597 -11.755 -94.904 1.00 10.52 B
ATOM 8533 CB ALA B 486 -13.699 -10.695 -94.868 1.00 7.16 B
ATOM 8534 C ALA B 486 -12.872 -12.739 -96.039 1.00 13.80 B
ATOM 8535 O ALA B 486 -13.576 -13.735 -95.866 1.00 14.93 B
ATOM 8536 N GLY B 487 -12.306 -12.457 -97.207 1.00 15.14 B
ATOM 8537 CA GLY B 487 -12.538 -13.319 -98.340 1.00 17.58 B
ATOM 8538 C GLY B 487 -11.746 -14.608 -98.297 1.00 19.58 B
ATOM 8539 O GLY B 487 -11.950 -15.494 -99.137 1.00 20.88 B
ATOM 8540 N ALA B 488 -10.846 -14.732 -97.327 1.00 19.58 B
ATOM 8541 CA ALA B 488 -10.034 -15.941 -97.213 1.00 18.55 B
ATOM 8542 CB ALA B 488 -8.719 -15.627 -96.532 1.00 17.44 B
ATOM 8543 C ALA B 488 -10.742 -17.040 -96.446 1.00 18.27 B
ATOM 8544 O ALA B 488 -10.164 -18.074 -96.161 1.00 17.35 B
ATOM 8545 N LYS B 489 -12.008 -16.810 -96.114 1.00 18.98 B
ATOM 8546 CA LYS B 489 -12.790 -17.797 -95.377 1.00 21.06 B
ATOM 8547 CB LYS B 489 -13.463 -17.154 -94.162 1.00 23.93 B
ATOM 8548 CG LYS B 489 -14.511 -18.032 -93.497 1.00 24.84 B
ATOM 8549 CD LYS B 489 -13.899 -18.895 -92.404 1.00 26.72 B
ATOM 8550 CE LYS B 489 -14.828 -20.034 -92.015 1.00 28.79 B
ATOM 8551 NZ LYS B 489 -14.104 -21.331 -91.912 1.00 28.31 B
ATOM 8552 C LYS B 489 -13.785 -18.449 -96.332 1.00 19.77 B
ATOM 8553 O LYS B 489 -14.552 -17.763 -97.007 1.00 21.32 B
ATOM 8554 N PHE B 490 -13.768 -19.777 -96.381 1.00 17.26 B
ATOM 8555 CA PHE B 490 -14.578 -20.517 -97.343 1.00 17.33 B
ATOM 8556 CB PHE B 490 -14.799 -21.947 -96.846 1.00 17.34 B
ATOM 8557 CG PHE B 490 -15.639 -22.786 -97.767 1.00 20.11 B
ATOM 8558 CD1 PHE B 490 -15.054 -23.513 -98.790 1.00 22.30 B
ATOM 8559 CD2 PHE B 490 -17.014 -22.847 -97.610 1.00 20.26 B
ATOM 8560 CE1 PHE B 490 -15.824 -24.285 -99.639 1.00 24.55 B
ATOM 8561 CE2 PHE B 490 -17.789 -23.618 -98.456 1.00 22.63 B
ATOM 8562 CZ PHE B 490 -17.193 -24.338 -99.472 1.00 23.62 B
ATOM 8563 C PHE B 490 -15.918 -19.813 -97.519 1.00 17.75 B
ATOM 8564 O PHE B 490 -16.432 -19.705 -98.632 1.00 20.27 B
ATOM 8565 N HIS B 491 -16.478 -19.336 -96.413 1.00 16.88 B

ATOM 8566 CA HIS B 491 -17.912 -19.093 -96.327 1.00 17.60 B
ATOM 8567 CB HIS B 491 -18.377 -19.127 -94.870 1.00 16.86 B
ATOM 8568 CG HIS B 491 -18.441 -20.505 -94.289 1.00 16.11 B
ATOM 8569 CD2 HIS B 491 -19.497 -21.271 -93.923 1.00 16.77 B
ATOM 8570 ND1 HIS B 491 -17.315 -21.254 -94.024 1.00 15.46 B
ATOM 8571 CE1 HIS B 491 -17.673 -22.421 -93.519 1.00 15.98 B
ATOM 8572 NE2 HIS B 491 -18.992 -22.457 -93.447 1.00 17.51 B
ATOM 8573 C HIS B 491 -18.285 -17.760 -96.966 1.00 18.38 B
ATOM 8574 O HIS B 491 -19.454 -17.510 -97.261 1.00 18.58 B
ATOM 8575 N VAL B 492 -17.288 -16.907 -97.181 1.00 19.00 B
ATOM 8576 CA VAL B 492 -17.532 -15.614 -97.753 1.00 20.70 B
ATOM 8577 CB VAL B 492 -16.435 -14.639 -97.360 1.00 21.13 B
ATOM 8578 CG1 VAL B 492 -16.681 -13.324 -98.028 1.00 20.70 B
ATOM 8579 CG2 VAL B 492 -16.428 -14.466 -95.847 1.00 22.47 B
ATOM 8580 C VAL B 492 -17.647 -15.743 -99.249 1.00 20.95 B
ATOM 8581 O VAL B 492 -18.685 -15.426 -99.804 1.00 22.68 B
ATOM 8582 N PRO B 493 -16.596 -16.229 -99.920 1.00 21.13 B
ATOM 8583 CD PRO B 493 -15.265 -16.629 -99.440 1.00 20.02 B
ATOM 8584 CA PRO B 493 -16.684 -16.367-101.372 1.00 21.11 B
ATOM 8585 CB PRO B 493 -15.262 -16.738-101.773 1.00 20.25 B
ATOM 8586 CG PRO B 493 -14.761 -17.459-100.588 1.00 21.04 B
ATOM 8587 C PRO B 493 -17.687 -17.414-101.805 1.00 21.91 B
ATOM 8588 O PRO B 493 -18.053 -17.464-102.965 1.00 24.26 B
ATOM 8589 N ASN B 494 -18.128 -18.258-100.883 1.00 22.15 B
ATOM 8590 CA ASN B 494 -19.095 -19.286-101.228 1.00 22.22 B
ATOM 8591 CB ASN B 494 -18.682 -20.624-100.641 1.00 22.65 B
ATOM 8592 CG ASN B 494 -17.608 -21.301-101.456 1.00 25.32 B
ATOM 8593 OD1 ASN B 494 -17.856 -22.324-102.079 1.00 27.31 B
ATOM 8594 ND2 ASN B 494 -16.409 -20.730-101.465 1.00 26.33 B
ATOM 8595 C ASN B 494 -20.473 -18.904-100.750 1.00 22.52 B
ATOM 8596 O ASN B 494 -21.368 -19.741-100.647 1.00 22.26 B
ATOM 8597 N VAL B 495 -20.627 -17.627-100.441 1.00 23.05 B
ATOM 8598 CA VAL B 495 -21.900 -17.086 -99.992 1.00 25.08 B
ATOM 8599 CB VAL B 495 -22.759 -16.719-101.215 1.00 24.66 B

ATOM 8600 CG1 VAL B 495 -23.980 -15.944-100.792 1.00 23.29 B
ATOM 8601 CG2 VAL B 495 -21.930 -15.918-102.200 1.00 25.51 B
ATOM 8602 C VAL B 495 -22.727 -17.990 -99.072 1.00 26.32 B
ATOM 8603 O VAL B 495 -23.862 -18.315 -99.394 1.00 26.71 B
ATOM 8604 N THR B 496 -22.170 -18.384 -97.928 1.00 28.25 B
ATOM 8605 CA THR B 496 -22.887 -19.236 -96.978 1.00 28.40 B
ATOM 8606 CB THR B 496 -22.123 -20.505 -96.696 1.00 28.50 B
ATOM 8607 OG1 THR B 496 -21.674 -21.068 -97.930 1.00 29.48 B
ATOM 8608 CG2 THR B 496 -23.016 -21.492 -95.999 1.00 28.41 B
ATOM 8609 C THR B 496 -23.036 -18.490 -95.668 1.00 29.43 B
ATOM 8610 O THR B 496 -22.036 -18.195 -95.002 1.00 28.84 B
ATOM 8611 N PRO B 497 -24.284 -18.169 -95.275 1.00 30.66 B
ATOM 8612 CD PRO B 497 -25.574 -18.526 -95.889 1.00 30.26 B
ATOM 8613 CA PRO B 497 -24.500 -17.443 -94.017 1.00 31.28 B
ATOM 8614 CB PRO B 497 -26.002 -17.583 -93.799 1.00 30.95 B
ATOM 8615 CG PRO B 497 -26.530 -17.573 -95.188 1.00 30.64 B
ATOM 8616 C PRO B 497 -23.667 -18.064 -92.895 1.00 31.52 B
ATOM 8617 O PRO B 497 -23.309 -19.249 -92.973 1.00 31.04 B
ATOM 8618 N TYR B 498 -23.350 -17.275 -91.865 1.00 30.81 B
ATOM 8619 CA TYR B 498 -22.527 -17.782 -90.768 1.00 30.31 B
ATOM 8620 CB TYR B 498 -21.194 -17.024 -90.746 1.00 28.88 B
ATOM 8621 CG TYR B 498 -20.003 -17.831 -90.275 1.00 26.33 B
ATOM 8622 CD1 TYR B 498 -19.385 -18.752 -91.110 1.00 25.37 B
ATOM 8623 CE1 TYR B 498 -18.275 -19.481 -90.684 1.00 25.46 B
ATOM 8624 CD2 TYR B 498 -19.485 -17.660 -88.998 1.00 26.12 B
ATOM 8625 CE2 TYR B 498 -18.379 -18.387 -88.565 1.00 26.34 B
ATOM 8626 CZ TYR B 498 -17.784 -19.289 -89.414 1.00 25.93 B
ATOM 8627 OH TYR B 498 -16.692 -19.991 -88.992 1.00 27.82 B
ATOM 8628 C TYR B 498 -23.169 -17.720 -89.376 1.00 30.89 B
ATOM 8629 O TYR B 498 -22.880 -18.556 -88.522 1.00 29.31 B
ATOM 8630 N ILE B 499 -24.037 -16.736 -89.150 1.00 32.64 B
ATOM 8631 CA ILE B 499 -24.681 -16.583 -87.851 1.00 34.38 B
ATOM 8632 CB ILE B 499 -25.699 -15.419 -87.841 1.00 34.77 B
ATOM 8633 CG2 ILE B 499 -26.915 -15.772 -88.660 1.00 35.18 B

ATOM 8634 CG1 ILE B 499 -26.126 -15.125 -86.404 1.00 36.21 B
ATOM 8635 CD1 ILE B 499 -24.953 -14.837 -85.465 1.00 36.36 B
ATOM 8636 C ILE B 499 -25.386 -17.859 -87.447 1.00 35.56 B
ATOM 8637 O ILE B 499 -25.804 -18.018 -86.304 1.00 37.84 B
ATOM 8638 N ARG B 500 -25.515 -18.771 -88.398 1.00 36.18 B
ATOM 8639 CA ARG B 500 -26.149 -20.043 -88.136 1.00 35.48 B
ATOM 8640 CB ARG B 500 -26.395 -20.784 -89.453 1.00 36.53 B
ATOM 8641 CG ARG B 500 -25.159 -20.957 -90.318 1.00 36.80 B
ATOM 8642 CD ARG B 500 -25.484 -21.631 -91.640 1.00 36.18 B
ATOM 8643 NE ARG B 500 -26.457 -20.872 -92.417 1.00 34.83 B
ATOM 8644 CZ ARG B 500 -26.977 -21.306 -93.555 1.00 34.17 B
ATOM 8645 NH1 ARG B 500 -26.598 -22.491 -94.035 1.00 30.81 B
ATOM 8646 NH2 ARG B 500 -27.888 -20.568 -94.189 1.00 32.79 B
ATOM 8647 C ARG B 500 -25.238 -20.849 -87.218 1.00 35.01 B
ATOM 8648 O ARG B 500 -25.715 -21.575 -86.364 1.00 35.61 B
ATOM 8649 N TYR B 501 -23.923 -20.715 -87.383 1.00 35.54 B
ATOM 8650 CA TYR B 501 -22.980 -21.453 -86.523 1.00 36.53 B
ATOM 8651 CB TYR B 501 -21.571 -21.482 -87.083 1.00 38.26 B
ATOM 8652 CG TYR B 501 -21.489 -22.002 -88.469 1.00 40.52 B
ATOM 8653 CD1 TYR B 501 -21.917 -21.216 -89.533 1.00 41.17 B
ATOM 8654 CE1 TYR B 501 -21.806 -21.656 -90.831 1.00 43.20 B
ATOM 8655 CD2 TYR B 501 -20.945 -23.260 -88.730 1.00 41.69 B
ATOM 8656 CE2 TYR B 501 -20.828 -23.728 -90.029 1.00 43.82 B
ATOM 8657 CZ TYR B 501 -21.255 -22.914 -91.081 1.00 44.78 B
ATOM 8658 OH TYR B 501 -21.137 -23.346 -92.386 1.00 45.46 B
ATOM 8659 C TYR B 501 -22.850 -20.912 -85.123 1.00 35.80 B
ATOM 8660 O TYR B 501 -22.379 -21.610 -84.220 1.00 35.11 B
ATOM 8661 N PHE B 502 -23.205 -19.655 -84.943 1.00 34.30 B
ATOM 8662 CA PHE B 502 -23.119 -19.115 -83.616 1.00 34.55 B
ATOM 8663 CB PHE B 502 -23.192 -17.591 -83.635 1.00 35.53 B
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ATOM 8665 CD1 PHE B 502 -22.127 -17.012 -81.433 1.00 34.96 B
ATOM 8666 CD2 PHE B 502 -24.382 -16.346 -81.830 1.00 35.17 B
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ATOM 8669 CZ PHE B 502 -23.338 -15.796 -79.745 1.00 35.15 B
ATOM 8670 C PHE B 502 -24.323 -19.716 -82.921 1.00 34.17 B
ATOM 8671 O PHE B 502 -24.181 -20.440 -81.932 1.00 34.41 B
ATOM 8672 N VAL B 503 -25.505 -19.449 -83.466 1.00 32.84 B
ATOM 8673 CA VAL B 503 -26.728 -19.992 -82.894 1.00 32.77 B
ATOM 8674 CB VAL B 503 -27.903 -19.864 -83.876 1.00 29.99 B
ATOM 8675 CG1 VAL B 503 -29.143 -20.491 -83.288 1.00 28.76 B
ATOM 8676 CG2 VAL B 503 -28.156 -18.418 -84.186 1.00 27.88 B
ATOM 8677 C VAL B 503 -26.507 -21.476 -82.567 1.00 34.08 B
ATOM 8678 O VAL B 503 -26.826 -21.956 -81.475 1.00 34.83 B
ATOM 8679 N SER B 504 -25.923 -22.181 -83.522 1.00 34.68 B
ATOM 8680 CA SER B 504 -25.646 -23.602 -83.386 1.00 37.17 B
ATOM 8681 CB SER B 504 -24.906 -24.105 -84.628 1.00 36.23 B
ATOM 8682 OG SER B 504 -24.343 -25.389 -84.405 1.00 33.87 B
ATOM 8683 C SER B 504 -24.856 -24.013 -82.144 1.00 39.30 B
ATOM 8684 O SER B 504 -25.218 -24.975 -81.464 1.00 40.62 B
ATOM 8685 N PHE B 505 -23.764 -23.311 -81.857 1.00 40.55 B
ATOM 8686 CA PHE B 505 -22.955 -23.663 -80.699 1.00 40.15 B
ATOM 8687 CB PHE B 505 -21.654 -22.862 -80.709 1.00 38.56 B
ATOM 8688 CG PHE B 505 -20.565 -23.492 -81.535 1.00 38.11 B
ATOM 8689 CD1 PHE B 505 -20.846 -24.028 -82.787 1.00 36.21 B
ATOM 8690 CD2 PHE B 505 -19.260 -23.561 -81.054 1.00 38.49 B
ATOM 8691 CE1 PHE B 505 -19.851 -24.626 -83.546 1.00 36.39 B
ATOM 8692 CE2 PHE B 505 -18.253 -24.158 -81.809 1.00 38.28 B
ATOM 8693 CZ PHE B 505 -18.552 -24.693 -83.059 1.00 37.30 B
ATOM 8694 C PHE B 505 -23.709 -23.461 -79.388 1.00 40.98 B
ATOM 8695 O PHE B 505 -23.594 -24.267 -78.470 1.00 41.79 B
ATOM 8696 N VAL B 506 -24.508 -22.405 -79.311 1.00 40.62 B
ATOM 8697 CA VAL B 506 -25.245 -22.139 -78.093 1.00 40.01 B
ATOM 8698 CB VAL B 506 -25.813 -20.718 -78.101 1.00 40.30 B
ATOM 8699 CG1 VAL B 506 -26.728 -20.506 -76.914 1.00 40.71 B
ATOM 8700 CG2 VAL B 506 -24.667 -19.724 -78.051 1.00 40.81 B
ATOM 8701 C VAL B 506 -26.366 -23.131 -77.888 1.00 40.17 B

ATOM 8702 O VAL B 506 -26.407 -23.858 -76.905 1.00 42.32 B
ATOM 8703 N LEU B 507 -27.278 -23.195 -78.830 1.00 39.47 B
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ATOM 8707 CD1 LEU B 507 -31.423 -24.045 -80.876 1.00 39.93 B
ATOM 8708 CD2 LEU B 507 -29.333 -25.277 -81.554 1.00 38.51 B
ATOM 8709 C LEU B 507 -28.050 -25.592 -78.813 1.00 36.07 B
ATOM 8710 O LEU B 507 -28.932 -26.451 -78.796 1.00 34.52 B
ATOM 8711 N GLN B 508 -26.778 -25.911 -78.964 1.00 34.86 B
ATOM 8712 CA GLN B 508 -26.446 -27.311 -79.121 1.00 36.38 B
ATOM 8713 CB GLN B 508 -25.115 -27.472 -79.874 1.00 36.65 B
ATOM 8714 CG GLN B 508 -23.886 -27.852 -79.088 1.00 39.13 B
ATOM 8715 CD GLN B 508 -22.624 -27.748 -79.949 1.00 40.83 B
ATOM 8716 OE1 GLN B 508 -21.552 -28.228 -79.572 1.00 41.38 B
ATOM 8717 NE2 GLN B 508 -22.753 -27.106 -81.114 1.00 41.16 B
ATOM 8718 C GLN B 508 -26.424 -27.954 -77.745 1.00 37.07 B
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ATOM 8720 N PHE B 509 -26.192 -27.131 -76.725 1.00 36.77 B
ATOM 8721 CA PHE B 509 -26.162 -27.619 -75.359 1.00 34.04 B
ATOM 8722 CB PHE B 509 -25.252 -26.744 -74.510 1.00 30.75 B
ATOM 8723 CG PHE B 509 -23.829 -26.813 -74.929 1.00 25.85 B
ATOM 8724 CD1 PHE B 509 -23.348 -25.963 -75.895 1.00 23.99 B
ATOM 8725 CD2 PHE B 509 -22.983 -27.779 -74.412 1.00 25.46 B
ATOM 8726 CE1 PHE B 509 -22.042 -26.068 -76.348 1.00 22.95 B
ATOM 8727 CE2 PHE B 509 -21.668 -27.895 -74.861 1.00 24.05 B
ATOM 8728 CZ PHE B 509 -21.200 -27.037 -75.829 1.00 23.21 B
ATOM 8729 C PHE B 509 -27.569 -27.664 -74.804 1.00 34.36 B
ATOM 8730 O PHE B 509 -27.831 -28.387 -73.843 1.00 36.17 B
ATOM 8731 N GLN B 510 -28.475 -26.897 -75.407 1.00 33.09 B
ATOM 8732 CA GLN B 510 -29.863 -26.927 -74.973 1.00 34.00 B
ATOM 8733 CB GLN B 510 -30.693 -25.871 -75.670 1.00 31.42 B
ATOM 8734 CG GLN B 510 -30.167 -24.503 -75.598 1.00 31.27 B
ATOM 8735 CD GLN B 510 -31.304 -23.545 -75.484 1.00 33.32 B

ATOM 8736 OE1 GLN B 510 -31.204 -22.375 -75.830 1.00 35.98 B
ATOM 8737 NE2 GLN B 510 -32.412 -24.039 -74.979 1.00 34.88 B
ATOM 8738 C GLN B 510 -30.390 -28.293 -75.402 1.00 35.75 B
ATOM 8739 O GLN B 510 -31.200 -28.917 -74.716 1.00 37.11 B
ATOM 8740 N PHE B 511 -29.925 -28.738 -76.563 1.00 36.99 B
ATOM 8741 CA PHE B 511 -30.320 -30.025 -77.101 1.00 37.94 B
ATOM 8742 CB PHE B 511 -29.794 -30.217 -78.535 1.00 37.98 B
ATOM 8743 CG PHE B 511 -30.614 -29.521 -79.600 1.00 36.83 B
ATOM 8744 CD1 PHE B 511 -31.736 -28.761 -79.270 1.00 36.12 B
ATOM 8745 CD2 PHE B 511 -30.250 -29.627 -80.943 1.00 35.83 B
ATOM 8746 CE1 PHE B 511 -32.484 -28.115 -80.263 1.00 36.82 B
ATOM 8747 CE2 PHE B 511 -30.987 -28.989 -81.938 1.00 35.10 B
ATOM 8748 CZ PHE B 511 -32.107 -28.229 -81.600 1.00 35.97 B
ATOM 8749 C PHE B 511 -29.705 -31.078 -76.216 1.00 37.98 B
ATOM 8750 O PHE B 511 -30.389 -31.964 -75.712 1.00 39.18 B
ATOM 8751 N HIS B 512 -28.400 -30.974 -76.026 1.00 37.92 B
ATOM 8752 CA HIS B 512 -27.692 -31.939 -75.208 1.00 39.42 B
ATOM 8753 CB HIS B 512 -26.246 -31.518 -75.044 1.00 36.90 B
ATOM 8754 CG HIS B 512 -25.379 -32.598 -74.504 1.00 35.63 B
ATOM 8755 CD2 HIS B 512 -24.295 -32.557 -73.695 1.00 37.17 B
ATOM 8756 ND1 HIS B 512 -25.548 -33.916 -74.854 1.00 36.47 B
ATOM 8757 CE1 HIS B 512 -24.601 -34.644 -74.289 1.00 38.46 B
ATOM 8758 NE2 HIS B 512 -23.827 -33.843 -73.580 1.00 37.92 B
ATOM 8759 C HIS B 512 -28.321 -32.145 -73.831 1.00 41.51 B
ATOM 8760 O HIS B 512 -28.516 -33.281 -73.383 1.00 42.72 B
ATOM 8761 N ALA B 513 -28.642 -31.054 -73.152 1.00 42.63 B
ATOM 8762 CA ALA B 513 -29.241 -31.181 -71.838 1.00 43.51 B
ATOM 8763 CB ALA B 513 -29.388 -29.804 -71.178 1.00 44.18 B
ATOM 8764 C ALA B 513 -30.597 -31.840 -72.007 1.00 43.52 B
ATOM 8765 O ALA B 513 -30.876 -32.876 -71.395 1.00 45.20 B
ATOM 8766 N ALA B 514 -31.433 -31.249 -72.850 1.00 41.91 B
ATOM 8767 CA ALA B 514 -32.767 -31.786 -73.089 1.00 41.55 B
ATOM 8768 CB ALA B 514 -33.462 -30.990 -74.195 1.00 41.31 B
ATOM 8769 C ALA B 514 -32.751 -33.279 -73.438 1.00 41.01 B

ATOM 8770 O ALA B 514 -33.694 -34.006 -73.137 1.00 40.38 B
ATOM 8771 N ALA B 515 -31.671 -33.738 -74.054 1.00 40.77 B
ATOM 8772 CA ALA B 515 -31.577 -35.134 -74.422 1.00 42.19 B
ATOM 8773 CB ALA B 515 -30.768 -35.287 -75.714 1.00 41.95 B
ATOM 8774 C ALA B 515 -30.976 -35.986 -73.314 1.00 43.38 B
ATOM 8775 O ALA B 515 -31.348 -37.149 -73.156 1.00 43.80 B
ATOM 8776 N CYS B 516 -30.046 -35.413 -72.550 1.00 44.40 B
ATOM 8777 CA CYS B 516 -29.407 -36.144 -71.448 1.00 45.80 B
ATOM 8778 C CYS B 516 -30.483 -36.451 -70.397 1.00 46.67 B
ATOM 8779 O CYS B 516 -30.535 -37.533 -69.812 1.00 45.90 B
ATOM 8780 CB CYS B 516 -28.252 -35.322 -70.875 1.00 45.53 B
ATOM 8781 SG CYS B 516 -26.867 -35.354 -72.041 1.00 45.65 B
ATOM 8782 N LYS B 517 -31.383 -35.488 -70.264 1.00 47.45 B
ATOM 8783 CA LYS B 517 -32.519 -35.517 -69.361 1.00 49.14 B
ATOM 8784 CB LYS B 517 -33.241 -34.177 -69.448 1.00 47.92 B
ATOM 8785 CG LYS B 517 -34.090 -33.852 -68.277 1.00 47.15 B
ATOM 8786 CD LYS B 517 -35.321 -33.085 -68.693 1.00 47.11 B
ATOM 8787 CE LYS B 517 -36.167 -32.780 -67.461 1.00 46.92 B
ATOM 8788 NZ LYS B 517 -37.538 -32.315 -67.825 1.00 45.46 B
ATOM 8789 C LYS B 517 -33.522 -36.602 -69.739 1.00 50.95 B
ATOM 8790 O LYS B 517 -33.898 -37.446 -68.931 1.00 51.48 B
ATOM 8791 N GLU B 518 -34.005 -36.541 -70.977 1.00 52.94 B
ATOM 8792 CA GLU B 518 -34.995 -37.540 -71.420 1.00 54.79 B
ATOM 8793 CB GLU B 518 -35.771 -37.105 -72.678 1.00 55.05 B
ATOM 8794 CG GLU B 518 -37.064 -36.313 -72.359 1.00 55.61 B
ATOM 8795 CD GLU B 518 -38.377 -37.021 -72.744 1.00 56.76 B
ATOM 8796 OE1 GLU B 518 -38.324 -38.132 -73.319 1.00 56.98 B
ATOM 8797 OE2 GLU B 518 -39.468 -36.455 -72.471 1.00 56.64 B
ATOM 8798 C GLU B 518 -34.307 -38.863 -71.649 1.00 55.77 B
ATOM 8799 O GLU B 518 -34.952 -39.908 -71.775 1.00 55.66 B
ATOM 8800 N ALA B 519 -32.980 -38.825 -71.705 1.00 57.27 B
ATOM 8801 CA ALA B 519 -32.171 -40.028 -71.549 1.00 59.08 B
ATOM 8802 CB ALA B 519 -30.728 -39.752 -71.941 1.00 59.49 B
ATOM 8803 C ALA B 519 -32.245 -40.562 -70.122 1.00 60.32 B

ATOM 8804 O ALA B 519 -31.555 -41.519 -69.771 1.00 60.31 B
ATOM 8805 N GLY B 520 -33.085 -39.936 -69.305 1.00 61.29 B
ATOM 8806 CA GLY B 520 -33.061

CLAIMS

1. A crystal of the N-domain of ACE protein.

2. A crystal according to claim 1 wherein the N-domain of ACE protein is minimally glycosylated.

3. A crystal according to claim 2 wherein the N-domain of ACE protein is minimally glycosylated at amino acids 25, 45, 117, 289 and 480 of SEQ ID NO: 1.

4. A crystal according to any one of the preceding claims comprising atoms arranged in a spatial relationship represented by at least a portion of the structural co-ordinates set forth in Table A or Table B.

5. A crystal according to any one of the preceding claims wherein the crystal belongs to the space group $C222_1$.

7. A crystal according to any one of the preceding claims having unit cell dimensions of: a=101.12 Å, b=211.32 Å, c=171.27 Å.

8. A crystal according to any one of the preceding claims wherein the crystal is a crystal of the N-domain of human ACE protein.

9. A crystal according to any one of the preceding claims wherein the crystal further comprises a ligand bound to the N-domain of ACE protein or a portion thereof.

10. A crystal according to claim 9 wherein the ligand modulates the activity of N-domain of ACE protein.

11. A crystal according to claim 10 wherein the ligand is an inhibitor of the N-domain of ACE protein.

12. A crystal according to claim 11 wherein the inhibitor is lisinopril or a derivative thereof.

13. A crystal according to claim 12 comprising atoms arranged in a spatial relationship represented by at least a portion of the structural co-ordinates set forth in Table B.

14. A crystal according to claim 13 having unit cell dimensions of: a=101.32 Å, b=211.90 Å, c=171.03 Å.

15. A method of preparing a crystal of the N-domain of ACE protein comprising the steps of:

(a) culturing host cells comprising the N-domain of ACE protein;
(b) purifying the N-domain of ACE protein; and
(c) crystallising the N-domain of ACE protein.

16. A method according to claim 15 wherein the N-domain of ACE protein is crystallised using about 5 mM HEPES and about 0.1 mM PMSF with an equal volume of a reservoir solution containing about 0.2M lithium sulphate, 15 % PEG 4000, about 100 mM $CH_3COONa.3H_2O$ pH 4.9 and about 10 µM $ZnSO_4.7H_2O$.

17. A method according to any of claims 15 or 16 wherein the crystal that is prepared has a structure defined by at least a portion of the structural co-ordinates set forth in Table A.

18. A method according to any of claims 15 to 17 wherein the crystal belongs to the space group $C222_1$.

19. A method according to any of claims 15 to 18 wherein the crystal has the unit cell dimensions: a= 101.12 Å, b=211.32 Å and c=171.27 Å.

20. A method according to any of claims 15 to 19 wherein the N-domain of ACE protein is an N-domain of human ACE protein.

21. A method according to any of claims 15 to 20 wherein the N-domain of ACE protein is crystallised in the presence of a ligand.

22. A method according to claim 21 wherein the ligand is a modulator of the N-domain of ACE protein.

23. A method according to claim 22 wherein the ligand is an inhibitor of the N-domain of ACE protein.

24. A method according to claim 23 wherein the inhibitor of the N-domain of ACE protein is lisinopril or a derivative thereof.

25. A method according to claim 24 wherein the crystal that is prepared has a strusture defined by at least a portion of the structural co-ordinates set forth in Table B.

26. A method according to claim 25 wherein the crystal has unit cell dimensions: a= 101.32 Å, b=211.90 Å and c=171.03 Å.

27. A method according to claim 25 wherein the crystal is crystallised using about 5 mM HEPES and about 0.1 mM PMSF with an equal volume of a reservoir solution containing about 0.2M lithium sulphate, 18 % PEG 4000, about 100 mM $CH_3COONa.3H_2O$ pH 4.9 and about 10 µM $ZnSO_4.7H_2O$.

28. A method of screening for a modulator of the N-domain of ACE protein wherein the method comprises the use of a crystal according to any of claims 1-14.

29. A method according to claim 28 comprising the steps of:

(a) providing at least a portion of the structural co-ordinates set forth in Table A or Table B;

(b) employing at least a portion of the structural co-ordinates set forth in Table A or Table B to design or select or synthesise a putative modulator of the N-domain;

(c) contacting the putative modulator of the N-domain with the N-domain or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and

(d) screening the putative modulator of the N-domain in an assay for the potential to modulate the N-domain.

30. A method of screening for a modulator of the C-domain of ACE protein wherein the method comprises the use of a crystal according to any of claims 1-14.

31. A method according to claim 30 comprising the steps of:

(a) providing at least a portion of the structural co-ordinates set forth in Table A or Table B;

(b) employing at least a portion of the structural co-ordinates set forth in Table A or Table B to design or select or synthesise a putative modulator of the C-domain of ACE protein;

(c) contacting the putative modulator of the C-domain with the C-domain or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and

(d) screening the putative modulator of the C-domain in an assay for the potential to selectively modulate the C-domain.

32. A method according to any one of claims 29 or 31 wherein at least a portion of the structural co-ordinates set forth in Table A or Table B and/or the putative modulator of the N-domain of ACE protein or C-domain of ACE protein and/or the substrate are

provided on a machine-readable data storage medium comprising a data storage material encoded with machine readable data.

33. A method according to claim 29, claim 31 or claim 32 wherein the putative N-domain modulator or the putative C-domain modulator is selected from a library of compounds.

34. A method according claim 29, claim 31 or claim 32 wherein the putative N-domain modulator or C-domain modulator is selected from a database.

35. A method according to any one of claims claim 28 to 31 wherein the putative N-domain modulator or C-domain modulator is designed *de novo*.

36. A method according to claim 29, claim 31 or claim 32 wherein the putative N-domain modulator or C-domain modulator is designed from a known ACE modulator.

37. A method according to claim 29, claim 31 or claim 32 wherein the design or selection of the putative N-domain modulator or C-domain modulator is performed in conjunction with computer modelling.

38. A method according to any of claims 28 to 37 wherein the selected N-domain modulator or C-domain modulator is useful in the prevention and/or treatment of an ACE protein related disorder.

39. A method according to claim 38 wherein the disorder is hypertension, myocardial infarction or congestive heart failure.

40. A process comprising the steps of:

(a) performing the method according to any of claims 28 to 38;

(b) identifying one or more modulators of the N-domain and/or C-domain; and

(c) preparing a quantity of those one or more N-domain and/or C-domain modulators.

41. A process comprising the steps of:

(a) performing the method according to any of claims 28 to 38;

(b) identifying one or more N-domain and/or C-domain modulators; and

(c) preparing a pharmaceutical composition comprising those one or more identified N-domain modulators.

42. A process comprising the steps of:

(a) performing the method according to any of claims 28 to 38;

(b) identifying one or more N-domain and/or C-domain modulators;

(c) modifying those one or more N-domain and/or C-domain modulators; and

(d) optionally preparing a pharmaceutical composition comprising those one or more N-domain and/or C-domain modulators.

43. A method of obtaining structural information about a molecule or a molecular complex of unknown structure by using at least a portion of the structural co-ordinates set forth in N-domain of ACE protein, comprising the steps of:

(a) generating X-ray diffraction data from a crystallised molecule or molecular complex;

(b) applying at least a portion of the structure co-ordinates of the N-domain to said X-ray diffraction pattern to generate a three dimensional electron density map of at least a portion of the molecule or molecular complex; and

(c) using all or a portion of the structural co-ordinates set forth in N-domain to generate homology models of the N-domain of ACE protein.

44. A method according to claim 43 wherein the structure co-ordinates of the N-domain of ACE protein are used for domain co-operativity studies.

45. The N-domain of ACE protein modulator and/or the C-domain of ACE protein modulator identified by the method of any of claims 28 to 38.

46. The N-domain of ACE protein modulator according to claim 45 wherein the modulator inhibits the N-domain of the ACE protein.

47. The C-domain of ACE protein modulator according to claim 45 wherein the modulator inhibits the C-domain of ACE protein.

48. A pharmaceutical composition comprising the N-domain of ACE protein modulator and/or the C-domain of ACE protein modulator according to any one of claims 45 to 47 and a pharmaceutically acceptable carrier, diluent, excipient or adjuvant or any combination thereof.

49. A method of preventing and/or treating an ACE related disorder comprising administering a modulator of the N-domain and/or C-domain according to any of claims 45 to 47 and/or a pharmaceutical composition according to claim 48 wherein said modulator or said composition is capable of causing a beneficial, preventative and/or therapeutic effect.

50. A computer for producing a three-dimensional representation of N-domain of ACE protein wherein said computer comprises:

(a) a computer-readable data storage medium comprising a data storage material encoded with computer-readable data, wherein said data comprises the structure co-ordinates of the N-domain;

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

(c) a central-processing unit coupled to said working memory and to said computer-readable data storage medium for processing said computer-machine readable data into said three-dimensional representation; and

(d) a display coupled to said central-processing unit for displaying said three-dimensional representation.

51. A machine-readable data storage medium comprising a data storage material encoded with machine readable data, wherein the data is defined by at least a portion of the structural co-ordinates of the N-domain of ACE protein set forth in Table A or Table B.

52. Use of the N-domain of ACE protein crystal in the preparation of a medicament to prevent and/or treat an ACE related disorder.

53. Use according to claim 52 wherein the disorder is hypertension, myocardial infarction or congestive heart failure.

54. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B to screen for modulators of the N-domain of ACE protein and/or the C-domain of the ACE protein.

55. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B to solve the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein.

56. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B in molecular design techniques to design, select and synthesise modulators of the N-domain of ACE protein and/or the C-domain of ACE protein.

57. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B in the development of compounds that can isomerise to reaction intermediates in the chemical reaction of a substrate or other compound that binds to the N-domain of ACE protein and/or the C-domain of ACE protein.

58. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B to screen small molecule databases for chemical entities or compounds that modulate the N-domain of ACE protein or the C-domain of ACE protein.

59. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B to solve the structure of the crystalline form of any other domain with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein.

60. Use according to claim 59 wherein the structure of the crystalline form of any other domain with significant amino acid sequence homology to any functional domain of the N-domain of ACE protein is solved using molecular replacement.

61. Use of at least a portion of the structural co-ordinates set forth in Table A or Table B to identify the binding site of any modulator of the N-domain of ACE protein.

62. Use according to claim 61 wherein the binding site is that of lisinopril or derivatives thereof.

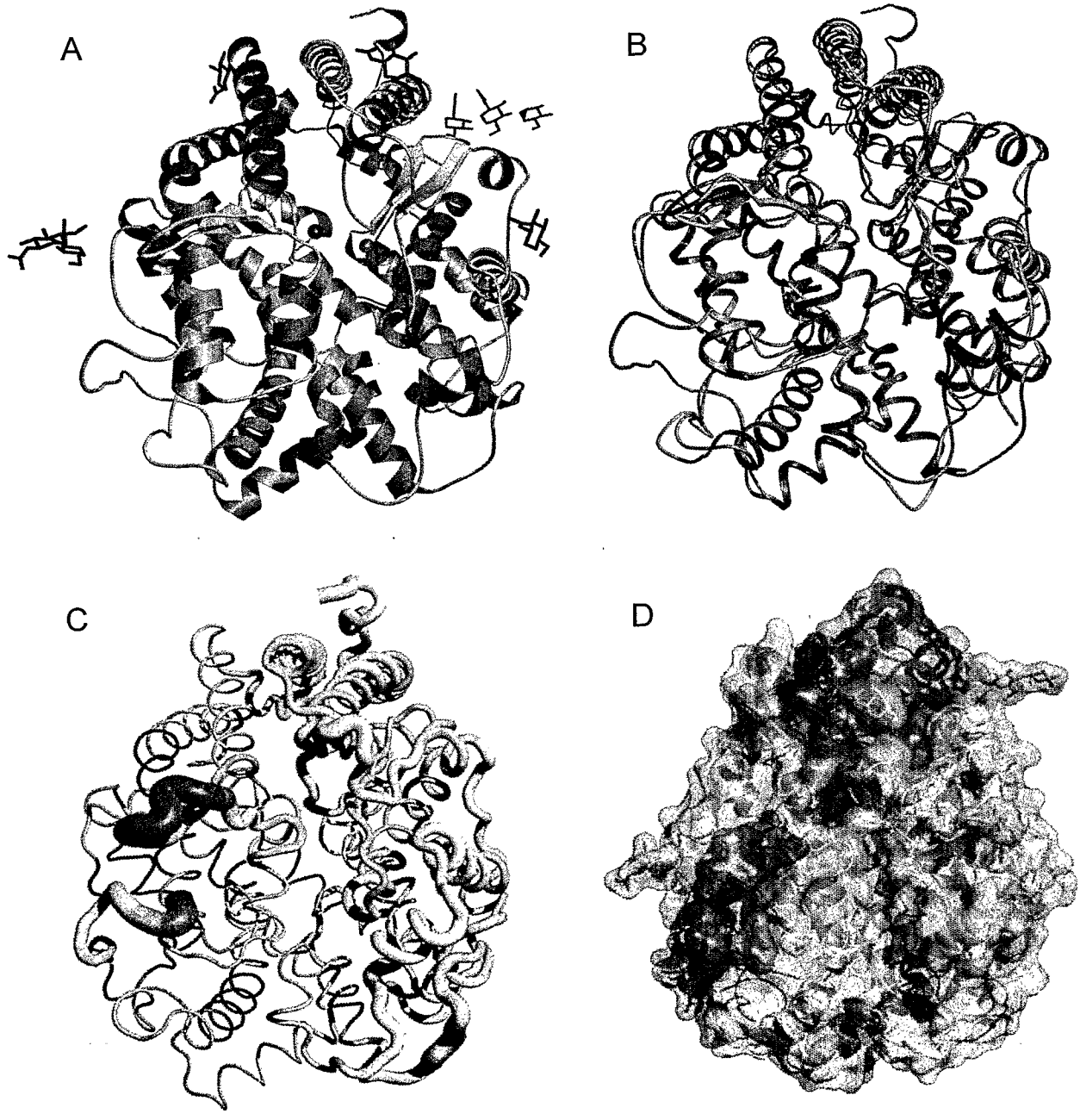

FIG. 1

FIG. 2

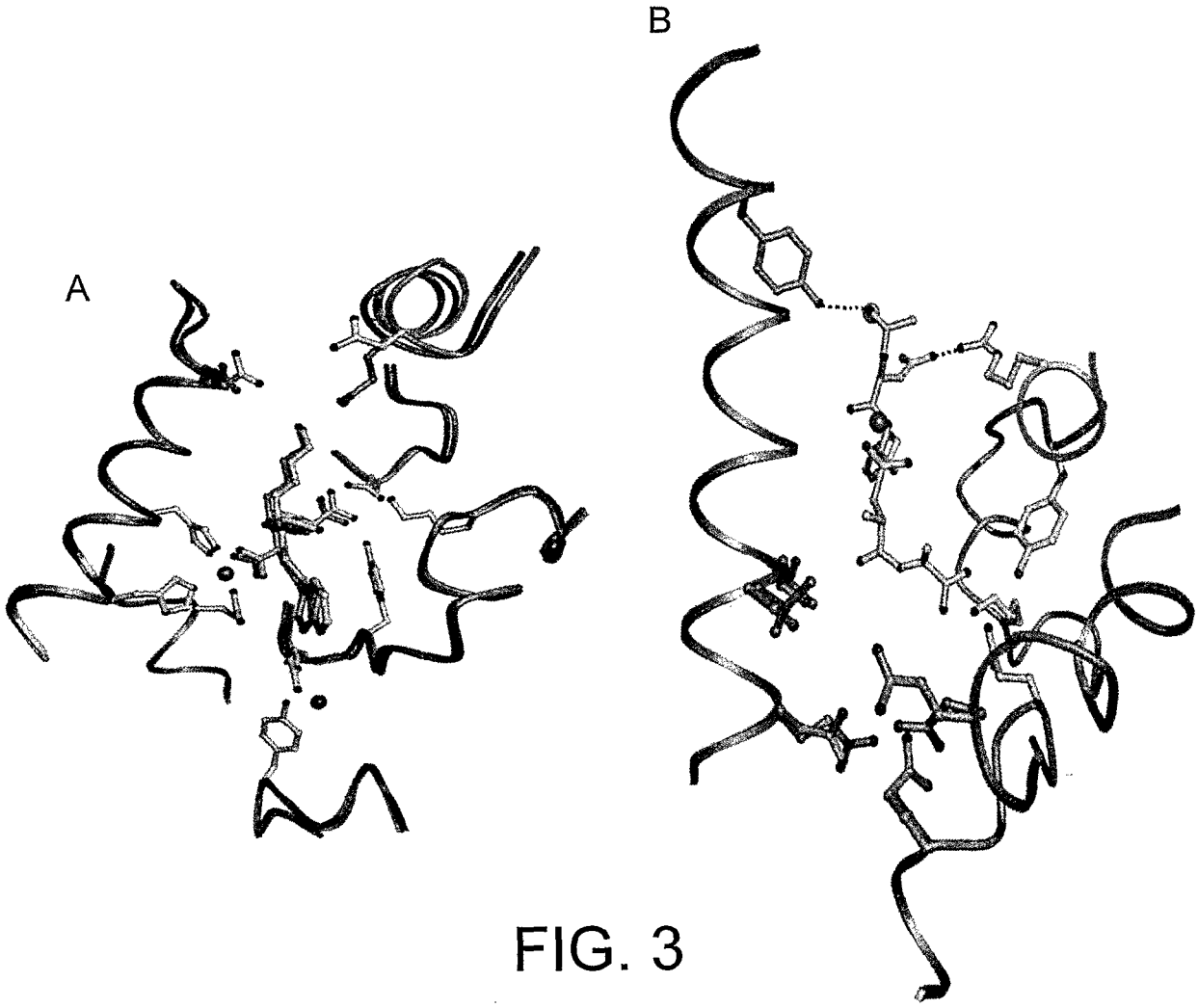

FIG. 3

```
                 H1                          α2                                  α3
N domain  1      LDPGLQPGNFSADEAGAQLFAQSYNSSAEQVLFQSVAASWAHDTNITAENARRQEEAALLSQE
tACE      37     ---------LVTDEAEASKFVEEYDRTSQVVWNEYAEANWNYNTNITTETSKILLQKNMQIAN
ACE2      18     ---------QSTIEEQAKTFLDKFNHEAEDLFYOSSLASWNYNTNITEENVQNMNNAGDKWSA

                                      α4          H5          α6
N domain  64     FAEAWGQKAKELYEPIWQNFTDPQLRRIIGAVRTLGSANLPLAKRQQYNALLSNMSRIYSTAK
tACE      91     HTLKYGTQARKEDVNQLQ---NTTLKRIIKKVQDLERAALPAQELEEYNKILLDMETTYSVAI
ACE2      72     FLKEQSTLAQMYPLQETQN---LTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTGK

              β1          β2        α7                        α8
N domain  127    VCLPNKTATCWSLDPDLTNILASSRSYAMLLFAWEGWHNAAGIPLKPLYEDFTALSNEAYKQD
tACE      151    VCHPNG--SCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPKYVELINQAARLN
ACE2      132    VCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMARAN

                    α/H9                                  α10
N domain  190    GFTDTGAYWRSWYNSP----------TFEDDLEHLYQQLEPLYLNLHAFVRRALHRRYGDRYI
tACE      212    GYVDAGDSWRSMYETP----------SLEQDLERLFQELQPLYLNLHAYVRRALHRHYGAQHI
ACE2      195    HYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMNAYPS-YI

                    β3              H/α11             H/α12          α13
N domain  243    NLRGPIPAHLLGDMWAQSWENIYDMVVPFPDKPNLDVTSTMLQQGWNATHMFRVAEEFFTSLE
tACE      265    NLEGPIPAHLLGNMWAQTWSNIYDLVVPFPSAPSMDTTEAMLKQGWTPRRMFKEADDFFTSLG
ACE2      257    SPIGCLPAHLLGDMWCRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKEAEKFFVSVG

                   α14                          β4        β5                α15
N domain  306    LSPMPPEFWEGSMLEKPADGREVVCHASAWDFYNRKDFRIKQCTRVTMDQLSTVHHEMGHIQY
tACE      328    LLPVPPEFWNKSMLEKPTDGREVVCHASAWDFYNCKDFRIKQCTTVNLEDLVVAHHEMGHIQY
ACE2      320    LPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGK-GDFRILMCTKVTMDDFLTAHHEMGHIQY

                        H16          α17          α18                     α19
N domain  369    YLQYKDLFVSLRRGANPGPHEAIGDVLALSVSTPEHLHKIGLLDRVTN-DTSSDINYLLKMAL
tACE      391    FMQYKDLPVALREGANPGFHEAIGDVLALSVSTPKHLHSLNLLSSEGG-SDEHDINFLMKMAL
ACE2      382    DMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQEDNETEINFLLKQAL

                        α20                  H/α21      β6          H22
N domain  431    EKIAFLPFGYLVDQWRWGVFSGRTPPSRYNFDWWYLRTKYQGICPPVTRNETHFDAGAKFHVP
tACE      453    DKIAFIPFSYLVDQWRWRVFDGSITKENYNQEWWSLRLKYQGLCPPVPRTQGDFDPGAKFHIP
ACE2      445    TIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMKREIVGVVEPVPHDETYCDPASLFHVS

                        α23                  H24          α25                α26
N domain  494    NVTPYIRYFVSFVLQFQFHEALCKEAGYEGPLHQCDIYRSTKAGAKLRKVLQAGSSRPWQEVL
tACE      516    SSVPYIRYFVSFIIQFQFHEALCQAAGHTGPLHKCDIYQSKEAGQRLATAMKLGFSRPWPEAM
ACE2      508    NDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTEAGQRLFNMLRLGKSEPWTLAL

                              α27
N domain  557    KDMVGLDALDAQPLLKYFQPVTQWLQEQNQQNGEVLGWPEYQWHPPLPDNTPESSD      612
tACE      579    QLITGQPNMSASAMLSYFKPLLDWLRTENELHGEKLGWPQYNWTPNS---------      626
ACE2      571    ENVVGAKNMNVRPLLNYFEPLFTWLKDQNKN-SFVGWST-DWSPYAD---------      615
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FIG. 4