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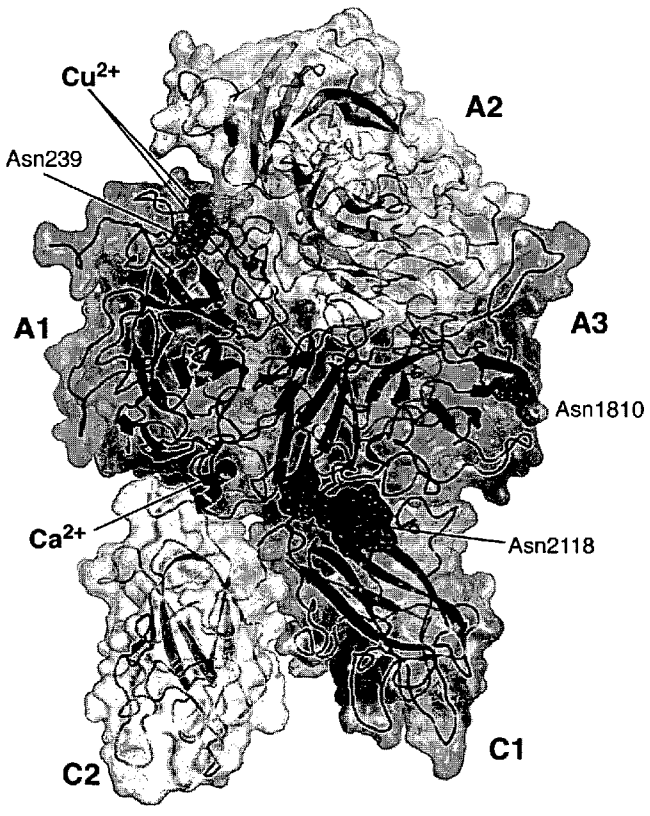


FIG. 1B

(57) Abstract: The present invention provides crystals of human Factor VIII, in particular, a B- domain deleted human Factor VIII, and its three-dimensional structure. The present invention also provides the structural information of Factor VIII, and methods for identifying compounds that modulate Factor VIII activity, for determining structures of Factor VIII homologs or analogs, and for designing drug candidates for the treatment of hemophilia based on the structural information.

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CRYSTAL STRUCTURE OF HUMAN FACTOR VIII AND USES THEREOF

RELATED APPLICATIONS

[0001] This application claims priority to United States Provisional Patent Application serial number 61/005,887, filed on December 6, 2007; United States Provisional Patent Application serial number 61/009,061, filed on December 20, 2007; and United States Provisional Patent Application serial number 61/072,777, filed on March 31, 2008, the entirety of each of which is hereby incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present invention relates to human Factor VIII, in particular, B-domain deleted human Factor VIII, methods for its crystallization, crystals, 3-dimensional structures, and uses thereof.

BACKGROUND OF THE INVENTION

[0003] Factor VIII is a protein cofactor that, when activated, forms a complex with Factor IXa on membrane surfaces to activate factor X during blood coagulation. This glycoprotein is encoded by a gene of 186 kb that is divided into 26 exons. Hemophilia A is caused by defects in the Factor VIII gene that leads to diminished or absent Factor VIII activity in blood, for example, missense mutations, nonsense mutations, gene deletions of varying size, inversions and splice junction mutations. The major treatment of the bleeding disorder associated with hemophilia involves the infusion of Factor VIII into the circulation of patients with hemophilia and the correction of hemostasis.

[0004] The three dimensional structure of Factor VIII is unknown.

SUMMARY OF THE INVENTION

[0005] The present invention provides crystals of human Factor VIII, in particular, a B-domain deleted human Factor VIII, and its three-dimensional structure. The analysis of the three dimensional structure provides previously unknown structural information about the human Factor VIII protein which can be used for the design and development of novel, potent and specific therapeutics for the treatment of hemophilia and other thromboembolic disorders.

[0006] In one aspect, the present invention provides a composition comprising a human Factor VIII, in a crystalline form. In particular, the human Factor VIII lacks at least a portion of B-domain. In one embodiment, the crystalline human Factor VIII has a space group $P4_12_12$. In another embodiment, the crystalline human Factor VIII has unit cell dimensions a=b=134.11 Å, c=349.76 Å. In yet another embodiment, the crystalline human Factor VIII diffracts X-rays for a determination of structural coordinates to a resolution of about 4.0 Angstroms or below (*e.g.*, about 3.8 Å or below, about 3.6 Å or below, about 3.4 Å or below, about 3.2 Å or below, about 3.0 Å or below, about 2.8 Å or below, about 2.5 Å or below, about 2.4 Å or below, about 2.3 Å or below, about 2.2 Å or below, about 2.1 Å or below, about 2.0 Å or below, about 1.9 Å or below, about 1.8 Å or below, about 1.7 Å or below, about 1.6 Å or below, about 1.5 Å or below, about 1.4 Å or below). In one particular example, the crystalline human Factor VIII diffracts X-rays for a determination of structural coordinates to a resolution at about 3.98 Angstroms.

[0007] In one embodiment, the human Factor VIII suitable for the present invention includes an amino acid sequence at least 70%, 75%, 80%, 85%, 90%, 95%, 98%, or 99% identical to SEQ ID NO:1. In a preferred embodiment, the human Factor VIII suitable for the present invention includes the amino acid sequence of SEQ ID NO:1. In another embodiment, the human Factor VIII suitable for the present invention includes an amino acid sequence at least 70%, 75%, 80%, 85%, 90%, 95%, 98%, or 99% identical to SEQ ID NO:2. In a preferred embodiment, the human Factor VIII suitable for the present invention includes the amino acid sequence of SEQ ID NO:2. More preferably, the human Factor VIII suitable for the present invention includes amino acid sequences of SEQ ID NO:1 and SEQ ID NO:2.

[0008] In another aspect, the present invention provides a computer-readable medium containing computer-readable data defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof. As used herein, a root mean square deviation for alpha carbon atoms of less than 2 Angstroms includes a root mean square deviation for alpha

carbon atoms at about 2 Å or less, about 1.8 Å or less, about 1.5 Å or less, about 1.2 Å or less, about 1.0 Å or less, or about 0.5 Å or less.

[0009] In some embodiments, the computer-readable data is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or at least 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95% of the coordinates thereof.

[0010] In some embodiments, the computer-readable data is defined by structural coordinates of one or more atoms selected from the group consisting of atoms of Lys 107, Glu 110, Asp 116, Glu 122, Asp 126, Asp 125, His 267, Cys 310, His 315, His 1954, Cys 2000, and His 2005. In other embodiments, the computer-readable data is defined by structural coordinates of one or more atoms selected from the group consisting of atoms of residues 558-565, 707-712 and 1811-1819 according to Table 2. In further embodiments, the computer-readable data are defined by three-dimensional structural coordinates of one or more Factor VIII domains selected from the group consisting of domain A1, A2, A3, C1 and C2.

[0011] In yet another aspect, the present invention provides a method for constructing a three-dimensional structural representation of a Factor VIIIa-Factor IXa complex, including a complex containing at least a region of Factor VIIIa and at least a region of Factor IXa. The method includes the steps of: (a) providing a three-dimensional structural representation of human Factor VIII, or a region thereof; (b) providing a three-dimensional structural representation of Factor IXa, or a region thereof; and (c) fitting the three-dimensional structural representation from step (a) to the three-dimensional structural representation from step (b).

[0012] In some embodiments, the three-dimensional structural representation of step (a) is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

[0013] In some embodiments, the three-dimensional structural representation of step (a) is defined at least by structural coordinates of one or more atoms selected from the group consisting of atoms of residues 558-565, 707-712 and 1811-1819 according to Table 2.

[0014] In other embodiments, step (c) of the method of this aspect of the invention is based on one or more constraints selected from the group consisting of: (1) residues 558-565 of Factor VIIIa interact with residues 330-339 of Factor IXa; (2) residues 707-712 of Factor VIIIa

interact with residues 301-303 of Factor IXa; (3) residues 1811-1819 of Factor VIIIa interact with the light chain of Factor IXa; (4) Phe 25 in the Gla domain of Factor IXa is juxtaposed with the light chain of Factor VIIIa; and (5) the Gla domain of Factor IXa is situated within a phospholipid membrane.

[0015] The present invention also provides computer-readable media containing computer-readable data defined by a three-dimensional structural representation of a complex comprising at least a region of Factor VIIIa and a region of Factor IXa constructed according to the methods as described in various embodiments above.

[0016] In still another aspect, the present invention provides a method for modifying human Factor VIIIa to alter its interaction with Factor IXa. The method includes the steps of: (a) providing a structural representation of human Factor VIIIa, or a region thereof; (b) fitting the structural representation of step (a) to a three-dimensional structural representation of Factor IXa, or a region thereof; and (d) computationally modifying the structural representation of step (a) to increase or decrease its interaction with the three-dimensional structural representation of Factor IXa, or a region thereof.

[0017] In some embodiments, the structural representation of step (a) is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

[0018] In other embodiments, the structural representation of step (a) is defined at least by structural coordinates of one or more atoms selected from the group consisting of atoms of residues 558-565, 707-712 and 1811-1819 according to Table 2.

[0019] In some embodiments, the three-dimensional structural representation of Factor IXa, or a region thereof, is defined at least by the Gla domain of Factor IXa. In other embodiments, the three-dimensional structural representation of Factor IXa, or a region thereof, is defined at least by the light chain of Factor IXa.

[0020] In some embodiments, the structural representation of step (a) is modified to increase its interaction with the three-dimensional structural representation of Factor IXa, or a region thereof.

[0021] The present invention also provides modified human Factor VIII with increased interaction with Factor IXa according to the methods described in various embodiments above.

[0022] In one aspect, the present invention provides a method for evaluating the activity of a modified human Factor VIII. The method includes the steps of: (a) providing a structural representation of human Factor VIII, or a region thereof; (b) computationally modifying the structural representation of step (a) to introduce one or more amino acid modifications; and (c) evaluating the activity of the modified human Factor VIII based on the modified structural representation from step (b).

[0023] In some embodiments, the structural representation of step (a) is defined by coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

[0024] In one embodiment, the evaluation of the activity of the modified human Factor VIII is based on an evaluation of its interaction with Factor IXa. In another embodiment, the evaluation of the activity of the modified human Factor VIII is based on an evaluation of its interaction with a phospholipid membrane. In yet another embodiment, the evaluation of the activity of the modified human Factor VIII is based on an evaluation of its interaction with von Willebrand Factor (vWF).

[0025] In some embodiments, the method of this aspect of the invention further includes a step of identifying a modified Factor VIII with an improved property. In one particular embodiment, the modified Factor VIII has increased plasma half-life.

[0026] In another aspect, the present invention provides a method of predicting a three dimensional structure of a human Factor VIII homologue or analogue of unknown structure. The method includes the steps of: (a) aligning an amino acid sequence of a target human Factor VIII homolog or analog of unknown structure with the amino acid sequence of human Factor VIII defined by coordinates according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof, to match one or more homologous regions; (b) modeling the structure of the matched one or more homologous regions of the target human Factor VIII homolog or analog of unknown structure on the corresponding regions of the human Factor VIII as defined by coordinates according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof; and (c) determining a structural conformation for said target human Factor VIII homolog or analog of unknown structure which substantially preserves the structure of said matched one or more homologous regions. In one embodiment, the method of this aspect of the invention

further includes a step of evaluating the activity of the target human Factor VIII homolog or analog of unknown structure based on the structural conformation determined at step (c).

[0027] In still another aspect, the present invention provides a method for designing a mimetic compound of human Factor VIII. The method includes the steps of: (a) providing a selected human Factor VIII structure that is associated with a biological activity of human Factor VIII; (b) superimposing a three-dimensional structure of a compound on the selected human Factor VIII structure; and (c) modifying the three-dimensional structure of the compound such that the modified three-dimensional structure comprises a structural confirmation substantially mimicking the selected human Factor VIII structure. In one embodiment, the mimetic compound includes an antibody structure. In another embodiment, the method further includes the steps of: (d) synthesizing the modified compound from step (c); and (e) evaluating the activity of the modified compound.

[0028] The present invention also provides mimetic antibodies of human Factor VIII designed by the methods of this aspect of the invention.

[0029] In yet another aspect, the present invention provides a method for rational drug design. The method includes the steps of: (a) providing selected coordinates of a human Factor VIII structure; (b) providing a plurality of moieties; (c) fitting the structure of each of the plurality of moieties to the selected coordinates; (d) selecting one or more moieties that fit into the selected coordinates; and (e) assembling the one or more moieties selected from step (d) into a single molecule to form a candidate modulator molecule. In some embodiments, the selected coordinates of a human Factor VIII structure comprises one or more coordinates as defined in Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms.

[0030] In some embodiments, wherein the moieties suitable for the method of this aspect of the invention are selected from the group consisting of molecular fragments, small molecules, ligands designed *de novo*, and compounds known to bind Factor VIII or modified compounds thereof.

[0031] In other embodiments, the method of this aspect of the invention further includes the steps of: (f) obtaining or synthesizing the candidate modulator molecule; and (g) contacting the candidate modulator molecule with human Factor VIII to determine the ability of the candidate modulator molecule to interact with human Factor VIII.

[0032] In a further aspect, the present invention provides a method for producing a computer readable database including a structural representation of at least one compound capable of binding human Factor VIII. The method includes the steps of: (a) introducing into a computer program selected coordinates of a human Factor VIII structure; (b) fitting a three-dimensional model of at least one binding test compound on the selected coordinates; (d) assessing whether said test compound model fits spatially into the selected coordinates; and (e) storing a structural representation of a compound that fits into the selected coordinates.

[0033] The present invention also provides a computer readable database produced by the method of this aspect of the invention.

[0034] Other features, objects, and advantages of the present invention are apparent in the detailed description, drawings and claims that follow. It should be understood, however, that the detailed description, the drawings, and the claims, while indicating embodiments of the present invention, are given by way of illustration only, not limitation. Various changes and modifications within the scope of the invention will become apparent to those skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

[0035] The drawings are for illustration purposes only, not for limitation.

[0036] Figure 1A depicts a diagram of the domain organization of human Factor VIII and the B-domain deleted Factor VIII.

[0037] Figure 1B depicts overall three dimensional structure of B-domain deleted Factor VIII.

[0038] Figure 1C depicts overlaid structures of the C2 domain of B-domain deleted Factor VIII and the 1.5 Å resolution structure of the isolated C2 domain (dark grey) (Pratt, K. P., Shen, B. W., Takeshima, K., Davie, E. W., Fujikawa, K. & Stoddard, B. L. (1999) *Nature* **402,** 439-442).

[0039] Figure 1D depicts 2 Cu^{2+} and 1 Ca^{2+} binding sites identified in the B-domain deleted Factor VIII.

[0040] Figure 2A-2D depict structural features of the A domains and C domains. Figure 2A depicts the A1, A2 and A3 domains form a triangular heterotrimer around a pseudo-three-

fold symmetry. Figure 2B illustrates that both the C1 and C2 domains contain numerous basic or hydrophobic residues positioned in the hairpin loops at the base of the domains. Figure 2C depicts the basic and hydrophobic nature of the putative lipid binding surface of the C domains. The solvent-accessible surface at the bottom of both C1 and C2 domains is shaded by electrostatic potential (8 kT/e) computed by APBS (Baker, N. A., Sept, D., Joseph, S., Holst, M. J. & McCammon, J. A. (2001) *Proc Natl Acad Sci U S A* **98,** 10037-41). Figure 2D depicts the interaction between the C2 domain and the A1 (left inset) and the C1 (right inset) domains. The key residues involved in direct contact are indicated. The loop that connects the C1 and C2 domains is highlighted with dashed line in the right inset.

[0041] Figure 3 depicts the comparison of Factor VIII and Factor Vai, and putative B-domain binding site. Figure 3A depicts X-ray crystallographic structure of human B-domain deleted Factor VIII compared to Factor Vai (the activated protein C-inhibited Factor Va). Figure 3B illustrates that the model of the heavy chain (dark grey) ends at residue Lys 713 and the light chain (light grey) starts at Phe 1691. Both termini are circled and the putative location of B-domain is outlined with an oval. This region covers the interaction sites between Factor VIIIa and Factor IXa (dash/dot line, diamond outline, rectangle outline).

[0042] Figure 4A and 4B depict the binding interface between the complex of Factor VIIIa and Factor IXa. Figure 4A depicts the three different interaction sites with Factor IXa. Figure 4B shows that the positions of residues contributed from different loops of C2 domain resemble that of the 330-339 α-helix of Factor IXa.

[0043] Figure 5A depicts the intermolecular energy, E_{inter} (the sum of intermolecular van der Waals, electrostatic, and AIR energy terms) for 60 complex structures, after water refinement, as a function of their backbone rmsd from the lowest energy structure. Figures 5B and 5C depict a model of the Factor IXa-Factor VIIIa complex. Figure 5B depicts front and side views of the complex of Factor VIIIa (dark and light grey) and Factor IXa (outlined in dashed line). Four putative membrane binding sites, including the bases of C1 and C2 domains, the A3 domain loop of Factor VIII and the Gla domain of Factor IXa, lie on the same plane and are darkly shaded (lower region of structures). The active site of Factor IXa is indicated (outlined in solid line). Figure 5C depicts a diagram of the possible interaction of the Factor IXa-Factor VIIIa complex with phospholipid membrane surfaces.

[0044] Figure 6 depicts an exemplary overlaid model of our B domain-deleted Factor VIII crystal structure (PDB ID: 3CDZ) and a crystal structure of a recombinant form of Factor

VIII which consists of a heterodimer of peptides, respectively containing the A1-A2 and A3-C1-C2 domains, disclosed on April 15, 2008 (PDB ID: 2R7E).

[0045] Figure 7 illustrates exemplary electrostatic surface potential of Factor VIII. (A) Front; dark shaded region is postively charged. (B) Back; dark shaded region in the center is negatively charged.

DETAILED DESCRIPTION OF THE INVENTION

[0046] The present invention provides crystals of human Factor VIII, in particular, a B-domain deleted human Factor VIII, and its three-dimensional structure. The present invention also provides the structural information of Factor VIII, and methods for identifying compounds that modulate Factor VIII activity, for determining structures of Factor VIII homologs or analogs, and for designing drug candidates for the treatment of hemophilia and other thromboembolic disorders based on the structural information.

[0047] Various aspects of the invention are described in detail in the following sections. The use of sections is not meant to limit the invention. Each section can apply to any aspect of the invention. In this application, the use of "or" means "and/or" unless stated otherwise.

Factor VIII and bleeding disorder

[0048] Factor VIII is a protein cofactor that, when activated, forms a complex with Factor IXa on membrane surfaces to activate factor X during blood coagulation (Furie, B. & Furie, B. C. (1988) *Cell* **53,** 505-518). This glycoprotein is encoded by a gene of 186 kb that is divided into 26 exons (Gitschier, J., Wood, W. I., Goralka, T. M., Wion, K. L., Chen, E. Y., Eaton, D. H., Vehar, G. A., Capon, D. J. & Lawn, R. M. (1984) *Nature* **312,** 326-30; Toole, J. J., Knopf, J. L., Wozney, J. M., Sultzman, L. A., Buecker, J. L., Pittman, D. D., Kaufman, R. J., Brown, E., Shoemaker, C., Orr, E. C. & et al. (1984) *Nature* **312,** 342-7). Factor VIII is synthesized as a single polypeptide chain, including a 19-residue signal peptide. The mature Factor VIII contains 2,332 amino acid residues arranged within five domains organized as A1-A2-B-A3-C1-C2 (Gitschier, J., Wood, W. I., Goralka, T. M., Wion, K. L., Chen, E. Y., Eaton, D. H., Vehar, G. A., Capon, D. J. & Lawn, R. M. (1984) *Nature* **312,** 326-30; Toole, J. J., Knopf, J. L., Wozney, J. M., Sultzman, L. A., Buecker, J. L., Pittman, D. D., Kaufman, R. J., Brown, E.,

Shoemaker, C., Orr, E. C. & et al. (1984) *Nature* **312,** 342-7) (Figure 1A). A diagram of the domain organization of human Factor VIII and the B-domain deleted Factor VIII is shown in Figure 1A. According to Lenting et al. (1998) *Blood* **92,** 3983-3996, domain A1 corresponds to amino acids 1-336. Domain A2 corresponds to amino acids 373-710. Domain B corresponds to amino acids 741-1648. Domain A3 corresponds to amino acids 1690-2019. Domain C1 corresponds to amino acids 2020-2172. Domain C2 corresponds to amino acids 2173- 2332. In addition, the A domains are bordered by acidic regions *a*1 corresponding to amino acids 337-372, *a*2 corresponds to amino acids 711-740, or *a*3 corresponds to amino acids 1649-1689.

[0049] Factor VIII circulates in the blood as a heterodimer composed of two polypeptide chains, a light chain with a molecular weight of about 80,000 and a heterogeneous heavy chain with a molecular weight varying between about 90,000 and 200,000, both derived from the single peptide chain. A region of the C2 domain defines the membrane-binding properties of Factor VIII and the site of interaction with von Willebrand factor (Pratt, K. P., Shen, B. W., Takeshima, K., Davie, E. W., Fujikawa, K. & Stoddard, B. L. (1999) *Nature* **402,** 439-442). Factor VIII is inactive or minimally active as a cofactor in blood coagulation, but is converted into its active cofactor form by proteolytic cleavage. Although active Factor VIII can be formed from cleavage at Arg 372 and Arg 1689, it is generally appreciated that activated Factor VIII is generated from 3 cleavage events (Arg 372, Arg 1689, and Arg 740).

[0050] Activated Factor VIII (Factor VIIIa) acts as a cofactor for activated Factor IX (Factor IXa) to accelerate the conversion of factor X to activated factor X (factor Xa). Factor Xa converts prothrombin into thrombin. Thrombin then converts fibrinogen into fibrin and a clot is formed.

[0051] Classic hemophilia (also known as hemophilia A) is caused by a defect in the Factor VIII gene that leads to diminished or absent Factor VIII activity in blood. A heterogeneous genetic disease, hemophilia A has been associated with missense mutations, nonsense mutations, gene deletions of varying size, inversions and splice junction mutations (Furie, B. & Furie, B. C. (1990) *Semin Hematol* **27,** 270-85; Graw, J., Brackmann, H. H., Oldenburg, J., Schneppenheim, R., Spannagl, M. & Schwaab, R. (2005) *Nat Rev Genet* **6,** 488-501). The major treatment of the bleeding disorder associated with hemophilia involves the infusion of Factor VIII into the circulation of patients with hemophilia and the correction of hemostasis (Mannucci, P. M. & Tuddenham, E. G. (2001) *N Engl J Med* **344,** 1773-9; Key, N. S. & Negrier, C. (2007) *Lancet* **370,** 439-48).

B-domain deleted human Factor VIII

[0052] Based upon the observation that the B-domain of porcine Factor VIII shows no sequence homology to the B-domain of human Factor VIII yet porcine and human Factor VIII have similar specific coagulant activities when evaluated in human plasma, engineered B-domain deleted human Factor VIII was shown to have full biological activity and could be expressed in heterologous cells with improved expression efficiency relative to that of the full-length molecule (Toole, J. J., Pittman, D. D., Orr, E. C., Murtha, P., Wasley, L. C. & Kaufman, R. J. (1986) *Proc Natl Acad Sci U S A* **83,** 5939-42). The structural heterogeneity of B-domain deleted Factor VIII is significantly less than that for full length Factor VIII, with a heavy chain of 90,000 and a light chain of 80,000 molecular weight (Figure 1A).

[0053] As used herein, a "B-domain deleted human Factor VIII" includes a Factor VIII, or a structural or functional variant, that lacks at least a portion or the entirety of the B-domain. As used herein, the B-domain of Factor VIII corresponds to amino residues 741 thru and including 1648 of human Factor VIII.

[0054] Thus, a B-domain deleted human Factor VIII suitable for the invention includes a heavy chain and a light chain. The heavy chain of human Factor VIII includes amino acid residues 1-740 (A1-*a*1-A2-*a*2) and the light chain of human Factor VIII includes amino acid residues 1649-2332 (*a*3-A3-C1-C2). This sequence of the heavy chain of human Factor VIII is shown below as SEQ ID NO:1 and the sequence of the light chain of human Factor VIII is shown below as SEQ ID NO:2.

[0055] The heavy chain of human Factor VIII (including residues 1-740) (SEQ ID NO:1)

ATRRYYLGAVELSWDYMQSDLGELPVDARFPPRVPKSFPFNTSVVYKKTLFVEFTDHLF
NIAKPRPPWMGLLGPTIQAEVYDTVVITLKNMASHPVSLHAVGVSYWKASEGAEYDDQ
TSQREKEDDKVFPGGSHTYVWQVLKENGPMASDPLCLTYSYLSHVDLVKDLNSGLIGA
LLVCREGSLAKEKTQTLHKFILLFAVFDEGKSWHSETKNSLMQDRDAASARAWPKMHT
VNGYVNRSLPGLIGCHRKSVYWHVIGMGTTPEVHSIFLEGHTFLVRNHRQASLEISPITFL
TAQTLLMDLGQFLLFCHISSHQHDGMEAYVKVDSCPEEPQLRMKNNEEAEDYDDDLTD
SEMDVVRFDDDNSPSFIQIRSVAKKHPKTWVHYIAAEEEDWDYAPLVLAPDDRSYKSQ
YLNNGPQRIGRKYKKVRFMAYTDETFKTREAIQHESGILGPLLYGEVGDTLLIIFKNQAS
RPYNIYPHGITDVRPLYSRRLPKGVKHLKDFPILPGEIFKYKWTVTVEDGPTKSDPRCLT
RYYSSFVNMERDLASGLIGPLLICYKESVDQRGNQIMSDKRNVILFSVFDENRSWYLTEN
IQRFLPNPAGVQLEDPEFQASNIMHSINGYVFDSLQLSVCLHEVAYWYILSIGAQTDFLS
VFFSGYTFKHKMVYEDTLTLFPFSGETVFMSMENPGLWILGCHNSDFRNRGMTALLKV
SSCDKNTGDYYEDSYEDISAYLLSKNNAIEPR

[0056] The light chain of human Factor VIII (including residues 1649-2332) (SEQ ID NO:2):

EITRTTLQSDQEEIDYDDTISVEMKKEDFDIYDEDENQSPRSFQKKTRHYFIAAVE
RLWDYGMSSSPHVLRNRAQSGSVPQFKKVVFQEFTDGSFTQPLYRGELNEHLGLLGPYI
RAEVEDNIMVTFRNQASRPYSFYSSLISYEEDQRQGAEPRKNFVKPNETKTYFWKVQHH
MAPTKDEFDCKAWAYFSDVDLEKDVHSGLIGPLLVCHTNTLNPAHGRQVTVQEFALFL
TIFDETKSWYFTENMERNCRAPCNIQMEDPTFKENYRFHAINGYIMDTLPGLVMAQDQR
IRWYLLSMGSNENIHSIHFSGHVFTVRKKEEYKMALYNLYPGVFETVEMLPSKAGIWRV
ECLIGEHLHAGMSTLFLVYSNKCQTPLGMASGHIRDFQITASGQYGQWAPKLARLHYSG
SINAWSTKEPFSWIKVDLLAPMIIHGIKTQGARQKFSSLYISQFIIMYSLDGKKWQTYRGN
STGTLMVFFGNVDSSGIKHNIFNPPIIARYIRLHPTHYSIRSTLRMELMGCDLNSCSMPLG
MESKAISDAQITASSYFTNMFATWSPSKARLHLQGRSNAWRPQVNNPKEWLQVDFQKT
MKVTGVTTQGVKSLLTSMYVKEFLISSSQDGHQWTLFFQNGKVKVFQGNQDSFTPVVN
SLDPPLLTRYLRIHPQSWVHQIALRMEVLGCEAQDLY

[0057] A B-domain deleted Factor VIII suitable for the invention may also contain modified or mutated heavy and/or light chains. Modified or mutant heavy or light chains may be generated by replacing at least one amino acid residue in a native polypeptide with a different amino acid residue, or by adding or deleting amino acid residues within the native polypeptide or at the N- or C-terminus of the native polypeptide. Preferably, the B-domain deleted Factor VIII including modified heavy and/or light chains has substantially the same three-dimensional structure. By having substantially the same three-dimensional structure is meant having a set of atomic structure coordinates that have a root-mean-square deviation of less than or equal to about 2 Å when superimposed with the atomic structure coordinates of the native protein, or a region thereof, from which the mutant is derived when at least about 50% to 100% of the alpha carbon atoms of the corresponding native protein, or a region thereof, are included in the superposition.

[0058] Amino acid substitutions, deletions and additions which do not significantly interfere with the three-dimensional structure of Factor VIII will depend, in part, on the region of Factor VIII where the substitution, addition or deletion occurs. In highly variable regions of the molecule, non-conservative substitutions as well as conservative substitutions may be tolerated without significantly disrupting the three-dimensional, structure of the molecule. In highly conserved regions, or regions containing significant secondary structure, conservative amino acid substitutions are preferred.

[0059] Conservative amino acid substitutions are well known in the art, and include substitutions made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the amino acid residues involved. For example,

negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; amino acids with uncharged polar head groups having similar hydrophilicity values include the following: leucine, isoleucine, valine; glycine, alanine; asparagine, glutamine; serine, threonine; phenylalanine, tyrosine. Other conservative amino acid substitutions are well known in the art.

[0060] For proteins obtained in whole or in part by chemical synthesis, the selection of amino acids available for substitution or addition is not limited to the genetically encoded amino acids. Indeed, the mutants described herein may contain non-genetically encoded amino acids. Conservative amino acid substitutions for many of the commonly known non-genetically encoded amino acids are well known in the art. Conservative substitutions for other amino acids can be determined based on their physical properties as compared to the properties of the genetically encoded amino acids.

[0061] In some instances, it may be particularly advantageous or convenient to substitute, delete and/or add amino acid residues to a native protein in order to provide convenient cloning sites in cDNA encoding the polypeptide, to aid in purification of the polypeptide, and for crystallization of the polypeptide. Such substitutions, deletions and/or additions which do not substantially alter the three dimensional structure of Factor VIII will be apparent to those of ordinary skill in the art.

[0062] Thus, a human Factor VIII suitable for the present invention includes an amino acid sequence at least 70%, 75%, 80%, 85%, 90%, 95%, 98%, or 99% identical to SEQ ID NO:1. In one particular embodiment, the human Factor VIII suitable for the present invention includes the amino acid sequence of SEQ ID NO:1. In another embodiment, the human Factor VIII suitable for the present invention includes an amino acid sequence at least 70%, 75%, 80%, 85%, 90%, 95%, 98%, or 99% identical to SEQ ID NO:2. In one particular embodiment, the human Factor VIII suitable for the present invention includes the amino acid sequence of SEQ ID NO:2. More particularly, the human Factor VIII suitable for the present invention includes amino acid sequences of SEQ ID NO:1 and SEQ ID NO:2.

[0063] In addition, the human Factor VIII suitable for the invention may also contain a linker, for example, at the C-terminus of the heavy chain, that connects the heavy chain and the light chain. A suitable linker may be derived from the amino acid sequence of the B-domain. For example, a linker may contain amino acids derived from the N-terminal region and/or the C-terminal region of the B-domain. One such exemplary linker sequence is as follows:

SFSQNPPVLKRHQR (SEQ ID NO:3). Alternatively, a linker may incorporate artificial amino acid sequences other than any naturally-occurring sequences and is generally designed to be flexible or to interpose a structure, such as an alpha-helix, between the two protein moieties.

Three-Dimensional Structure Determination Using X-ray Crystallography

[0064] X-ray crystallography is a method of solving the three dimensional structures of molecules. The structure of a molecule is calculated from X-ray diffraction patterns using a crystal as a diffraction grating. Three dimensional structures of protein molecules arise from crystals grown from a concentrated aqueous solution of that protein. The process of X-ray crystallography can include the following steps: (a) synthesizing and isolating (or otherwise obtaining) a protein; (b) growing a crystal from an aqueous solution comprising the protein with or without a modulator; and (c) collecting X-ray diffraction patterns from the crystals, determining unit cell dimensions and symmetry, determining electron density, fitting the amino acid sequence of the protein to the electron density, and refining the structure.

Preparation of B-domain deleted human Factor VIII

[0065] A B-domain deleted human Factor VIII described herein may be chemically synthesized in whole or part using techniques that are well-known in the art (see, *e.g.*, Creighton (1983) Biopolymers 22(1):49-58). Alternatively, methods which are well known to those skilled in the art can be used to construct expression vectors containing the Factor VIII coding sequence and appropriate transcriptional/translational control signals. These methods include *in vitro* recombinant DNA techniques, synthetic techniques and *in vivo* recombination/genetic recombination. See, for example, the techniques described in Maniatis, T (1989). Molecular cloning: A laboratory Manual. Cold Spring Harbor Laboratory, New York. Cold Spring Harbor Laboratory Press; and Ausubel, F. M. *et al.* (1994) Current Protocols in Molecular Biology. John Wiley & Sons, Secaucus, N.J.

[0066] B-domain deleted human Factor VIII can be expressed in a variety of mammalian cell lines including, but not limited to, human embryonic kidney (HEK) 293, Chinese hamster ovary (CHO), monkey kidney (COS), HT1080, C10, HeLa, baby hamster kidney (BHK), 3T3, C127, CV-1, HaK, NS/O, and L-929 cells. B-domain deleted human Factor VIII can also be expressed in a variety of non-mammalian host cells such as, for example, insect (*e.g.*, Sf-9, Sf-

21, Hi5), plant (*e.g.*, Leguminosa, cereal, or tobacco), yeast (*e.g.*, S. cerivisae, P. pastoris), prokaryote (*e.g.*, E. Coli, B. subtilis and other Bacillus spp., Pseudomonas spp., Streptomyces spp), or fungus. Detailed preparation of B-domain deleted human Factor VIII was described in Sandberg *et al.* (2001) Seminars in Hematology, Vol. 38, No. 2, Suppl. 4: pp 4-12; and Eriksson *et al.* (2001) Semin. Hematol., 38:24-31, the teachings of both of which are hereby incorporated by reference.

Crystal Growth

[0067] Typically, crystals are grown from an aqueous solution containing the purified and concentrated protein by a variety of techniques. Suitable techniques include batch, liquid, bridge, dialysis, vapor diffusion, and hanging drop methods. McPherson (1982) John Wiley, New York; McPherson (1990) Eur. J. Biochem. 189:1-23; Webber (1991) Adv. Protein Chem. 41:1-36, incorporated by reference herein in their entireties, including all figures, tables, and drawings.

[0068] The crystals of the invention are, in general, grown by adding precipitants to the concentrated solution of the polypeptide. The precipitants are added at a concentration just below that necessary to precipitate the protein. Water is removed by controlled evaporation to produce precipitating conditions, which are maintained until crystal growth ceases. For crystals of the invention, exemplary crystallization conditions are described in the Examples. Those of ordinary skill in the art will recognize that the exemplary crystallization conditions can be varied. Such variations may be used alone or in combination. In addition, other crystallizations may be found, *e.g.*, by using crystallization screening plates to identify such other conditions.

[0069] Derivative crystals of the invention can be obtained by soaking original crystals in mother liquor containing salts of heavy metal atoms. Heavy metal atoms useful for providing derivative crystals include, by way of example and not limitation, gold, mercury, selenium, *etc.* It has been found that soaking an original crystal in a solution containing about 0.1 mM to about 5 mM thimerosal, 4-chloromeruribenzoic acid or $KAu(CN)_2$ for about 2 hr to about 72 hr provides derivative crystals suitable for use as isomorphous replacements in determining the X-ray crystal structure of Factor VIII.

[0070] Co-crystals of the invention can be obtained by soaking a crystal of Factor VIII in mother liquor containing compound that binds Factor VIII, or can be obtained by co-crystallizing

the Factor VIII protein in the presence of a binding compounds. Thus, the co-crystals generally comprise a crystalline Factor VIII, or a region thereof, in association with one or more compounds. The association may be covalent or non-covalent. Such compounds include, but are not limited to, cofactors, substrates, substrate analogues, inhibitors, allosteric effectors, *etc.*

[0071] Generally, co-crystallization of Factor VIII and binding compound can be accomplished using conditions identified for crystallizing the corresponding Factor VIII without binding compound. It is advantageous if a plurality of different crystallization conditions have been identified for Factor VIII, and these can be tested to determine which condition gives the best co-crystals. It may also be beneficial to optimize the conditions for co-crystallization.

Determining Unit Cell Dimensions and the Three Dimensional Structure

[0072] Once the crystal is grown, it can be placed in a glass capillary tube or other mounting device and mounted onto a holding device connected to an X-ray generator and an X-ray detection device. Collection of X-ray diffraction patterns are well documented by those in the art. See, *e.g.*, Ducruix and Geige, (1992), IRL Press, Oxford, England, and references cited therein. A beam of X-rays enters the crystal and then diffracts from the crystal. An X-ray detection device can be utilized to record the diffraction patterns emanating from the crystal. Although the X-ray detection device on older models of these instruments is a piece of film, modern instruments digitally record X-ray diffraction scattering. X-ray sources can be of various types, but advantageously, a high intensity source is used, e.g., a synchrotron beam source.

[0073] Methods for obtaining the three dimensional structure of the crystalline form of a peptide molecule or molecule complex are well known in the art. See, *e.g.*, Ducruix and Geige, (1992), IRL Press, Oxford, England, and references cited therein. The following are steps in the process of determining the three dimensional structure of a molecule or complex from X-ray diffraction data.

[0074] After the X-ray diffraction patterns are collected from the crystal, the unit cell dimensions and orientation in the crystal can be determined. They can be determined from the spacing between the diffraction emissions as well as the patterns made from these emissions. The unit cell dimensions are characterized in three dimensions in units of Angstroms (one Å=10^{-10} meters) and by angles at each vertices. The symmetry of the unit cell in the crystals is also

characterized at this stage. The symmetry of the unit cell in the crystal simplifies the complexity of the collected data by identifying repeating patterns. Application of the symmetry and dimensions of the unit cell is described below.

[0075] Each diffraction pattern emission is characterized as a vector and the data collected at this stage of the method determine the amplitude of each vector. The phases of the vectors can be determined using multiple techniques. In one method, heavy atoms can be soaked into a crystal, a method called isomorphous replacement, and the phases of the vectors can be determined by using these heavy atoms as reference points in the X-ray analysis. (Otwinowski, (1991), Daresbury, United Kingdom, 80-86). The isomorphous replacement method usually utilizes more than one heavy atom derivative. In another method, the amplitudes and phases of vectors from a crystalline polypeptide with an already determined structure can be applied to the amplitudes of the vectors from a crystalline polypeptide of unknown structure and consequently determine the phases of these vectors. This second method is known as molecular replacement and the protein structure which is used as a reference must have a closely related structure to the protein of interest. (Naraza (1994) Proteins 11:281-296). For example, the structural information from any isolated Factor VIII domain, or related proteins such as, Factor Va or ceroluplasmin, can be used as references for the molecular replacement analysis.

[0076] Once the phases of the vectors describing the unit cell of a crystal are determined, the vector amplitudes and phases, unit cell dimensions, and unit cell symmetry can be used as terms in a Fourier transform function. The Fourier transform function calculates the electron density in the unit cell from these measurements. The electron density that describes one of the molecules or one of the molecule complexes in the unit cell can be referred to as an electron density map. The amino acid structures of the sequence or the molecular structures of compounds complexed with the crystalline polypeptide may then be fitted to the electron density using a variety of computer programs. This step of the process is sometimes referred to as model building and can be accomplished by using computer programs such as Turbo/FRODO or "O" (Jones (1985) Methods in Enzymology 115:157-171), or AMoRe (Navaza, (1994) Acta Cryst. A50:157-163)

[0077] A theoretical electron density map can then be calculated from the amino acid structures fit to the experimentally determined electron density. The theoretical and experimental electron density maps can be compared to one another and the agreement between these two maps can be described by a parameter called an R-factor. A low value for an R-factor

describes a high degree of overlapping electron density between a theoretical and experimental electron density map.

[0078] The R-factor is then minimized by using computer programs that refine the theoretical electron density map. A computer program such as X-PLOR can be used for model refinement by those skilled in the art. Briinger (1992) Nature 355:472-475. Other suitable computer programs such as or REFMAC are well known in the art. Refinement may be achieved in an iterative process. A first step can entail altering the conformation of atoms defined in an electron density map. The conformations of the atoms can be altered by simulating a rise in temperature, which will increase the vibrational frequency of the bonds and modify positions of atoms in the structure. At a particular point in the atomic perturbation process, a force field, which typically defines interactions between atoms in terms of allowed bond angles and bond lengths, Van der Waals interactions, hydrogen bonds, ionic interactions, and hydrophobic interactions, can be applied to the system of atoms. Favorable interactions may be described in terms of free energy and the atoms can be moved over many iterations until a free energy minimum is achieved. The refinement process can be iterated until the R-factor reaches a minimum value.

[0079] The three dimensional structure of the molecule or molecule complex is described by atoms that fit the theoretical electron density characterized by a minimum R-value. A file can then be created for the three dimensional structure that defines each atom by coordinates in three dimensions. An example of such a structural coordinate file is shown in Table 2.

Structures of B-domain deleted human Factor VIII

[0080] The present invention provides three-dimensional structures and atomic structure coordinates of B-domain deleted human Factor VIII as determined by X-ray crystallography. The specific methods used to obtain the structure coordinates are provided in the examples. Exemplary atomic structure coordinates of B-domain deleted human Factor VIII are listed in Table 2.

[0081] Those having skill in the art will recognize that atomic structure coordinates as determined by X-ray crystallography are not without error. Thus, it is to be understood that any set of structure coordinates obtained for crystals of B-domain deleted human Factor VIII, or a region thereof, that have a root mean square deviation ("rmsd") of less than or equal to about 2 Å

when superimposed, using backbone atoms (*e.g.*, N, Cα, C or O), on the corresponding structure coordinates listed in Table 2 are considered to be identical with the structure coordinates listed in the Table 2 when at least about 50% to 100% of the corresponding backbone atoms are included in the superposition. As used herein, a root mean square deviation for alpha carbon atoms of less than 2 Angstroms includes a root mean square deviation for alpha carbon atoms at about 2 Å or less, at about 1.8 Å or less, at about 1.5 Å or less, at about 1.2 Å or less, at about 1.0 Å or less, or at about 0.5 Å or less.

[0082] The overall three dimensional structure of B-domain deleted Factor VIII is illustrated in Figure 1B. The structure includes five globular domains with overall dimensions of about 120 Å by 75 Å. The A1 domain (residues 1-336) and the a1 acidic region (residues 337-372) are depicted. The A2 domain (residues 373-710) and the a2 acidic region (residues 711-740) are depicted. These regions (A1, a1, A2, and a2) are part of the heavy chain. The A3 domain (residues 1690-2019), and the C1 domain (residues 2020-2172) and the C2 domain (residues 2173-2332) are part of the light chain are depicted here. The a3 acidic region is disordered and not included in this structure. The structure contains 2 Cu^{2+} ions, 1 Ca^{2+} ion and three carbohydrate moieties.

[0083] Figure 1C depicts overlaid structures of the C2 domain of B-domain deleted Factor VIII provided by the present invention and the 1.5 Å resolution structure of the isolated C2 domain (grey) (Pratt, K. P., Shen, B. W., Takeshima, K., Davie, E. W., Fujikawa, K. & Stoddard, B. L. (1999) *Nature* **402,** 439-442).

[0084] Figure 1D depicts 2 Cu^{2+} and 1 Ca^{2+} binding sites identified in the B-domain deleted Factor VIII. Anomalous electron density map of the metal ions are contoured at 4δ. The upper panel in Figure 1D illustrates the Cu^{2+} binding site in A1 domain. The middle panel shows the Cu^{2+} binding site in A3 domain. Each Cu^{2+} is liganded by two histidine and one cysteine residue with a trigonal planar coordination geometry. The lower panel in Figure 1D illustrates that Ca^{2+} ion is liganded by carboxyl groups of aspartate and glutamate residues as well as two backbone carbonyl oxygens.

[0085] The A1, A2 and A3 domains each consists of two β-barrel structures that resemble the fold of a typical cupredoxin-type domain. All three A domains share high structural homology with each other and the A domains of ceruloplasmin. The A domains form a triangular heterotrimer where A1 and A3 domains serve as the base and interact with the C2 and C1 domains respectively. The C1 and C2 domains are defined by a distorted β-barrel and

are structurally homologous with each other. At the base of the Factor VIII structure, both C domains reveal membrane binding features.

[0086] Figures 2A-2D depict structural features of the A domains and C domains. As illustrated in Figure 2A, the A1, A2 and A3 domains form a triangular heterotrimer around a pseudo-three-fold symmetry axis. Side view of the A domain heterotrimer shows that the front surface is relatively flat when compared to the back face, which contains a deep cleft formed by three large loops. As shown in Figure 2B, both of the C1 and C2 domains contain numerous basic or hydrophobic residues positioned in the hairpin loops at the base of the domains. As an indication of the basic and hydrophobic nature of the putative lipid binding surface of the C domains, the solvent-accessible surface at the bottom of both C1 and C2 domains is shaded by electrostatic potential (8 kT/e) computed by APBS (Baker, N. A., Sept, D., Joseph, S., Holst, M. J. & McCammon, J. A. (2001) *Proc Natl Acad Sci U S A* **98,** 10037-41) (Figure 2C). Figure 2D shows that the C2 domain has few interactions with the A1 (left inset) and the C1 (right inset) domains. The key residues involved in direct contact are indicated. The loop that connects the C1 and C2 domains is highlighted with dashed line in the right inset.

[0087] The domain organization in Factor VIII is homologous to the activated protein C-inactivated Factor Va (Factor Vai) structure (Adams *et al.*, Proc. Natl. Acad. Sci USA, 101:8918, 2004) except that it also includes the A2 domain. Figures 3A and 3B depict the comparison of Factor VIII and Factor Vai and putative B-domain binding site. Figure 3A depicts X-ray crystallographic structure of human B-domain deleted Factor VIII compared to Factor Vai. Figure 3A shows the superimposition of the carbon backbones of B-domain deleted Factor VIII (dark grey shaded) and Factor Vai (lightly shaded). Factor Vai shares the same domain organization as B-domain deleted Factor VIII but does not include the A2 domain. As illustrated in Figure 1B, the model of the heavy chain (dark grey) ends at residue Lys 713 and the light chain (light grey) starts at Phe 1691. Both termini are circled and the putative location of B-domain is outlined in an oval. This region covers the interaction sites between Factor VIIIa and Factor IXa (dash/dot line, diamond outline, rectangle outline).

Structural model of the complex of Factor VIIIa and Factor IXa

[0088] The absence of B-domain and the disorder of the loops containing the cleavage sites necessary for Factor VIII activation suggest that the our current structural model resembles the covalent structure of Factor VIIIa. Thus, the structural model of the present invention can be

used to construct a three-dimensional structural model of a Factor VIIIa-Factor IXa complex, including a complex containing at least a region of Factor VIIIa and at least a region of Factor IXa. In general, the method includes the steps of: (a) providing a three-dimensional structural representation of human Factor VIII, or a region thereof; (b) providing a three-dimensional structural representation of Factor IXa, or a region thereof; and (c) fitting the three-dimensional structural representation from step (a) to the three-dimensional structural representation from step (b).

[0089] The assembly of the Factor IXa-Factor VIIIa complex normally involves the binding of Factor VIIIa and Factor IXa on phospholipid membrane surfaces in the presence of calcium ions. Based upon homology modeling (Autin, L., Miteva, M. A., Lee, W. H., Mertens, K., Radtke, K. P. & Villoutreix, B. O. (2005) *J Thromb Haemost* **3,** 2044-56), the analysis of naturally occurring hemophilia A and B mutations or mutations introduced by site-specific mutagenesis (Mannucci, P. M. & Tuddenham, E. G. (2001) *N Engl J Med* **344,** 1773-9; Jenkins, P. V., Dill, J. L., Zhou, Q. & Fay, P. J. (2004) *Biochemistry* **43,** 5094-101; Nishimura, H., Takeya, H., Miyata, T., Suehiro, K., Okamura, T., Niho, Y. & Iwanaga, S. (1993) *J Biol Chem* **268,** 24041-6; Hughes, P. E., Morgan, G., Rooney, E. K., Brownlee, G. G. & Handford, P. (1993) *J Biol Chem* **268,** 17727-33), cross-linking studies (Blostein, M. D., Furie, B. C., Rajotte, I. & Furie, B. (2003) *J Biol Chem* **278,** 31297-302) and inhibition with synthetic peptides (Lenting, P. J., van de Loo, J. W., Donath, M. J., van Mourik, J. A. & Mertens, K. (1996) *J Biol Chem* **271,** 1935-40), the binding surface on Factor VIIIa is thought to involve the A2 and A3 domains interacting with multiple domains on Factor IXa. Thus, a model of the Factor IXa-Factor VIIIa complex using our Factor VIII structure and the x-ray crystal structure of porcine Factor IXa backbone may be constructed using one or more of the following constraints: (1) residues 558-565 of Factor VIII interact with the 330-339 helix of Factor IXa; (2) 707-712 of Factor VIIIa binds to Factor IXa residues 301-303; (3) residues 1811-1819 of Factor VIII interact with the light chain of Factor IXa; (4) Phe 25 in the Gla domain of Factor IX is juxtaposed with the light chain of Factor VIII; and (5) the Gla domain of Factor IXa is situated within the phospholipid membrane, forming non-covalent interactions between the phosphoserine head group and fatty acid chains of the phospholipid bilayer and the hydrophobic patch and the Gla residues within the Gla domain of Factor IXa.

[0090] Figures 4A and 4B illustrate the binding interface between Factor VIII and Factor IXa. In Figure 4A, three different interaction sites with Factor IXa were identified on Factor VIIIa in previous studies and are indicated by i, ii, and iii respectively. The complementary binding sites on Factor IXa are labeled accordingly. Region i includes residues 558-565 on

Factor VIII and the 330-339 helix on Factor IXa. Region ii includes residue around 712 on Factor VIII and 301-303 on Factor IXa. Region iii on Factor VIII represents the binding site (1811-1818) that is suggested to be responsible for the high affinity interaction between Factor VIIIa and Factor IXa. Residues on the light chain of Factor IXa that have been shown to be important for binding include Phe 25 within the Gla domain, which is known to be juxtaposed to the Factor VIIIa light chain, and Tyr 69 (Nishimura, H., Takeya, H., Miyata, T., Suehiro, K., Okamura, T., Niho, Y. & Iwanaga, S. (1993) *J Biol Chem* **268,** 24041-6) and Asn 92 (Hughes, P. E., Morgan, G., Rooney, E. K., Brownlee, G. G. & Handford, P. (1993) *J Biol Chem* **268,** 17727-33). The putative binding region with 1811-1818 of Factor VIII is highlighted with dashed line. The putative phospholipids binding sites in the C1 and C2 domains of Factor VIIIa and the Gla domain of Factor IXa that are responsible for membrane binding are indicated (dark grey). As illustrated in Figure 4B, positions of residues contributed from different loops of C2 domain resemble that of the 330-339 α-helix of Factor IXa.

[0091] Figure 5A shows a plot of the intermolecular energy, E_{inter} (the sum of intermolecular van der Waals, electrostatic, and AIR energy terms) for 60 complex structures, after water refinement, as a function of their backbone rmsd from the lowest energy structure. Three main clusters, labeled "1," "2," and "3," were obtained after analysis, using a 5 Å rmsd cut-off to distinguish the clusters. Figures 5B and 5C depict a model of the Factor IXa-Factor VIIIa complex including front and side views of the complex of Factor VIIIa (dark and light grey) and Factor IXa (outlined in solid line). Four putative membrane binding sites, including the bases of C1 and C2 domains, the A3 domain loop of Factor VIII and the Gla domain of Factor IXa, lie on the same plane and are darkly shaded (lower region of structures). The active site of Factor IXa is indicated (outlined in dashed line). Based on the model of the Factor IXa-Factor VIIIa complex and the x-ray crystal structure of Factor IXa, the A3 domain of Factor VIII is predicted to play a role in the interaction between the Factor IXa-Factor VIIIa complex and the phospholipid membrane.

Representations of Structures

[0092] Structural information of B-domain deleted Factor VIII, or regions thereof (*e.g.*, domain A1, A2, A3, C1, C2), and structural models of the present invention (including various structural models designed by computer-based methods described below) can be represented in many different ways. Particularly useful are electronic representations, as such representations

allow rapid and convenient data manipulations and structural modifications. Electronic representations can be embedded in many different storage or memory media, frequently computer readable media. Examples include without limitations, computer random access memory (RAM), floppy disk, magnetic hard drive, magnetic tape (analog or digital), compact disk (CD), optical disk, CD-ROM, memory card, digital video disk (DVD), and others. The storage medium can be separate or part of a computer system. Such a computer system may be a dedicated, special purpose, or embedded system, such as a computer system that forms part of an X-ray crystallography system, or may be a general purpose computer (which may have data connection with other equipment such as a sensor device in an X-ray crystallographic system. In many cases, the information provided by such electronic representations can also be represented physically or visually in two or three dimensions, e.g., on paper, as a visual display (e.g., on a computer monitor as a two dimensional or pseudo-three dimensional image) or as a three dimensional physical model. Such physical representations can also be used, alone or in connection with electronic representations. Exemplary useful representations include, but are not limited to, the following:

Atomic Coordinate Representation

[0093] One type of representation is a list or table of atomic coordinates representing positions of particular atoms in a molecular structure, portions of a structure, or complex (e.g., a co-crystal). Such a representation may also include additional information, for example, information about occupancy of particular coordinates.

Energy Surface or Surface of Interaction Representation

[0094] Another representation is an energy surface representation, e.g., of an active site or other binding site, representing an energy surface for electronic and steric interactions. Such a representation may also include other features. An example is the inclusion of representation of a particular amino acid residue(s) or group(s) on a particular amino acid residue(s), *e.g.*, a residue or group that can participate in H-bonding or ionic interaction.

Structural Representation

[0095] Still another representation is a structural representation, *i.e.*, a physical representation or an electronic representation of such a physical representation. Such a structural representation includes representations of relative positions of particular features of a molecule or complex, often with linkage between structural features. For example, a structure can be represented in which all atoms are linked; atoms other than hydrogen are linked; backbone atoms, with or without representation of sidechain atoms that could participate in significant electronic interaction, are linked; among others. However, not all features need to be linked. For example, for structural representations of portions of a molecule or complex, structural features significant for that feature may be represented (*e.g.*, atoms of amino acid residues that can have significant binding interation with a ligand at a binding site. Those amino acid residues may not be linked with each other.

[0096] A structural representation can also be a schematic representation. For example, a schematic representation can represent secondary and/or tertiary structure in a schematic manner. Within such a schematic representation of a polypeptide, a particular amino acid residue(s) or group(s) on a residue(s) can be included, e.g., conserved residues in a binding site, and/or residue(s) or group(s) that may interact with binding compounds.

Uses of the Crystals and Atomic Structure Coordinates

[0097] The x-ray crystallographic structure of a biologically active human Factor VIII provides important structural information of Factor VIII, such as, for example, the domain organization, the metal binding sites and the surface features in this protein. In particular, the invention provides structural coordinates of atoms corresponding to various binding regions of Factor VIII, such as, for example, the low-density lipoprotein receptor-related protein (LRP) binding site (*e.g.*, amino acids 484-509), heparin sulfate proteoglycans (HSPGs) binding site (*e.g.*, amino acids 558-565), Factor IXa binding regions (*e.g.*, amino acids 558-565, 707-712 or 1811-1819), and LRP/vWF/phospholipids (PL) binding region (*e.g.*, amino acids 2303-2332).

[0098] Given the critical importance of Factor VIII to normal hemostasis in the blood coagulation cascade, the crystals of the invention, and particularly the atomic structure coordinates obtained therefrom, have a wide variety of uses including the design of improved therapies for hemophilia A. For example, the crystals described herein provides a useful tool for

exploring the rich database of missense mutations that characterize many forms of hemophilia A and link them to functional abnormalities *in vitro* and *in vivo*. For example, the present invention allows detailed analysis of structure-function role of specific amino acids in Factor VIIIa in binding to the enzyme Factor IXa, activation of Factor VIII to Factor VIIIa by thrombin or factor Xa, binding of the substrate, factor X, and interaction of the complex with membrane surfaces. Understanding the structure-function relationship of the Factor IXa-Factor VIIIa complex and its interaction with membrane surfaces is critically important to detailed understanding of normal hemostasis within the context of the blood coagulation cascade.

[0099] The structures described herein can be used as a starting point in methods for modifying Factor VIII to improve its interaction with, for example, Factor IXa, vWF, or phospholipids membranes, resulting in modified Factor VIII with improved plasma half-life, improved functional activity (*e.g.*, increased activation, or resistance to inactivation), reduced antigenicity or immunogenicity.

[0100] The structure coordinates described herein can also be used as phasing models for determining the crystal structures of Factor VIII homologs or analogs of unknown structure, as well as the structures of co-crystals of Factor VIII with ligands such as inhibitors, agonists, antagonists, and other molecules.

[0101] The structure described in herein can be used to design compounds that mimic Factor VIII cofactor activity. For example, mimetic antibodies can be designed based on the structure of Factor VIII described herein to substitute for Factor VIII cofactor activity. Such antibodies can be used as long-acting therapeutics for hemophilia.

[0102] In addition, the crystals and structure coordinates provided by the present invention are particularly useful for identifying compounds or molecules that modulate Factor VIII activity as an approach towards developing new therapeutic agents. In particular, the crystals and structural information are particularly useful in methods based on rational drug design.

[0103] A human Factor VIII structure suitable for various methods of these aspects of the invention includes structures defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof, as well as the models of Factor VIII homologs or analogs obtained by the methods of the invention.

[0104] In preferred embodiments, the methods of these aspects of the invention described above are computer-based methods. Various exemplary computational techniques suitable for the methods of these aspects of the invention are described below.

Computational techniques for in silico analysis and design

Homology Modeling

[0105] Homology modeling is a method of applying structural coordinates of a polypeptide of known structure to the amino acid sequence of a polypeptide of unknown structure. This method is accomplished using a computer representation of the three dimensional structure of a polypeptide or polypeptide complex, the computer representation of amino acid sequences of the polypeptides with known and unknown structures, and standard computer representations of the structures of amino acids. Homology modeling generally involves (a) aligning the amino acid sequences of the polypeptides with and without known structure to match one or more homologous regions or amino acids; (b) modeling the structure of the matched one or more homologous regions or amino acids of the polypeptide of unknown structure on the corresponding regions of the known structure; and (d) determining a structural confirmation for the polypeptide of unknown structure which substantially preserves the structure of the matched homologous regions. Methods for matching homologous regions or amino acids are well known in the art. For example, the programs BLAST, gapped BLAST, BLASTN, PSI-BLAST and BLAST2 (provided by the National Center for Biotechnology Information) are widely used in the art for this purpose, and can align homologous regions of two amino acid sequences. These may be used with default parameters.

[0106] The above method is well known to those skilled in the art. (Greer (1985) Science 228:1055; Blundell *et al.* A(1988) Eur. J. Biocheni., 172:513. An exemplary computer program that can be utilized for homology modeling by those skilled in the art is the Homology module in the Insight II modeling package distributed by Accelerys Inc.

[0107] Alignment of the amino acid sequence may be accomplished by first placing the computer representation of the amino acid sequence of a polypeptide with known structure above the amino acid sequence of the polypeptide of unknown structure. Amino acids in the sequences are then compared and groups of amino acids that are homologous (*e.g.*, amino acid side chains that are similar in chemical nature--aliphatic, aromatic, polar, or charged) are grouped together.

This method will detect conserved regions of the polypeptides and account for amino acid insertions or deletions.

[0108] Once the amino acid sequences of the polypeptides with known and unknown structures are aligned, the structures of the conserved amino acids in the computer representation of the polypeptide with known structure are transferred to the corresponding amino acids of the polypeptide whose structure is unknown. For example, a tyrosine in the amino acid sequence of known structure may be replaced by a phenylalanine, the corresponding homologous amino acid in the amino acid sequence of unknown structure.

[0109] The structures of amino acids located in non-conserved regions are to be assigned manually by either using standard peptide geometries or molecular simulation techniques, such as molecular dynamics. The final step in the process is accomplished by refining the entire structure using molecular dynamics and/or energy minimization. The homology modeling method is well known to those skilled in the art and has been practiced using different protein molecules. For example, the three dimensional structure of the polypeptide corresponding to the catalytic domain of a serine/threonine protein kinase, myosin light chain protein kinase, was homology modeled from the cAMP-dependent protein kinase catalytic subunit. (Knighton *et al.* (1992) Science 258:130-135.)

[0110] In addition, specific computer software is available in the art to evaluate compound deformation energy and electrostatic interactions. Examples of programs designed for such uses include: Gaussian 94, revision C (M. J. Frisch, Gaussian, Inc., Pittsburgh, Pa. © 1995); AMBER, version 4.1 (P. A. Kollman, University of California at San Francisco, © 1995) QUANTA/CHARMM (Molecular Simulations, Inc., San Diego, Calif. © 1995); Insight II/Discover (Molecular Simulations, Inc., San Diego, Calif. © 1995); DelPhi (Molecular Simulations, Inc., San Diego, Calif. © 1995); and AMSOL (Qunatum Chemistry Program Exchange, Indiana University). These programs may be implemented, for instance, using a Silicon Graphics workstation such as an Indigo^2 with "IMPACT" graphics. Other modern hardware systems and software packages will be known to those skilled in the art.

Molecular Replacement

[0111] Molecular replacement is a method of applying the X-ray diffraction data of a polypeptide of known structure to the X-ray diffraction data of a polypeptide of unknown

sequence. This method can be utilized to define the phases describing the X-ray diffraction data of a polypeptide of unknown structure when only the amplitudes are known. X-PLOR is a commonly utilized computer software package used for molecular replacement. Brunger (1992) Nature 355:472-475. AMORE is another program used for molecular replacement. Navaza (1994) Acta Crystallogr. A50:157-163. Preferably, the resulting structure does not exhibit a root-mean-square deviation of more than 3 Å. Specific steps of molecular replacement are described below.

[0112] A goal of molecular replacement is to position the atomic coordinates of a structure model into the unit cell of Factor VIII crystal. A program such as X-PLOR can involve four steps. A first step can be to determine the number of molecules in the unit cell. A second step can involve rotating the structure model to define the orientation of the molecules in the unit cell. A third step can be to translate the structure model in three dimensions to correctly position the molecules in the unit cell. Once the amplitudes and phases of the X-ray diffraction data is determined, an R-factor can be calculated by comparing X-ray diffraction data calculated experimentally from the reference data set and calculated from the new data set. An R-factor between 30-50% indicates that the orientations of the atoms in the unit cell are reasonably determined by this method. A fourth step in the process can be to decrease the R-factor to roughly 25% or lower by refining the positioned structure model using iterative refinement techniques described herein and known to those or ordinary skill in the art.

Designing mimetic compounds of Factor VIII

[0113] In general, a mimetic compound of human Factor VIII may be designed by: (a) providing a selected human Factor VIII structure that is associated with a biological activity of human Factor VIII; (b) superimposing a three-dimensional structure of a compound on the selected human Factor VIII structure; and (c) modifying the three-dimensional structure of the compound such that the modified three-dimensional structure comprises a structural confirmation substantially mimicking the selected human Factor VIII structure.

[0114] A less biased approach involves computer algorithms for searching databases of three dimensional structures suitable compounds. By this method, one can generate compounds for which the bioactive conformation is heavily populated, *i.e.*, compounds which are based on particularly biologically relevant conformations of the target protein. Algorithms for this purpose are implemented in programs such as Cast-3D (Chemical Abstracts Service), 3DB Unity

(Tripos, Inc.), Quest-3D (Cambridge Crystallographic Data Center), and MACCS/ISIS-3D (Molecular Design Limited). These geometric searches can be augmented by steric searching, in which the size and shape requirements of the binding site are used to weed out hits that have prohibitive dimensions. Programs that may be used to synchronize the geometric and steric requirements in a search applied to the FRB of FRAP include CAVEAT (P. Bartlett, University of California, Berkeley), HOOK (MSI), ALADDIN (Daylight Software) and DOCK (I.D. Kuntz, University of California, San Francisco; see *e.g.* http://www.cmpharm.ucsf.edu/kuntz-/kuntz.html and references cited therein). All of these searching protocols may be used in conjunction with existing corporate databases, the Cambridge Structural Database, or available chemical databases from chemical suppliers.

[0115] In addition, mimetic compounds of Factor VIII may be developed from the bound conformation of Factor VIII by design, by searching databases for replacements of one or more structural segments of Factor VIII, or by enhancement of existing ligand-protein interactions (*i.e.*, by replacing a component moiety of a ligand with a substitute moiety capable of greater interaction with the target protein, whether through accessible protein contact points or by extrusion of otherwise sequestered waters). Knowledge of the bound conformation of a ligand can suggest avenues for conformational restriction and replacement of atoms and/or bonds of Factor VIII.

[0116] Computer programs such as those described in the homology modeling section above can be used to superimpose a three-dimensional structure of a compound on the selected human Factor VIII structure; and to modify the three-dimensional structure of the compound such that the modified three-dimensional structure includes a structural confirmation substantially mimicking the selected human Factor VIII structure.

[0117] Modified compounds may be synthesized and the Factor VIII mimetic activity is tested by *in vitro* or *in vivo* methods known in the art.

[0118] In particular, the present invention contemplates mimetic antibodies of human Factor VIII designed by the methods described herein. For example, mimetic antibodies can be designed to mimic a binding activity of Factor VIII to Factor IXa and/or Factor X. Such mimetic antibodies may substitute for Factor VIII cofactor activity and could potentially be used as therapeutic agents for hemophilia.

Structure-based rational drug design

[0119] A particular aspect of the invention relates to computer-based rational drug design methods to identify candidate modulators of Factor VIII function that interact with human Factor VIII structures of the present invention.

[0120] Determination of the three-dimensional structure of B-domain deleted human Factor VIII provides important information about the binding sites of Factor VIII, particularly when comparisons are made with similar proteins, such as Factor Va, ceroluplasmin. This information may then be used for rational design, *e.g.*, by computational techniques which identify possible binding ligands for the binding sites, by enabling linked-fragment approaches to drug design, and by enabling the identification and location of bound ligands using X-ray crystallographic analysis. The suitable techniques are discussed in detail, for example, by Walters *et al.* Drug Discovery Today, Vol. 3, No. 4, (1998), 160-178; and Abagyan, R.; Totrov, M. Curr. Opin. Chem. Biol. 2001, 5, 375-382. In particular, automated ligand-receptor docking programs is discussed, for example, by Jones *et al.* in Current Opinion in Biotechnology, Vol. 6, (1995), 652-656 and Halperin et al. Proteins 2002, 47, 409-443).

[0121] The aspects of the invention described herein which utilize the human Factor VIII structure *in silico* may be equally applied to both the human Factor VIII structure defined by coordinates of Table 2, or selected coordinates thereof, and the models of Factor VIII homologs or analogs obtained by other aspects of the invention. For rational drug design, the coordinates of atoms corresponding to one or more binding regions of Factor VIII are particularly useful. Such binding regions of Factor VIII include, but are not limited to, the LRP and Factor IXa binding region (*e.g.*, amino acids 484-509), the HSPGs and Factor IXa binding region (*e.g.*, amino acids 558-565), the Factor IXa binding regions (*e.g.*, amino acids 707-712, and amino acids 1811-1819), and the LRP, vWF, PL binding region (*e.g.*, amino acids 2303-2332).

[0122] Accordingly, the invention provides a computer-based method for the analysis of the interaction of a molecular structure with a human Factor VIII structure of the invention, which generally includes the steps of: providing selected coordinates of a human Factor VIII structure; providing a plurality of moieties to be fitted to said human Factor VIII structure; fitting the structure of each of the plurality of moieties to the human Factor VIII structure; selecting one or more moieties that fit into the selected structure; and, optionally, assembling the fitted one or more moieties into a single molecule to form a candidate modulator molecule.

[0123] The moieties suitable for the method of this aspect of the invention can be selected from the group consisting of molecular fragments, small molecules, ligands designed *de novo*, and compounds known to bind Factor VIII or modified compounds thereof.

[0124] In some embodiments, such moieties may be selected from publicly available databases include, for example: a) ACD from Molecular Designs Limited; b) NCI from National Cancer Institute; c) CCDC from Cambridge Crystallographic Data Center; d) CAST from Chemical Abstract Service; e) Derwent from Derwent Information Limited; f) Maybridge from Maybridge Chemical Company LTD; g) Aldrich from Aldrich Chemical Company; h) Directory of Natural Products from Chapman & Hall.

[0125] The availability of the structure of B-domain deleted human Factor VIII will allow the generation of highly predictive pharmacophore models for virtual library screening or compound design. The modeling software can be used to determine Factor VIII binding surfaces and to reveal features such as van der Waals contacts, electrostatic interactions, and/or hydrogen bonding opportunities. These binding surfaces can be used to model docking of ligands with Factor VIII, to arrive at pharmacophore hypotheses, and to design possible therapeutic compounds *de novo*. The term "pharmacophore" refers to a collection of chemical features and three-dimensional constraints that represent specific characteristics responsible for a ligand's activity. The pharmacophore includes surface-accessible features, hydrogen bond donors and acceptors, charged/ionizable groups, and/or hydrophobic patches, among other features.

[0126] A pharmacophore can be defined for the Factor VIII ternary complex that includes surface-accessible features, hydrogen bond donors and acceptors, charged/ionizable groups, and/or hydrophobic patches, among other features. These features can be weighted depending on their relative importance in conferring activity (see, *e.g.*, Computer-Assisted Lead Finding and Optimization, Testra & Folkers, 1997).

[0127] Pharmacophores can be determined using software such as CATALYST (including HypoGen or HipHop, available from Molecular Simulations Inc.), CERIUS2, or constructed by hand from a known conformation of a lead compound. The pharmacophore can be used to screen structural libraries, using a program such as CATALYST. The CLIX program (Davic & Lawrence, Proteins 12:31-41, 1992) can also be used, which searches for orientations of candidate molecules in structural databases that yield maximum spatial coincidence with chemical groups which interact with the receptor. The DISCO program (available from Tripos) uses a method of clique detection to identify common pharmacophoric features in each structure,

produce optimally aligned structures, and extract the key features of the pharmacophore. The GASP program (available from Tripos) uses a genetic algorithm to automatically find pharmacophores with conformational flexibility.

[0128] The binding surface or pharmacophore of the Factor VIII ternary complex can be used to map favorable interaction positions for functional groups (*e.g.*, protons, hydroxyl groups, amine groups, acidic groups, hydrophobic groups and/or divalent cations) or small molecule fragments. Compounds can then be designed *de novo* in which the relevant functional groups are located in the correct spatial relationship to interact with Factor VIII.

[0129] There are many de novo ligand design methods including:

1. LUDI (H.-J. Bohm, "The Computer Program LUDI: A New Method for the De Novo Design of Enzyme Inhibitors," J. Comp. Aid. Molec. Design, 6, pp. 61-78 (1992)). LUDI is available from Molecular Simulations Incorporated, San Diego, Calif.

2. LEGEND (Y. Nishibata *et al.*, Tetrahedron, 47, p. 8985 (1991)). LEGEND is available from Molecular Simulations Incorporated, San Diego, Calif.

3. LeapFrog (available from Tripos Associates, St. Louis, Mo.).

4. SPROUT (V. Gillet *et al.*, "SPROUT: A Program for Structure Generation," J. Comput. Aided Mol. Design, 7, pp. 127-153 (1993)). SPROUT is available from the University of Leeds, UK.

[0130] In order to provide a three-dimensional structure of moieties to be fitted to a human Factor VIII structure of the invention, the moiety structure may be modeled in three dimensions using commercially available software for this purpose or, if its crystal structure is available, the coordinates of the structure may be used to provide a representation of the compound for fitting to a human Factor VIII structure of the invention.

[0131] By "fitting", it is meant determining by automatic, or semi-automatic means, interactions between at least one atom of a molecular structure and at least one atom of a human Factor VIII structure of the invention, and calculating the extent to which such an interaction is stable. Interactions include attraction and repulsion, brought about by charge, steric considerations and the like. Various computer-based methods for fitting are available in the art, for example, docking program such as GOLD (Jones *et al.*, J. Mol. Biol., 245, 43-53 (1995), Jones *et al.*, J. Mol. Biol., 267, 727-748 (1997)), GRAMM (Vakser, I. A., Proteins, Suppl., 1:226-230 (1997)), DOCK (Kuntz *et al.*, J. Mol. Biol. 1982, 161, 269-288, Makino *et al.*, J.

Comput. Chem. 1997, 18, 1812-1825), AUTODOCK (Goodsell *et al.*, Proteins 1990, 8, 195-202, Morris *et al.*, J. Comput. Chem. 1998, 19, 1639-1662.), FlexX, (Rarey *et al.*, J. Mol. Biol. 1996, 261, 470-489) or ICM (Abagyan *et al.*, J. Comput. Chem. 1994, 15, 488-506). This procedure can include computer fitting of a moiety to a human Factor VIII Structure to ascertain how well the shape and the chemical structure of the moiety will bind to human Factor VIII.

[0132] Also computer-assisted, manual examination of the structure of human Factor VIIIa may be performed. The use of programs such as GRID (Goodford, J. Med. Chem., 28, (1985), 849-857)--a program that determines probable interaction sites between molecules with various functional groups and an enzyme surface--may also be used to analyse the active site to predict, for example, the types of modifications which will alter the rate of catabolism of a substrate.

[0133] Computer programs can be employed to estimate the attraction, repulsion, and steric hindrance of the two binding partners.

[0134] Following the fitting of the molecular structures, a person of skill in the art may seek to use molecular modeling to determine to what extent the structures interact with each other (*e.g.*, by hydrogen bonding, other non-covalent interactions, or by reaction to provide a covalent bond between parts of the structures) or the interaction of one structure with human Factor VIII is altered by the presence of another structure.

[0135] Once suitable moieties (such as, for example, chemical entities or fragments) have been selected, they can be designed or assembled into a single compound or complex. Assembly may be preceded by visual inspection of the relationship of the fragments to each other on the three-dimensional image displayed on a computer screen in relation to the structure coordinates of human serum albumin. This would be followed by manual model building using software such as Quanta or Sybyl (Tripos Associates, St. Louis, Mo.).

[0136] If more than one human Factor VIII region is characterized and a plurality of respective smaller moieties are designed or selected, a candidate modulator may be formed by linking the respective small moieties into a larger molecule, which maintains the relative positions and orientations of the respective smaller moieties at the respective binding regions. The candidate modulator may be formed as a real molecule or by computer modeling.

[0137] Useful programs to aid one of skill in the art in connecting the individual chemical entities or fragments include:

1. CAVEAT (P. A. Bartlett *et al.*, "CAVEAT: A Program to Facilitate the Structure-Derived Design of Biologically Active Molecules," in Molecular Recognition in Chemical and Biological Problems, Special Pub., Royal Chem. Soc., 78, pp. 182-196 (1989); G. Lauri and P. A. Bartlett, "CAVEAT: a Program to Facilitate the Design of Organic Molecules," J. Comput Aided Mol. Des., 8, pp. 51-66 (1994)). CAVEAT is available from the University of California, Berkeley, Calif.

2. 3D Database systems such as ISIS (MDL Information Systems, San Leandro, Calif.). This area is reviewed in Y. C. Martin. "3D Database Searching in Drug Design," J. Med. Chem., 35, pp. 2145-2154 (1992).

3. HOOK (M. B. Eisen *et al.*, "HOOK: A Program for Finding Novel Molecular Architectures that Satisfy the Chemical and Steric Requirements of a Macromolecule Binding Site," Proteins: Struct., Funct. Genet., 19, pp. 199-221 (1994). HOOK is available from Molecular Simulations, San Diego, Calif.

[0138] Detailed structural information can then be obtained about the binding of the candidate modulator to human Factor VIII, and in the light of this information adjustments can be made to the structure or functionality of the candidate modulator, *e.g.*, to alter its interaction with human Factor VIII. The above steps may be repeated and re-repeated as necessary.

[0139] A newly designed candidate modulator molecule may be obtained or synthesized and its interaction with human Factor VIII may be determined by binding assays. Various binding assays are well known in the art.

[0140] Such modulators may affect the interactions between Factor VIII and its binding partners, such as, LRP, Factor IXa, HSPGs, vWF, and PL, resulting in changed pharmacokinetics and functional activity for Factor VIII. Modulators of human Factor VIII identified by rational drug design may be developed as potential therapeutic agents for hemophilia.

[0141] Various molecular analysis and rational drug design techniques are further disclosed in, for example, U.S. Pat. Nos. 5,834,228, 5,939,528 and 5,856,116, as well as in PCT Application No. PCT/US98/16879, published as WO 99/09148, the teachings of all of which are hereby incorporated by reference.

[0142] The invention is illustrated by the following non-limiting examples.

EXAMPLES

Example 1. Expression and purification of B-domain deleted Factor VIII

[0143] The mature B-domain deleted human Factor VIII used for crystallization contains residues 1-740 (SEQ ID NO:1) that comprise the heavy chain (A1 and A2 domains), a short peptide linker (residues 741-754) (SEQ ID NO:3) and residues 1649-2332 (SEQ ID NO:2) that comprise the light chain (A3, C1 and C2 domains) (Figure 1A). B-domain deleted recombinant Factor VIII (Wyeth) was prepared as previously described (Sandberg, H., Almstedt, A., Brandt, J., Castro, V. M., Gray, E., Holmquist, L., Lewin, M., Oswaldsson, U., Mikaelsson, M., Jankowski, M. A., Bond, M. & Scoble, H. A. (2001) *Semin Hematol* **38,** 4-12; Eriksson, R. K., Fenge, C., Lindner-Olsson, E., Ljungqvist, C., Rosenquist, J., Smeds, A. L., ostlin, A., Charlebois, T., Leonard, M., Kelley, B. D. & Ljungqvist, A. (2001) *Semin Hematol* **38,** 24-31) with the following modifications. Chinese hamster ovary cells were cultured in medium free of human serum albumin and purified by monoclonal antibody immunoaffinity chromatography was replaced with a peptide ligand affinity chromatography using TN8.2 Sepharose (Kelley, B. D., Tannatt, M., Magnusson, R., Hagelberg, S. & Booth, J. (2004) *Biotechnol Bioeng* **87,** 400-12). The purified Factor VIII used for crystallization was obtained detergent-free following the anion exchange step used in the manufacturing process. Purified Factor VIII at a concentration of approximately 2.5 mg/ml in 50 mM histidine pH 6.3, 4 mM $CaCl_2$, 400 mM NaCl was stored at –80 °C.

Example 2. Formation of B-domain deleted Factor VIII crystals and data collection

[0144] Crystals were obtained by hanging drop vapor diffusion at 25°C using the Hampton Screen (Hampton Research). The drop contained 1 µl of Factor VIII at 10 mg/ml mixed with 1 µl of reservoir solution. The optimal condition for crystallization was found to be 100 mM Tris-HCl (pH 8.5), 10% ethanol, and 7% PEG 3350 in the reservoir. All crystals were cryo-protected by sequential addition of 10%, 15% and finally 20% ethylene glycol (v/v) in the presence of the reservoir solution and flash frozen in liquid nitrogen prior to data collection. Factor VIII crystallized in a $P4_12_12$ space group (a=b=134.11 Å, c=349.760 Å and $\alpha=\beta=\gamma=90°$) with one molecule per asymmetric unit (Table 1). The crystal contains an unusually high solvent content of 75%.

[0145] X-ray diffraction data of Factor VIII crystals were collected at the NE-CAT synchrotron beamline ID-24 of the Advanced Photon Source (APS) at Argonne National Laboratory. All xray data were processed using program HKL2000 (Otwinowski, Z. & Minor, W. (1997) in *Methods Enzymol* (Academic Press, New York), Vol. 276, pp. 307-326) (Table 1).

Table I. Statistics on diffraction data and structure refinement of B-domain deleted human Factor VIII.

Crystal	
Data Collection	
Data Collection Source	APS ID-24
Wavelength (Å)	0.97918
Resolution (Å)	∞-3.98
Space group	$P4_12_12$
Unit cell	a=b=134.11 Å, c=349.76 Å, $\alpha=\beta=\gamma=90^{o}$
Redundancy (outer shell)	13.2 (8.0)
No. of unique reflections (outer shell)	27631 (2505)
Completeness (outer shell) (%)	99.0 (92.3)
I/σ (overall / outer shell)	27.2 (1.7)
R_{sym}[a] (overall / outer shell) (%)	13.0 (82.7)
Refinement	
Resolution (Å)	50-3.98
R_{crys}[b] (%)	25.56
R_{free}[c] (%)	32.69
R.m.s. deviations	
Bond lengths (Å)	0.017
Bond angles	1.741

[a] $R_{sym} = \Sigma|I - \langle I \rangle|/\Sigma I$

[b] $R_{crys} = \Sigma||F_{obs}| - |F_{calc}||/\Sigma|F_{obs}|$, where F_{obs} and F_{calc} are the observe and calculated structure factors, respectively.

[c] R_{free} was calculated with 5% of the data excluded from the refinement calculation.

Example 3. Structure determination and refinement of Factor VIII

[0146] For structural determination using the molecular replacement method, a homology structure model of Factor VIII was constructed from the known primary sequence of Factor VIII (McCoy, A. J. (2007) *Acta Crystallogr D Biol Crystallogr* **63,** 32-41). Using the template structures of Factor Vai (PDBID: 15DD) (Sandberg, H., Almstedt, A., Brandt, J., Castro, V. M., Gray, E., Holmquist, L., Lewin, M., Oswaldsson, U., Mikaelsson, M., Jankowski, M. A., Bond, M. & Scoble, H. A. (2001) *Semin Hematol* **38,** 4-12) and ceruloplasmin (PDBID: 1KCW) (Adams, T. E., Hockin, M. F., Mann, K. G. & Everse, S. J. (2004) *Proc Natl Acad Sci U S A* **101,** 8918-23), the structure of the A1 and A2 domains of Factor VIII were initially determined with AMoRe (Murshudov, G. N., Vagin, A. A. & Dodson, E. J. (1997) *Acta Crystallogr D Biol Crystallogr* **53,** 240-55) using the structure of the A1 and A2 domains of the homology model. This yielded clear rotation function and translation function solutions. The A3 domain was then solved by AMoRe after fixing the solution of the A1 and A2 domains and using the A3 domain of ceroluplasmin as a search model (PDBID: 1KCW) (Adams, T. E., Hockin, M. F., Mann, K. G. & Everse, S. J. (2004) *Proc Natl Acad Sci U S A* **101,** 8918-23). After fixing all three A domains together, the positions of the C1 and C2 domains were determined with the program PHASER using a polyalanine model built from the high resolution structure of the C2 domain of Factor VIII (PDBID: 1D7P) (Pratt, K. P., Shen, B. W., Takeshima, K., Davie, E. W., Fujikawa, K. & Stoddard, B. L. (1999) *Nature* **402,** 439-442; Potterton, E., Briggs, P., Turkenburg, M. & Dodson, E. (2003) *Acta Crystallogr D Biol Crystallogr* **59,** 1131-7). The structure was refined with several cycles of manual refitting and refinements using REFMAC of the CCP4i suite (Bihoreau, N., Pin, S., de Kersabiec, A. M., Vidot, F. & Fontaine-Aupart, M. P. (1994) *Eur J Biochem* **222,** 41-8 ; Messerschmidt, A. & Huber, R. (1990) *Eur J Biochem* **187,** 341-52). The R_{cryst} and R_{free} for the Factor VIII model were 25.70% and 33.06% respectively for data from 50-3.98 Å (Table 1).

Example 4. Structural analysis of Factor VIII

[0147] Structural analysis was conducted by methods described above and those known in the art. Our model indicates that Factor VIII is a heterodimer consisting of the heavy chain (A1-A2 domains) and light chain (A3-C1-C2 domains). Several regions within the structure are poorly ordered and were not modeled, including residues 17-43, 334-376, and 714-754 within the heavy chain, and residues 1649-1690 and 1714-1724 of the light chain.

[0148] The overall structure of Factor VIII can be described as a triangular heterotrimer of the A domains stacked on two smaller globular C domains (Figure 1B). This structure closely resembles that of inactivated bovine Factor Va, Factor Vai (Adams, T. E., Hockin, M. F., Mann, K. G. & Everse, S. J. (2004) *Proc Natl Acad Sci U S A* **101,** 8918-23), except that B-domain deleted Factor VIII also contains the A2 domain. The A1, A2 and A3 domains each consist of two connected β-barrels that resemble the fold of a typical cupredoxin-type domain (Zaitseva, I., Zaitsev, V., Card, G., Moshkov, K., Bax, B., Ralph, A. & Lindley, P. (1996) *J. Biol. Inorg. Chem.* **1,** 15). All three A domains share high structural homology with each other (average rmsd 1.40 Å). The C1 and C2 domains are defined by a distorted β-barrel and share structural homology (rmsd 1.09 Å). The Factor VIII C1 domain is homologous to the C1 domain of Factor Va (rmsd 1.04 Å) whereas the Factor VIII C2 domain is homologous to the C2 domain of Factor Va (rmsd 0.93 Å) and is nearly identical with the Factor VIII C2 domain determined at 1.5 Å resolution (rmsd 0.73 Å) (Pratt, K. P., Shen, B. W., Takeshima, K., Davie, E. W., Fujikawa, K. & Stoddard, B. L. (1999) *Nature* **402,** 439-442) (Figure 1C). The final model includes 630 residues of the heavy chain, 631 residues of light chain, two Cu^{2+} ions, one Ca^{2+}, and three carbohydrate moieties. The coordinates of the Factor VIII structural model is shown in Table 2.

[0149] Factor VIII is a copper binding protein (Bihoreau, N., Pin, S., de Kersabiec, A. M., Vidot, F. & Fontaine-Aupart, M. P. (1994) *Eur J Biochem* **222,** 41-8), and we identified two copper ions and their binding sites internally within the A1 domain and the A3 domain. These are prototypic copper binding sites, with nitrogen and sulhydryl ligands (Messerschmidt, A. & Huber, R. (1990) *Eur J Biochem* **187,** 341-52). In the A3 domain, the copper ion is liganded by His 1954, Cys 2000, His 2005 whereas the copper binding site in the A1 domain is defined by His 267, His 315 and Cys 310 (Figure 1D). These copper ions are not located at the domain interface, thus indicating that their role in enhancing light chain-heavy chain interaction is indirect (Wakabayashi, H., Koszelak, M. E., Mastri, M. & Fay, P. J. (2001) *Biochemistry* **40,** 10293-300).

[0150] A single calcium binding site was located in the A1 domain. This site is defined by carboxyl groups of Glu 110, Asp 116, Asp 126, Asp 125 and the carbonyl O of Lys 107and Glu 122 (Figure 1D).)

[0151] Oligosaccharides was observed linked to Asn 239 in the A1 domain, Asn 1810 in the A3 domain and Asn 2118 in the C1 domain.

[0152] The three A domains form a triangular heterotrimer around a pseudo-three-fold symmetry where A1 and A3 domains serve as the base and interact with the C2 and C1 domains respectively (Figures 2A). The front surface of the triangular heterotrimer of the A domains is planar whereas the back surface is dominated by three protrusions, formed by large loops from each domain, that create a deep groove at the center of the three domains (Figure 2A). The C1 and C2 domains are adjacent at the base of the triangular heterotrimer. Each C domain projects three β-hairpin loops containing hydrophobic and basic residues toward the same plane. These loops likely contribute to the interaction of Factor VIII with the phospholipid bilayer (Figure 2B and 2C).

[0153] Although the C2 domain is connected to the C1 domain and located adjacent to the A1 domain, there are few direct contacts of the C2 with either domain (Figure 2D). The interface between the C2 and A1 domains only buries 371 $Å^2$ of solvent accessible surface area. Only Arg 121 from the A1 domain is in sufficient proximity to form hydrogen bonds with the backbone carbonyl of Leu 2302 and the side chain of Gln 2266, and only Glu 122 is capable of an electrostatic interaction with Lys 2239 (Figure 2D, left inset). The only close interactions between the C1 and C2 domains are observed within the loop that connects the two domains (residues 2168 to 2175), and between Met 2176 and Thr 2023, Val 2294 and Ser 2029 (Figure 2D, right inset). These contacts cover a limited accessible surface area (371 $Å^2$). Together, these observations strongly suggest the potential flexibility of the C2 domain and are in agreement the concept that the C2 domain undergoes conformational changes upon proteolysis within the light chain, resulting in enhanced affinity of Factor VIIIa for anionic phospholipids surfaces (Saenko, E. L., Scandella, D., Yakhyaev, A. V. & Greco, N. J. (1998) *J Biol Chem* **273,** 27918-26).

[0154] Factor VIII and Factor V are procofactors that show approximately 40% sequence similarity and a parallel domain arrangement in their primary structure (Kane, W. H. & Davie, E. W. (1986) *Proc Natl Acad Sci U S A* **83,** 6800-4). Both cofactors are activated to their active cofactor forms, Factor VIIIa and Factor Va, by thrombin-mediated limited proteolysis (Pittman, D. D. & Kaufman, R. J. (1988) *Proc Natl Acad Sci U S A* **85,** 2429-33; Nesheim, M. E. & Mann, K. G. (1979) *J Biol Chem* **254,** 1326-34). Both cofactors are inactivated by activated protein C-mediated limited proteolysis to yield Factor VIIIai and Factor Vai. The three dimensional structure of Factor V has not been solved, thus precluding direct comparison with our current structure of human B-domain deleted Factor VIII. However, a high resolution x-ray crystal structure of activated protein C-inactivated bovine Factor Va, Factor Vai, allows partial comparison since activation and subsequent inactivation of Factor V is associated with the removal of the B-domain and the A2 domain (Adams, T. E., Hockin, M. F., Mann, K. G. &

Everse, S. J. (2004) *Proc Natl Acad Sci U S A* **101,** 8918-23). The spatial arrangement of the A1 and A3 domains in B-domain deleted Factor VIII are nearly identical to that of Factor Vai, while the C1 and C2 domains show slightly different conformations when comparing our Factor VIII structure and that of Factor Vai. Despite the differences in the C1 and C2 domains, structures of Factor VIII and Factor Vai can be superimposed with a rmsd of 1.54 Å for the carbons of the 524 residues that span the A1, A2, C1 and C2 domains (Figure 3A).

Example 5. Implications for the activation of Factor VIII to Factor VIIIa

[0155] The activation of Factor VIII by thrombin requires cleavage of a peptide bond in the A2 domain, after Arg 372, and the removal of the B-domain linked to the 41 residue N-terminal region of the A3 domain, typically referred to as the a3 acidic region comprising residues 1649-1689, by thrombin cleavage after Arg 1689. This exposes the Factor VIII surfaces that are important for Factor IXa binding. Activation is also associated with but does not require cleavage after arginine 740 (Pittman, D. D. & Kaufman, R. J. (1988) *Proc Natl Acad Sci U S A* **85,** 2429-33). In B-domain deleted Factor VIII, conversion of Factor VIII to Factor VIIIa requires cleavage at arginine 1689 to remove the acidic a3 region adjacent to the A3 domain as well as cleavage after Arg 372. These regions are located on the front surface of Factor VIII (Figures 1A and Figure 3B). Thus, it appears that the B-domain and the a3 acidic region are positioned on one face of the triangular heterotrimeric A domains of Factor VIII and obstruct a functionally significant surface on the A2 and A3 domains (Figure 3B). This putative B-domain interaction surface on Factor VIII includes all of the suggested Factor IXa binding regions previously described, including residues 558-565, 707-712 and 1811-1819 (Fay, P. J., Beattie, T., Huggins, C. F. & Regan, L. M. (1994) *J Biol Chem* **269,** 20522-7; Jenkins, P. V., Dill, J. L., Zhou, Q. & Fay, P. J. (2004) *Biochemistry* **43,** 5094-101; Lenting, P. J., van de Loo, J. W., Donath, M. J., van Mourik, J. A. & Mertens, K. (1996) *J Biol Chem* **271,** 1935-40).

Example 6. Structural model of the complex of Factor VIII and Factor IXa

[0156] The assembly of the Factor IXa-Factor VIIIa complex involves the binding of Factor VIIIa and Factor IXa on phospholipid membrane surfaces in the presence of calcium ions. Based upon homology modeling (Autin, L., Miteva, M. A., Lee, W. H., Mertens, K., Radtke, K. P. & Villoutreix, B. O. (2005) *J Thromb Haemost* **3,** 2044-56), the analysis of naturally

occurring hemophilia A and B mutations or mutations introduced by site-specific mutagenesis (Mannucci, P. M. & Tuddenham, E. G. (2001) *N Engl J Med* **344,** 1773-9; Jenkins, P. V., Dill, J. L., Zhou, Q. & Fay, P. J. (2004) *Biochemistry* **43,** 5094-101; Nishimura, H., Takeya, H., Miyata, T., Suehiro, K., Okamura, T., Niho, Y. & Iwanaga, S. (1993) *J Biol Chem* **268,** 24041-6; Hughes, P. E., Morgan, G., Rooney, E. K., Brownlee, G. G. & Handford, P. (1993) *J Biol Chem* **268,** 17727-33), cross-linking studies (Blostein, M. D., Furie, B. C., Rajotte, I. & Furie, B. (2003) *J Biol Chem* **278,** 31297-302) and inhibition with synthetic peptides (Lenting, P. J., van de Loo, J. W., Donath, M. J., van Mourik, J. A. & Mertens, K. (1996) *J Biol Chem* **271,** 1935-40), the Factor VIIIa binding surface for Factor IXa is thought to involve the A2 and A3 domains that interact with multiple domains on Factor IXa. The A3 domain of the light chain contains a high affinity binding site (Kd~2-15 nM) for Factor IXa (Lenting, P. J., Donath, M. J., van Mourik, J. A. & Mertens, K. (1994) *J Biol Chem* **269,** 7150-5). Inhibition studies with synthetic peptides directed against the A3 domain have located this site to residues 1811-1818 (Lenting, P. J., van de Loo, J. W., Donath, M. J., van Mourik, J. A. & Mertens, K. (1996) *J Biol Chem* **271,** 1935-40). Potential Factor IXa binding sites on the A2 domain include residues 558-565 (Fay, P. J., Beattie, T., Huggins, C. F. & Regan, L. M. (1994) *J Biol Chem* **269,** 20522-7) and the region around Asp 712 (Jenkins, P. V., Dill, J. L., Zhou, Q. & Fay, P. J. (2004) *Biochemistry* **43,** 5094-101). We have mapped these putative binding regions onto our structure of Factor VIII (Figure 4A). All three binding regions are solvent-exposed on the front surface of the molecule and surround a portion of the interface between the A2 and A3 domains. One of these binding regions, residues 558-565, bound to the C2 domain of a symmetry-related molecule in the crystal. The interaction involves mainly hydrophobic and basic residues (*e.g.*, Arg 2215, Lys 2249, Leu 2251) from the β-hairpin loops located at the bottom of the C2 domain. Despite the fact that these interacting residues are located on different loops of the C2 domain, their orientations closely resemble those in the α-helix region 330-339 in Factor IXa (Figure 4B) (Bajaj, S. P., Schmidt, A. E., Mathur, A., Padmanabhan, K., Zhong, D., Mastri, M. & Fay, P. J. (2001) *J Biol Chem* **276,** 16302-9). This crystal contact may be mimicking the interaction between Factor VIIIa and the 330-339 helix of Factor IXa.

[0157] The absence of B-domain and the disorder of the loops containing the cleavage sites necessary for Factor VIII activation suggest that the our current structural model resembles the covalent structure of Factor VIIIa. Human Factor IXa was constructed by homology modeling using the x-ray structure of porcine Factor IXa (PDB ID: 1PFX.pdb) and the program SWISS-MODEL (McCoy, A. J. (2007) *Acta Crystallogr D Biol Crystallogr* **63,** 32-41 ; Wakabayashi, H., Koszelak, M. E., Mastri, M. & Fay, P. J. (2001) *Biochemistry* **40,** 10293-300).

The structure of Factor VIIIa was docked with Factor IXa using the program HADDOCK (Saenko, E. L., Scandella, D., Yakhyaev, A. V. & Greco, N. J. (1998) *J Biol Chem* **273,** 27918-26). In this approach, residues previously reported to be important for Factor VIIIa-Factor IXa interactions were defined as the ambiguous interaction constraints. Initially, 600 structures for the complex were generated by docking Factor VIII and Factor IXa as rigid bodies during iterations of energy minimization and 150 of those structures were refined and analyzed by using the default settings.

[0158] In particular, we have constructed a model of the Factor IXa-Factor VIIIa complex using our Factor VIII structure and the x-ray crystal structure of porcine Factor IXa backbone using as constraints: (1) residues 558-565 of Factor VIII interact with the 330-339 helix of Factor IXa; (2) 707-712 of Factor VIIIa binds to Factor IXa residues 301-303; (3) residues 1811-1819 of Factor VIII interact with the light chain of Factor IXa (Lenting, P. J., van de Loo, J. W., Donath, M. J., van Mourik, J. A. & Mertens, K. (1996) *J Biol Chem* **271,** 1935-40); (4) Phe 25 in the Gla domain of Factor IX is juxtaposed with the light chain of Factor VIII (Blostein, M. D., Furie, B. C., Rajotte, I. & Furie, B. (2003) *J Biol Chem* **278,** 31297-302); and (5) the Gla domain of Factor IXa is situated within the phospholipid membrane, forming non-covalent interactions between the phosphoserine head group and fatty acid chains of the phospholipid bilayer and the hydrophobic patch and the Gla residues within the Gla domain of Factor IXa (Freedman, S. J., Blostein, M. D., Baleja, J. D., Jacobs, M., Furie, B. C. & Furie, B. (1996) *Journal of Biological Chemistry* **271,** 16227-16236; Huang, M., Rigby, A. C., Morelli, X., Grant, M. A., Huang, G., Furie, B., Seaton, B. & Furie, B. C. (2003) *Nature Structural Biology* **10,** 751-756) (Figure 4A).

[0159] The model of the Factor IXa-Factor VIIIa complex illustrates that the light chain of Factor IXa, which includes the phospholipid-binding Gla domain, is wrapped across the side of the A3 domain and oriented almost perpendicularly to the Factor VIII molecule, and is distally located from the membrane-binding interface of the C2 domain, which is important for Factor VIIIa interaction with the membrane (Figure 5B). This orientation of the Factor VIII light chain and Factor IX Gla domain suggest the C2 domain of Factor VIII has to undergo a significant conformational change in order to orient its membrane binding surfaces in the same direction as the Gla domain of Factor IXa. In fact, in addition to the observation that C2 domain must undergo a conformational change upon activation, the 15 Å resolution cryo-electron microscopy structure of Factor VIII bound to phospholipids shows that the A domains are inclined at an angle of 60-65° to the membrane surface, with the A3 domain positioned close to the membrane surface. Furthermore, Factor IXa has been shown to orient with the long size of the molecule

perpendicularly to the membrane, the Gla domain proximal to the membrane with the active site positioned more than 70 Å above the surface (Mutucumarana, V. P., Duffy, E. J., Lollar, P. & Johnson, A. E. (1992) *J Biol Chem* **267,** 17012-21). We suggest that upon binding to Factor IXa, the C2 domain of the phospholipid-bound Factor VIIIa undergoes a significant conformational change that alters the orientation of the Factor VIIIa from an upright position to a bent position, in order for the Gla domain of the bound Factor IXa to interact with the phospholipids membrane simultaneously. The active site of Factor IXa in this Factor IXa-Factor VIIIa complex model is positioned on the top of the complex facing into the solution, with an approximate distance of 75-80 Å above the membrane surface.

[0160] We have identified the four putative phospholipid binding sites in the Factor IXa-Factor VIIIa complex. Within the context of the domain organization of C2 in the Factor IXa-Factor VIII complex, Arg 2215 and Lys 2249 play a special role in phospholipids binding. The hairpin loops in the Factor VIII C1 domain, including Lys 2092, Arg 2090, Arg 2169, likely play a similar role. In addition, a well-defined loop extends downward from the backside of the Factor VIII A3 domain. This loop, which includes a β-turn, is held together by Cys 1899 and Cys 1903, and thrusts Arg 1900 into a favorable position for electrostatical interaction with acidic phospholipid headgroups. The polypeptide backbone of this loop is structurally identical to and co-planar with the omega loop of the Gla domain of Factor IXa. Using the prothrombin Gla domain as a prototype, we have previously established that the phosphoserine head group in lysophosphatidylserine interacts with conserved residues within the Gla domain of vitamin K-dependent proteins, including Factor IX (Huang, M., Rigby, A. C., Morelli, X., Grant, M. A., Huang, G., Furie, B., Seaton, B. & Furie, B. C. (2003) *Nature Structural Biology* **10,** 751-756). Trp 4 within the omega loop of the Gla domain of prothrombin is located 5 to 7 Å below the membrane surface in the interfacial membrane region (Falls, L. A., Furie, B. C., Jacobs, M., Furie, B. & Rigby, A. C. (2001) *J Biol Chem* **276,** 23895-902). Based on this observation, the Factor IXa in this model was similarly positioned.

Example 7. Comparison with a structure of a heterodimer form of Factor VIII

[0161] After the priority date of the present application, a crystal structure of a recombinant form of Factor VIII which consists of a heterodimer of peptides, respectively containing the A1-A2 and A3-C1-C2 domains, was disclosed on April 15, 2008 (PDB ID: 2R7E). See Shen B.W. et al. "The tertiary structure and domain organization of coagulation

Factor VIII," Blood, 2008 Feb 1; 111(3):1240-7, Epub 2007 Oct. 26. Overlaid of our B domain-deleted FVIII crystal structure (PDB ID: 3CDZ) and 2R7E shows that both structures are maintained in similar conformations with a few exceptions (Figure 6).

[0162] Firstly, the loop formed by residues 558 to 565 in 3CDZ is solvent-exposed and appears to be accessible for the interaction with FIXa. In contrast, the model of 2R7E contains extra residues between amino acids 360-376 and 715-725, which form two large extensions and bury the 558-565 loop. Importantly, the extension formed by residues 360 to 376 contains the activating cleavage site (Arg 372). Cleavage at this position during FVIII activation may help to expose the 558-565 loop for FIXa binding. The difference between the two structures also suggests that this loop is flexible and may adopt different conformations upon binding with FIXa. Furthermore, the two extensions in 2R7E appear to be more ordered than those in 3CDZ because of the presence of B-domain regions in 2R7E. Therefore, the burial of the 558-568 loop may be a feature of the full length FVIII before activation and removal of the B-domain.

[0163] Secondly, residues 1712 to 1725 are disordered in 3CDZ but they form an extended loop in 2R7E. This loop is comprised mostly of basic and hydrophobic residues and is oriented in a similar manner as the other A3 domain loop (amino acids 1895-1907). Based on the proposed orientation of our FVIIIa:FIXa complex model, this region of the A3 domain of FVIII is also likely to interact with the acidic phospholipids membrane.

Example 8. Electrostatic surface potential of Factor VIII

[0164] Exemplary electrostatic surface potential of Factor VIII is illustrated in Figure 7. As shown, FVIII is highly charged on the surface. In addition to the positively charged bottoms of the C1 and C2 domains, the solvent-accessible surface near the interface between A1 and A2 domain is also highly positively charged. The acidic a1 peptide (337-372) is disordered and not modeled in our structure, suggesting that it may not interact strongly with this basic region in FVIII. However, based on the connecting regions of the peptide, it is expected to position near this region and may have a neutralizing effect. Without wishing to be bound by any particular theories, it is contemplated that the proteolytic cleavage at Arg 372 during activation of FVIII may reorient the acidic peptide to this region, resulting in both retention and reorientation of the A2 domain.

[0165] As also shown in Figure 7, a deep groove formed by the large protrusions of A1, A2 and A3 domains is extensively negatively charged. Without wishing to be bound by any

particular theories, it is contemplated that such striking property may cause strong repulsion between the domains and is responsible for the spontaneous dissociation of the A2 domain after FVIII activation. Interestingly, the binding interfaces between the A2 domain and the light chain and A1 domain contain large number of histidine residues. Previous studies have shown that the association between the A2 domain and A1/A3-C1-C2 dimer in FVIIIa is more stable at pH 6.0 (Lollar et al. (1990) "pH-dependent denaturation of thrombin-activated porcine Factor VIII," *J. Biol. Chem.* 265, 1688-1692; Lamphear, B.J. et al. (1992) "Factor IXa enhances reconstitution of Factor VIIIa from isolated A2 subunit and A1/A3-C1-C2 dimer," *J. Biol. Chem.* 267, 3725-3730). Without wishing to be bound by any theories, it is contemplated that the neutral property of histidine residues at pH 6.0 may play a role in the retention of A2 domain and that electrostatic potential plays an important role in the dissociation of A2 domain.

Table 2. Exemplary structural coordinates of B-domain-deleted human Factor VIII

```
REMARK   1
REMARK   2
REMARK   2 RESOLUTION. 3.98 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : REFMAC 5.3.0037
REMARK   3   AUTHORS     : MURSHUDOV,VAGIN,DODSON
REMARK   3
REMARK   3    REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 3.98
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 50.00
REMARK   3   DATA CUTOFF            (SIGMA(F)) : 0.000
REMARK   3   COMPLETENESS FOR RANGE        (%) : 98.5
REMARK   3   NUMBER OF REFLECTIONS             : 26444
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD           : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION   : RANDOM
REMARK   3   R VALUE      (WORKING + TEST SET) : 0.259
REMARK   3   R VALUE            (WORKING SET) : 0.256
REMARK   3   FREE R VALUE                      : 0.327
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : 5.000
REMARK   3   FREE R VALUE TEST SET COUNT       : 1399
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           : 20
REMARK   3   BIN RESOLUTION RANGE HIGH           : 3.98
REMARK   3   BIN RESOLUTION RANGE LOW            : 4.08
REMARK   3   REFLECTION IN BIN     (WORKING SET) : 1648
REMARK   3   BIN COMPLETENESS (WORKING+TEST) (%) : 85.98
REMARK   3   BIN R VALUE           (WORKING SET) : 0.4140
REMARK   3   BIN FREE R VALUE SET COUNT          : 87
REMARK   3   BIN FREE R VALUE                    : 0.4550
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REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   ALL ATOMS                : 10317
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) : 199.23
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) : 4.46000
REMARK   3    B22 (A**2) : 4.46000
REMARK   3    B33 (A**2) : -8.92000
REMARK   3    B12 (A**2) : 0.00000
REMARK   3    B13 (A**2) : 0.00000
REMARK   3    B23 (A**2) : 0.00000
REMARK   3
REMARK   3  ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3   ESU BASED ON R VALUE                                (A): NULL
REMARK   3   ESU BASED ON FREE R VALUE                           (A): 0.831
REMARK   3   ESU BASED ON MAXIMUM LIKELIHOOD                     (A): 0.728
REMARK   3   ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): 123.639
REMARK   3
REMARK   3 CORRELATION COEFFICIENTS.
REMARK   3   CORRELATION COEFFICIENT FO-FC      : 0.925
REMARK   3   CORRELATION COEFFICIENT FO-FC FREE : 0.889
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES         COUNT    RMS    WEIGHT
REMARK   3   BOND LENGTHS REFINED ATOMS        (A): 10617 ; 0.014 ; 0.022
REMARK   3   BOND LENGTHS OTHERS               (A):  NULL ;  NULL ;  NULL
REMARK   3   BOND ANGLES REFINED ATOMS   (DEGREES): 14405 ; 1.735 ; 1.951
REMARK   3   BOND ANGLES OTHERS          (DEGREES):  NULL ;  NULL ;  NULL
REMARK   3   TORSION ANGLES, PERIOD 1    (DEGREES):  1255 ; 9.793 ; 5.000
REMARK   3   TORSION ANGLES, PERIOD 2    (DEGREES):   495 ;37.797 ;23.515
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REMARK   3   TORSION ANGLES, PERIOD 3    (DEGREES):  1767 ;24.514 ;15.000
REMARK   3   TORSION ANGLES, PERIOD 4    (DEGREES):    58 ;18.451 ;15.000
REMARK   3   CHIRAL-CENTER RESTRAINTS       (A**3):  1551 ; 0.123 ; 0.200
REMARK   3   GENERAL PLANES REFINED ATOMS      (A):  8038 ; 0.004 ; 0.020
REMARK   3   GENERAL PLANES OTHERS             (A):  NULL ;  NULL ;  NULL
REMARK   3   NON-BONDED CONTACTS REFINED ATOMS (A):  5632 ; 0.268 ; 0.200
REMARK   3   NON-BONDED CONTACTS OTHERS        (A):  NULL ;  NULL ;  NULL
REMARK   3   NON-BONDED TORSION REFINED ATOMS  (A):  6731 ; 0.322 ; 0.200
REMARK   3   NON-BONDED TORSION OTHERS         (A):  NULL ;  NULL ;  NULL
REMARK   3   H-BOND (X...Y) REFINED ATOMS      (A):   336 ; 0.215 ; 0.200
REMARK   3   H-BOND (X...Y) OTHERS             (A):  NULL ;  NULL ;  NULL
REMARK   3   POTENTIAL METAL-ION REFINED ATOMS (A):     1 ; 0.021 ; 0.200
REMARK   3   POTENTIAL METAL-ION OTHERS        (A):  NULL ;  NULL ;  NULL
REMARK   3   SYMMETRY VDW REFINED ATOMS        (A):    37 ; 0.201 ; 0.200
REMARK   3   SYMMETRY VDW OTHERS               (A):  NULL ;  NULL ;  NULL
REMARK   3   SYMMETRY H-BOND REFINED ATOMS     (A):     2 ; 0.121 ; 0.200
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REMARK   3   SYMMETRY METAL-ION REFINED ATOMS  (A):  NULL ;  NULL ;  NULL
REMARK   3   SYMMETRY METAL-ION OTHERS         (A):  NULL ;  NULL ;  NULL
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REMARK   3   MAIN-CHAIN BOND OTHER ATOMS    (A**2):  NULL ;  NULL ;  NULL
REMARK   3   MAIN-CHAIN ANGLE REFINED ATOMS (A**2): 10173 ; 0.751 ; 2.000
REMARK   3   SIDE-CHAIN BOND REFINED ATOMS  (A**2):  4826 ; 0.712 ; 3.000
REMARK   3   SIDE-CHAIN ANGLE REFINED ATOMS (A**2):  4232 ; 1.208 ; 4.500
REMARK   3
REMARK   3 ANISOTROPIC THERMAL FACTOR RESTRAINTS.     COUNT   RMS   WEIGHT
REMARK   3   RIGID-BOND RESTRAINTS          (A**2):  NULL ;  NULL ;  NULL
REMARK   3   SPHERICITY; FREE ATOMS         (A**2):  NULL ;  NULL ;  NULL
REMARK   3   SPHERICITY; BONDED ATOMS       (A**2):  NULL ;  NULL ;  NULL
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF DIFFERENT NCS GROUPS : 0
REMARK   3
REMARK   3  TLS DETAILS
REMARK   3   NUMBER OF TLS GROUPS  : 5
REMARK   3
REMARK   3   TLS GROUP : 1
REMARK   3    NUMBER OF COMPONENTS GROUP : 1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
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REMARK   3    T TENSOR
REMARK   3      T11:   0.0488 T22:  -0.4021
REMARK   3      T33:  -0.3291 T12:   0.2088
REMARK   3      T13:   0.4594 T23:   0.1594
REMARK   3    L TENSOR
REMARK   3      L11:   3.2010 L22:   4.9182
REMARK   3      L33:   2.6407 L12:   0.0206
REMARK   3      L13:  -1.1756 L23:  -1.5965
REMARK   3    S TENSOR
REMARK   3      S11:   0.1180 S12:  -0.1105 S13:   0.3216
REMARK   3      S21:   0.4136 S22:   0.2256 S23:   0.6029
REMARK   3      S31:  -0.4494 S32:  -0.5301 S33:  -0.3437
REMARK   3
REMARK   3   TLS GROUP : 2
REMARK   3    NUMBER OF COMPONENTS GROUP : 1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   A   377        A   713
REMARK   3    ORIGIN FOR THE GROUP (A): -32.7180 -65.7300  95.6120
REMARK   3    T TENSOR
REMARK   3      T11:  -0.2332 T22:  -0.5344
REMARK   3      T33:  -0.4849 T12:   0.1358
REMARK   3      T13:   0.0423 T23:   0.0906
REMARK   3    L TENSOR
REMARK   3      L11:   5.2257 L22:   4.3633
REMARK   3      L33:   3.6873 L12:   1.8858
REMARK   3      L13:  -0.9924 L23:  -1.8479
REMARK   3    S TENSOR
REMARK   3      S11:   0.0737 S12:  -0.3120 S13:  -0.1871
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REMARK   3      S21:   0.4170 S22:  -0.1297 S23:  -0.5661
REMARK   3      S31:  -0.3564 S32:   0.4305 S33:   0.0559
REMARK   3
REMARK   3   TLS GROUP : 3
REMARK   3    NUMBER OF COMPONENTS GROUP : 1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   B  1691        B  2017
REMARK   3    ORIGIN FOR THE GROUP (A): -20.3410 -40.3280  73.1920
REMARK   3    T TENSOR
REMARK   3      T11:   0.0369 T22:  -0.4212
REMARK   3      T33:  -0.3314 T12:  -0.1045
REMARK   3      T13:   0.1959 T23:   0.0659
REMARK   3    L TENSOR
REMARK   3      L11:   4.9932 L22:   2.3390
REMARK   3      L33:   3.6103 L12:  -0.5468
REMARK   3      L13:   0.2394 L23:  -0.1885
REMARK   3    S TENSOR
REMARK   3      S11:  -0.0733 S12:  -0.3626 S13:   0.1996
REMARK   3      S21:   0.6314 S22:   0.0715 S23:  -0.6262
REMARK   3      S31:  -0.5013 S32:   0.6131 S33:   0.0017
REMARK   3
REMARK   3   TLS GROUP : 4
REMARK   3    NUMBER OF COMPONENTS GROUP : 1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   B  2018        B  2172
REMARK   3    ORIGIN FOR THE GROUP (A): -15.6000 -17.4400  45.2720
REMARK   3    T TENSOR
REMARK   3      T11:  -0.2260 T22:  -0.4864
REMARK   3      T33:  -0.6626 T12:  -0.1539
REMARK   3      T13:   0.2109 T23:  -0.0963
REMARK   3    L TENSOR
REMARK   3      L11:   9.1841 L22:   6.5501
REMARK   3      L33:   8.5469 L12:   3.1423
REMARK   3      L13:  -4.7271 L23:  -2.7307
REMARK   3    S TENSOR
REMARK   3      S11:   0.2568 S12:  -0.1740 S13:   0.6834
REMARK   3      S21:   0.4176 S22:   0.0791 S23:   0.0414
REMARK   3      S31:  -0.8275 S32:   0.9388 S33:  -0.3360
REMARK   3
REMARK   3   TLS GROUP : 5
REMARK   3    NUMBER OF COMPONENTS GROUP : 1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   B  2173        B  2332
REMARK   3    ORIGIN FOR THE GROUP (A): -47.5410 -12.1740  37.1510
REMARK   3    T TENSOR
REMARK   3      T11:  -0.2882 T22:  -0.6015
REMARK   3      T33:  -0.2609 T12:  -0.0841
REMARK   3      T13:   0.2885 T23:   0.0570
REMARK   3    L TENSOR
REMARK   3      L11:   6.9284 L22:   7.8931
REMARK   3      L33:   8.5099 L12:  -0.1438
REMARK   3      L13:  -1.5144 L23:  -4.0847
REMARK   3    S TENSOR
REMARK   3      S11:   0.0258 S12:  -0.1522 S13:  -0.2533
REMARK   3      S21:   0.2658 S22:   0.2510 S23:   0.8421
REMARK   3      S31:   0.2954 S32:  -0.6847 S33:  -0.2767
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED : MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS   : 1.20
REMARK   3   ION PROBE RADIUS   : 0.80
REMARK   3   SHRINKAGE RADIUS   : 0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: HYDROGENS HAVE BEEN ADDED IN THE
REMARK   3  RIDING POSITIONS
REMARK   4
REMARK   4 3CDZ COMPLIES WITH FORMAT V. 3.1, 01-AUG-2007
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB.
REMARK 100 THE RCSB ID CODE IS RCSB046659.
```

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REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : NULL
REMARK 200  TEMPERATURE           (KELVIN) : NULL
REMARK 200  PH                             : 8.50
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : Y
REMARK 200  RADIATION SOURCE               : APS
REMARK 200  BEAMLINE                       : 24-ID-C
REMARK 200  X-RAY GENERATOR MODEL          : NULL
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 0.97918
REMARK 200  MONOCHROMATOR                  : NULL
REMARK 200  OPTICS                         : NULL
REMARK 200
REMARK 200  DETECTOR TYPE                  : CCD
REMARK 200  DETECTOR MANUFACTURER          : ADSC QUANTUM 315
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : HKL-2000
REMARK 200  DATA SCALING SOFTWARE          : HKL-2000
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 26444
REMARK 200  RESOLUTION RANGE HIGH      (A) : 3.980
REMARK 200  RESOLUTION RANGE LOW       (A) : 50.000
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 1.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 99.0
REMARK 200  DATA REDUNDANCY                : 13.200
REMARK 200  R MERGE                    (I) : 0.13000
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : 27.2000
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : NULL
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : NULL
REMARK 200  COMPLETENESS FOR SHELL     (%) : 92.3
REMARK 200  DATA REDUNDANCY IN SHELL       : 8.90
REMARK 200  R MERGE FOR SHELL          (I) : 0.82700
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : 1.700
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: AMORE
REMARK 200 STARTING MODEL: HOMOLOGY MODELS OF INDIVIDUAL DOMAIN BUILT BY
REMARK 200  SWISS-MODEL USING PDB ENTRIES 1SDD, 1KCW AND 1D7P.
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 74.11
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 4.75
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 100 MM TRIS-HCL, 10% ETOH, 7% PEG
REMARK 280  3350, PH 8.5, VAPOR DIFFUSION, HANGING DROP, TEMPERATURE 298K
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 41 21 2
REMARK 290
REMARK 290      SYMOP   SYMMETRY
REMARK 290     NNNMMM   OPERATOR
REMARK 290       1555   X,Y,Z
REMARK 290       2555   -X,-Y,1/2+Z
REMARK 290       3555   1/2-Y,1/2+X,1/4+Z
REMARK 290       4555   1/2+Y,1/2-X,3/4+Z
REMARK 290       5555   1/2-X,1/2+Y,1/4-Z
REMARK 290       6555   1/2+X,1/2-Y,3/4-Z
REMARK 290       7555   Y,X,-Z
REMARK 290       8555   -Y,-X,1/2-Z
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REMARK 290
REMARK 290      WHERE NNN -> OPERATOR NUMBER
REMARK 290            MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290   SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290   SMTRY3   1  0.000000  0.000000  1.000000        0.00000
REMARK 290   SMTRY1   2 -1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   2  0.000000 -1.000000  0.000000        0.00000
REMARK 290   SMTRY3   2  0.000000  0.000000  1.000000      174.88000
REMARK 290   SMTRY1   3  0.000000 -1.000000  0.000000       67.05650
REMARK 290   SMTRY2   3  1.000000  0.000000  0.000000       67.05650
REMARK 290   SMTRY3   3  0.000000  0.000000  1.000000       87.44000
REMARK 290   SMTRY1   4  0.000000  1.000000  0.000000       67.05650
REMARK 290   SMTRY2   4 -1.000000  0.000000  0.000000       67.05650
REMARK 290   SMTRY3   4  0.000000  0.000000  1.000000      262.32000
REMARK 290   SMTRY1   5 -1.000000  0.000000  0.000000       67.05650
REMARK 290   SMTRY2   5  0.000000  1.000000  0.000000       67.05650
REMARK 290   SMTRY3   5  0.000000  0.000000 -1.000000       87.44000
REMARK 290   SMTRY1   6  1.000000  0.000000  0.000000       67.05650
REMARK 290   SMTRY2   6  0.000000 -1.000000  0.000000       67.05650
REMARK 290   SMTRY3   6  0.000000  0.000000 -1.000000      262.32000
REMARK 290   SMTRY1   7  0.000000  1.000000  0.000000        0.00000
REMARK 290   SMTRY2   7  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY3   7  0.000000  0.000000 -1.000000        0.00000
REMARK 290   SMTRY1   8  0.000000 -1.000000  0.000000        0.00000
REMARK 290   SMTRY2   8 -1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY3   8  0.000000  0.000000 -1.000000      174.88000
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 SEE REMARK 350 FOR THE AUTHOR PROVIDED AND/OR PROGRAM
REMARK 300 GENERATED ASSEMBLY INFORMATION FOR THE STRUCTURE IN
REMARK 300 THIS ENTRY. THE REMARK MAY ALSO PROVIDE INFORMATION ON
REMARK 300 BURIED SURFACE AREA.
REMARK 350
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 AUTHOR DETERMINED BIOLOGICAL UNIT: DIMERIC
REMARK 350 SOFTWARE DETERMINED QUATERNARY STRUCTURE: DIMERIC
REMARK 350 SOFTWARE USED: PISA
REMARK 350 TOTAL BURIED SURFACE AREA: 9180 ANGSTROM**2
REMARK 350 TOTAL SURFACE AREA FOR THE COMPLEX: 56090 ANGSTROM**2
REMARK 350 GAIN IN SOLVENT FREE ENERGY: -23 KCAL/MOL
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A, B
REMARK 350   BIOMT1   1  1.000000  0.000000  0.000000        0.00000
REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C  SSEQI
REMARK 465     MET A    17
REMARK 465     GLN A    18
REMARK 465     SER A    19
REMARK 465     ASP A    20
REMARK 465     LEU A    21
REMARK 465     GLY A    22
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REMARK 465     GLU A    23
REMARK 465     LEU A    24
REMARK 465     PRO A    25
REMARK 465     VAL A    26
REMARK 465     ASP A    27
REMARK 465     ALA A    28
REMARK 465     ARG A    29
REMARK 465     PHE A    30
REMARK 465     PRO A    31
REMARK 465     PRO A    32
REMARK 465     ARG A    33
REMARK 465     VAL A    34
REMARK 465     PRO A    35
REMARK 465     LYS A    36
REMARK 465     SER A    37
REMARK 465     PHE A    38
REMARK 465     PRO A    39
REMARK 465     PHE A    40
REMARK 465     ASN A    41
REMARK 465     THR A    42
REMARK 465     SER A    43
REMARK 465     GLU A   211
REMARK 465     THR A   212
REMARK 465     LYS A   213
REMARK 465     ASN A   214
REMARK 465     SER A   215
REMARK 465     LEU A   216
REMARK 465     MET A   217
REMARK 465     GLN A   218
REMARK 465     ASP A   219
REMARK 465     ARG A   220
REMARK 465     ASP A   221
REMARK 465     ALA A   222
REMARK 465     ALA A   223
REMARK 465     GLN A   334
REMARK 465     LEU A   335
REMARK 465     ARG A   336
REMARK 465     MET A   337
REMARK 465     LYS A   338
REMARK 465     ASN A   339
REMARK 465     ASN A   340
REMARK 465     GLU A   341
REMARK 465     GLU A   342
REMARK 465     ALA A   343
REMARK 465     GLU A   344
REMARK 465     ASP A   345
REMARK 465     TYR A   346
REMARK 465     ASP A   347
REMARK 465     ASP A   348
REMARK 465     ASP A   349
REMARK 465     LEU A   350
REMARK 465     THR A   351
REMARK 465     ASP A   352
REMARK 465     SER A   353
REMARK 465     GLU A   354
REMARK 465     MET A   355
REMARK 465     ASP A   356
REMARK 465     VAL A   357
REMARK 465     VAL A   358
REMARK 465     ARG A   359
REMARK 465     PHE A   360
REMARK 465     ASP A   361
REMARK 465     ASP A   362
REMARK 465     ASP A   363
REMARK 465     ASN A   364
REMARK 465     SER A   365
REMARK 465     PRO A   366
REMARK 465     SER A   367
REMARK 465     PHE A   368
REMARK 465     ILE A   369
REMARK 465     GLN A   370
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REMARK 465     ILE A   371
REMARK 465     ARG A   372
REMARK 465     SER A   373
REMARK 465     VAL A   374
REMARK 465     ALA A   375
REMARK 465     LYS A   376
REMARK 465     ASN A   714
REMARK 465     THR A   715
REMARK 465     GLY A   716
REMARK 465     ASP A   717
REMARK 465     TYR A   718
REMARK 465     TYR A   719
REMARK 465     GLU A   720
REMARK 465     ASP A   721
REMARK 465     SER A   722
REMARK 465     TYR A   723
REMARK 465     GLU A   724
REMARK 465     ASP A   725
REMARK 465     ILE A   726
REMARK 465     SER A   727
REMARK 465     ALA A   728
REMARK 465     TYR A   729
REMARK 465     LEU A   730
REMARK 465     LEU A   731
REMARK 465     SER A   732
REMARK 465     LYS A   733
REMARK 465     ASN A   734
REMARK 465     ASN A   735
REMARK 465     ALA A   736
REMARK 465     ILE A   737
REMARK 465     GLU A   738
REMARK 465     PRO A   739
REMARK 465     ARG A   740
REMARK 465     SER A   741
REMARK 465     PHE A   742
REMARK 465     SER A   743
REMARK 465     GLN A   744
REMARK 465     ASN A   745
REMARK 465     PRO A   746
REMARK 465     PRO A   747
REMARK 465     VAL A   748
REMARK 465     LEU A   749
REMARK 465     LYS A   750
REMARK 465     ARG A   751
REMARK 465     HIS A   752
REMARK 465     GLN A   753
REMARK 465     ARG A   754
REMARK 465     GLU B  1649
REMARK 465     ILE B  1650
REMARK 465     THR B  1651
REMARK 465     ARG B  1652
REMARK 465     THR B  1653
REMARK 465     THR B  1654
REMARK 465     LEU B  1655
REMARK 465     GLN B  1656
REMARK 465     SER B  1657
REMARK 465     ASP B  1658
REMARK 465     GLN B  1659
REMARK 465     GLU B  1660
REMARK 465     GLU B  1661
REMARK 465     ILE B  1662
REMARK 465     ASP B  1663
REMARK 465     TYR B  1664
REMARK 465     ASP B  1665
REMARK 465     ASP B  1666
REMARK 465     THR B  1667
REMARK 465     ILE B  1668
REMARK 465     SER B  1669
REMARK 465     VAL B  1670
REMARK 465     GLU B  1671
REMARK 465     MET B  1672
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REMARK 465     LYS B  1673
REMARK 465     LYS B  1674
REMARK 465     GLU B  1675
REMARK 465     ASP B  1676
REMARK 465     PHE B  1677
REMARK 465     ASP B  1678
REMARK 465     ILE B  1679
REMARK 465     TYR B  1680
REMARK 465     ASP B  1681
REMARK 465     GLU B  1682
REMARK 465     ASP B  1683
REMARK 465     GLU B  1684
REMARK 465     ASN B  1685
REMARK 465     GLN B  1686
REMARK 465     SER B  1687
REMARK 465     PRO B  1688
REMARK 465     ARG B  1689
REMARK 465     SER B  1690
REMARK 465     SER B  1714
REMARK 465     PRO B  1715
REMARK 465     HIS B  1716
REMARK 465     VAL B  1717
REMARK 465     LEU B  1718
REMARK 465     ARG B  1719
REMARK 465     ASN B  1720
REMARK 465     ARG B  1721
REMARK 465     ALA B  1722
REMARK 465     GLN B  1723
REMARK 465     SER B  1724
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT
REMARK 500
REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.
REMARK 500
REMARK 500  ATM1  RES C  SSEQI   ATM2  RES C  SSEQI
REMARK 500   CG   ASN B  2118     C1   NAG B  2334              2.06
REMARK 500   OH   TYR A   114     NH1  ARG B  1997              2.08
REMARK 500   O    GLY A   643     NE2  GLN A   645              2.09
REMARK 500   O    PRO A   492     N    GLY A   494              2.18
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3)
REMARK 500
REMARK 500 EXPECTED VALUES PROTEIN: ENGH AND HUBER, 1999
REMARK 500 EXPECTED VALUES NUCELIC ACID: CLOWNEY ET AL 1996
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2   DEVIATION
REMARK 500    LYS A 107   CG    LYS A 107   CD      0.222
REMARK 500    ARG A 121   NE    ARG A 121   CZ      0.113
REMARK 500    ARG A 121   CZ    ARG A 121   NH1     0.171
REMARK 500    ARG A 121   CZ    ARG A 121   NH2     0.084
REMARK 500    GLN A 602   CD    GLN A 602   NE2     0.159
REMARK 500    ASN B1904   CG    ASN B1904   OD1     0.214
REMARK 500    ASN B1904   CG    ASN B1904   ND2     0.208
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
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REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES PROTEIN: ENGH AND HUBER, 1999
REMARK 500 EXPECTED VALUES NUCELIC ACID: CLOWNEY ET AL 1996
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500    ARG A 121   CD  -  NE  -  CZ  ANGL. DEV. =  -9.3 DEGREES
REMARK 500    ARG A 121   NE  -  CZ  -  NH1 ANGL. DEV. =  11.8 DEGREES
REMARK 500    ARG A 121   NE  -  CZ  -  NH2 ANGL. DEV. = -12.0 DEGREES
REMARK 500    LEU A 184   CA  -  CB  -  CG  ANGL. DEV. =  13.8 DEGREES
REMARK 500    LEU A 277   CA  -  CB  -  CG  ANGL. DEV. =  17.2 DEGREES
REMARK 500    LEU A 398   CA  -  CB  -  CG  ANGL. DEV. =  14.1 DEGREES
REMARK 500    LEU B1945   CA  -  CB  -  CG  ANGL. DEV. =  17.9 DEGREES
REMARK 500    LEU B2050   CA  -  CB  -  CG  ANGL. DEV. =  15.7 DEGREES
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: TORSION ANGLES
REMARK 500
REMARK 500 TORSION ANGLES OUTSIDE THE EXPECTED RAMACHANDRAN REGIONS:
REMARK 500 (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER;
REMARK 500 SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT:(10X,I3,1X,A3,1X,A1,I4,A1,4X,F7.2,3X,F7.2)
REMARK 500
REMARK 500 EXPECTED VALUES: GJ KLEYWEGT AND TA JONES (1996). PHI/PSI-
REMARK 500 CHOLOGY: RAMACHANDRAN REVISITED. STRUCTURE 4, 1395 - 1400
REMARK 500
REMARK 500  M RES CSSEQI        PSI       PHI
REMARK 500    TYR A   6       44.41    -74.35
REMARK 500    ASP A  15     -113.61   -149.85
REMARK 500    TYR A  46      122.46    100.47
REMARK 500    LYS A  48     -158.77   -115.70
REMARK 500    LEU A  50     -160.23   -109.23
REMARK 500    VAL A  52     -174.19    -69.82
REMARK 500    THR A  55       26.93    -74.03
REMARK 500    LEU A  58     -110.87   -116.89
REMARK 500    ILE A  61      154.26    -39.80
REMARK 500    ALA A  62      105.27    177.95
REMARK 500    PRO A  67     -123.04    -91.31
REMARK 500    TRP A  68      -30.57    -35.94
REMARK 500    THR A  75      109.01    -52.87
REMARK 500    VAL A  80      -45.27    -25.58
REMARK 500    SER A 109     -117.42   -138.76
REMARK 500    GLU A 110      -57.28     71.09
REMARK 500    TYR A 114      161.93    157.56
REMARK 500    ASP A 116       39.23    -79.65
REMARK 500    GLN A 117      -57.00     65.42
REMARK 500    THR A 118      114.06     29.12
REMARK 500    SER A 119     -174.93    -62.65
REMARK 500    SER A 133      125.26    142.53
REMARK 500    ALA A 148      -65.44    -20.06
REMARK 500    ASP A 150     -178.88   -173.93
REMARK 500    PRO A 151      116.80    -21.18
REMARK 500    LEU A 168      -74.65    -89.16
REMARK 500    GLU A 181       81.23    -55.50
REMARK 500    LEU A 184      -20.11    -38.85
REMARK 500    GLU A 204       -0.62    -55.50
REMARK 500    SER A 207     -165.64    -79.46
REMARK 500    ALA A 225      110.89    -19.63
REMARK 500    ALA A 227       72.20    168.00
REMARK 500    MET A 231     -174.28   -173.16
REMARK 500    HIS A 232       27.41   -178.60
```

REMARK 500	VAL A 234	132.51	-36.48
REMARK 500	ASN A 235	-7.08	54.07
REMARK 500	ASN A 239	-71.58	54.54
REMARK 500	ARG A 240	-3.57	-150.38
REMARK 500	SER A 241	154.02	-43.05
REMARK 500	PRO A 243	-92.44	-85.59
REMARK 500	LYS A 251	-153.68	-143.13
REMARK 500	PRO A 264	75.62	-54.43
REMARK 500	HIS A 267	-169.86	-121.80
REMARK 500	SER A 268	104.25	-169.23
REMARK 500	THR A 275	44.92	80.92
REMARK 500	VAL A 278	-68.36	-133.32
REMARK 500	ARG A 279	-151.51	-96.73
REMARK 500	ASN A 280	34.82	-78.04
REMARK 500	SER A 285	117.67	-175.20
REMARK 500	PRO A 290	-87.65	-13.95
REMARK 500	LEU A 303	-34.17	-30.58
REMARK 500	HIS A 311	56.52	37.15
REMARK 500	GLN A 316	-89.55	-43.40
REMARK 500	HIS A 317	-58.12	-25.18
REMARK 500	ASP A 318	45.76	-95.83
REMARK 500	VAL A 324	89.22	-164.74
REMARK 500	VAL A 326	72.48	10.78
REMARK 500	GLU A 331	-1.15	-57.93
REMARK 500	HIS A 378	-151.12	-80.64
REMARK 500	PRO A 397	-70.67	-77.13
REMARK 500	ALA A 401	44.64	-159.78
REMARK 500	ASP A 403	-108.85	-159.34
REMARK 500	LEU A 412	125.46	72.83
REMARK 500	ASN A 413	77.43	38.86
REMARK 500	ARG A 418	9.57	-162.28
REMARK 500	ILE A 419	-144.83	-71.22
REMARK 500	THR A 435	89.80	-61.71
REMARK 500	GLN A 443	74.03	-113.26
REMARK 500	HIS A 444	5.59	-47.66
REMARK 500	SER A 470	-70.38	-50.72
REMARK 500	ASN A 474	-151.73	-144.01
REMARK 500	LEU A 486	-70.10	-36.11
REMARK 500	PRO A 492	85.30	-34.99
REMARK 500	LYS A 493	-27.32	44.09
REMARK 500	HIS A 497	140.73	-178.23
REMARK 500	LEU A 498	-35.39	-31.85
REMARK 500	LYS A 499	26.34	-72.47
REMARK 500	ASP A 500	-74.44	-94.49
REMARK 500	ILE A 503	101.86	65.59
REMARK 500	PRO A 521	-158.41	-66.14
REMARK 500	ASP A 525	-157.70	-54.82
REMARK 500	PRO A 526	-161.88	-75.88
REMARK 500	ARG A 541	-4.53	-55.55
REMARK 500	ASP A 542	-81.07	-107.69
REMARK 500	GLU A 557	135.16	177.67
REMARK 500	SER A 558	107.44	-167.89
REMARK 500	VAL A 559	51.76	39.80
REMARK 500	ASP A 560	166.94	170.79
REMARK 500	GLN A 561	-90.26	91.84
REMARK 500	ASN A 564	55.64	-146.47
REMARK 500	MET A 567	145.82	-178.45
REMARK 500	LYS A 570	170.90	-45.11
REMARK 500	ASP A 580	76.81	-100.51
REMARK 500	ASN A 582	-8.85	-54.98
REMARK 500	TRP A 585	15.71	-63.80
REMARK 500	LEU A 587	-83.70	-49.54
REMARK 500	ARG A 593	-104.23	-71.88
REMARK 500	PRO A 596	-84.20	-57.45
REMARK 500	VAL A 601	25.98	-68.03
REMARK 500	LEU A 603	-155.02	-136.04
REMARK 500	GLU A 604	97.65	19.04
REMARK 500	ILE A 613	97.72	-66.95
REMARK 500	LEU A 625	113.60	-5.64
REMARK 500	GLN A 626	-123.80	-74.99
REMARK 500	HIS A 632	-14.71	72.17

REMARK 500	GLN A 645	-155.32	-116.57
REMARK 500	THR A 646	-22.80	67.22
REMARK 500	PHE A 652	-111.64	-87.87
REMARK 500	PHE A 653	103.49	85.80
REMARK 500	LYS A 659	79.95	-110.55
REMARK 500	MET A 662	41.37	39.28
REMARK 500	PHE A 671	-138.38	-66.82
REMARK 500	SER A 674	98.58	-57.80
REMARK 500	GLU A 683	34.47	-149.63
REMARK 500	SER A 695	56.61	-99.85
REMARK 500	ARG A 698	7.77	-61.86
REMARK 500	ARG A 700	23.30	-78.23
REMARK 500	SER A 710	154.51	-49.31
REMARK 500	CYS A 711	-130.63	-113.76
REMARK 500	ASP A 712	-65.06	-162.02
REMARK 500	ARG B1705	-81.97	-169.78
REMARK 500	LEU B1706	-103.29	132.24
REMARK 500	TYR B1709	-61.63	-120.30
REMARK 500	MET B1711	-71.15	-131.96
REMARK 500	SER B1712	-36.49	-161.98
REMARK 500	VAL B1727	136.95	-35.49
REMARK 500	ASP B1740	-163.14	-161.97
REMARK 500	PHE B1743	65.50	14.84
REMARK 500	TYR B1748	123.16	-18.77
REMARK 500	LEU B1759	-169.63	-127.47
REMARK 500	VAL B1767	-78.94	-63.79
REMARK 500	ALA B1779	-173.60	-176.57
REMARK 500	SER B1780	-95.79	-79.89
REMARK 500	TYR B1783	-167.91	-121.72
REMARK 500	SER B1788	-78.85	-72.07
REMARK 500	LEU B1789	91.39	-62.99
REMARK 500	SER B1791	85.18	-43.17
REMARK 500	TYR B1792	-179.52	-68.62
REMARK 500	GLU B1794	-129.54	62.03
REMARK 500	ARG B1797	92.48	-64.41
REMARK 500	GLU B1801	66.27	67.24
REMARK 500	PRO B1802	90.52	-55.10
REMARK 500	ASN B1810	-14.60	62.51
REMARK 500	GLN B1820	170.81	-59.11
REMARK 500	GLU B1829	-148.78	-83.51
REMARK 500	LEU B1843	-30.59	-33.76
REMARK 500	ASP B1846	18.57	-67.76
REMARK 500	HIS B1867	134.00	63.99
REMARK 500	GLN B1870	-0.76	-174.96
REMARK 500	VAL B1871	84.47	-54.87
REMARK 500	VAL B1873	-99.43	-104.77
REMARK 500	GLN B1874	96.10	70.43
REMARK 500	GLU B1885	66.80	-111.61
REMARK 500	SER B1888	109.57	53.35
REMARK 500	TRP B1889	14.15	25.61
REMARK 500	THR B1892	39.45	-70.67
REMARK 500	GLU B1893	-42.69	-147.32
REMARK 500	ASN B1898	-5.26	80.28
REMARK 500	ARG B1900	-111.10	-143.70
REMARK 500	CYS B1903	-150.31	-130.06
REMARK 500	GLN B1906	100.02	64.17
REMARK 500	PRO B1910	35.89	-6.17
REMARK 500	PHE B1912	82.87	13.25
REMARK 500	ARG B1917	-89.36	-149.42
REMARK 500	PHE B1918	104.45	-48.82
REMARK 500	ASN B1922	-49.20	143.82
REMARK 500	ILE B1925	68.94	-106.69
REMARK 500	MET B1926	-120.12	-70.61
REMARK 500	THR B1928	110.07	176.29
REMARK 500	PRO B1930	-87.76	-73.27
REMARK 500	LEU B1932	62.36	-108.91
REMARK 500	GLN B1936	6.63	-55.62
REMARK 500	ASP B1937	-73.60	-124.72
REMARK 500	GLN B1938	93.12	-24.45
REMARK 500	MET B1947	-135.96	-133.69
REMARK 500	SER B1949	-148.34	-110.62

REMARK 500	ASN B1952	34.58	-75.97
REMARK 500	LYS B1967	-113.45	-176.38
REMARK 500	GLU B1969	-147.79	-115.45
REMARK 500	ASN B1977	87.90	-58.87
REMARK 500	PRO B1990	49.37	-68.70
REMARK 500	SER B1991	18.50	-61.00
REMARK 500	TRP B1996	-152.07	-119.99
REMARK 500	ALA B2008	55.46	-148.56
REMARK 500	SER B2011	70.39	-65.00
REMARK 500	GLN B2022	94.78	-169.34
REMARK 500	SER B2029	56.84	-92.77
REMARK 500	HIS B2031	100.67	-170.03
REMARK 500	ASP B2034	-91.03	-65.47
REMARK 500	GLN B2036	-83.12	-141.99
REMARK 500	ILE B2037	-142.41	-154.47
REMARK 500	THR B2038	-2.45	-162.10
REMARK 500	ALA B2039	-38.05	-175.16
REMARK 500	GLN B2042	135.35	-172.94
REMARK 500	TYR B2043	72.05	179.85
REMARK 500	GLN B2045	92.25	-62.49
REMARK 500	TRP B2046	-166.59	-75.32
REMARK 500	ALA B2047	-161.14	-57.86
REMARK 500	PRO B2048	165.48	-48.98
REMARK 500	LYS B2049	-36.27	122.76
REMARK 500	LEU B2050	32.85	-165.58
REMARK 500	HIS B2054	-3.13	70.71
REMARK 500	TYR B2055	106.48	-56.93
REMARK 500	ILE B2059	49.85	-83.46
REMARK 500	ALA B2061	-171.50	114.12
REMARK 500	SER B2063	95.64	-162.87
REMARK 500	TRP B2070	149.72	172.81
REMARK 500	ALA B2077	143.57	174.55
REMARK 500	GLN B2091	-145.61	-99.36
REMARK 500	PHE B2093	21.88	-143.25
REMARK 500	ASP B2108	-34.28	-145.07
REMARK 500	LYS B2110	-101.78	-66.64
REMARK 500	THR B2114	-168.11	-64.90
REMARK 500	ASN B2118	129.36	-32.97
REMARK 500	SER B2119	31.21	33.91
REMARK 500	THR B2120	-86.07	-62.99
REMARK 500	ASP B2131	-155.68	-155.98
REMARK 500	SER B2133	22.39	-155.85
REMARK 500	ILE B2135	81.47	-65.13
REMARK 500	HIS B2137	94.92	-45.67
REMARK 500	HIS B2155	148.73	-170.67
REMARK 500	SER B2157	-85.31	-96.81
REMARK 500	SER B2160	101.93	-53.65
REMARK 500	CYS B2169	177.24	176.26
REMARK 500	ASN B2172	71.94	-171.15
REMARK 500	CYS B2174	62.39	30.79
REMARK 500	SER B2194	156.43	179.38
REMARK 500	ASN B2198	-92.16	-143.48
REMARK 500	MET B2199	-49.20	-146.75
REMARK 500	SER B2206	10.95	-65.36
REMARK 500	ALA B2208	79.32	-59.17
REMARK 500	LEU B2210	-36.93	-28.47
REMARK 500	LYS B2227	20.74	-71.48
REMARK 500	LEU B2251	-28.19	53.18
REMARK 500	LEU B2252	-89.67	-62.46
REMARK 500	GLN B2276	-128.76	-81.06
REMARK 500	LYS B2279	-169.68	-73.30
REMARK 500	ASN B2286	-178.94	-64.15
REMARK 500	GLN B2287	8.35	-154.07
REMARK 500	PHE B2290	-148.25	-108.08
REMARK 500	THR B2291	119.88	52.21
REMARK 500	VAL B2294	72.55	-55.56
REMARK 500	ARG B2304	-18.15	-143.77
REMARK 500	GLN B2311	-64.99	-108.99
REMARK 500	VAL B2314	-74.17	-100.00
REMARK 500	CYS B2326	-135.22	-157.98
REMARK 500	ALA B2328	-153.15	-85.41

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REMARK 500    GLN B2329       163.70    -46.57
REMARK 500    LEU B2331       -46.01     73.94
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: NON-CIS, NON-TRANS
REMARK 500
REMARK 500 THE FOLLOWING PEPTIDE BONDS DEVIATE SIGNIFICANTLY FROM BOTH
REMARK 500 CIS AND TRANS CONFORMATION.  CIS BONDS, IF ANY, ARE LISTED
REMARK 500 ON CISPEP RECORDS.  TRANS IS DEFINED AS 180 +/- 30 AND
REMARK 500 CIS IS DEFINED AS 0 +/- 30 DEGREES.
REMARK 500                                        MODEL     OMEGA
REMARK 500 ASP A   56    HIS A   57                      138.50
REMARK 500 TYR A  237    VAL A  238                     -145.68
REMARK 500 VAL A  278    ARG A  279                      143.20
REMARK 500 HIS A  281    ARG A  282                     -147.05
REMARK 500 ARG A  282    GLN A  283                     -149.49
REMARK 500 PHE A  293    LEU A  294                      149.87
REMARK 500 PHE A  673    SER A  674                     -135.90
REMARK 500 ARG B 1705    LEU B 1706                      142.74
REMARK 500 LEU B 1878    PHE B 1879                     -148.77
REMARK 500 GLU B 1885    THR B 1886                      149.38
REMARK 500 PRO B 2048    LYS B 2049                     -149.46
REMARK 500 ASN B 2141    PRO B 2142                      148.96
REMARK 500 LEU B 2171    ASN B 2172                      138.42
REMARK 500
REMARK 500 REMARK: NULL
REMARK 620
REMARK 620 METAL COORDINATION
REMARK 620  (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER;
REMARK 620  SSEQ=SEQUENCE NUMBER; I=INSERTION CODE):
REMARK 620
REMARK 620 COORDINATION ANGLES FOR:  M RES CSSEQI METAL
REMARK 620                              CA A 758  CA
REMARK 620 N RES CSSEQI ATOM
REMARK 620 1 LYS A 107   O
REMARK 620 2 GLU A 122   O    65.7
REMARK 620 3 ASP A 125   OD1  95.1  75.1
REMARK 620 4 ASP A 126   OD1 156.8  91.1  77.3
REMARK 620 5 ASP A 126   OD2 144.8 117.4  56.2  45.3
REMARK 620 N                   1     2     3     4
REMARK 620
REMARK 620 COORDINATION ANGLES FOR:  M RES CSSEQI METAL
REMARK 620                              CU B   1  CU
REMARK 620 N RES CSSEQI ATOM
REMARK 620 1 HIS B1954   ND1
REMARK 620 2 HIS B2005   ND1 117.5
REMARK 620 N                   1
REMARK 800
REMARK 800 SITE
REMARK 800 SITE_IDENTIFIER: AC1
REMARK 800 SITE_DESCRIPTION: NAG BINDING SITE FOR RESIDUE A 755
REMARK 800 SITE_IDENTIFIER: AC2
REMARK 800 SITE_DESCRIPTION: NAG BINDING SITE FOR RESIDUE A 756
REMARK 800 SITE_IDENTIFIER: AC3
REMARK 800 SITE_DESCRIPTION: NAG BINDING SITE FOR RESIDUE B 2333
REMARK 800 SITE_IDENTIFIER: AC4
REMARK 800 SITE_DESCRIPTION: NAG BINDING SITE FOR RESIDUE B 2334
REMARK 800 SITE_IDENTIFIER: AC5
REMARK 800 SITE_DESCRIPTION: NAG BINDING SITE FOR RESIDUE B 2335
REMARK 800 SITE_IDENTIFIER: AC6
REMARK 800 SITE_DESCRIPTION: BMA BINDING SITE FOR RESIDUE B 2336
REMARK 800 SITE_IDENTIFIER: AC7
REMARK 800 SITE_DESCRIPTION: MAN BINDING SITE FOR RESIDUE B 2338
REMARK 800 SITE_IDENTIFIER: AC8
REMARK 800 SITE_DESCRIPTION: CU BINDING SITE FOR RESIDUE B 1
REMARK 800 SITE_IDENTIFIER: AC9
REMARK 800 SITE_DESCRIPTION: CU BINDING SITE FOR RESIDUE A 757
REMARK 800 SITE_IDENTIFIER: BC1
REMARK 800 SITE_DESCRIPTION: CA BINDING SITE FOR RESIDUE A 758
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REMARK 999
REMARK 999 SEQUENCE
REMARK 999 RESIDUES 741 TO 754 (SFSQNPPVLKRHQR) ARE ENGINEERED LINKER IN
REMARK 999  THE CONSTRUCT TO CONNECT THE HEAVY AND LIGHT CHAINS TOGETHER.
REMARK 999  INTRACELLULAR CLEAVAGE HAPPEN WITHIN THE LINKER WHEN EXPRESSED,
REMARK 999  RESULTING IN TWO SEPARATED HEAVY AND LIGHT CHAINS THAT ASSOCIATE
REMARK 999  WITH EACH OTHER.
DBREF  3CDZ A    1   740  UNP    P00451   FA8_HUMAN       20    759
DBREF  3CDZ B 1649  2332  UNP    P00451   FA8_HUMAN     1668   2351
SEQADV 3CDZ SER A  741  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ PHE A  742  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ SER A  743  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ GLN A  744  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ ASN A  745  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ PRO A  746  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ PRO A  747  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ VAL A  748  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ LEU A  749  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ LYS A  750  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ ARG A  751  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ HIS A  752  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ GLN A  753  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ ARG A  754  UNP  P00451              SEE REMARK 999
SEQADV 3CDZ LEU B 1880  UNP  P00451    PHE  1899 VARIANT
SEQRES   1 A  754  ALA THR ARG ARG TYR TYR LEU GLY ALA VAL GLU LEU SER
SEQRES   2 A  754  TRP ASP TYR MET GLN SER ASP LEU GLY GLU LEU PRO VAL
SEQRES   3 A  754  ASP ALA ARG PHE PRO PRO ARG VAL PRO LYS SER PHE PRO
SEQRES   4 A  754  PHE ASN THR SER VAL VAL TYR LYS LYS THR LEU PHE VAL
SEQRES   5 A  754  GLU PHE THR ASP HIS LEU PHE ASN ILE ALA LYS PRO ARG
SEQRES   6 A  754  PRO PRO TRP MET GLY LEU LEU GLY PRO THR ILE GLN ALA
SEQRES   7 A  754  GLU VAL TYR ASP THR VAL VAL ILE THR LEU LYS ASN MET
SEQRES   8 A  754  ALA SER HIS PRO VAL SER LEU HIS ALA VAL GLY VAL SER
SEQRES   9 A  754  TYR TRP LYS ALA SER GLU GLY ALA GLU TYR ASP ASP GLN
SEQRES  10 A  754  THR SER GLN ARG GLU LYS GLU ASP ASP LYS VAL PHE PRO
SEQRES  11 A  754  GLY GLY SER HIS THR TYR VAL TRP GLN VAL LEU LYS GLU
SEQRES  12 A  754  ASN GLY PRO MET ALA SER ASP PRO LEU CYS LEU THR TYR
SEQRES  13 A  754  SER TYR LEU SER HIS VAL ASP LEU VAL LYS ASP LEU ASN
SEQRES  14 A  754  SER GLY LEU ILE GLY ALA LEU LEU VAL CYS ARG GLU GLY
SEQRES  15 A  754  SER LEU ALA LYS GLU LYS THR GLN THR LEU HIS LYS PHE
SEQRES  16 A  754  ILE LEU LEU PHE ALA VAL PHE ASP GLU GLY LYS SER TRP
SEQRES  17 A  754  HIS SER GLU THR LYS ASN SER LEU MET GLN ASP ARG ASP
SEQRES  18 A  754  ALA ALA SER ALA ARG ALA TRP PRO LYS MET HIS THR VAL
SEQRES  19 A  754  ASN GLY TYR VAL ASN ARG SER LEU PRO GLY LEU ILE GLY
SEQRES  20 A  754  CYS HIS ARG LYS SER VAL TYR TRP HIS VAL ILE GLY MET
SEQRES  21 A  754  GLY THR THR PRO GLU VAL HIS SER ILE PHE LEU GLU GLY
SEQRES  22 A  754  HIS THR PHE LEU VAL ARG ASN HIS ARG GLN ALA SER LEU
SEQRES  23 A  754  GLU ILE SER PRO ILE THR PHE LEU THR ALA GLN THR LEU
SEQRES  24 A  754  LEU MET ASP LEU GLY GLN PHE LEU LEU PHE CYS HIS ILE
SEQRES  25 A  754  SER SER HIS GLN HIS ASP GLY MET GLU ALA TYR VAL LYS
SEQRES  26 A  754  VAL ASP SER CYS PRO GLU GLU PRO GLN LEU ARG MET LYS
SEQRES  27 A  754  ASN ASN GLU GLU ALA GLU ASP TYR ASP ASP ASP LEU THR
SEQRES  28 A  754  ASP SER GLU MET ASP VAL VAL ARG PHE ASP ASP ASP ASN
SEQRES  29 A  754  SER PRO SER PHE ILE GLN ILE ARG SER VAL ALA LYS LYS
SEQRES  30 A  754  HIS PRO LYS THR TRP VAL HIS TYR ILE ALA ALA GLU GLU
SEQRES  31 A  754  GLU ASP TRP ASP TYR ALA PRO LEU VAL LEU ALA PRO ASP
SEQRES  32 A  754  ASP ARG SER TYR LYS SER GLN TYR LEU ASN ASN GLY PRO
SEQRES  33 A  754  GLN ARG ILE GLY ARG LYS TYR LYS LYS VAL ARG PHE MET
SEQRES  34 A  754  ALA TYR THR ASP GLU THR PHE LYS THR ARG GLU ALA ILE
SEQRES  35 A  754  GLN HIS GLU SER GLY ILE LEU GLY PRO LEU LEU TYR GLY
SEQRES  36 A  754  GLU VAL GLY ASP THR LEU LEU ILE ILE PHE LYS ASN GLN
SEQRES  37 A  754  ALA SER ARG PRO TYR ASN ILE TYR PRO HIS GLY ILE THR
SEQRES  38 A  754  ASP VAL ARG PRO LEU TYR SER ARG ARG LEU PRO LYS GLY
SEQRES  39 A  754  VAL LYS HIS LEU LYS ASP PHE PRO ILE LEU PRO GLY GLU
SEQRES  40 A  754  ILE PHE LYS TYR LYS TRP THR VAL THR VAL GLU ASP GLY
SEQRES  41 A  754  PRO THR LYS SER ASP PRO ARG CYS LEU THR ARG TYR TYR
SEQRES  42 A  754  SER SER PHE VAL ASN MET GLU ARG ASP LEU ALA SER GLY
SEQRES  43 A  754  LEU ILE GLY PRO LEU LEU ILE CYS TYR LYS GLU SER VAL
SEQRES  44 A  754  ASP GLN ARG GLY ASN GLN ILE MET SER ASP LYS ARG ASN
SEQRES  45 A  754  VAL ILE LEU PHE SER VAL PHE ASP GLU ASN ARG SER TRP
SEQRES  46 A  754  TYR LEU THR GLU ASN ILE GLN ARG PHE LEU PRO ASN PRO
SEQRES  47 A  754  ALA GLY VAL GLN LEU GLU ASP PRO GLU PHE GLN ALA SER
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SEQRES  48 A  754  ASN ILE MET HIS SER ILE ASN GLY TYR VAL PHE ASP SER
SEQRES  49 A  754  LEU GLN LEU SER VAL CYS LEU HIS GLU VAL ALA TYR TRP
SEQRES  50 A  754  TYR ILE LEU SER ILE GLY ALA GLN THR ASP PHE LEU SER
SEQRES  51 A  754  VAL PHE PHE SER GLY TYR THR PHE LYS HIS LYS MET VAL
SEQRES  52 A  754  TYR GLU ASP THR LEU THR LEU PHE PRO PHE SER GLY GLU
SEQRES  53 A  754  THR VAL PHE MET SER MET GLU ASN PRO GLY LEU TRP ILE
SEQRES  54 A  754  LEU GLY CYS HIS ASN SER ASP PHE ARG ASN ARG GLY MET
SEQRES  55 A  754  THR ALA LEU LEU LYS VAL SER SER CYS ASP LYS ASN THR
SEQRES  56 A  754  GLY ASP TYR TYR GLU ASP SER TYR GLU ASP ILE SER ALA
SEQRES  57 A  754  TYR LEU LEU SER LYS ASN ASN ALA ILE GLU PRO ARG SER
SEQRES  58 A  754  PHE SER GLN ASN PRO PRO VAL LEU LYS ARG HIS GLN ARG
SEQRES   1 B  684  GLU ILE THR ARG THR THR LEU GLN SER ASP GLN GLU GLU
SEQRES   2 B  684  ILE ASP TYR ASP ASP THR ILE SER VAL GLU MET LYS LYS
SEQRES   3 B  684  GLU ASP PHE ASP ILE TYR ASP GLU ASP GLU ASN GLN SER
SEQRES   4 B  684  PRO ARG SER PHE GLN LYS LYS THR ARG HIS TYR PHE ILE
SEQRES   5 B  684  ALA ALA VAL GLU ARG LEU TRP ASP TYR GLY MET SER SER
SEQRES   6 B  684  SER PRO HIS VAL LEU ARG ASN ARG ALA GLN SER GLY SER
SEQRES   7 B  684  VAL PRO GLN PHE LYS LYS VAL VAL PHE GLN GLU PHE THR
SEQRES   8 B  684  ASP GLY SER PHE THR GLN PRO LEU TYR ARG GLY GLU LEU
SEQRES   9 B  684  ASN GLU HIS LEU GLY LEU LEU GLY PRO TYR ILE ARG ALA
SEQRES  10 B  684  GLU VAL GLU ASP ASN ILE MET VAL THR PHE ARG ASN GLN
SEQRES  11 B  684  ALA SER ARG PRO TYR SER PHE TYR SER SER LEU ILE SER
SEQRES  12 B  684  TYR GLU GLU ASP GLN ARG GLN GLY ALA GLU PRO ARG LYS
SEQRES  13 B  684  ASN PHE VAL LYS PRO ASN GLU THR LYS THR TYR PHE TRP
SEQRES  14 B  684  LYS VAL GLN HIS HIS MET ALA PRO THR LYS ASP GLU PHE
SEQRES  15 B  684  ASP CYS LYS ALA TRP ALA TYR PHE SER ASP VAL ASP LEU
SEQRES  16 B  684  GLU LYS ASP VAL HIS SER GLY LEU ILE GLY PRO LEU LEU
SEQRES  17 B  684  VAL CYS HIS THR ASN THR LEU ASN PRO ALA HIS GLY ARG
SEQRES  18 B  684  GLN VAL THR VAL GLN GLU PHE ALA LEU PHE LEU THR ILE
SEQRES  19 B  684  PHE ASP GLU THR LYS SER TRP TYR PHE THR GLU ASN MET
SEQRES  20 B  684  GLU ARG ASN CYS ARG ALA PRO CYS ASN ILE GLN MET GLU
SEQRES  21 B  684  ASP PRO THR PHE LYS GLU ASN TYR ARG PHE HIS ALA ILE
SEQRES  22 B  684  ASN GLY TYR ILE MET ASP THR LEU PRO GLY LEU VAL MET
SEQRES  23 B  684  ALA GLN ASP GLN ARG ILE ARG TRP TYR LEU LEU SER MET
SEQRES  24 B  684  GLY SER ASN GLU ASN ILE HIS SER ILE HIS PHE SER GLY
SEQRES  25 B  684  HIS VAL PHE THR VAL ARG LYS LYS GLU GLU TYR LYS MET
SEQRES  26 B  684  ALA LEU TYR ASN LEU TYR PRO GLY VAL PHE GLU THR VAL
SEQRES  27 B  684  GLU MET LEU PRO SER LYS ALA GLY ILE TRP ARG VAL GLU
SEQRES  28 B  684  CYS LEU ILE GLY GLU HIS LEU HIS ALA GLY MET SER THR
SEQRES  29 B  684  LEU PHE LEU VAL TYR SER ASN LYS CYS GLN THR PRO LEU
SEQRES  30 B  684  GLY MET ALA SER GLY HIS ILE ARG ASP PHE GLN ILE THR
SEQRES  31 B  684  ALA SER GLY GLN TYR GLY GLN TRP ALA PRO LYS LEU ALA
SEQRES  32 B  684  ARG LEU HIS TYR SER GLY SER ILE ASN ALA TRP SER THR
SEQRES  33 B  684  LYS GLU PRO PHE SER TRP ILE LYS VAL ASP LEU LEU ALA
SEQRES  34 B  684  PRO MET ILE ILE HIS GLY ILE LYS THR GLN GLY ALA ARG
SEQRES  35 B  684  GLN LYS PHE SER SER LEU TYR ILE SER GLN PHE ILE ILE
SEQRES  36 B  684  MET TYR SER LEU ASP GLY LYS LYS TRP GLN THR TYR ARG
SEQRES  37 B  684  GLY ASN SER THR GLY THR LEU MET VAL PHE PHE GLY ASN
SEQRES  38 B  684  VAL ASP SER SER GLY ILE LYS HIS ASN ILE PHE ASN PRO
SEQRES  39 B  684  PRO ILE ILE ALA ARG TYR ILE ARG LEU HIS PRO THR HIS
SEQRES  40 B  684  TYR SER ILE ARG SER THR LEU ARG MET GLU LEU MET GLY
SEQRES  41 B  684  CYS ASP LEU ASN SER CYS SER MET PRO LEU GLY MET GLU
SEQRES  42 B  684  SER LYS ALA ILE SER ASP ALA GLN ILE THR ALA SER SER
SEQRES  43 B  684  TYR PHE THR ASN MET PHE ALA THR TRP SER PRO SER LYS
SEQRES  44 B  684  ALA ARG LEU HIS LEU GLN GLY ARG SER ASN ALA TRP ARG
SEQRES  45 B  684  PRO GLN VAL ASN ASN PRO LYS GLU TRP LEU GLN VAL ASP
SEQRES  46 B  684  PHE GLN LYS THR MET LYS VAL THR GLY VAL THR THR GLN
SEQRES  47 B  684  GLY VAL LYS SER LEU LEU THR SER MET TYR VAL LYS GLU
SEQRES  48 B  684  PHE LEU ILE SER SER SER GLN ASP GLY HIS GLN TRP THR
SEQRES  49 B  684  LEU PHE PHE GLN ASN GLY LYS VAL LYS VAL PHE GLN GLY
SEQRES  50 B  684  ASN GLN ASP SER PHE THR PRO VAL VAL ASN SER LEU ASP
SEQRES  51 B  684  PRO PRO LEU LEU THR ARG TYR LEU ARG ILE HIS PRO GLN
SEQRES  52 B  684  SER TRP VAL HIS GLN ILE ALA LEU ARG MET GLU VAL LEU
SEQRES  53 B  684  GLY CYS GLU ALA GLN ASP LEU TYR
MODRES 3CDZ ASN A  239  ASN  GLYCOSYLATION SITE
MODRES 3CDZ ASN B 1810  ASN  GLYCOSYLATION SITE
MODRES 3CDZ ASN B 2118  ASN  GLYCOSYLATION SITE
HET    NAG  A 755       14
HET    NAG  A 756       14
HET    NAG  B2333       14
HET    NAG  B2334       14
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HET    NAG  B2335      14
HET    MAN  B2336      11
HET    MAN  B2337      11
HET    MAN  B2338      11
HET     CU  A 757       1
HET     CA  A 758       1
HET     CU  B   1       1
HETNAM     NAG N-ACETYL-D-GLUCOSAMINE
HETNAM     MAN ALPHA-D-MANNOSE
HETNAM      CU COPPER (II) ION
HETNAM      CA CALCIUM ION
HETSYN     NAG NAG
FORMUL   3  NAG    5(C8 H15 N O6)
FORMUL   6  MAN    3(C6 H12 O6)
FORMUL   7   CU    2(CU 2+)
FORMUL   8   CA    CA 2+
HELIX    1   1 SER A  119  GLU A  124  1                                   6
HELIX    2   2 LEU A  141  GLY A  145  5                                   5
HELIX    3   3 ASP A  163  LEU A  172  1                                  10
HELIX    4   4 THR A  233  TYR A  237  5                                   5
HELIX    5   5 ILE A  312  HIS A  317  1                                   6
HELIX    6   6 THR A  516  GLY A  520  5                                   5
HELIX    7   7 MET A  539  ALA A  544  1                                   6
HELIX    8   8 ASN A  582  SER A  584  5                                   3
HELIX    9   9 THR A  588  PHE A  594  1                                   7
HELIX   10  10 ASP A  605  SER A  611  1                                   7
HELIX   11  11 GLU B 1844  SER B 1849  1                                   6
HELIX   12  12 TYR B 1890  MET B 1895  1                                   6
HELIX   13  13 ILE B 2002  HIS B 2007  1                                   6
HELIX   14  14 SER B 2186  ALA B 2188  5                                   3
HELIX   15  15 SER B 2204  ALA B 2208  5                                   5
SHEET    1   A 3 ARG A   4  TYR A   5  0
SHEET    2   A 3 THR A  83  LEU A  88  1  O  VAL A  85   N  TYR A   5
SHEET    3   A 3 HIS A 134  THR A 135 -1  O  HIS A 134   N  LEU A  88
SHEET    1   B 3 ARG A   4  TYR A   5  0
SHEET    2   B 3 THR A  83  LEU A  88  1  O  VAL A  85   N  TYR A   5
SHEET    3   B 3 TRP A 138  GLN A 139 -1  O  TRP A 138   N  VAL A  84
SHEET    1   C 3 GLY A  73  GLU A  79  0
SHEET    2   C 3 GLY A 174  CYS A 179  1  O  LEU A 177   N  ILE A  76
SHEET    3   C 3 CYS A 153  LEU A 154 -1  N  LEU A 154   O  VAL A 178
SHEET    1   D 3 GLY A  73  GLU A  79  0
SHEET    2   D 3 GLY A 174  CYS A 179  1  O  LEU A 177   N  ILE A  76
SHEET    3   D 3 SER A 157  TYR A 158 -1  N  TYR A 158   O  GLY A 174
SHEET    1   E 3 LYS A 194  LEU A 197  0
SHEET    2   E 3 VAL A 253  VAL A 257  1  O  HIS A 256   N  PHE A 195
SHEET    3   E 3 THR A 295  THR A 298 -1  O  ALA A 296   N  TRP A 255
SHEET    1   F 5 VAL A 426  TYR A 431  0
SHEET    2   F 5 THR A 381  GLU A 390 -1  N  ALA A 387   O  MET A 429
SHEET    3   F 5 THR A 460  GLN A 468  1  O  LEU A 462   N  TRP A 382
SHEET    4   F 5 ILE A 508  THR A 514 -1  O  TRP A 513   N  LEU A 461
SHEET    5   F 5 ASP A 482  PRO A 485 -1  N  ARG A 484   O  LYS A 512
SHEET    1   G 2 TRP A 393  ASP A 394  0
SHEET    2   G 2 LYS A 422  TYR A 423 -1  O  TYR A 423   N  TRP A 393
SHEET    1   H 4 LEU A 453  GLU A 456  0
SHEET    2   H 4 ILE A 548  CYS A 554  1  O  PRO A 550   N  LEU A 453
SHEET    3   H 4 CYS A 528  SER A 534 -1  N  TYR A 533   O  GLY A 549
SHEET    4   H 4 TYR A 476  HIS A 478 -1  N  HIS A 478   O  TYR A 532
SHEET    1   I 4 ILE A 613  ILE A 617  0
SHEET    2   I 4 ASN A 572  ASP A 580 -1  N  PHE A 579   O  MET A 614
SHEET    3   I 4 VAL A 634  ILE A 642  1  O  LEU A 640   N  PHE A 576
SHEET    4   I 4 GLY A 675  SER A 681 -1  O  GLU A 676   N  ILE A 639
SHEET    1   J 2 LEU A 649  VAL A 651  0
SHEET    2   J 2 LEU A 668  LEU A 670 -1  O  LEU A 670   N  LEU A 649
SHEET    1   K 4 VAL B1733  GLU B1737  0
SHEET    2   K 4 THR B1695  GLU B1704 -1  N  VAL B1703   O  VAL B1734
SHEET    3   K 4 ASP B1769  ASN B1777  1  O  ASN B1770   N  ARG B1696
SHEET    4   K 4 THR B1812  VAL B1819 -1  O  TYR B1815   N  VAL B1773
SHEET    1   L 3 ILE B1763  ALA B1765  0
SHEET    2   L 3 ILE B1852  CYS B1858  1  O  CYS B1858   N  ALA B1765
SHEET    3   L 3 CYS B1832  PHE B1838 -1  N  TRP B1835   O  LEU B1855
SHEET    1   M 5 GLU B1875  LEU B1878  0
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SHEET    2   M 5 ILE B1940  LEU B1945  1  O  TYR B1943   N  PHE B1876
SHEET    3   M 5 PHE B1983  MET B1988 -1  O  VAL B1986   N  TRP B1942
SHEET    4   M 5 PHE B1963  ARG B1966 -1  N  THR B1964   O  GLU B1987
SHEET    5   M 5 GLU B1970  MET B1973 -1  O  MET B1973   N  PHE B1963
SHEET    1   N 5 VAL B1933  ALA B1935  0
SHEET    2   N 5 THR B2012  TYR B2017  1  O  TYR B2017   N  MET B1934
SHEET    3   N 5 GLY B1994  CYS B2000 -1  N  GLY B1994   O  VAL B2016
SHEET    4   N 5 HIS B1954  PHE B1958 -1  N  HIS B1957   O  GLU B1999
SHEET    5   N 5 LEU B1975  LEU B1978 -1  O  LEU B1978   N  HIS B1954
SHEET    1   O 3 THR B2023  PRO B2024  0
SHEET    2   O 3 SER B2160  CYS B2169 -1  O  GLY B2168   N  THR B2023
SHEET    3   O 3 TRP B2062  THR B2064 -1  N  TRP B2062   O  LEU B2162
SHEET    1   P 6 THR B2023  PRO B2024  0
SHEET    2   P 6 SER B2160  CYS B2169 -1  O  GLY B2168   N  THR B2023
SHEET    3   P 6 ILE B2071  GLN B2087 -1  N  GLY B2083   O  MET B2167
SHEET    4   P 6 ASN B2138  TYR B2156 -1  O  ILE B2144   N  ILE B2081
SHEET    5   P 6 ILE B2098  SER B2106 -1  N  SER B2099   O  HIS B2155
SHEET    6   P 6 VAL B2125  PHE B2127 -1  O  PHE B2126   N  PHE B2101
SHEET    1   Q 2 ALA B2089  ARG B2090  0
SHEET    2   Q 2 SER B2095  LEU B2096 -1  O  LEU B2096   N  ALA B2089
SHEET    1   R 5 ILE B2190  ALA B2192  0
SHEET    2   R 5 LEU B2230  GLN B2246 -1  O  GLN B2231   N  THR B2191
SHEET    3   R 5 SER B2296  TRP B2313 -1  O  LEU B2297   N  THR B2241
SHEET    4   R 5 VAL B2257  SER B2265 -1  N  LEU B2261   O  HIS B2309
SHEET    5   R 5 PHE B2283  GLN B2284 -1  O  PHE B2283   N  PHE B2260
SHEET    1   S 5 THR B2272  LEU B2273  0
SHEET    2   S 5 VAL B2257  SER B2265 -1  N  SER B2264   O  THR B2272
SHEET    3   S 5 SER B2296  TRP B2313 -1  O  HIS B2309   N  LEU B2261
SHEET    4   S 5 LEU B2230  GLN B2246 -1  N  THR B2241   O  LEU B2297
SHEET    5   S 5 ARG B2320  CYS B2326 -1  O  GLU B2322   N  THR B2244
SHEET    1   T 2 VAL B2248  LYS B2249  0
SHEET    2   T 2 SER B2254  MET B2255 -1  O  MET B2255   N  VAL B2248
SSBOND   1 CYS A  153    CYS A  179                          1555   1555    2.06
SSBOND   2 CYS A  248    CYS A  329                          1555   1555    2.06
SSBOND   3 CYS A  528    CYS A  554                          1555   1555    2.04
SSBOND   4 CYS A  630    CYS A  711                          1555   1555    2.05
SSBOND   5 CYS B 1832    CYS B 1858                          1555   1555    2.05
SSBOND   6 CYS B 1899    CYS B 1903                          1555   1555    2.05
SSBOND   7 CYS B 2021    CYS B 2169                          1555   1555    2.07
SSBOND   8 CYS B 2174    CYS B 2326                          1555   1555    2.04
LINK         O   LYS A 107                 CA    CA A 758   1555   1555    2.67
LINK         O   GLU A 122                 CA    CA A 758   1555   1555    2.64
LINK         OD1 ASP A 125                 CA    CA A 758   1555   1555    2.77
LINK         OD1 ASP A 126                 CA    CA A 758   1555   1555    2.96
LINK         OD2 ASP A 126                 CA    CA A 758   1555   1555    2.73
LINK         ND2 ASN A 239                 C1  NAG A 755   1555   1555    1.44
LINK         ND1 HIS A 267                 CU    CU A 757   1555   1555    2.05
LINK         ND2 ASN B1810                 C1  NAG B2333   1555   1555    1.54
LINK         ND1 HIS B1954                 CU    CU B   1   1555   1555    2.01
LINK         ND1 HIS B2005                 CU    CU B   1   1555   1555    2.22
LINK         ND2 ASN B2118                 C1  NAG B2334   1555   1555    1.25
LINK         O4  NAG A 755                 C1  NAG A 756   1555   1555    1.47
LINK         O4  NAG B2335                 C1  MAN B2336   1555   1555    1.46
LINK         O3  MAN B2336                 C1  MAN B2337   1555   1555    1.47
LINK         O6  MAN B2336                 C1  MAN B2338   1555   1555    1.45
SITE     1 AC1  2 ASN A 239  HIS A 317
SITE     1 AC2  1 HIS A 317
SITE     1 AC3  2 ALA B1779  ASN B1810
SITE     1 AC4  4 GLN B1870  GLN B1938  ASN B2118  ASN B2141
SITE     1 AC5  3 GLN B1870  THR B1872  GLN B1938
SITE     1 AC7  2 THR B1872  ARG B1939
SITE     1 AC8  5 ILE B1953  HIS B1954  CYS B2000  ILE B2002
SITE     2 AC8  5 HIS B2005
SITE     1 AC9  3 HIS A 267  CYS A 310  HIS A 315
SITE     1 BC1  8 LYS A 107  SER A 109  GLU A 110  ASP A 116
SITE     2 BC1  8 THR A 118  GLU A 122  ASP A 125  ASP A 126
CRYST1  134.113  134.113  349.760  90.00  90.00  90.00 P 41 21 2     8
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.007456  0.000000  0.000000        0.00000
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SCALE2      0.000000  0.007456  0.000000        0.00000
SCALE3      0.000000  0.000000  0.002859        0.00000
ATOM      1  N   ALA A   1     -60.690 -42.803  52.435  1.00204.30           N
ATOM      2  CA  ALA A   1     -61.414 -42.106  53.543  1.00204.42           C
ATOM      3  C   ALA A   1     -60.692 -40.816  53.993  1.00204.42           C
ATOM      4  O   ALA A   1     -59.523 -40.603  53.655  1.00204.67           O
ATOM      5  CB  ALA A   1     -61.636 -43.068  54.721  1.00204.35           C
ATOM      6  N   THR A   2     -61.393 -39.962  54.742  1.00204.23           N
ATOM      7  CA  THR A   2     -60.868 -38.659  55.184  1.00203.98           C
ATOM      8  C   THR A   2     -61.548 -38.223  56.491  1.00204.17           C
ATOM      9  O   THR A   2     -62.645 -37.667  56.451  1.00204.36           O
ATOM     10  CB  THR A   2     -61.028 -37.559  54.071  1.00203.87           C
ATOM     11  OG1 THR A   2     -61.136 -36.266  54.674  1.00203.37           O
ATOM     12  CG2 THR A   2     -62.268 -37.796  53.195  1.00203.40           C
ATOM     13  N   ARG A   3     -60.899 -38.461  57.638  1.00204.25           N
ATOM     14  CA  ARG A   3     -61.542 -38.318  58.982  1.00204.23           C
ATOM     15  C   ARG A   3     -61.439 -36.966  59.719  1.00204.54           C
ATOM     16  O   ARG A   3     -60.380 -36.335  59.729  1.00204.66           O
ATOM     17  CB  ARG A   3     -61.091 -39.446  59.929  1.00204.18           C
ATOM     18  CG  ARG A   3     -62.238 -40.326  60.423  1.00203.86           C
ATOM     19  CD  ARG A   3     -61.761 -41.580  61.142  1.00203.49           C
ATOM     20  NE  ARG A   3     -61.639 -42.715  60.230  1.00201.88           N
ATOM     21  CZ  ARG A   3     -60.490 -43.194  59.758  1.00201.37           C
ATOM     22  NH1 ARG A   3     -59.334 -42.648  60.109  1.00200.89           N
ATOM     23  NH2 ARG A   3     -60.497 -44.227  58.928  1.00201.11           N
ATOM     24  N   ARG A   4     -62.545 -36.551  60.350  1.00204.69           N
ATOM     25  CA  ARG A   4     -62.625 -35.282  61.094  1.00204.93           C
ATOM     26  C   ARG A   4     -62.973 -35.478  62.554  1.00205.04           C
ATOM     27  O   ARG A   4     -63.835 -36.286  62.876  1.00205.05           O
ATOM     28  CB  ARG A   4     -63.671 -34.357  60.480  1.00204.91           C
ATOM     29  CG  ARG A   4     -63.122 -33.420  59.432  1.00205.50           C
ATOM     30  CD  ARG A   4     -64.234 -32.631  58.772  1.00206.19           C
ATOM     31  NE  ARG A   4     -63.852 -32.171  57.438  1.00206.84           N
ATOM     32  CZ  ARG A   4     -64.003 -32.882  56.319  1.00207.47           C
ATOM     33  NH1 ARG A   4     -64.534 -34.104  56.354  1.00207.36           N
ATOM     34  NH2 ARG A   4     -63.621 -32.367  55.154  1.00208.05           N
ATOM     35  N   TYR A   5     -62.318 -34.714  63.427  1.00205.38           N
ATOM     36  CA  TYR A   5     -62.560 -34.775  64.875  1.00205.77           C
ATOM     37  C   TYR A   5     -62.661 -33.381  65.506  1.00205.95           C
ATOM     38  O   TYR A   5     -61.690 -32.880  66.080  1.00206.09           O
ATOM     39  CB  TYR A   5     -61.481 -35.616  65.573  1.00205.84           C
ATOM     40  CG  TYR A   5     -61.590 -37.100  65.299  1.00206.26           C
ATOM     41  CD1 TYR A   5     -60.469 -37.855  64.953  1.00206.47           C
ATOM     42  CD2 TYR A   5     -62.826 -37.753  65.377  1.00206.99           C
ATOM     43  CE1 TYR A   5     -60.579 -39.234  64.701  1.00206.84           C
ATOM     44  CE2 TYR A   5     -62.951 -39.123  65.121  1.00207.07           C
ATOM     45  CZ  TYR A   5     -61.827 -39.859  64.788  1.00206.86           C
ATOM     46  OH  TYR A   5     -61.966 -41.211  64.542  1.00206.70           O
ATOM     47  N   TYR A   6     -63.856 -32.786  65.424  1.00206.08           N
ATOM     48  CA  TYR A   6     -64.098 -31.350  65.716  1.00206.04           C
ATOM     49  C   TYR A   6     -64.087 -30.926  67.204  1.00205.52           C
ATOM     50  O   TYR A   6     -64.929 -30.127  67.634  1.00205.23           O
ATOM     51  CB  TYR A   6     -65.415 -30.879  65.038  1.00206.58           C
ATOM     52  CG  TYR A   6     -65.313 -30.496  63.553  1.00207.40           C
ATOM     53  CD1 TYR A   6     -64.059 -30.373  62.914  1.00208.36           C
ATOM     54  CD2 TYR A   6     -66.467 -30.217  62.800  1.00207.45           C
ATOM     55  CE1 TYR A   6     -63.957 -30.007  61.562  1.00208.40           C
ATOM     56  CE2 TYR A   6     -66.374 -29.849  61.444  1.00207.94           C
ATOM     57  CZ  TYR A   6     -65.113 -29.745  60.834  1.00208.02           C
ATOM     58  OH  TYR A   6     -64.991 -29.383  59.506  1.00207.59           O
ATOM     59  N   LEU A   7     -63.106 -31.416  67.966  1.00205.09           N
ATOM     60  CA  LEU A   7     -63.156 -31.336  69.436  1.00204.73           C
ATOM     61  C   LEU A   7     -62.057 -30.457  70.080  1.00204.00           C
ATOM     62  O   LEU A   7     -60.859 -30.734  69.951  1.00203.63           O
ATOM     63  CB  LEU A   7     -63.222 -32.765  70.064  1.00205.11           C
ATOM     64  CG  LEU A   7     -63.949 -33.971  69.376  1.00205.77           C
ATOM     65  CD1 LEU A   7     -63.797 -35.313  70.103  1.00205.38           C
ATOM     66  CD2 LEU A   7     -65.436 -33.746  69.077  1.00206.70           C
ATOM     67  N   GLY A   8     -62.496 -29.394  70.761  1.00203.34           N
ATOM     68  CA  GLY A   8     -61.612 -28.465  71.466  1.00202.62           C
ATOM     69  C   GLY A   8     -61.194 -28.930  72.849  1.00202.23           C
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ATOM	70	O	GLY	A	8	-61.440	-30.076	73.218	1.00202.04	O
ATOM	71	N	ALA	A	9	-60.563	-28.035	73.612	1.00201.98	N
ATOM	72	CA	ALA	A	9	-60.038	-28.342	74.959	1.00201.79	C
ATOM	73	C	ALA	A	9	-60.560	-27.384	76.043	1.00201.71	C
ATOM	74	O	ALA	A	9	-60.650	-26.174	75.810	1.00201.79	O
ATOM	75	CB	ALA	A	9	-58.520	-28.348	74.953	1.00201.78	C
ATOM	76	N	VAL	A	10	-60.853	-27.931	77.233	1.00201.46	N
ATOM	77	CA	VAL	A	10	-61.637	-27.237	78.284	1.00200.92	C
ATOM	78	C	VAL	A	10	-61.035	-27.245	79.706	1.00200.61	C
ATOM	79	O	VAL	A	10	-60.021	-27.896	79.975	1.00200.50	O
ATOM	80	CB	VAL	A	10	-63.081	-27.828	78.365	1.00200.89	C
ATOM	81	CG1	VAL	A	10	-63.136	-29.007	79.339	1.00200.59	C
ATOM	82	CG2	VAL	A	10	-64.108	-26.762	78.741	1.00200.90	C
ATOM	83	N	GLU	A	11	-61.695	-26.502	80.597	1.00200.33	N
ATOM	84	CA	GLU	A	11	-61.451	-26.515	82.040	1.00200.13	C
ATOM	85	C	GLU	A	11	-62.554	-27.276	82.797	1.00199.76	C
ATOM	86	O	GLU	A	11	-63.739	-26.906	82.728	1.00199.92	O
ATOM	87	CB	GLU	A	11	-61.400	-25.085	82.576	1.00200.27	C
ATOM	88	CG	GLU	A	11	-60.023	-24.473	82.656	1.00200.60	C
ATOM	89	CD	GLU	A	11	-60.011	-23.235	83.526	1.00201.04	C
ATOM	90	OE1	GLU	A	11	-60.833	-22.321	83.284	1.00201.38	O
ATOM	91	OE2	GLU	A	11	-59.183	-23.182	84.458	1.00201.26	O
ATOM	92	N	LEU	A	12	-62.161	-28.314	83.538	1.00198.99	N
ATOM	93	CA	LEU	A	12	-63.118	-29.131	84.279	1.00198.09	C
ATOM	94	C	LEU	A	12	-62.673	-29.376	85.719	1.00197.56	C
ATOM	95	O	LEU	A	12	-61.483	-29.300	86.034	1.00197.48	O
ATOM	96	CB	LEU	A	12	-63.356	-30.465	83.559	1.00198.09	C
ATOM	97	CG	LEU	A	12	-64.770	-31.059	83.616	1.00198.06	C
ATOM	98	CD1	LEU	A	12	-65.713	-30.364	82.613	1.00197.78	C
ATOM	99	CD2	LEU	A	12	-64.740	-32.579	83.394	1.00197.98	C
ATOM	100	N	SER	A	13	-63.653	-29.675	86.572	1.00196.83	N
ATOM	101	CA	SER	A	13	-63.454	-29.974	87.994	1.00195.94	C
ATOM	102	C	SER	A	13	-63.478	-31.498	88.285	1.00195.46	C
ATOM	103	O	SER	A	13	-64.406	-32.198	87.868	1.00195.36	O
ATOM	104	CB	SER	A	13	-64.506	-29.213	88.806	1.00195.92	C
ATOM	105	OG	SER	A	13	-65.557	-28.741	87.968	1.00195.33	O
ATOM	106	N	TRP	A	14	-62.460	-31.994	88.997	1.00194.79	N
ATOM	107	CA	TRP	A	14	-62.177	-33.442	89.106	1.00194.30	C
ATOM	108	C	TRP	A	14	-62.241	-33.989	90.542	1.00194.28	C
ATOM	109	O	TRP	A	14	-62.374	-33.208	91.491	1.00194.38	O
ATOM	110	CB	TRP	A	14	-60.803	-33.738	88.490	1.00194.03	C
ATOM	111	CG	TRP	A	14	-60.499	-35.194	88.290	1.00193.67	C
ATOM	112	CD1	TRP	A	14	-59.459	-35.908	88.835	1.00193.44	C
ATOM	113	CD2	TRP	A	14	-61.245	-36.115	87.496	1.00193.22	C
ATOM	114	NE1	TRP	A	14	-59.516	-37.217	88.422	1.00192.98	N
ATOM	115	CE2	TRP	A	14	-60.602	-37.372	87.599	1.00193.15	C
ATOM	116	CE3	TRP	A	14	-62.399	-36.003	86.707	1.00192.98	C
ATOM	117	CZ2	TRP	A	14	-61.076	-38.508	86.940	1.00193.36	C
ATOM	118	CZ3	TRP	A	14	-62.868	-37.129	86.055	1.00193.37	C
ATOM	119	CH2	TRP	A	14	-62.206	-38.368	86.173	1.00193.53	C
ATOM	120	N	ASP	A	15	-62.136	-35.320	90.696	1.00194.11	N
ATOM	121	CA	ASP	A	15	-62.258	-35.980	92.011	1.00193.87	C
ATOM	122	C	ASP	A	15	-61.472	-37.295	92.253	1.00193.42	C
ATOM	123	O	ASP	A	15	-60.231	-37.308	92.298	1.00193.24	O
ATOM	124	CB	ASP	A	15	-63.743	-36.191	92.344	1.00194.09	C
ATOM	125	CG	ASP	A	15	-64.002	-36.293	93.847	1.00195.40	C
ATOM	126	OD1	ASP	A	15	-63.400	-35.507	94.615	1.00196.58	O
ATOM	127	OD2	ASP	A	15	-64.815	-37.153	94.267	1.00197.17	O
ATOM	128	N	TYR	A	16	-62.240	-38.378	92.416	1.00193.00	N
ATOM	129	CA	TYR	A	16	-61.826	-39.703	92.924	1.00192.63	C
ATOM	130	C	TYR	A	16	-60.897	-40.462	91.985	1.00192.47	C
ATOM	131	O	TYR	A	16	-60.176	-39.865	91.190	1.00192.34	O
ATOM	132	CB	TYR	A	16	-63.085	-40.550	93.193	1.00192.38	C
ATOM	133	CG	TYR	A	16	-64.079	-40.511	92.038	1.00192.21	C
ATOM	134	CD1	TYR	A	16	-63.995	-39.507	91.060	1.00191.96	C
ATOM	135	CD2	TYR	A	16	-65.110	-41.448	91.926	1.00191.92	C
ATOM	136	CE1	TYR	A	16	-64.876	-39.436	89.997	1.00191.87	C
ATOM	137	CE2	TYR	A	16	-66.020	-41.385	90.850	1.00192.01	C
ATOM	138	CZ	TYR	A	16	-65.884	-40.368	89.887	1.00192.21	C
ATOM	139	OH	TYR	A	16	-66.735	-40.250	88.807	1.00192.15	O
ATOM	140	N	VAL	A	44	-62.524	-36.401	98.284	1.00197.30	N

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ATOM    141  CA  VAL A  44     -62.947 -35.025  98.034  1.00197.37           C
ATOM    142  C   VAL A  44     -61.748 -34.037  97.897  1.00197.56           C
ATOM    143  O   VAL A  44     -61.635 -33.083  98.676  1.00197.71           O
ATOM    144  CB  VAL A  44     -64.049 -34.541  99.072  1.00197.30           C
ATOM    145  CG1 VAL A  44     -65.391 -35.193  98.773  1.00197.07           C
ATOM    146  CG2 VAL A  44     -63.644 -34.798 100.538  1.00196.98           C
ATOM    147  N   VAL A  45     -60.874 -34.270  96.899  1.00197.58           N
ATOM    148  CA  VAL A  45     -59.650 -33.439  96.659  1.00197.43           C
ATOM    149  C   VAL A  45     -59.106 -33.294  95.193  1.00197.60           C
ATOM    150  O   VAL A  45     -58.700 -34.293  94.570  1.00197.84           O
ATOM    151  CB  VAL A  45     -58.450 -33.866  97.591  1.00197.43           C
ATOM    152  CG1 VAL A  45     -58.375 -32.988  98.837  1.00197.37           C
ATOM    153  CG2 VAL A  45     -58.500 -35.359  97.948  1.00196.96           C
ATOM    154  N   TYR A  46     -59.117 -32.049  94.676  1.00197.36           N
ATOM    155  CA  TYR A  46     -58.346 -31.538  93.469  1.00197.01           C
ATOM    156  C   TYR A  46     -58.992 -31.364  92.063  1.00196.07           C
ATOM    157  O   TYR A  46     -59.500 -32.328  91.494  1.00195.90           O
ATOM    158  CB  TYR A  46     -56.865 -31.998  93.424  1.00197.52           C
ATOM    159  CG  TYR A  46     -56.063 -31.212  94.444  1.00198.57           C
ATOM    160  CD1 TYR A  46     -55.686 -31.786  95.664  1.00199.54           C
ATOM    161  CD2 TYR A  46     -55.763 -29.856  94.230  1.00199.36           C
ATOM    162  CE1 TYR A  46     -54.991 -31.040  96.636  1.00200.15           C
ATOM    163  CE2 TYR A  46     -55.067 -29.100  95.188  1.00199.87           C
ATOM    164  CZ  TYR A  46     -54.685 -29.697  96.391  1.00199.79           C
ATOM    165  OH  TYR A  46     -54.002 -28.957  97.340  1.00199.26           O
ATOM    166  N   LYS A  47     -58.943 -30.140  91.517  1.00195.10           N
ATOM    167  CA  LYS A  47     -59.688 -29.775  90.282  1.00194.21           C
ATOM    168  C   LYS A  47     -58.866 -29.055  89.169  1.00194.07           C
ATOM    169  O   LYS A  47     -58.282 -27.993  89.413  1.00194.00           O
ATOM    170  CB  LYS A  47     -60.961 -29.000  90.648  1.00193.89           C
ATOM    171  CG  LYS A  47     -61.934 -29.785  91.562  1.00192.65           C
ATOM    172  CD  LYS A  47     -61.620 -29.632  93.067  1.00189.74           C
ATOM    173  CE  LYS A  47     -62.157 -30.792  93.894  1.00186.99           C
ATOM    174  NZ  LYS A  47     -61.567 -30.791  95.253  1.00184.74           N
ATOM    175  N   LYS A  48     -58.892 -29.620  87.947  1.00193.75           N
ATOM    176  CA  LYS A  48     -57.866 -29.436  86.886  1.00193.34           C
ATOM    177  C   LYS A  48     -58.322 -28.734  85.588  1.00193.67           C
ATOM    178  O   LYS A  48     -59.294 -27.987  85.589  1.00193.53           O
ATOM    179  CB  LYS A  48     -57.303 -30.816  86.507  1.00192.89           C
ATOM    180  CG  LYS A  48     -56.393 -31.452  87.542  1.00191.73           C
ATOM    181  CD  LYS A  48     -56.444 -32.984  87.481  1.00190.05           C
ATOM    182  CE  LYS A  48     -55.741 -33.617  88.698  1.00189.11           C
ATOM    183  NZ  LYS A  48     -56.054 -35.055  88.950  1.00187.75           N
ATOM    184  N   THR A  49     -57.565 -28.957  84.501  1.00194.25           N
ATOM    185  CA  THR A  49     -57.962 -28.657  83.088  1.00194.55           C
ATOM    186  C   THR A  49     -57.804 -29.895  82.175  1.00194.74           C
ATOM    187  O   THR A  49     -56.726 -30.483  82.085  1.00194.67           O
ATOM    188  CB  THR A  49     -57.235 -27.408  82.443  1.00194.53           C
ATOM    189  OG1 THR A  49     -57.577 -27.311  81.052  1.00194.31           O
ATOM    190  CG2 THR A  49     -55.724 -27.497  82.546  1.00194.35           C
ATOM    191  N   LEU A  50     -58.886 -30.265  81.495  1.00195.01           N
ATOM    192  CA  LEU A  50     -58.979 -31.552  80.805  1.00195.23           C
ATOM    193  C   LEU A  50     -58.939 -31.361  79.286  1.00195.39           C
ATOM    194  O   LEU A  50     -58.482 -30.326  78.798  1.00195.35           O
ATOM    195  CB  LEU A  50     -60.264 -32.271  81.254  1.00195.28           C
ATOM    196  CG  LEU A  50     -60.258 -33.752  81.663  1.00195.25           C
ATOM    197  CD1 LEU A  50     -60.978 -33.948  82.988  1.00194.91           C
ATOM    198  CD2 LEU A  50     -60.874 -34.641  80.594  1.00195.45           C
ATOM    199  N   PHE A  51     -59.411 -32.360  78.549  1.00195.61           N
ATOM    200  CA  PHE A  51     -59.375 -32.340  77.101  1.00195.99           C
ATOM    201  C   PHE A  51     -60.727 -32.807  76.592  1.00196.13           C
ATOM    202  O   PHE A  51     -60.989 -34.003  76.555  1.00196.01           O
ATOM    203  CB  PHE A  51     -58.291 -33.303  76.614  1.00196.20           C
ATOM    204  CG  PHE A  51     -57.347 -32.710  75.596  1.00196.80           C
ATOM    205  CD1 PHE A  51     -55.967 -32.816  75.771  1.00196.93           C
ATOM    206  CD2 PHE A  51     -57.828 -32.050  74.463  1.00197.01           C
ATOM    207  CE1 PHE A  51     -55.085 -32.274  74.842  1.00196.72           C
ATOM    208  CE2 PHE A  51     -56.951 -31.504  73.526  1.00196.57           C
ATOM    209  CZ  PHE A  51     -55.579 -31.615  73.718  1.00196.52           C
ATOM    210  N   VAL A  52     -61.582 -31.869  76.194  1.00196.56           N
ATOM    211  CA  VAL A  52     -62.976 -32.203  75.864  1.00197.10           C
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ATOM	212	C	VAL	A	52	-63.207	-33.014	74.602	1.00197.42	C
ATOM	213	O	VAL	A	52	-62.271	-33.432	73.935	1.00197.55	O
ATOM	214	CB	VAL	A	52	-63.927	-30.993	75.839	1.00197.18	C
ATOM	215	CG1	VAL	A	52	-64.629	-30.857	77.172	1.00197.21	C
ATOM	216	CG2	VAL	A	52	-63.211	-29.728	75.432	1.00197.43	C
ATOM	217	N	GLU	A	53	-64.484	-33.189	74.278	1.00197.89	N
ATOM	218	CA	GLU	A	53	-64.949	-34.332	73.518	1.00198.63	C
ATOM	219	C	GLU	A	53	-66.030	-33.957	72.475	1.00198.77	C
ATOM	220	O	GLU	A	53	-66.498	-34.822	71.734	1.00198.75	O
ATOM	221	CB	GLU	A	53	-65.462	-35.422	74.527	1.00198.72	C
ATOM	222	CG	GLU	A	53	-64.340	-36.097	75.472	1.00199.52	C
ATOM	223	CD	GLU	A	53	-64.837	-36.899	76.736	1.00199.15	C
ATOM	224	OE1	GLU	A	53	-64.148	-37.868	77.174	1.00198.57	O
ATOM	225	OE2	GLU	A	53	-65.892	-36.547	77.309	1.00199.71	O
ATOM	226	N	PHE	A	54	-66.377	-32.669	72.380	1.00199.27	N
ATOM	227	CA	PHE	A	54	-67.732	-32.256	71.916	1.00199.86	C
ATOM	228	C	PHE	A	54	-67.974	-31.808	70.479	1.00200.13	C
ATOM	229	O	PHE	A	54	-67.100	-31.259	69.836	1.00200.00	O
ATOM	230	CB	PHE	A	54	-68.403	-31.279	72.909	1.00199.97	C
ATOM	231	CG	PHE	A	54	-67.644	-29.998	73.152	1.00200.18	C
ATOM	232	CD1	PHE	A	54	-66.270	-29.907	72.940	1.00200.60	C
ATOM	233	CD2	PHE	A	54	-68.312	-28.884	73.652	1.00200.54	C
ATOM	234	CE1	PHE	A	54	-65.584	-28.714	73.190	1.00201.06	C
ATOM	235	CE2	PHE	A	54	-67.637	-27.685	73.908	1.00200.79	C
ATOM	236	CZ	PHE	A	54	-66.273	-27.600	73.680	1.00200.81	C
ATOM	237	N	THR	A	55	-69.205	-32.019	70.019	1.00200.89	N
ATOM	238	CA	THR	A	55	-69.608	-31.834	68.620	1.00201.87	C
ATOM	239	C	THR	A	55	-69.748	-30.376	68.160	1.00202.86	C
ATOM	240	O	THR	A	55	-70.491	-30.084	67.212	1.00202.87	O
ATOM	241	CB	THR	A	55	-70.945	-32.564	68.347	1.00201.75	C
ATOM	242	OG1	THR	A	55	-71.351	-32.330	66.995	1.00201.67	O
ATOM	243	CG2	THR	A	55	-72.050	-32.076	69.288	1.00201.47	C
ATOM	244	N	ASP	A	56	-69.005	-29.477	68.805	1.00204.16	N
ATOM	245	CA	ASP	A	56	-69.223	-28.020	68.684	1.00205.24	C
ATOM	246	C	ASP	A	56	-69.194	-27.402	67.286	1.00205.93	C
ATOM	247	O	ASP	A	56	-68.605	-27.935	66.330	1.00205.95	O
ATOM	248	CB	ASP	A	56	-68.320	-27.208	69.676	1.00205.23	C
ATOM	249	CG	ASP	A	56	-67.003	-26.619	69.036	1.00205.31	C
ATOM	250	OD1	ASP	A	56	-66.244	-25.943	69.774	1.00204.74	O
ATOM	251	OD2	ASP	A	56	-66.703	-26.811	67.834	1.00205.26	O
ATOM	252	N	HIS	A	57	-69.916	-26.295	67.196	1.00206.80	N
ATOM	253	CA	HIS	A	57	-69.446	-25.140	66.465	1.00207.70	C
ATOM	254	C	HIS	A	57	-69.302	-24.033	67.506	1.00208.25	C
ATOM	255	O	HIS	A	57	-68.527	-23.089	67.326	1.00208.41	O
ATOM	256	CB	HIS	A	57	-70.361	-24.769	65.296	1.00207.67	C
ATOM	257	CG	HIS	A	57	-69.702	-24.912	63.954	1.00207.82	C
ATOM	258	ND1	HIS	A	57	-69.010	-26.045	63.579	1.00207.86	N
ATOM	259	CD2	HIS	A	57	-69.619	-24.058	62.906	1.00207.63	C
ATOM	260	CE1	HIS	A	57	-68.535	-25.885	62.356	1.00207.63	C
ATOM	261	NE2	HIS	A	57	-68.891	-24.688	61.926	1.00207.60	N
ATOM	262	N	LEU	A	58	-70.027	-24.191	68.615	1.00208.93	N
ATOM	263	CA	LEU	A	58	-69.854	-23.341	69.795	1.00209.60	C
ATOM	264	C	LEU	A	58	-69.373	-24.148	71.036	1.00210.05	C
ATOM	265	O	LEU	A	58	-68.232	-24.627	71.077	1.00209.89	O
ATOM	266	CB	LEU	A	58	-71.133	-22.510	70.094	1.00209.59	C
ATOM	267	CG	LEU	A	58	-71.581	-21.269	69.286	1.00209.35	C
ATOM	268	CD1	LEU	A	58	-72.976	-20.800	69.720	1.00208.78	C
ATOM	269	CD2	LEU	A	58	-70.593	-20.105	69.375	1.00209.26	C
ATOM	270	N	PHE	A	59	-70.248	-24.289	72.036	1.00210.69	N
ATOM	271	CA	PHE	A	59	-69.891	-24.867	73.339	1.00211.13	C
ATOM	272	C	PHE	A	59	-71.025	-25.779	73.891	1.00211.30	C
ATOM	273	O	PHE	A	59	-71.597	-25.501	74.954	1.00211.33	O
ATOM	274	CB	PHE	A	59	-69.514	-23.767	74.383	1.00211.24	C
ATOM	275	CG	PHE	A	59	-69.352	-22.331	73.816	1.00211.63	C
ATOM	276	CD1	PHE	A	59	-70.447	-21.446	73.763	1.00211.37	C
ATOM	277	CD2	PHE	A	59	-68.096	-21.850	73.400	1.00211.62	C
ATOM	278	CE1	PHE	A	59	-70.303	-20.128	73.272	1.00210.73	C
ATOM	279	CE2	PHE	A	59	-67.946	-20.529	72.907	1.00211.07	C
ATOM	280	CZ	PHE	A	59	-69.052	-19.674	72.847	1.00210.85	C
ATOM	281	N	ASN	A	60	-71.339	-26.861	73.172	1.00211.49	N
ATOM	282	CA	ASN	A	60	-72.465	-27.751	73.525	1.00211.61	C

ATOM	283	C	ASN	A	60	-72.066	-29.187	73.902	1.00211.88	C
ATOM	284	O	ASN	A	60	-71.252	-29.806	73.206	1.00211.83	O
ATOM	285	CB	ASN	A	60	-73.494	-27.773	72.388	1.00211.49	C
ATOM	286	CG	ASN	A	60	-72.924	-28.320	71.088	1.00211.21	C
ATOM	287	OD1	ASN	A	60	-72.536	-27.560	70.199	1.00210.69	O
ATOM	288	ND2	ASN	A	60	-72.866	-29.645	70.977	1.00210.64	N
ATOM	289	N	ILE	A	61	-72.665	-29.712	74.980	1.00212.29	N
ATOM	290	CA	ILE	A	61	-72.336	-31.053	75.553	1.00212.61	C
ATOM	291	C	ILE	A	61	-72.070	-32.160	74.471	1.00212.93	C
ATOM	292	O	ILE	A	61	-72.537	-32.017	73.331	1.00213.00	O
ATOM	293	CB	ILE	A	61	-73.363	-31.500	76.728	1.00212.48	C
ATOM	294	CG1	ILE	A	61	-74.842	-31.430	76.301	1.00212.07	C
ATOM	295	CG2	ILE	A	61	-73.141	-30.680	78.016	1.00211.87	C
ATOM	296	CD1	ILE	A	61	-75.831	-32.081	77.277	1.00211.96	C
ATOM	297	N	ALA	A	62	-71.284	-33.203	74.804	1.00213.14	N
ATOM	298	CA	ALA	A	62	-71.091	-34.408	73.934	1.00213.33	C
ATOM	299	C	ALA	A	62	-70.118	-35.446	74.488	1.00213.78	C
ATOM	300	O	ALA	A	62	-68.908	-35.267	74.415	1.00213.51	O
ATOM	301	CB	ALA	A	62	-70.674	-34.022	72.521	1.00213.46	C
ATOM	302	N	LYS	A	63	-70.653	-36.556	74.988	1.00214.60	N
ATOM	303	CA	LYS	A	63	-69.885	-37.442	75.875	1.00215.58	C
ATOM	304	C	LYS	A	63	-69.860	-38.920	75.459	1.00216.19	C
ATOM	305	O	LYS	A	63	-70.919	-39.519	75.258	1.00215.92	O
ATOM	306	CB	LYS	A	63	-70.414	-37.323	77.315	1.00215.67	C
ATOM	307	CG	LYS	A	63	-70.265	-35.931	77.963	1.00216.05	C
ATOM	308	CD	LYS	A	63	-71.475	-35.525	78.838	1.00216.31	C
ATOM	309	CE	LYS	A	63	-72.526	-34.723	78.045	1.00216.52	C
ATOM	310	NZ	LYS	A	63	-73.461	-33.908	78.896	1.00216.74	N
ATOM	311	N	PRO	A	64	-68.640	-39.495	75.290	1.00217.05	N
ATOM	312	CA	PRO	A	64	-68.376	-40.943	75.143	1.00217.49	C
ATOM	313	C	PRO	A	64	-67.854	-41.595	76.432	1.00217.62	C
ATOM	314	O	PRO	A	64	-67.745	-42.829	76.538	1.00217.40	O
ATOM	315	CB	PRO	A	64	-67.256	-40.975	74.073	1.00217.61	C
ATOM	316	CG	PRO	A	64	-66.477	-39.657	74.270	1.00217.40	C
ATOM	317	CD	PRO	A	64	-67.387	-38.722	75.122	1.00217.36	C
ATOM	318	N	ARG	A	65	-67.571	-40.742	77.404	1.00217.89	N
ATOM	319	CA	ARG	A	65	-66.628	-41.036	78.463	1.00218.40	C
ATOM	320	C	ARG	A	65	-66.985	-42.129	79.493	1.00218.80	C
ATOM	321	O	ARG	A	65	-66.063	-42.667	80.120	1.00218.81	O
ATOM	322	CB	ARG	A	65	-66.243	-39.721	79.163	1.00218.36	C
ATOM	323	CG	ARG	A	65	-67.245	-38.593	78.919	1.00218.55	C
ATOM	324	CD	ARG	A	65	-67.759	-37.964	80.210	1.00219.87	C
ATOM	325	NE	ARG	A	65	-68.350	-38.963	81.110	1.00220.86	N
ATOM	326	CZ	ARG	A	65	-69.391	-38.757	81.919	1.00220.96	C
ATOM	327	NH1	ARG	A	65	-70.001	-37.575	81.958	1.00221.33	N
ATOM	328	NH2	ARG	A	65	-69.833	-39.749	82.686	1.00220.42	N
ATOM	329	N	PRO	A	66	-68.294	-42.491	79.654	1.00219.16	N
ATOM	330	CA	PRO	A	66	-68.683	-43.195	80.888	1.00219.19	C
ATOM	331	C	PRO	A	66	-67.620	-44.084	81.547	1.00219.22	C
ATOM	332	O	PRO	A	66	-67.267	-43.826	82.697	1.00219.17	O
ATOM	333	CB	PRO	A	66	-69.927	-43.987	80.465	1.00219.15	C
ATOM	334	CG	PRO	A	66	-70.597	-43.081	79.505	1.00219.16	C
ATOM	335	CD	PRO	A	66	-69.475	-42.326	78.775	1.00219.27	C
ATOM	336	N	PRO	A	67	-67.074	-45.086	80.827	1.00219.32	N
ATOM	337	CA	PRO	A	67	-66.296	-46.010	81.633	1.00219.28	C
ATOM	338	C	PRO	A	67	-64.827	-45.624	81.720	1.00219.07	C
ATOM	339	O	PRO	A	67	-64.477	-44.520	82.152	1.00218.73	O
ATOM	340	CB	PRO	A	67	-66.464	-47.342	80.883	1.00219.33	C
ATOM	341	CG	PRO	A	67	-66.767	-46.950	79.436	1.00219.49	C
ATOM	342	CD	PRO	A	67	-67.048	-45.463	79.398	1.00219.37	C
ATOM	343	N	TRP	A	68	-63.996	-46.568	81.307	1.00219.01	N
ATOM	344	CA	TRP	A	68	-62.560	-46.430	81.242	1.00219.11	C
ATOM	345	C	TRP	A	68	-62.040	-45.048	80.844	1.00219.00	C
ATOM	346	O	TRP	A	68	-60.950	-44.665	81.270	1.00219.18	O
ATOM	347	CB	TRP	A	68	-61.994	-47.495	80.299	1.00219.47	C
ATOM	348	CG	TRP	A	68	-62.807	-47.721	79.065	1.00219.50	C
ATOM	349	CD1	TRP	A	68	-63.890	-48.544	78.929	1.00219.72	C
ATOM	350	CD2	TRP	A	68	-62.590	-47.128	77.792	1.00219.76	C
ATOM	351	NE1	TRP	A	68	-64.368	-48.490	77.647	1.00219.67	N
ATOM	352	CE2	TRP	A	68	-63.586	-47.627	76.925	1.00219.95	C
ATOM	353	CE3	TRP	A	68	-61.651	-46.211	77.295	1.00220.24	C

ATOM	354	CZ2	TRP	A	68	-63.671	-47.241	75.582	1.00220.41	C
ATOM	355	CZ3	TRP	A	68	-61.735	-45.823	75.955	1.00220.23	C
ATOM	356	CH2	TRP	A	68	-62.738	-46.340	75.115	1.00220.32	C
ATOM	357	N	MET	A	69	-62.791	-44.307	80.027	1.00218.67	N
ATOM	358	CA	MET	A	69	-62.392	-42.934	79.704	1.00218.16	C
ATOM	359	C	MET	A	69	-62.372	-42.136	81.012	1.00217.46	C
ATOM	360	O	MET	A	69	-63.405	-41.975	81.678	1.00217.42	O
ATOM	361	CB	MET	A	69	-63.319	-42.280	78.662	1.00218.44	C
ATOM	362	CG	MET	A	69	-63.249	-42.840	77.226	1.00218.89	C
ATOM	363	SD	MET	A	69	-62.480	-41.760	75.984	1.00219.92	S
ATOM	364	CE	MET	A	69	-63.374	-42.198	74.481	1.00218.86	C
ATOM	365	N	GLY	A	70	-61.178	-41.699	81.401	1.00216.49	N
ATOM	366	CA	GLY	A	70	-61.019	-40.861	82.574	1.00215.30	C
ATOM	367	C	GLY	A	70	-60.907	-39.447	82.076	1.00214.50	C
ATOM	368	O	GLY	A	70	-61.757	-38.970	81.317	1.00214.48	O
ATOM	369	N	LEU	A	71	-59.852	-38.772	82.497	1.00213.69	N
ATOM	370	CA	LEU	A	71	-59.497	-37.523	81.873	1.00213.01	C
ATOM	371	C	LEU	A	71	-58.852	-37.908	80.545	1.00212.76	C
ATOM	372	O	LEU	A	71	-57.677	-38.287	80.495	1.00212.93	O
ATOM	373	CB	LEU	A	71	-58.519	-36.735	82.734	1.00212.85	C
ATOM	374	CG	LEU	A	71	-58.291	-37.189	84.167	1.00212.35	C
ATOM	375	CD1	LEU	A	71	-57.152	-38.174	84.186	1.00211.59	C
ATOM	376	CD2	LEU	A	71	-57.963	-35.987	85.021	1.00212.53	C
ATOM	377	N	LEU	A	72	-59.633	-37.844	79.471	1.00212.15	N
ATOM	378	CA	LEU	A	72	-59.179	-38.319	78.169	1.00211.29	C
ATOM	379	C	LEU	A	72	-59.874	-37.627	77.018	1.00210.75	C
ATOM	380	O	LEU	A	72	-61.096	-37.745	76.864	1.00210.79	O
ATOM	381	CB	LEU	A	72	-59.433	-39.818	78.051	1.00211.30	C
ATOM	382	CG	LEU	A	72	-58.287	-40.724	78.455	1.00211.08	C
ATOM	383	CD1	LEU	A	72	-58.835	-42.075	78.855	1.00211.02	C
ATOM	384	CD2	LEU	A	72	-57.324	-40.819	77.294	1.00211.11	C
ATOM	385	N	GLY	A	73	-59.098	-36.909	76.211	1.00209.97	N
ATOM	386	CA	GLY	A	73	-59.580	-36.476	74.909	1.00209.12	C
ATOM	387	C	GLY	A	73	-59.882	-37.767	74.174	1.00208.58	C
ATOM	388	O	GLY	A	73	-59.135	-38.745	74.336	1.00208.57	O
ATOM	389	N	PRO	A	74	-60.964	-37.790	73.363	1.00208.09	N
ATOM	390	CA	PRO	A	74	-61.453	-39.064	72.835	1.00207.75	C
ATOM	391	C	PRO	A	74	-60.366	-39.854	72.118	1.00207.32	C
ATOM	392	O	PRO	A	74	-59.555	-39.283	71.385	1.00207.20	O
ATOM	393	CB	PRO	A	74	-62.554	-38.647	71.851	1.00207.70	C
ATOM	394	CG	PRO	A	74	-63.005	-37.365	72.334	1.00207.73	C
ATOM	395	CD	PRO	A	74	-61.775	-36.670	72.864	1.00207.95	C
ATOM	396	N	THR	A	75	-60.339	-41.155	72.374	1.00206.84	N
ATOM	397	CA	THR	A	75	-59.483	-42.061	71.643	1.00206.42	C
ATOM	398	C	THR	A	75	-59.780	-41.818	70.162	1.00205.95	C
ATOM	399	O	THR	A	75	-60.878	-42.126	69.686	1.00205.93	O
ATOM	400	CB	THR	A	75	-59.770	-43.547	72.027	1.00206.59	C
ATOM	401	OG1	THR	A	75	-60.044	-43.659	73.433	1.00206.74	O
ATOM	402	CG2	THR	A	75	-58.592	-44.443	71.667	1.00206.56	C
ATOM	403	N	ILE	A	76	-58.828	-41.206	69.455	1.00205.35	N
ATOM	404	CA	ILE	A	76	-58.976	-40.974	68.012	1.00204.58	C
ATOM	405	C	ILE	A	76	-58.211	-42.022	67.208	1.00204.09	C
ATOM	406	O	ILE	A	76	-57.035	-42.298	67.475	1.00203.93	O
ATOM	407	CB	ILE	A	76	-58.592	-39.534	67.568	1.00204.54	C
ATOM	408	CG1	ILE	A	76	-57.090	-39.285	67.677	1.00204.55	C
ATOM	409	CG2	ILE	A	76	-59.369	-38.494	68.361	1.00204.50	C
ATOM	410	CD1	ILE	A	76	-56.619	-38.153	66.782	1.00205.11	C
ATOM	411	N	GLN	A	77	-58.901	-42.601	66.232	1.00203.48	N
ATOM	412	CA	GLN	A	77	-58.365	-43.704	65.448	1.00203.09	C
ATOM	413	C	GLN	A	77	-58.323	-43.387	63.959	1.00202.67	C
ATOM	414	O	GLN	A	77	-59.359	-43.087	63.362	1.00202.87	O
ATOM	415	CB	GLN	A	77	-59.214	-44.954	65.660	1.00203.12	C
ATOM	416	CG	GLN	A	77	-58.951	-45.688	66.959	1.00203.78	C
ATOM	417	CD	GLN	A	77	-59.374	-47.147	66.893	1.00204.60	C
ATOM	418	OE1	GLN	A	77	-59.469	-47.730	65.809	1.00204.99	O
ATOM	419	NE2	GLN	A	77	-59.626	-47.747	68.052	1.00204.88	N
ATOM	420	N	ALA	A	78	-57.133	-43.467	63.361	1.00201.96	N
ATOM	421	CA	ALA	A	78	-56.980	-43.328	61.910	1.00201.33	C
ATOM	422	C	ALA	A	78	-56.191	-44.496	61.310	1.00201.08	C
ATOM	423	O	ALA	A	78	-55.274	-45.031	61.948	1.00201.07	O
ATOM	424	CB	ALA	A	78	-56.332	-42.007	61.567	1.00201.21	C

ATOM	425	N	GLU	A	79	-56.557	-44.901	60.094	1.00200.59	N
ATOM	426	CA	GLU	A	79	-55.867	-46.009	59.427	1.00200.28	C
ATOM	427	C	GLU	A	79	-54.764	-45.538	58.459	1.00199.88	C
ATOM	428	O	GLU	A	79	-54.787	-44.400	57.989	1.00199.94	O
ATOM	429	CB	GLU	A	79	-56.856	-46.986	58.768	1.00200.10	C
ATOM	430	CG	GLU	A	79	-58.040	-46.341	58.057	1.00200.55	C
ATOM	431	CD	GLU	A	79	-58.935	-47.347	57.323	1.00200.84	C
ATOM	432	OE1	GLU	A	79	-58.665	-48.571	57.394	1.00201.24	O
ATOM	433	OE2	GLU	A	79	-59.916	-46.908	56.670	1.00201.70	O
ATOM	434	N	VAL	A	80	-53.808	-46.429	58.183	1.00199.39	N
ATOM	435	CA	VAL	A	80	-52.572	-46.144	57.429	1.00198.73	C
ATOM	436	C	VAL	A	80	-52.612	-44.986	56.446	1.00198.43	C
ATOM	437	O	VAL	A	80	-51.681	-44.191	56.421	1.00198.46	O
ATOM	438	CB	VAL	A	80	-52.047	-47.384	56.647	1.00198.74	C
ATOM	439	CG1	VAL	A	80	-51.193	-48.281	57.524	1.00198.73	C
ATOM	440	CG2	VAL	A	80	-53.185	-48.155	56.035	1.00198.71	C
ATOM	441	N	TYR	A	81	-53.677	-44.905	55.646	1.00198.08	N
ATOM	442	CA	TYR	A	81	-53.743	-43.992	54.493	1.00197.77	C
ATOM	443	C	TYR	A	81	-54.557	-42.703	54.670	1.00197.40	C
ATOM	444	O	TYR	A	81	-54.735	-41.930	53.720	1.00197.12	O
ATOM	445	CB	TYR	A	81	-54.275	-44.752	53.291	1.00197.95	C
ATOM	446	CG	TYR	A	81	-53.197	-45.282	52.389	1.00198.20	C
ATOM	447	CD1	TYR	A	81	-52.637	-46.541	52.602	1.00198.20	C
ATOM	448	CD2	TYR	A	81	-52.742	-44.529	51.311	1.00198.69	C
ATOM	449	CE1	TYR	A	81	-51.645	-47.037	51.762	1.00198.31	C
ATOM	450	CE2	TYR	A	81	-51.753	-45.010	50.465	1.00198.97	C
ATOM	451	CZ	TYR	A	81	-51.208	-46.263	50.697	1.00198.69	C
ATOM	452	OH	TYR	A	81	-50.228	-46.735	49.853	1.00198.90	O
ATOM	453	N	ASP	A	82	-55.014	-42.467	55.894	1.00197.07	N
ATOM	454	CA	ASP	A	82	-55.986	-41.420	56.176	1.00196.72	C
ATOM	455	C	ASP	A	82	-55.428	-40.061	56.588	1.00196.22	C
ATOM	456	O	ASP	A	82	-54.216	-39.864	56.676	1.00196.14	O
ATOM	457	CB	ASP	A	82	-56.987	-41.923	57.212	1.00196.96	C
ATOM	458	CG	ASP	A	82	-58.288	-42.357	56.585	1.00197.70	C
ATOM	459	OD1	ASP	A	82	-58.432	-43.561	56.264	1.00198.14	O
ATOM	460	OD2	ASP	A	82	-59.155	-41.474	56.393	1.00198.59	O
ATOM	461	N	THR	A	83	-56.346	-39.136	56.852	1.00195.66	N
ATOM	462	CA	THR	A	83	-56.032	-37.729	57.042	1.00195.15	C
ATOM	463	C	THR	A	83	-56.998	-37.114	58.055	1.00194.96	C
ATOM	464	O	THR	A	83	-58.164	-36.872	57.730	1.00194.97	O
ATOM	465	CB	THR	A	83	-56.167	-36.998	55.707	1.00195.10	C
ATOM	466	OG1	THR	A	83	-57.190	-37.642	54.933	1.00194.78	O
ATOM	467	CG2	THR	A	83	-54.851	-37.038	54.931	1.00194.92	C
ATOM	468	N	VAL	A	84	-56.508	-36.864	59.273	1.00194.63	N
ATOM	469	CA	VAL	A	84	-57.350	-36.439	60.411	1.00194.25	C
ATOM	470	C	VAL	A	84	-57.333	-34.933	60.655	1.00194.23	C
ATOM	471	O	VAL	A	84	-56.279	-34.304	60.610	1.00194.25	O
ATOM	472	CB	VAL	A	84	-56.987	-37.220	61.709	1.00194.09	C
ATOM	473	CG1	VAL	A	84	-57.255	-36.399	62.968	1.00193.70	C
ATOM	474	CG2	VAL	A	84	-57.748	-38.526	61.753	1.00193.73	C
ATOM	475	N	VAL	A	85	-58.510	-34.364	60.912	1.00194.27	N
ATOM	476	CA	VAL	A	85	-58.642	-32.918	61.147	1.00194.43	C
ATOM	477	C	VAL	A	85	-59.309	-32.525	62.479	1.00194.58	C
ATOM	478	O	VAL	A	85	-60.534	-32.312	62.583	1.00194.43	O
ATOM	479	CB	VAL	A	85	-59.250	-32.178	59.922	1.00194.37	C
ATOM	480	CG1	VAL	A	85	-60.048	-30.942	60.339	1.00194.37	C
ATOM	481	CG2	VAL	A	85	-58.143	-31.786	58.972	1.00194.36	C
ATOM	482	N	ILE	A	86	-58.457	-32.444	63.496	1.00194.76	N
ATOM	483	CA	ILE	A	86	-58.813	-31.888	64.789	1.00194.90	C
ATOM	484	C	ILE	A	86	-58.887	-30.376	64.623	1.00194.93	C
ATOM	485	O	ILE	A	86	-58.006	-29.784	64.003	1.00195.24	O
ATOM	486	CB	ILE	A	86	-57.730	-32.206	65.856	1.00194.89	C
ATOM	487	CG1	ILE	A	86	-57.240	-33.658	65.732	1.00195.05	C
ATOM	488	CG2	ILE	A	86	-58.251	-31.892	67.264	1.00195.07	C
ATOM	489	CD1	ILE	A	86	-55.961	-33.957	66.492	1.00194.90	C
ATOM	490	N	THR	A	87	-59.940	-29.755	65.147	1.00194.78	N
ATOM	491	CA	THR	A	87	-59.988	-28.295	65.242	1.00194.64	C
ATOM	492	C	THR	A	87	-60.282	-27.924	66.694	1.00194.64	C
ATOM	493	O	THR	A	87	-61.403	-28.091	67.167	1.00194.77	O
ATOM	494	CB	THR	A	87	-61.034	-27.675	64.289	1.00194.52	C
ATOM	495	OG1	THR	A	87	-62.331	-28.130	64.659	1.00194.64	O

ATOM	496	CG2	THR	A	87	-60.790	-28.082	62.846	1.00194.45	C
ATOM	497	N	LEU	A	88	-59.266	-27.450	67.407	1.00194.73	N
ATOM	498	CA	LEU	A	88	-59.376	-27.216	68.851	1.00194.93	C
ATOM	499	C	LEU	A	88	-59.940	-25.827	69.172	1.00195.13	C
ATOM	500	O	LEU	A	88	-59.370	-24.815	68.728	1.00195.33	O
ATOM	501	CB	LEU	A	88	-58.005	-27.427	69.524	1.00194.92	C
ATOM	502	CG	LEU	A	88	-57.669	-26.954	70.949	1.00194.82	C
ATOM	503	CD1	LEU	A	88	-56.755	-27.952	71.628	1.00194.95	C
ATOM	504	CD2	LEU	A	88	-57.027	-25.566	70.970	1.00194.88	C
ATOM	505	N	LYS	A	89	-61.057	-25.781	69.919	1.00195.00	N
ATOM	506	CA	LYS	A	89	-61.559	-24.517	70.495	1.00194.65	C
ATOM	507	C	LYS	A	89	-61.093	-24.431	71.945	1.00194.49	C
ATOM	508	O	LYS	A	89	-61.497	-25.243	72.778	1.00194.60	O
ATOM	509	CB	LYS	A	89	-63.090	-24.351	70.359	1.00194.38	C
ATOM	510	CG	LYS	A	89	-63.536	-22.863	70.355	1.00194.37	C
ATOM	511	CD	LYS	A	89	-64.749	-22.573	69.441	1.00194.01	C
ATOM	512	CE	LYS	A	89	-64.794	-21.100	68.943	1.00193.18	C
ATOM	513	NZ	LYS	A	89	-65.385	-20.104	69.904	1.00191.60	N
ATOM	514	N	ASN	A	90	-60.208	-23.472	72.222	1.00194.28	N
ATOM	515	CA	ASN	A	90	-59.578	-23.332	73.536	1.00194.09	C
ATOM	516	C	ASN	A	90	-60.426	-22.509	74.488	1.00194.00	C
ATOM	517	O	ASN	A	90	-60.933	-21.446	74.138	1.00193.98	O
ATOM	518	CB	ASN	A	90	-58.166	-22.728	73.423	1.00194.15	C
ATOM	519	CG	ASN	A	90	-57.378	-22.778	74.743	1.00194.01	C
ATOM	520	OD1	ASN	A	90	-56.400	-22.042	74.925	1.00193.58	O
ATOM	521	ND2	ASN	A	90	-57.791	-23.654	75.656	1.00194.01	N
ATOM	522	N	MET	A	91	-60.579	-23.033	75.696	1.00193.88	N
ATOM	523	CA	MET	A	91	-61.293	-22.355	76.762	1.00193.81	C
ATOM	524	C	MET	A	91	-60.585	-22.659	78.097	1.00193.39	C
ATOM	525	O	MET	A	91	-60.737	-23.743	78.661	1.00193.41	O
ATOM	526	CB	MET	A	91	-62.806	-22.706	76.737	1.00193.89	C
ATOM	527	CG	MET	A	91	-63.203	-24.031	76.002	1.00194.13	C
ATOM	528	SD	MET	A	91	-64.789	-24.071	75.073	1.00194.52	S
ATOM	529	CE	MET	A	91	-66.033	-24.281	76.365	1.00194.85	C
ATOM	530	N	ALA	A	92	-59.774	-21.701	78.555	1.00192.90	N
ATOM	531	CA	ALA	A	92	-58.919	-21.837	79.746	1.00192.40	C
ATOM	532	C	ALA	A	92	-58.166	-20.523	80.010	1.00192.10	C
ATOM	533	O	ALA	A	92	-57.985	-19.726	79.094	1.00192.22	O
ATOM	534	CB	ALA	A	92	-57.919	-22.994	79.566	1.00192.27	C
ATOM	535	N	SER	A	93	-57.720	-20.305	81.250	1.00191.67	N
ATOM	536	CA	SER	A	93	-56.811	-19.187	81.576	1.00191.19	C
ATOM	537	C	SER	A	93	-55.403	-19.497	81.059	1.00190.90	C
ATOM	538	O	SER	A	93	-54.451	-18.729	81.245	1.00190.79	O
ATOM	539	CB	SER	A	93	-56.783	-18.920	83.090	1.00191.23	C
ATOM	540	OG	SER	A	93	-55.999	-19.876	83.792	1.00190.89	O
ATOM	541	N	HIS	A	94	-55.313	-20.636	80.384	1.00190.52	N
ATOM	542	CA	HIS	A	94	-54.075	-21.240	79.961	1.00190.16	C
ATOM	543	C	HIS	A	94	-53.830	-20.956	78.468	1.00190.01	C
ATOM	544	O	HIS	A	94	-54.773	-20.946	77.666	1.00189.98	O
ATOM	545	CB	HIS	A	94	-54.199	-22.751	80.191	1.00190.06	C
ATOM	546	CG	HIS	A	94	-53.003	-23.378	80.833	1.00189.71	C
ATOM	547	ND1	HIS	A	94	-53.111	-24.321	81.829	1.00189.27	N
ATOM	548	CD2	HIS	A	94	-51.677	-23.208	80.617	1.00189.73	C
ATOM	549	CE1	HIS	A	94	-51.903	-24.703	82.202	1.00189.55	C
ATOM	550	NE2	HIS	A	94	-51.015	-24.043	81.481	1.00189.51	N
ATOM	551	N	PRO	A	95	-52.568	-20.692	78.088	1.00189.81	N
ATOM	552	CA	PRO	A	95	-52.215	-20.774	76.676	1.00189.59	C
ATOM	553	C	PRO	A	95	-51.887	-22.224	76.346	1.00189.41	C
ATOM	554	O	PRO	A	95	-50.834	-22.722	76.764	1.00189.33	O
ATOM	555	CB	PRO	A	95	-50.951	-19.919	76.592	1.00189.65	C
ATOM	556	CG	PRO	A	95	-50.297	-20.095	77.927	1.00189.79	C
ATOM	557	CD	PRO	A	95	-51.422	-20.279	78.925	1.00189.85	C
ATOM	558	N	VAL	A	96	-52.770	-22.909	75.626	1.00189.24	N
ATOM	559	CA	VAL	A	96	-52.564	-24.350	75.424	1.00189.25	C
ATOM	560	C	VAL	A	96	-52.581	-24.871	73.979	1.00189.29	C
ATOM	561	O	VAL	A	96	-53.446	-24.513	73.177	1.00189.17	O
ATOM	562	CB	VAL	A	96	-53.481	-25.206	76.332	1.00189.24	C
ATOM	563	CG1	VAL	A	96	-52.942	-25.237	77.762	1.00188.99	C
ATOM	564	CG2	VAL	A	96	-54.904	-24.696	76.298	1.00189.43	C
ATOM	565	N	SER	A	97	-51.614	-25.744	73.693	1.00189.43	N
ATOM	566	CA	SER	A	97	-51.342	-26.267	72.355	1.00189.65	C

ATOM	567	C	SER	A	97	-51.998	-27.619	72.091	1.00189.74	C
ATOM	568	O	SER	A	97	-52.812	-28.085	72.877	1.00189.90	O
ATOM	569	CB	SER	A	97	-49.835	-26.442	72.179	1.00189.76	C
ATOM	570	OG	SER	A	97	-49.419	-27.681	72.728	1.00189.73	O
ATOM	571	N	LEU	A	98	-51.618	-28.234	70.972	1.00189.77	N
ATOM	572	CA	LEU	A	98	-52.000	-29.599	70.619	1.00190.00	C
ATOM	573	C	LEU	A	98	-50.897	-30.119	69.720	1.00190.39	C
ATOM	574	O	LEU	A	98	-50.558	-29.484	68.719	1.00190.65	O
ATOM	575	CB	LEU	A	98	-53.356	-29.635	69.897	1.00189.83	C
ATOM	576	CG	LEU	A	98	-54.007	-30.925	69.362	1.00189.39	C
ATOM	577	CD1	LEU	A	98	-53.636	-31.207	67.917	1.00188.78	C
ATOM	578	CD2	LEU	A	98	-53.721	-32.131	70.230	1.00188.69	C
ATOM	579	N	HIS	A	99	-50.343	-31.272	70.084	1.00190.75	N
ATOM	580	CA	HIS	A	99	-49.134	-31.809	69.453	1.00191.00	C
ATOM	581	C	HIS	A	99	-49.187	-33.330	69.466	1.00191.25	C
ATOM	582	O	HIS	A	99	-49.559	-33.945	70.473	1.00191.38	O
ATOM	583	CB	HIS	A	99	-47.891	-31.267	70.186	1.00190.97	C
ATOM	584	CG	HIS	A	99	-46.600	-31.941	69.825	1.00190.77	C
ATOM	585	ND1	HIS	A	99	-45.535	-32.007	70.699	1.00190.69	N
ATOM	586	CD2	HIS	A	99	-46.194	-32.565	68.693	1.00190.63	C
ATOM	587	CE1	HIS	A	99	-44.531	-32.647	70.126	1.00190.47	C
ATOM	588	NE2	HIS	A	99	-44.907	-33.001	68.910	1.00190.91	N
ATOM	589	N	ALA	A	100	-48.829	-33.936	68.340	1.00191.55	N
ATOM	590	CA	ALA	A	100	-48.905	-35.390	68.219	1.00191.89	C
ATOM	591	C	ALA	A	100	-47.577	-36.092	68.445	1.00191.98	C
ATOM	592	O	ALA	A	100	-46.548	-35.475	68.721	1.00192.10	O
ATOM	593	CB	ALA	A	100	-49.462	-35.785	66.859	1.00192.00	C
ATOM	594	N	VAL	A	101	-47.627	-37.407	68.319	1.00191.94	N
ATOM	595	CA	VAL	A	101	-46.440	-38.213	68.231	1.00191.97	C
ATOM	596	C	VAL	A	101	-46.801	-39.337	67.250	1.00192.25	C
ATOM	597	O	VAL	A	101	-47.978	-39.478	66.894	1.00192.37	O
ATOM	598	CB	VAL	A	101	-46.034	-38.710	69.627	1.00191.69	C
ATOM	599	CG1	VAL	A	101	-46.709	-40.031	69.955	1.00191.48	C
ATOM	600	CG2	VAL	A	101	-44.533	-38.814	69.731	1.00191.63	C
ATOM	601	N	GLY	A	102	-45.803	-40.088	66.773	1.00192.40	N
ATOM	602	CA	GLY	A	102	-46.030	-41.273	65.922	1.00192.29	C
ATOM	603	C	GLY	A	102	-46.665	-41.018	64.566	1.00192.30	C
ATOM	604	O	GLY	A	102	-46.938	-41.959	63.809	1.00192.10	O
ATOM	605	N	VAL	A	103	-46.876	-39.738	64.267	1.00192.40	N
ATOM	606	CA	VAL	A	103	-47.589	-39.289	63.084	1.00192.47	C
ATOM	607	C	VAL	A	103	-46.757	-38.220	62.407	1.00192.68	C
ATOM	608	O	VAL	A	103	-45.908	-37.599	63.054	1.00192.68	O
ATOM	609	CB	VAL	A	103	-48.966	-38.717	63.490	1.00192.37	C
ATOM	610	CG1	VAL	A	103	-49.406	-37.582	62.576	1.00192.20	C
ATOM	611	CG2	VAL	A	103	-50.010	-39.825	63.529	1.00192.19	C
ATOM	612	N	SER	A	104	-46.992	-38.022	61.110	1.00192.94	N
ATOM	613	CA	SER	A	104	-46.374	-36.913	60.382	1.00193.37	C
ATOM	614	C	SER	A	104	-47.349	-35.757	60.108	1.00193.39	C
ATOM	615	O	SER	A	104	-48.572	-35.938	60.108	1.00193.34	O
ATOM	616	CB	SER	A	104	-45.717	-37.394	59.080	1.00193.50	C
ATOM	617	OG	SER	A	104	-46.640	-37.415	58.004	1.00194.00	O
ATOM	618	N	TYR	A	105	-46.781	-34.572	59.883	1.00193.44	N
ATOM	619	CA	TYR	A	105	-47.540	-33.373	59.550	1.00193.52	C
ATOM	620	C	TYR	A	105	-46.616	-32.322	58.993	1.00193.55	C
ATOM	621	O	TYR	A	105	-45.400	-32.520	58.915	1.00193.41	O
ATOM	622	CB	TYR	A	105	-48.233	-32.797	60.782	1.00193.69	C
ATOM	623	CG	TYR	A	105	-47.451	-32.975	62.059	1.00193.92	C
ATOM	624	CD1	TYR	A	105	-46.175	-32.431	62.210	1.00194.13	C
ATOM	625	CD2	TYR	A	105	-47.988	-33.693	63.121	1.00194.38	C
ATOM	626	CE1	TYR	A	105	-45.456	-32.602	63.387	1.00194.37	C
ATOM	627	CE2	TYR	A	105	-47.280	-33.870	64.304	1.00194.63	C
ATOM	628	CZ	TYR	A	105	-46.017	-33.324	64.431	1.00194.43	C
ATOM	629	OH	TYR	A	105	-45.325	-33.510	65.603	1.00194.42	O
ATOM	630	N	TRP	A	106	-47.219	-31.194	58.637	1.00193.73	N
ATOM	631	CA	TRP	A	106	-46.509	-30.035	58.122	1.00194.08	C
ATOM	632	C	TRP	A	106	-46.126	-29.122	59.253	1.00193.76	C
ATOM	633	O	TRP	A	106	-46.772	-29.138	60.303	1.00193.89	O
ATOM	634	CB	TRP	A	106	-47.417	-29.259	57.185	1.00194.73	C
ATOM	635	CG	TRP	A	106	-47.858	-30.086	56.054	1.00195.80	C
ATOM	636	CD1	TRP	A	106	-48.941	-30.919	56.016	1.00196.71	C
ATOM	637	CD2	TRP	A	106	-47.216	-30.200	54.784	1.00196.22	C

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ATOM    638  NE1 TRP A 106     -49.020 -31.537  54.787  1.00196.95           N
ATOM    639  CE2 TRP A 106     -47.972 -31.113  54.014  1.00196.41           C
ATOM    640  CE3 TRP A 106     -46.083 -29.611  54.218  1.00195.99           C
ATOM    641  CZ2 TRP A 106     -47.630 -31.449  52.711  1.00195.95           C
ATOM    642  CZ3 TRP A 106     -45.747 -29.943  52.928  1.00196.10           C
ATOM    643  CH2 TRP A 106     -46.519 -30.853  52.184  1.00196.04           C
ATOM    644  N   LYS A 107     -45.095 -28.308  59.028  1.00193.26           N
ATOM    645  CA  LYS A 107     -44.673 -27.309  60.006  1.00192.85           C
ATOM    646  C   LYS A 107     -45.818 -26.304  60.300  1.00192.64           C
ATOM    647  O   LYS A 107     -45.717 -25.478  61.216  1.00192.67           O
ATOM    648  CB  LYS A 107     -43.346 -26.645  59.582  1.00192.67           C
ATOM    649  CG  LYS A 107     -43.295 -26.267  57.992  1.00193.04           C
ATOM    650  CD  LYS A 107     -41.590 -26.137  57.659  1.00192.92           C
ATOM    651  CE  LYS A 107     -41.425 -25.416  56.277  1.00192.02           C
ATOM    652  NZ  LYS A 107     -40.741 -26.270  55.225  1.00190.89           N
ATOM    653  N   ALA A 108     -46.918 -26.428  59.544  1.00192.34           N
ATOM    654  CA  ALA A 108     -48.195 -25.713  59.800  1.00191.91           C
ATOM    655  C   ALA A 108     -49.169 -26.478  60.738  1.00191.45           C
ATOM    656  O   ALA A 108     -50.381 -26.209  60.799  1.00191.16           O
ATOM    657  CB  ALA A 108     -48.875 -25.355  58.485  1.00192.15           C
ATOM    658  N   SER A 109     -48.606 -27.455  61.436  1.00190.85           N
ATOM    659  CA  SER A 109     -49.184 -28.028  62.627  1.00190.20           C
ATOM    660  C   SER A 109     -48.007 -28.206  63.561  1.00190.04           C
ATOM    661  O   SER A 109     -47.344 -27.229  63.911  1.00189.87           O
ATOM    662  CB  SER A 109     -49.880 -29.349  62.337  1.00190.06           C
ATOM    663  OG  SER A 109     -51.235 -29.113  62.035  1.00189.52           O
ATOM    664  N   GLU A 110     -47.712 -29.450  63.925  1.00189.86           N
ATOM    665  CA  GLU A 110     -46.697 -29.746  64.936  1.00189.67           C
ATOM    666  C   GLU A 110     -47.219 -29.332  66.308  1.00189.87           C
ATOM    667  O   GLU A 110     -47.307 -30.168  67.205  1.00190.07           O
ATOM    668  CB  GLU A 110     -45.363 -29.063  64.619  1.00189.39           C
ATOM    669  CG  GLU A 110     -44.195 -29.531  65.452  1.00188.30           C
ATOM    670  CD  GLU A 110     -42.939 -28.743  65.165  1.00187.60           C
ATOM    671  OE1 GLU A 110     -43.044 -27.579  64.736  1.00188.15           O
ATOM    672  OE2 GLU A 110     -41.838 -29.281  65.365  1.00186.83           O
ATOM    673  N   GLY A 111     -47.583 -28.055  66.454  1.00189.87           N
ATOM    674  CA  GLY A 111     -48.190 -27.532  67.684  1.00189.73           C
ATOM    675  C   GLY A 111     -47.163 -27.351  68.780  1.00189.67           C
ATOM    676  O   GLY A 111     -47.465 -27.480  69.970  1.00189.53           O
ATOM    677  N   ALA A 112     -45.942 -27.040  68.361  1.00189.69           N
ATOM    678  CA  ALA A 112     -44.803 -27.000  69.256  1.00189.81           C
ATOM    679  C   ALA A 112     -43.979 -25.738  69.038  1.00189.85           C
ATOM    680  O   ALA A 112     -43.345 -25.566  67.993  1.00189.82           O
ATOM    681  CB  ALA A 112     -43.956 -28.224  69.039  1.00189.94           C
ATOM    682  N   GLU A 113     -43.982 -24.863  70.037  1.00189.89           N
ATOM    683  CA  GLU A 113     -43.351 -23.557  69.904  1.00189.89           C
ATOM    684  C   GLU A 113     -41.853 -23.640  70.158  1.00189.61           C
ATOM    685  O   GLU A 113     -41.411 -24.303  71.094  1.00189.83           O
ATOM    686  CB  GLU A 113     -44.015 -22.556  70.853  1.00190.15           C
ATOM    687  CG  GLU A 113     -44.409 -21.245  70.195  1.00190.84           C
ATOM    688  CD  GLU A 113     -43.293 -20.232  70.174  1.00192.04           C
ATOM    689  OE1 GLU A 113     -43.502 -19.121  70.716  1.00192.62           O
ATOM    690  OE2 GLU A 113     -42.213 -20.545  69.620  1.00192.42           O
ATOM    691  N   TYR A 114     -41.097 -22.962  69.302  1.00189.17           N
ATOM    692  CA  TYR A 114     -39.633 -22.892  69.307  1.00189.00           C
ATOM    693  C   TYR A 114     -39.375 -22.513  67.872  1.00189.42           C
ATOM    694  O   TYR A 114     -40.266 -22.679  67.035  1.00189.46           O
ATOM    695  CB  TYR A 114     -38.956 -24.229  69.658  1.00188.40           C
ATOM    696  CG  TYR A 114     -38.970 -25.252  68.548  1.00187.67           C
ATOM    697  CD1 TYR A 114     -37.791 -25.679  67.956  1.00187.49           C
ATOM    698  CD2 TYR A 114     -40.170 -25.791  68.083  1.00187.40           C
ATOM    699  CE1 TYR A 114     -37.809 -26.622  66.914  1.00187.33           C
ATOM    700  CE2 TYR A 114     -40.198 -26.729  67.048  1.00186.88           C
ATOM    701  CZ  TYR A 114     -39.020 -27.135  66.467  1.00186.82           C
ATOM    702  OH  TYR A 114     -39.064 -28.053  65.444  1.00185.99           O
ATOM    703  N   ASP A 115     -38.191 -22.002  67.564  1.00190.04           N
ATOM    704  CA  ASP A 115     -37.987 -21.417  66.237  1.00190.72           C
ATOM    705  C   ASP A 115     -37.672 -22.444  65.150  1.00190.90           C
ATOM    706  O   ASP A 115     -36.522 -22.598  64.728  1.00190.80           O
ATOM    707  CB  ASP A 115     -36.955 -20.276  66.264  1.00190.97           C
ATOM    708  CG  ASP A 115     -35.533 -20.774  66.451  1.00191.59           C
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ATOM	709	OD1	ASP	A	115	-35.275	-21.498	67.439	1.00192.19	O
ATOM	710	OD2	ASP	A	115	-34.676	-20.443	65.603	1.00192.14	O
ATOM	711	N	ASP	A	116	-38.704	-23.152	64.694	1.00191.36	N
ATOM	712	CA	ASP	A	116	-38.549	-23.966	63.483	1.00191.79	C
ATOM	713	C	ASP	A	116	-38.657	-23.053	62.247	1.00192.15	C
ATOM	714	O	ASP	A	116	-39.242	-23.421	61.224	1.00192.72	O
ATOM	715	CB	ASP	A	116	-39.442	-25.256	63.456	1.00191.68	C
ATOM	716	CG	ASP	A	116	-40.942	-24.998	63.157	1.00191.15	C
ATOM	717	OD1	ASP	A	116	-41.486	-23.856	63.590	1.00190.31	O
ATOM	718	OD2	ASP	A	116	-41.587	-26.002	62.532	1.00189.44	O
ATOM	719	N	GLN	A	117	-38.065	-21.860	62.377	1.00192.07	N
ATOM	720	CA	GLN	A	117	-37.977	-20.840	61.327	1.00191.91	C
ATOM	721	C	GLN	A	117	-39.307	-20.262	60.919	1.00191.71	C
ATOM	722	O	GLN	A	117	-39.487	-19.052	60.936	1.00191.69	O
ATOM	723	CB	GLN	A	117	-37.230	-21.344	60.098	1.00192.01	C
ATOM	724	CG	GLN	A	117	-36.487	-20.229	59.420	1.00192.85	C
ATOM	725	CD	GLN	A	117	-35.716	-19.378	60.417	1.00193.67	C
ATOM	726	OE1	GLN	A	117	-35.262	-19.875	61.454	1.00194.05	O
ATOM	727	NE2	GLN	A	117	-35.570	-18.090	60.112	1.00194.18	N
ATOM	728	N	THR	A	118	-40.198	-21.151	60.498	1.00191.67	N
ATOM	729	CA	THR	A	118	-41.631	-20.906	60.415	1.00191.84	C
ATOM	730	C	THR	A	118	-42.049	-19.466	60.167	1.00191.99	C
ATOM	731	O	THR	A	118	-41.860	-18.580	61.012	1.00191.94	O
ATOM	732	CB	THR	A	118	-42.387	-21.460	61.665	1.00191.93	C
ATOM	733	OG1	THR	A	118	-41.522	-21.460	62.824	1.00191.83	O
ATOM	734	CG2	THR	A	118	-42.859	-22.874	61.395	1.00192.11	C
ATOM	735	N	SER	A	119	-42.642	-19.252	58.998	1.00192.24	N
ATOM	736	CA	SER	A	119	-43.215	-17.961	58.649	1.00192.46	C
ATOM	737	C	SER	A	119	-44.354	-17.607	59.604	1.00192.47	C
ATOM	738	O	SER	A	119	-44.616	-18.318	60.581	1.00192.28	O
ATOM	739	CB	SER	A	119	-43.689	-17.948	57.189	1.00192.49	C
ATOM	740	OG	SER	A	119	-44.643	-18.968	56.938	1.00192.82	O
ATOM	741	N	GLN	A	120	-45.022	-16.500	59.321	1.00192.61	N
ATOM	742	CA	GLN	A	120	-46.008	-15.983	60.234	1.00192.80	C
ATOM	743	C	GLN	A	120	-47.023	-17.077	60.591	1.00192.67	C
ATOM	744	O	GLN	A	120	-47.082	-17.537	61.736	1.00192.43	O
ATOM	745	CB	GLN	A	120	-46.670	-14.733	59.641	1.00192.95	C
ATOM	746	CG	GLN	A	120	-46.968	-13.648	60.673	1.00193.95	C
ATOM	747	CD	GLN	A	120	-47.927	-14.116	61.778	1.00195.45	C
ATOM	748	OE1	GLN	A	120	-47.497	-14.543	62.857	1.00196.26	O
ATOM	749	NE2	GLN	A	120	-49.228	-14.052	61.502	1.00195.68	N
ATOM	750	N	ARG	A	121	-47.775	-17.522	59.589	1.00192.76	N
ATOM	751	CA	ARG	A	121	-48.871	-18.465	59.793	1.00192.93	C
ATOM	752	C	ARG	A	121	-48.414	-19.865	60.191	1.00193.01	C
ATOM	753	O	ARG	A	121	-49.218	-20.669	60.644	1.00193.08	O
ATOM	754	CB	ARG	A	121	-49.780	-18.517	58.552	1.00192.95	C
ATOM	755	CG	ARG	A	121	-51.020	-17.630	58.658	1.00193.16	C
ATOM	756	CD	ARG	A	121	-51.374	-16.961	57.330	1.00194.28	C
ATOM	757	NE	ARG	A	121	-52.613	-17.553	56.661	1.00195.33	N
ATOM	758	CZ	ARG	A	121	-52.793	-17.153	55.291	1.00196.40	C
ATOM	759	NH1	ARG	A	121	-52.078	-16.154	54.436	1.00196.49	N
ATOM	760	NH2	ARG	A	121	-53.966	-17.764	54.802	1.00196.78	N
ATOM	761	N	GLU	A	122	-47.127	-20.154	60.035	1.00193.13	N
ATOM	762	CA	GLU	A	122	-46.603	-21.488	60.337	1.00193.30	C
ATOM	763	C	GLU	A	122	-46.290	-21.693	61.828	1.00193.14	C
ATOM	764	O	GLU	A	122	-46.057	-22.825	62.276	1.00193.02	O
ATOM	765	CB	GLU	A	122	-45.372	-21.785	59.474	1.00193.34	C
ATOM	766	CG	GLU	A	122	-45.674	-22.279	58.051	1.00193.79	C
ATOM	767	CD	GLU	A	122	-44.415	-22.709	57.284	1.00193.81	C
ATOM	768	OE1	GLU	A	122	-43.314	-22.117	57.591	1.00194.18	O
ATOM	769	OE2	GLU	A	122	-44.528	-23.637	56.364	1.00194.61	O
ATOM	770	N	LYS	A	123	-46.289	-20.595	62.586	1.00193.09	N
ATOM	771	CA	LYS	A	123	-46.055	-20.637	64.033	1.00192.99	C
ATOM	772	C	LYS	A	123	-47.342	-20.630	64.875	1.00192.95	C
ATOM	773	O	LYS	A	123	-47.330	-21.071	66.027	1.00192.94	O
ATOM	774	CB	LYS	A	123	-45.142	-19.487	64.472	1.00193.01	C
ATOM	775	CG	LYS	A	123	-43.689	-19.878	64.668	1.00192.89	C
ATOM	776	CD	LYS	A	123	-42.907	-18.790	65.411	1.00192.77	C
ATOM	777	CE	LYS	A	123	-41.406	-19.033	65.350	1.00192.90	C
ATOM	778	NZ	LYS	A	123	-41.066	-20.480	65.534	1.00193.54	N
ATOM	779	N	GLU	A	124	-48.442	-20.138	64.302	1.00192.75	N

ATOM	780	CA	GLU	A	124	-49.723	-20.028	65.018	1.00192.48	C
ATOM	781	C	GLU	A	124	-50.317	-21.359	65.498	1.00192.29	C
ATOM	782	O	GLU	A	124	-51.225	-21.370	66.325	1.00192.43	O
ATOM	783	CB	GLU	A	124	-50.740	-19.268	64.174	1.00192.40	C
ATOM	784	CG	GLU	A	124	-50.442	-17.788	64.065	1.00192.64	C
ATOM	785	CD	GLU	A	124	-51.327	-17.095	63.052	1.00192.93	C
ATOM	786	OE1	GLU	A	124	-51.631	-17.712	62.008	1.00192.99	O
ATOM	787	OE2	GLU	A	124	-51.718	-15.934	63.297	1.00192.93	O
ATOM	788	N	ASP	A	125	-49.803	-22.470	64.980	1.00192.03	N
ATOM	789	CA	ASP	A	125	-50.188	-23.797	65.447	1.00191.85	C
ATOM	790	C	ASP	A	125	-49.508	-24.101	66.767	1.00191.97	C
ATOM	791	O	ASP	A	125	-50.023	-24.869	67.576	1.00191.89	O
ATOM	792	CB	ASP	A	125	-49.825	-24.870	64.406	1.00191.78	C
ATOM	793	CG	ASP	A	125	-48.381	-24.762	63.904	1.00191.47	C
ATOM	794	OD1	ASP	A	125	-47.461	-24.552	64.709	1.00191.33	O
ATOM	795	OD2	ASP	A	125	-48.145	-24.914	62.693	1.00190.71	O
ATOM	796	N	ASP	A	126	-48.354	-23.467	66.969	1.00192.21	N
ATOM	797	CA	ASP	A	126	-47.427	-23.765	68.068	1.00192.61	C
ATOM	798	C	ASP	A	126	-47.944	-23.402	69.476	1.00192.51	C
ATOM	799	O	ASP	A	126	-47.542	-24.019	70.474	1.00192.47	O
ATOM	800	CB	ASP	A	126	-46.069	-23.084	67.804	1.00192.86	C
ATOM	801	CG	ASP	A	126	-45.298	-23.691	66.611	1.00193.84	C
ATOM	802	OD1	ASP	A	126	-44.508	-22.953	65.963	1.00194.58	O
ATOM	803	OD2	ASP	A	126	-45.462	-24.903	66.317	1.00194.65	O
ATOM	804	N	LYS	A	127	-48.819	-22.394	69.540	1.00192.43	N
ATOM	805	CA	LYS	A	127	-49.446	-21.921	70.781	1.00192.13	C
ATOM	806	C	LYS	A	127	-50.819	-21.332	70.472	1.00192.17	C
ATOM	807	O	LYS	A	127	-50.908	-20.311	69.797	1.00192.01	O
ATOM	808	CB	LYS	A	127	-48.584	-20.844	71.447	1.00191.99	C
ATOM	809	CG	LYS	A	127	-47.395	-21.362	72.238	1.00191.79	C
ATOM	810	CD	LYS	A	127	-46.495	-20.232	72.720	1.00191.99	C
ATOM	811	CE	LYS	A	127	-47.044	-19.534	73.959	1.00192.34	C
ATOM	812	NZ	LYS	A	127	-48.298	-18.762	73.709	1.00192.51	N
ATOM	813	N	VAL	A	128	-51.882	-21.979	70.948	1.00192.39	N
ATOM	814	CA	VAL	A	128	-53.242	-21.425	70.834	1.00192.70	C
ATOM	815	C	VAL	A	128	-53.510	-20.451	71.985	1.00192.91	C
ATOM	816	O	VAL	A	128	-53.851	-20.857	73.107	1.00192.82	O
ATOM	817	CB	VAL	A	128	-54.347	-22.524	70.768	1.00192.66	C
ATOM	818	CG1	VAL	A	128	-55.733	-21.900	70.611	1.00192.40	C
ATOM	819	CG2	VAL	A	128	-54.083	-23.479	69.624	1.00192.73	C
ATOM	820	N	PHE	A	129	-53.342	-19.165	71.684	1.00193.21	N
ATOM	821	CA	PHE	A	129	-53.482	-18.093	72.655	1.00193.69	C
ATOM	822	C	PHE	A	129	-54.785	-18.337	73.419	1.00193.83	C
ATOM	823	O	PHE	A	129	-55.742	-18.833	72.818	1.00193.83	O
ATOM	824	CB	PHE	A	129	-53.496	-16.713	71.969	1.00194.01	C
ATOM	825	CG	PHE	A	129	-52.789	-16.655	70.611	1.00195.17	C
ATOM	826	CD1	PHE	A	129	-53.173	-15.696	69.660	1.00196.03	C
ATOM	827	CD2	PHE	A	129	-51.744	-17.533	70.276	1.00196.06	C
ATOM	828	CE1	PHE	A	129	-52.534	-15.614	68.397	1.00195.96	C
ATOM	829	CE2	PHE	A	129	-51.105	-17.465	69.008	1.00196.01	C
ATOM	830	CZ	PHE	A	129	-51.502	-16.503	68.074	1.00195.51	C
ATOM	831	N	PRO	A	130	-54.831	-17.988	74.735	1.00194.00	N
ATOM	832	CA	PRO	A	130	-55.907	-18.383	75.680	1.00193.82	C
ATOM	833	C	PRO	A	130	-57.316	-17.981	75.245	1.00193.57	C
ATOM	834	O	PRO	A	130	-57.604	-16.793	75.092	1.00193.41	O
ATOM	835	CB	PRO	A	130	-55.527	-17.650	76.980	1.00193.79	C
ATOM	836	CG	PRO	A	130	-54.627	-16.533	76.549	1.00193.93	C
ATOM	837	CD	PRO	A	130	-53.838	-17.127	75.408	1.00194.16	C
ATOM	838	N	GLY	A	131	-58.180	-18.977	75.065	1.00193.43	N
ATOM	839	CA	GLY	A	131	-59.510	-18.755	74.508	1.00193.44	C
ATOM	840	C	GLY	A	131	-59.453	-18.486	73.013	1.00193.49	C
ATOM	841	O	GLY	A	131	-60.184	-17.638	72.496	1.00193.52	O
ATOM	842	N	GLY	A	132	-58.585	-19.218	72.316	1.00193.53	N
ATOM	843	CA	GLY	A	132	-58.349	-19.006	70.888	1.00193.52	C
ATOM	844	C	GLY	A	132	-59.250	-19.801	69.961	1.00193.50	C
ATOM	845	O	GLY	A	132	-60.462	-19.556	69.902	1.00193.56	O
ATOM	846	N	SER	A	133	-58.641	-20.750	69.242	1.00193.40	N
ATOM	847	CA	SER	A	133	-59.274	-21.529	68.168	1.00193.19	C
ATOM	848	C	SER	A	133	-58.250	-21.757	67.045	1.00193.11	C
ATOM	849	O	SER	A	133	-57.655	-20.799	66.527	1.00193.18	O
ATOM	850	CB	SER	A	133	-60.515	-20.810	67.607	1.00193.20	C

ATOM	851	OG	SER	A	133	-61.514	-21.722	67.188	1.00192.93	O
ATOM	852	N	HIS	A	134	-58.039	-23.023	66.682	1.00192.83	N
ATOM	853	CA	HIS	A	134	-57.167	-23.383	65.545	1.00192.56	C
ATOM	854	C	HIS	A	134	-57.476	-24.781	64.955	1.00192.14	C
ATOM	855	O	HIS	A	134	-57.864	-25.707	65.686	1.00192.31	O
ATOM	856	CB	HIS	A	134	-55.677	-23.249	65.928	1.00192.67	C
ATOM	857	CG	HIS	A	134	-54.729	-23.475	64.787	1.00192.90	C
ATOM	858	ND1	HIS	A	134	-53.709	-24.402	64.839	1.00192.91	N
ATOM	859	CD2	HIS	A	134	-54.654	-22.901	63.562	1.00192.99	C
ATOM	860	CE1	HIS	A	134	-53.045	-24.386	63.696	1.00192.94	C
ATOM	861	NE2	HIS	A	134	-53.599	-23.484	62.905	1.00192.98	N
ATOM	862	N	THR	A	135	-57.314	-24.905	63.632	1.00191.25	N
ATOM	863	CA	THR	A	135	-57.494	-26.162	62.892	1.00190.26	C
ATOM	864	C	THR	A	135	-56.205	-26.980	62.987	1.00189.63	C
ATOM	865	O	THR	A	135	-55.156	-26.421	63.293	1.00189.57	O
ATOM	866	CB	THR	A	135	-57.817	-25.865	61.411	1.00190.26	C
ATOM	867	OG1	THR	A	135	-58.768	-24.799	61.332	1.00190.36	O
ATOM	868	CG2	THR	A	135	-58.394	-27.072	60.721	1.00190.30	C
ATOM	869	N	TYR	A	136	-56.273	-28.291	62.741	1.00188.89	N
ATOM	870	CA	TYR	A	136	-55.068	-29.140	62.793	1.00188.33	C
ATOM	871	C	TYR	A	136	-54.935	-30.163	61.655	1.00187.81	C
ATOM	872	O	TYR	A	136	-55.834	-30.966	61.406	1.00187.52	O
ATOM	873	CB	TYR	A	136	-54.874	-29.769	64.187	1.00188.42	C
ATOM	874	CG	TYR	A	136	-54.060	-28.887	65.130	1.00188.69	C
ATOM	875	CD1	TYR	A	136	-54.680	-27.940	65.964	1.00187.99	C
ATOM	876	CD2	TYR	A	136	-52.660	-28.987	65.171	1.00189.36	C
ATOM	877	CE1	TYR	A	136	-53.923	-27.120	66.814	1.00187.83	C
ATOM	878	CE2	TYR	A	136	-51.897	-28.173	66.020	1.00189.02	C
ATOM	879	CZ	TYR	A	136	-52.533	-27.247	66.835	1.00188.39	C
ATOM	880	OH	TYR	A	136	-51.763	-26.462	67.661	1.00188.13	O
ATOM	881	N	VAL	A	137	-53.789	-30.096	60.975	1.00187.45	N
ATOM	882	CA	VAL	A	137	-53.519	-30.842	59.742	1.00187.07	C
ATOM	883	C	VAL	A	137	-52.690	-32.088	60.058	1.00186.77	C
ATOM	884	O	VAL	A	137	-51.480	-31.989	60.273	1.00186.98	O
ATOM	885	CB	VAL	A	137	-52.822	-29.937	58.621	1.00187.18	C
ATOM	886	CG1	VAL	A	137	-53.671	-28.721	58.269	1.00187.11	C
ATOM	887	CG2	VAL	A	137	-51.410	-29.465	59.006	1.00187.10	C
ATOM	888	N	TRP	A	138	-53.338	-33.253	60.098	1.00186.28	N
ATOM	889	CA	TRP	A	138	-52.665	-34.504	60.506	1.00185.84	C
ATOM	890	C	TRP	A	138	-52.686	-35.640	59.474	1.00185.75	C
ATOM	891	O	TRP	A	138	-53.748	-36.016	58.961	1.00185.68	O
ATOM	892	CB	TRP	A	138	-53.256	-35.012	61.814	1.00185.56	C
ATOM	893	CG	TRP	A	138	-52.703	-34.389	63.057	1.00185.26	C
ATOM	894	CD1	TRP	A	138	-52.040	-33.194	63.178	1.00185.04	C
ATOM	895	CD2	TRP	A	138	-52.813	-34.920	64.375	1.00184.94	C
ATOM	896	NE1	TRP	A	138	-51.713	-32.963	64.493	1.00184.86	N
ATOM	897	CE2	TRP	A	138	-52.179	-34.009	65.249	1.00185.03	C
ATOM	898	CE3	TRP	A	138	-53.386	-36.083	64.905	1.00184.38	C
ATOM	899	CZ2	TRP	A	138	-52.103	-34.229	66.621	1.00185.26	C
ATOM	900	CZ3	TRP	A	138	-53.301	-36.304	66.261	1.00184.67	C
ATOM	901	CH2	TRP	A	138	-52.667	-35.383	67.107	1.00184.98	C
ATOM	902	N	GLN	A	139	-51.508	-36.202	59.206	1.00185.59	N
ATOM	903	CA	GLN	A	139	-51.360	-37.225	58.184	1.00185.61	C
ATOM	904	C	GLN	A	139	-50.688	-38.468	58.696	1.00185.51	C
ATOM	905	O	GLN	A	139	-49.707	-38.401	59.437	1.00185.45	O
ATOM	906	CB	GLN	A	139	-50.495	-36.706	57.052	1.00185.76	C
ATOM	907	CG	GLN	A	139	-51.179	-35.797	56.077	1.00186.88	C
ATOM	908	CD	GLN	A	139	-50.197	-34.826	55.460	1.00188.62	C
ATOM	909	OE1	GLN	A	139	-49.451	-34.146	56.177	1.00188.99	O
ATOM	910	NE2	GLN	A	139	-50.181	-34.756	54.126	1.00189.64	N
ATOM	911	N	VAL	A	140	-51.212	-39.609	58.277	1.00185.55	N
ATOM	912	CA	VAL	A	140	-50.463	-40.844	58.355	1.00185.78	C
ATOM	913	C	VAL	A	140	-50.014	-41.195	56.942	1.00186.41	C
ATOM	914	O	VAL	A	140	-50.840	-41.335	56.047	1.00186.58	O
ATOM	915	CB	VAL	A	140	-51.271	-42.000	59.001	1.00185.52	C
ATOM	916	CG1	VAL	A	140	-51.163	-41.935	60.500	1.00185.06	C
ATOM	917	CG2	VAL	A	140	-52.723	-41.962	58.584	1.00184.99	C
ATOM	918	N	LEU	A	141	-48.706	-41.278	56.723	1.00187.09	N
ATOM	919	CA	LEU	A	141	-48.184	-41.795	55.460	1.00187.88	C
ATOM	920	C	LEU	A	141	-47.930	-43.290	55.634	1.00188.52	C
ATOM	921	O	LEU	A	141	-48.196	-43.846	56.705	1.00188.60	O

ATOM	922	CB	LEU	A	141	-46.888	-41.092	55.056	1.00187.77	C
ATOM	923	CG	LEU	A	141	-46.601	-39.696	55.599	1.00187.86	C
ATOM	924	CD1	LEU	A	141	-45.100	-39.407	55.492	1.00188.25	C
ATOM	925	CD2	LEU	A	141	-47.449	-38.621	54.909	1.00187.30	C
ATOM	926	N	LYS	A	142	-47.420	-43.937	54.584	1.00189.26	N
ATOM	927	CA	LYS	A	142	-47.018	-45.342	54.658	1.00189.92	C
ATOM	928	C	LYS	A	142	-45.884	-45.503	55.677	1.00190.61	C
ATOM	929	O	LYS	A	142	-45.889	-46.430	56.499	1.00190.52	O
ATOM	930	CB	LYS	A	142	-46.577	-45.835	53.278	1.00189.71	C
ATOM	931	CG	LYS	A	142	-46.784	-47.327	53.047	1.00189.85	C
ATOM	932	CD	LYS	A	142	-48.273	-47.711	53.036	1.00189.89	C
ATOM	933	CE	LYS	A	142	-48.502	-49.222	52.900	1.00189.76	C
ATOM	934	NZ	LYS	A	142	-48.291	-49.731	51.512	1.00189.12	N
ATOM	935	N	GLU	A	143	-44.948	-44.549	55.620	1.00191.56	N
ATOM	936	CA	GLU	A	143	-43.726	-44.484	56.444	1.00192.27	C
ATOM	937	C	GLU	A	143	-43.968	-44.353	57.957	1.00192.08	C
ATOM	938	O	GLU	A	143	-43.023	-44.498	58.732	1.00192.34	O
ATOM	939	CB	GLU	A	143	-42.805	-43.333	55.962	1.00192.48	C
ATOM	940	CG	GLU	A	143	-42.263	-43.457	54.496	1.00193.14	C
ATOM	941	CD	GLU	A	143	-41.947	-42.095	53.810	1.00193.05	C
ATOM	942	OE1	GLU	A	143	-42.548	-41.045	54.171	1.00194.08	O
ATOM	943	OE2	GLU	A	143	-41.097	-42.087	52.886	1.00192.94	O
ATOM	944	N	ASN	A	144	-45.204	-44.068	58.377	1.00191.88	N
ATOM	945	CA	ASN	A	144	-45.544	-44.051	59.816	1.00191.57	C
ATOM	946	C	ASN	A	144	-46.716	-44.939	60.223	1.00191.34	C
ATOM	947	O	ASN	A	144	-47.231	-44.843	61.336	1.00191.03	O
ATOM	948	CB	ASN	A	144	-45.689	-42.616	60.384	1.00191.64	C
ATOM	949	CG	ASN	A	144	-46.654	-41.737	59.595	1.00191.16	C
ATOM	950	OD1	ASN	A	144	-46.499	-40.516	59.564	1.00190.32	O
ATOM	951	ND2	ASN	A	144	-47.658	-42.344	58.982	1.00191.03	N
ATOM	952	N	GLY	A	145	-47.124	-45.806	59.305	1.00191.27	N
ATOM	953	CA	GLY	A	145	-48.020	-46.901	59.631	1.00191.36	C
ATOM	954	C	GLY	A	145	-47.180	-47.979	60.286	1.00191.45	C
ATOM	955	O	GLY	A	145	-45.957	-47.867	60.301	1.00191.62	O
ATOM	956	N	PRO	A	146	-47.818	-49.043	60.802	1.00191.46	N
ATOM	957	CA	PRO	A	146	-47.149	-49.999	61.662	1.00191.70	C
ATOM	958	C	PRO	A	146	-46.494	-51.097	60.860	1.00192.30	C
ATOM	959	O	PRO	A	146	-47.038	-51.538	59.842	1.00192.20	O
ATOM	960	CB	PRO	A	146	-48.294	-50.581	62.458	1.00191.54	C
ATOM	961	CG	PRO	A	146	-49.404	-50.616	61.475	1.00191.46	C
ATOM	962	CD	PRO	A	146	-49.219	-49.427	60.570	1.00191.43	C
ATOM	963	N	MET	A	147	-45.345	-51.551	61.351	1.00193.26	N
ATOM	964	CA	MET	A	147	-44.470	-52.457	60.599	1.00194.13	C
ATOM	965	C	MET	A	147	-45.037	-53.835	60.323	1.00194.28	C
ATOM	966	O	MET	A	147	-45.782	-54.397	61.128	1.00194.15	O
ATOM	967	CB	MET	A	147	-43.085	-52.576	61.248	1.00194.33	C
ATOM	968	CG	MET	A	147	-42.106	-51.476	60.820	1.00195.53	C
ATOM	969	SD	MET	A	147	-41.887	-51.236	59.029	1.00197.22	S
ATOM	970	CE	MET	A	147	-40.727	-52.557	58.606	1.00197.42	C
ATOM	971	N	ALA	A	148	-44.648	-54.364	59.167	1.00194.68	N
ATOM	972	CA	ALA	A	148	-45.079	-55.667	58.710	1.00195.06	C
ATOM	973	C	ALA	A	148	-45.593	-56.534	59.873	1.00195.20	C
ATOM	974	O	ALA	A	148	-46.786	-56.818	59.934	1.00195.49	O
ATOM	975	CB	ALA	A	148	-43.955	-56.364	57.902	1.00195.05	C
ATOM	976	N	SER	A	149	-44.732	-56.908	60.816	1.00195.15	N
ATOM	977	CA	SER	A	149	-45.173	-57.798	61.878	1.00195.21	C
ATOM	978	C	SER	A	149	-44.924	-57.249	63.270	1.00195.61	C
ATOM	979	O	SER	A	149	-43.808	-57.275	63.777	1.00195.71	O
ATOM	980	CB	SER	A	149	-44.551	-59.177	61.716	1.00194.97	C
ATOM	981	OG	SER	A	149	-43.147	-59.078	61.723	1.00194.79	O
ATOM	982	N	ASP	A	150	-45.996	-56.748	63.868	1.00196.13	N
ATOM	983	CA	ASP	A	150	-46.004	-56.206	65.216	1.00196.70	C
ATOM	984	C	ASP	A	150	-47.476	-55.894	65.530	1.00197.30	C
ATOM	985	O	ASP	A	150	-48.332	-56.169	64.677	1.00197.26	O
ATOM	986	CB	ASP	A	150	-45.118	-54.947	65.297	1.00196.69	C
ATOM	987	CG	ASP	A	150	-45.774	-53.698	64.691	1.00196.44	C
ATOM	988	OD1	ASP	A	150	-46.642	-53.849	63.809	1.00196.71	O
ATOM	989	OD2	ASP	A	150	-45.411	-52.563	65.095	1.00195.40	O
ATOM	990	N	PRO	A	151	-47.782	-55.343	66.743	1.00197.85	N
ATOM	991	CA	PRO	A	151	-49.097	-54.782	67.079	1.00197.79	C
ATOM	992	C	PRO	A	151	-49.969	-54.377	65.888	1.00197.59	C

ATOM	993	O	PRO	A	151	-49.604	-53.485	65.116	1.00197.32	O
ATOM	994	CB	PRO	A	151	-48.723	-53.556	67.929	1.00197.87	C
ATOM	995	CG	PRO	A	151	-47.444	-53.991	68.676	1.00198.13	C
ATOM	996	CD	PRO	A	151	-46.900	-55.242	67.929	1.00198.22	C
ATOM	997	N	LEU	A	152	-51.114	-55.053	65.762	1.00197.54	N
ATOM	998	CA	LEU	A	152	-52.093	-54.792	64.708	1.00197.47	C
ATOM	999	C	LEU	A	152	-52.307	-53.312	64.629	1.00197.38	C
ATOM	1000	O	LEU	A	152	-52.569	-52.759	63.567	1.00197.07	O
ATOM	1001	CB	LEU	A	152	-53.432	-55.465	65.048	1.00197.50	C
ATOM	1002	CG	LEU	A	152	-54.662	-55.338	64.124	1.00197.32	C
ATOM	1003	CD1	LEU	A	152	-55.519	-54.095	64.398	1.00196.80	C
ATOM	1004	CD2	LEU	A	152	-54.290	-55.453	62.638	1.00196.95	C
ATOM	1005	N	CYS	A	153	-52.182	-52.688	65.789	1.00197.64	N
ATOM	1006	CA	CYS	A	153	-52.544	-51.319	65.944	1.00198.13	C
ATOM	1007	C	CYS	A	153	-51.739	-50.573	66.992	1.00198.34	C
ATOM	1008	O	CYS	A	153	-51.766	-50.900	68.180	1.00198.34	O
ATOM	1009	CB	CYS	A	153	-54.008	-51.229	66.272	1.00198.10	C
ATOM	1010	SG	CYS	A	153	-54.467	-49.578	66.027	1.00199.51	S
ATOM	1011	N	LEU	A	154	-51.052	-49.535	66.544	1.00198.75	N
ATOM	1012	CA	LEU	A	154	-50.054	-48.911	67.376	1.00199.33	C
ATOM	1013	C	LEU	A	154	-50.558	-47.971	68.443	1.00199.57	C
ATOM	1014	O	LEU	A	154	-51.473	-47.169	68.234	1.00199.73	O
ATOM	1015	CB	LEU	A	154	-48.983	-48.232	66.539	1.00199.47	C
ATOM	1016	CG	LEU	A	154	-47.640	-48.931	66.744	1.00200.42	C
ATOM	1017	CD1	LEU	A	154	-46.673	-48.594	65.589	1.00200.85	C
ATOM	1018	CD2	LEU	A	154	-47.035	-48.638	68.164	1.00200.76	C
ATOM	1019	N	THR	A	155	-49.910	-48.099	69.592	1.00199.80	N
ATOM	1020	CA	THR	A	155	-50.087	-47.238	70.746	1.00199.95	C
ATOM	1021	C	THR	A	155	-49.458	-45.878	70.454	1.00199.31	C
ATOM	1022	O	THR	A	155	-48.238	-45.805	70.272	1.00199.34	O
ATOM	1023	CB	THR	A	155	-49.286	-47.822	71.933	1.00200.35	C
ATOM	1024	OG1	THR	A	155	-48.562	-48.988	71.496	1.00201.51	O
ATOM	1025	CG2	THR	A	155	-50.185	-48.134	73.136	1.00200.31	C
ATOM	1026	N	TYR	A	156	-50.271	-44.823	70.388	1.00198.46	N
ATOM	1027	CA	TYR	A	156	-49.754	-43.453	70.378	1.00197.73	C
ATOM	1028	C	TYR	A	156	-50.708	-42.522	71.090	1.00197.07	C
ATOM	1029	O	TYR	A	156	-51.901	-42.753	71.105	1.00196.98	O
ATOM	1030	CB	TYR	A	156	-49.470	-42.937	68.963	1.00197.99	C
ATOM	1031	CG	TYR	A	156	-48.333	-43.637	68.220	1.00198.45	C
ATOM	1032	CD1	TYR	A	156	-48.474	-43.994	66.877	1.00198.72	C
ATOM	1033	CD2	TYR	A	156	-47.117	-43.932	68.849	1.00198.81	C
ATOM	1034	CE1	TYR	A	156	-47.448	-44.631	66.180	1.00198.38	C
ATOM	1035	CE2	TYR	A	156	-46.089	-44.583	68.164	1.00198.72	C
ATOM	1036	CZ	TYR	A	156	-46.264	-44.921	66.828	1.00198.47	C
ATOM	1037	OH	TYR	A	156	-45.261	-45.557	66.137	1.00198.43	O
ATOM	1038	N	SER	A	157	-50.175	-41.473	71.694	1.00196.47	N
ATOM	1039	CA	SER	A	157	-51.000	-40.522	72.431	1.00196.12	C
ATOM	1040	C	SER	A	157	-50.944	-39.158	71.760	1.00195.97	C
ATOM	1041	O	SER	A	157	-50.099	-38.952	70.884	1.00196.33	O
ATOM	1042	CB	SER	A	157	-50.522	-40.418	73.883	1.00196.13	C
ATOM	1043	OG	SER	A	157	-49.192	-39.939	73.967	1.00195.30	O
ATOM	1044	N	TYR	A	158	-51.836	-38.234	72.143	1.00195.38	N
ATOM	1045	CA	TYR	A	158	-51.720	-36.840	71.679	1.00194.59	C
ATOM	1046	C	TYR	A	158	-51.604	-35.832	72.793	1.00193.93	C
ATOM	1047	O	TYR	A	158	-52.509	-35.650	73.596	1.00193.77	O
ATOM	1048	CB	TYR	A	158	-52.793	-36.440	70.665	1.00194.84	C
ATOM	1049	CG	TYR	A	158	-54.239	-36.531	71.096	1.00195.03	C
ATOM	1050	CD1	TYR	A	158	-54.799	-35.589	71.956	1.00195.41	C
ATOM	1051	CD2	TYR	A	158	-55.072	-37.521	70.576	1.00195.45	C
ATOM	1052	CE1	TYR	A	158	-56.142	-35.657	72.324	1.00195.90	C
ATOM	1053	CE2	TYR	A	158	-56.416	-37.597	70.927	1.00195.79	C
ATOM	1054	CZ	TYR	A	158	-56.946	-36.664	71.802	1.00195.94	C
ATOM	1055	OH	TYR	A	158	-58.277	-36.740	72.148	1.00195.89	O
ATOM	1056	N	LEU	A	159	-50.467	-35.166	72.809	1.00193.25	N
ATOM	1057	CA	LEU	A	159	-50.077	-34.358	73.925	1.00192.98	C
ATOM	1058	C	LEU	A	159	-50.577	-32.940	73.766	1.00193.13	C
ATOM	1059	O	LEU	A	159	-51.369	-32.656	72.877	1.00193.16	O
ATOM	1060	CB	LEU	A	159	-48.562	-34.382	74.007	1.00192.71	C
ATOM	1061	CG	LEU	A	159	-47.817	-33.731	75.164	1.00192.76	C
ATOM	1062	CD1	LEU	A	159	-48.537	-33.891	76.501	1.00193.50	C
ATOM	1063	CD2	LEU	A	159	-46.440	-34.341	75.223	1.00192.78	C

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ATOM   1064  N   SER A 160     -50.131 -32.067  74.663  1.00193.47           N
ATOM   1065  CA  SER A 160     -50.232 -30.626  74.503  1.00193.85           C
ATOM   1066  C   SER A 160     -48.996 -29.975  75.108  1.00194.24           C
ATOM   1067  O   SER A 160     -48.738 -30.145  76.302  1.00194.08           O
ATOM   1068  CB  SER A 160     -51.466 -30.092  75.204  1.00193.71           C
ATOM   1069  OG  SER A 160     -51.421 -28.681  75.201  1.00193.74           O
ATOM   1070  N   HIS A 161     -48.230 -29.244  74.291  1.00194.88           N
ATOM   1071  CA  HIS A 161     -47.019 -28.565  74.800  1.00195.43           C
ATOM   1072  C   HIS A 161     -46.749 -27.106  74.354  1.00195.76           C
ATOM   1073  O   HIS A 161     -46.411 -26.795  73.203  1.00195.83           O
ATOM   1074  CB  HIS A 161     -45.780 -29.523  74.852  1.00195.41           C
ATOM   1075  CG  HIS A 161     -44.698 -29.267  73.836  1.00195.17           C
ATOM   1076  ND1 HIS A 161     -44.483 -30.097  72.757  1.00194.24           N
ATOM   1077  CD2 HIS A 161     -43.709 -28.339  73.797  1.00195.07           C
ATOM   1078  CE1 HIS A 161     -43.438 -29.666  72.073  1.00194.14           C
ATOM   1079  NE2 HIS A 161     -42.953 -28.596  72.680  1.00194.40           N
ATOM   1080  N   VAL A 162     -46.976 -26.226  75.321  1.00196.05           N
ATOM   1081  CA  VAL A 162     -46.566 -24.841  75.297  1.00196.63           C
ATOM   1082  C   VAL A 162     -45.523 -24.735  76.412  1.00197.02           C
ATOM   1083  O   VAL A 162     -44.356 -24.414  76.150  1.00197.23           O
ATOM   1084  CB  VAL A 162     -47.775 -23.929  75.589  1.00196.65           C
ATOM   1085  CG1 VAL A 162     -47.342 -22.494  75.967  1.00196.90           C
ATOM   1086  CG2 VAL A 162     -48.729 -23.945  74.412  1.00196.66           C
ATOM   1087  N   ASP A 163     -45.979 -24.995  77.649  1.00197.42           N
ATOM   1088  CA  ASP A 163     -45.146 -25.280  78.842  1.00197.41           C
ATOM   1089  C   ASP A 163     -45.382 -26.760  79.141  1.00197.12           C
ATOM   1090  O   ASP A 163     -46.357 -27.127  79.805  1.00196.84           O
ATOM   1091  CB  ASP A 163     -45.538 -24.382  80.054  1.00197.63           C
ATOM   1092  CG  ASP A 163     -44.735 -24.689  81.365  1.00197.62           C
ATOM   1093  OD1 ASP A 163     -45.145 -24.172  82.431  1.00198.16           O
ATOM   1094  OD2 ASP A 163     -43.712 -25.416  81.359  1.00197.41           O
ATOM   1095  N   LEU A 164     -44.494 -27.600  78.619  1.00196.96           N
ATOM   1096  CA  LEU A 164     -44.665 -29.038  78.695  1.00196.96           C
ATOM   1097  C   LEU A 164     -45.081 -29.503  80.082  1.00197.11           C
ATOM   1098  O   LEU A 164     -46.061 -30.236  80.206  1.00197.59           O
ATOM   1099  CB  LEU A 164     -43.402 -29.770  78.263  1.00196.83           C
ATOM   1100  CG  LEU A 164     -43.688 -31.162  77.702  1.00196.49           C
ATOM   1101  CD1 LEU A 164     -42.582 -31.511  76.725  1.00197.13           C
ATOM   1102  CD2 LEU A 164     -43.865 -32.252  78.780  1.00195.22           C
ATOM   1103  N   VAL A 165     -44.345 -29.076  81.113  1.00196.92           N
ATOM   1104  CA  VAL A 165     -44.621 -29.475  82.506  1.00196.55           C
ATOM   1105  C   VAL A 165     -46.054 -29.114  82.937  1.00196.34           C
ATOM   1106  O   VAL A 165     -46.778 -29.958  83.488  1.00196.27           O
ATOM   1107  CB  VAL A 165     -43.595 -28.862  83.504  1.00196.55           C
ATOM   1108  CG1 VAL A 165     -43.762 -29.466  84.892  1.00196.37           C
ATOM   1109  CG2 VAL A 165     -42.171 -29.067  83.013  1.00196.53           C
ATOM   1110  N   LYS A 166     -46.446 -27.867  82.656  1.00195.99           N
ATOM   1111  CA  LYS A 166     -47.741 -27.302  83.060  1.00195.49           C
ATOM   1112  C   LYS A 166     -48.888 -27.963  82.292  1.00195.17           C
ATOM   1113  O   LYS A 166     -49.786 -28.553  82.893  1.00195.17           O
ATOM   1114  CB  LYS A 166     -47.741 -25.781  82.841  1.00195.45           C
ATOM   1115  CG  LYS A 166     -48.568 -24.958  83.809  1.00194.72           C
ATOM   1116  CD  LYS A 166     -48.317 -23.498  83.537  1.00193.71           C
ATOM   1117  CE  LYS A 166     -49.529 -22.675  83.854  1.00193.61           C
ATOM   1118  NZ  LYS A 166     -49.718 -21.679  82.771  1.00193.60           N
ATOM   1119  N   ASP A 167     -48.827 -27.881  80.964  1.00194.68           N
ATOM   1120  CA  ASP A 167     -49.856 -28.430  80.080  1.00194.30           C
ATOM   1121  C   ASP A 167     -50.233 -29.863  80.422  1.00193.64           C
ATOM   1122  O   ASP A 167     -51.355 -30.302  80.167  1.00193.39           O
ATOM   1123  CB  ASP A 167     -49.373 -28.386  78.629  1.00194.65           C
ATOM   1124  CG  ASP A 167     -49.055 -26.977  78.151  1.00195.49           C
ATOM   1125  OD1 ASP A 167     -49.238 -26.008  78.932  1.00196.43           O
ATOM   1126  OD2 ASP A 167     -48.623 -26.847  76.981  1.00196.05           O
ATOM   1127  N   LEU A 168     -49.281 -30.588  80.993  1.00193.00           N
ATOM   1128  CA  LEU A 168     -49.479 -31.985  81.298  1.00192.48           C
ATOM   1129  C   LEU A 168     -50.074 -32.141  82.688  1.00192.28           C
ATOM   1130  O   LEU A 168     -51.266 -32.420  82.817  1.00192.33           O
ATOM   1131  CB  LEU A 168     -48.171 -32.760  81.163  1.00192.33           C
ATOM   1132  CG  LEU A 168     -48.309 -34.195  80.670  1.00191.81           C
ATOM   1133  CD1 LEU A 168     -47.062 -34.556  79.895  1.00191.86           C
ATOM   1134  CD2 LEU A 168     -48.534 -35.151  81.832  1.00191.44           C
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ATOM	1135	N	ASN	A	169	-49.261	-31.944	83.724	1.00191.86	N
ATOM	1136	CA	ASN	A	169	-49.725	-32.157	85.097	1.00191.42	C
ATOM	1137	C	ASN	A	169	-51.119	-31.608	85.315	1.00191.04	C
ATOM	1138	O	ASN	A	169	-51.940	-32.238	85.969	1.00191.00	O
ATOM	1139	CB	ASN	A	169	-48.742	-31.588	86.116	1.00191.42	C
ATOM	1140	CG	ASN	A	169	-47.546	-32.492	86.329	1.00191.73	C
ATOM	1141	OD1	ASN	A	169	-47.129	-32.738	87.464	1.00191.74	O
ATOM	1142	ND2	ASN	A	169	-46.996	-33.010	85.231	1.00192.14	N
ATOM	1143	N	SER	A	170	-51.380	-30.445	84.729	1.00190.71	N
ATOM	1144	CA	SER	A	170	-52.711	-29.864	84.686	1.00190.41	C
ATOM	1145	C	SER	A	170	-53.764	-30.924	84.304	1.00190.20	C
ATOM	1146	O	SER	A	170	-54.677	-31.184	85.086	1.00190.28	O
ATOM	1147	CB	SER	A	170	-52.728	-28.684	83.712	1.00190.42	C
ATOM	1148	OG	SER	A	170	-53.147	-27.492	84.350	1.00190.16	O
ATOM	1149	N	GLY	A	171	-53.627	-31.540	83.125	1.00189.84	N
ATOM	1150	CA	GLY	A	171	-54.510	-32.645	82.713	1.00189.33	C
ATOM	1151	C	GLY	A	171	-54.862	-32.771	81.234	1.00189.07	C
ATOM	1152	O	GLY	A	171	-55.942	-33.271	80.896	1.00188.88	O
ATOM	1153	N	LEU	A	172	-53.958	-32.324	80.358	1.00188.89	N
ATOM	1154	CA	LEU	A	172	-54.131	-32.444	78.902	1.00188.72	C
ATOM	1155	C	LEU	A	172	-53.401	-33.658	78.329	1.00188.74	C
ATOM	1156	O	LEU	A	172	-52.176	-33.643	78.170	1.00188.94	O
ATOM	1157	CB	LEU	A	172	-53.656	-31.179	78.183	1.00188.51	C
ATOM	1158	CG	LEU	A	172	-54.499	-29.922	78.371	1.00188.53	C
ATOM	1159	CD1	LEU	A	172	-53.592	-28.728	78.495	1.00188.96	C
ATOM	1160	CD2	LEU	A	172	-55.504	-29.721	77.244	1.00188.20	C
ATOM	1161	N	ILE	A	173	-54.165	-34.709	78.033	1.00188.64	N
ATOM	1162	CA	ILE	A	173	-53.650	-35.912	77.365	1.00188.39	C
ATOM	1163	C	ILE	A	173	-54.797	-36.780	76.815	1.00188.70	C
ATOM	1164	O	ILE	A	173	-55.830	-36.978	77.478	1.00188.83	O
ATOM	1165	CB	ILE	A	173	-52.653	-36.732	78.259	1.00188.00	C
ATOM	1166	CG1	ILE	A	173	-52.190	-38.003	77.555	1.00187.47	C
ATOM	1167	CG2	ILE	A	173	-53.277	-37.115	79.575	1.00187.78	C
ATOM	1168	CD1	ILE	A	173	-51.354	-37.775	76.336	1.00187.25	C
ATOM	1169	N	GLY	A	174	-54.608	-37.266	75.586	1.00188.83	N
ATOM	1170	CA	GLY	A	174	-55.546	-38.186	74.940	1.00188.82	C
ATOM	1171	C	GLY	A	174	-54.844	-39.327	74.223	1.00188.71	C
ATOM	1172	O	GLY	A	174	-53.632	-39.284	74.007	1.00188.44	O
ATOM	1173	N	ALA	A	175	-55.612	-40.352	73.865	1.00188.76	N
ATOM	1174	CA	ALA	A	175	-55.085	-41.472	73.101	1.00189.01	C
ATOM	1175	C	ALA	A	175	-55.278	-41.238	71.602	1.00189.30	C
ATOM	1176	O	ALA	A	175	-56.287	-40.667	71.179	1.00189.54	O
ATOM	1177	CB	ALA	A	175	-55.750	-42.751	73.528	1.00188.91	C
ATOM	1178	N	LEU	A	176	-54.308	-41.690	70.812	1.00189.42	N
ATOM	1179	CA	LEU	A	176	-54.304	-41.512	69.370	1.00189.44	C
ATOM	1180	C	LEU	A	176	-53.805	-42.792	68.727	1.00189.85	C
ATOM	1181	O	LEU	A	176	-52.636	-43.141	68.862	1.00189.96	O
ATOM	1182	CB	LEU	A	176	-53.365	-40.370	69.023	1.00189.22	C
ATOM	1183	CG	LEU	A	176	-52.493	-40.528	67.784	1.00189.17	C
ATOM	1184	CD1	LEU	A	176	-53.303	-40.254	66.540	1.00189.44	C
ATOM	1185	CD2	LEU	A	176	-51.275	-39.623	67.847	1.00189.15	C
ATOM	1186	N	LEU	A	177	-54.676	-43.499	68.022	1.00190.34	N
ATOM	1187	CA	LEU	A	177	-54.282	-44.796	67.468	1.00190.90	C
ATOM	1188	C	LEU	A	177	-54.140	-44.794	65.946	1.00191.59	C
ATOM	1189	O	LEU	A	177	-54.848	-44.068	65.253	1.00191.80	O
ATOM	1190	CB	LEU	A	177	-55.264	-45.882	67.901	1.00190.61	C
ATOM	1191	CG	LEU	A	177	-55.431	-46.207	69.382	1.00190.01	C
ATOM	1192	CD1	LEU	A	177	-56.446	-47.314	69.488	1.00189.35	C
ATOM	1193	CD2	LEU	A	177	-54.117	-46.611	70.058	1.00189.62	C
ATOM	1194	N	VAL	A	178	-53.242	-45.631	65.434	1.00192.29	N
ATOM	1195	CA	VAL	A	178	-52.959	-45.685	64.008	1.00193.12	C
ATOM	1196	C	VAL	A	178	-52.639	-47.102	63.605	1.00194.04	C
ATOM	1197	O	VAL	A	178	-51.817	-47.732	64.268	1.00193.96	O
ATOM	1198	CB	VAL	A	178	-51.742	-44.831	63.701	1.00193.03	C
ATOM	1199	CG1	VAL	A	178	-50.698	-45.018	64.782	1.00192.65	C
ATOM	1200	CG2	VAL	A	178	-51.174	-45.173	62.331	1.00193.41	C
ATOM	1201	N	CYS	A	179	-53.266	-47.603	62.531	1.00195.52	N
ATOM	1202	CA	CYS	A	179	-53.026	-49.000	62.067	1.00197.43	C
ATOM	1203	C	CYS	A	179	-53.491	-49.376	60.650	1.00197.98	C
ATOM	1204	O	CYS	A	179	-54.189	-48.603	60.008	1.00198.17	O
ATOM	1205	CB	CYS	A	179	-53.560	-50.020	63.083	1.00197.77	C

ATOM	1206	SG	CYS	A	179	-55.008	-49.476	64.047	1.00200.46	S
ATOM	1207	N	ARG	A	180	-53.120	-50.580	60.200	1.00198.93	N
ATOM	1208	CA	ARG	A	180	-53.222	-50.995	58.785	1.00200.32	C
ATOM	1209	C	ARG	A	180	-54.590	-50.838	58.111	1.00200.90	C
ATOM	1210	O	ARG	A	180	-55.602	-50.668	58.785	1.00201.03	O
ATOM	1211	CB	ARG	A	180	-52.686	-52.419	58.591	1.00200.37	C
ATOM	1212	CG	ARG	A	180	-51.265	-52.485	57.986	1.00201.29	C
ATOM	1213	CD	ARG	A	180	-50.706	-53.926	57.892	1.00201.01	C
ATOM	1214	NE	ARG	A	180	-50.161	-54.423	59.164	1.00202.06	N
ATOM	1215	CZ	ARG	A	180	-50.842	-55.149	60.057	1.00202.77	C
ATOM	1216	NH1	ARG	A	180	-50.258	-55.551	61.183	1.00202.94	N
ATOM	1217	NH2	ARG	A	180	-52.110	-55.481	59.837	1.00203.23	N
ATOM	1218	N	GLU	A	181	-54.594	-50.928	56.778	1.00201.77	N
ATOM	1219	CA	GLU	A	181	-55.780	-50.704	55.936	1.00202.90	C
ATOM	1220	C	GLU	A	181	-57.002	-51.575	56.285	1.00203.29	C
ATOM	1221	O	GLU	A	181	-57.250	-52.590	55.633	1.00203.33	O
ATOM	1222	CB	GLU	A	181	-55.405	-50.864	54.445	1.00202.86	C
ATOM	1223	CG	GLU	A	181	-55.108	-49.536	53.685	1.00203.71	C
ATOM	1224	CD	GLU	A	181	-54.230	-49.695	52.408	1.00203.77	C
ATOM	1225	OE1	GLU	A	181	-54.635	-49.220	51.319	1.00204.37	O
ATOM	1226	OE2	GLU	A	181	-53.121	-50.274	52.487	1.00205.20	O
ATOM	1227	N	GLY	A	182	-57.762	-51.166	57.306	1.00203.97	N
ATOM	1228	CA	GLY	A	182	-58.969	-51.894	57.729	1.00204.71	C
ATOM	1229	C	GLY	A	182	-59.389	-51.786	59.194	1.00205.29	C
ATOM	1230	O	GLY	A	182	-59.213	-52.722	59.970	1.00205.04	O
ATOM	1231	N	SER	A	183	-59.942	-50.638	59.569	1.00206.10	N
ATOM	1232	CA	SER	A	183	-60.639	-50.477	60.844	1.00207.01	C
ATOM	1233	C	SER	A	183	-62.107	-50.275	60.525	1.00207.93	C
ATOM	1234	O	SER	A	183	-62.923	-51.150	60.787	1.00207.93	O
ATOM	1235	CB	SER	A	183	-60.114	-49.271	61.618	1.00206.78	C
ATOM	1236	OG	SER	A	183	-58.742	-49.420	61.899	1.00206.57	O
ATOM	1237	N	LEU	A	184	-62.419	-49.110	59.948	1.00209.32	N
ATOM	1238	CA	LEU	A	184	-63.728	-48.779	59.338	1.00210.38	C
ATOM	1239	C	LEU	A	184	-64.402	-49.936	58.549	1.00211.35	C
ATOM	1240	O	LEU	A	184	-65.627	-49.913	58.339	1.00211.53	O
ATOM	1241	CB	LEU	A	184	-63.583	-47.490	58.471	1.00210.39	C
ATOM	1242	CG	LEU	A	184	-64.282	-47.125	57.135	1.00209.98	C
ATOM	1243	CD1	LEU	A	184	-65.745	-46.684	57.309	1.00210.18	C
ATOM	1244	CD2	LEU	A	184	-63.491	-46.050	56.359	1.00210.16	C
ATOM	1245	N	ALA	A	185	-63.607	-50.937	58.140	1.00212.32	N
ATOM	1246	CA	ALA	A	185	-64.071	-52.066	57.300	1.00213.06	C
ATOM	1247	C	ALA	A	185	-63.888	-53.461	57.926	1.00213.51	C
ATOM	1248	O	ALA	A	185	-64.715	-54.359	57.702	1.00213.48	O
ATOM	1249	CB	ALA	A	185	-63.407	-52.012	55.905	1.00213.03	C
ATOM	1250	N	LYS	A	186	-62.803	-53.634	58.688	1.00214.11	N
ATOM	1251	CA	LYS	A	186	-62.486	-54.911	59.339	1.00214.65	C
ATOM	1252	C	LYS	A	186	-62.588	-54.815	60.864	1.00215.01	C
ATOM	1253	O	LYS	A	186	-62.071	-55.670	61.584	1.00215.04	O
ATOM	1254	CB	LYS	A	186	-61.100	-55.427	58.915	1.00214.74	C
ATOM	1255	CG	LYS	A	186	-60.923	-56.958	58.992	1.00214.69	C
ATOM	1256	CD	LYS	A	186	-60.788	-57.609	57.618	1.00214.92	C
ATOM	1257	CE	LYS	A	186	-62.111	-57.668	56.874	1.00215.11	C
ATOM	1258	NZ	LYS	A	186	-61.894	-57.578	55.407	1.00215.32	N
ATOM	1259	N	GLU	A	187	-63.224	-53.746	61.343	1.00215.49	N
ATOM	1260	CA	GLU	A	187	-63.785	-53.685	62.707	1.00215.94	C
ATOM	1261	C	GLU	A	187	-65.281	-53.300	62.658	1.00215.88	C
ATOM	1262	O	GLU	A	187	-65.950	-53.193	63.696	1.00215.92	O
ATOM	1263	CB	GLU	A	187	-62.976	-52.765	63.646	1.00216.09	C
ATOM	1264	CG	GLU	A	187	-62.188	-53.498	64.754	1.00216.81	C
ATOM	1265	CD	GLU	A	187	-63.085	-54.115	65.843	1.00218.09	C
ATOM	1266	OE1	GLU	A	187	-63.005	-55.346	66.050	1.00218.45	O
ATOM	1267	OE2	GLU	A	187	-63.867	-53.379	66.494	1.00218.51	O
ATOM	1268	N	LYS	A	188	-65.787	-53.093	61.439	1.00215.79	N
ATOM	1269	CA	LYS	A	188	-67.228	-53.056	61.176	1.00215.55	C
ATOM	1270	C	LYS	A	188	-67.718	-54.506	61.098	1.00215.40	C
ATOM	1271	O	LYS	A	188	-68.903	-54.794	61.300	1.00215.49	O
ATOM	1272	CB	LYS	A	188	-67.547	-52.267	59.882	1.00215.63	C
ATOM	1273	CG	LYS	A	188	-67.746	-53.089	58.582	1.00215.44	C
ATOM	1274	CD	LYS	A	188	-67.776	-52.212	57.323	1.00215.36	C
ATOM	1275	CE	LYS	A	188	-68.813	-51.090	57.394	1.00215.08	C
ATOM	1276	NZ	LYS	A	188	-68.553	-50.033	56.374	1.00215.00	N

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ATOM   1277  N   THR A 189     -66.774 -55.408  60.827  1.00215.02           N
ATOM   1278  CA  THR A 189     -67.046 -56.829  60.657  1.00214.66           C
ATOM   1279  C   THR A 189     -66.302 -57.694  61.695  1.00214.21           C
ATOM   1280  O   THR A 189     -66.678 -58.851  61.934  1.00214.21           O
ATOM   1281  CB  THR A 189     -66.745 -57.281  59.193  1.00214.77           C
ATOM   1282  OG1 THR A 189     -67.157 -58.640  59.006  1.00215.22           O
ATOM   1283  CG2 THR A 189     -65.263 -57.145  58.848  1.00214.79           C
ATOM   1284  N   GLN A 190     -65.266 -57.118  62.315  1.00213.59           N
ATOM   1285  CA  GLN A 190     -64.457 -57.815  63.329  1.00212.97           C
ATOM   1286  C   GLN A 190     -64.883 -57.488  64.763  1.00212.31           C
ATOM   1287  O   GLN A 190     -65.461 -56.427  65.037  1.00212.30           O
ATOM   1288  CB  GLN A 190     -62.968 -57.487  63.165  1.00213.06           C
ATOM   1289  CG  GLN A 190     -62.021 -58.641  63.452  1.00213.56           C
ATOM   1290  CD  GLN A 190     -61.734 -59.473  62.212  1.00214.59           C
ATOM   1291  OE1 GLN A 190     -61.083 -59.006  61.273  1.00215.00           O
ATOM   1292  NE2 GLN A 190     -62.216 -60.714  62.203  1.00214.81           N
ATOM   1293  N   THR A 191     -64.585 -58.414  65.671  1.00211.33           N
ATOM   1294  CA  THR A 191     -64.808 -58.223  67.101  1.00210.24           C
ATOM   1295  C   THR A 191     -63.455 -58.013  67.781  1.00209.30           C
ATOM   1296  O   THR A 191     -62.526 -58.796  67.565  1.00209.33           O
ATOM   1297  CB  THR A 191     -65.600 -59.425  67.730  1.00210.37           C
ATOM   1298  OG1 THR A 191     -65.354 -59.499  69.142  1.00210.46           O
ATOM   1299  CG2 THR A 191     -65.217 -60.763  67.080  1.00210.31           C
ATOM   1300  N   LEU A 192     -63.334 -56.940  68.564  1.00207.94           N
ATOM   1301  CA  LEU A 192     -62.120 -56.691  69.354  1.00206.68           C
ATOM   1302  C   LEU A 192     -62.425 -56.065  70.709  1.00205.70           C
ATOM   1303  O   LEU A 192     -63.189 -55.104  70.790  1.00205.83           O
ATOM   1304  CB  LEU A 192     -61.123 -55.814  68.588  1.00206.75           C
ATOM   1305  CG  LEU A 192     -60.008 -56.502  67.785  1.00206.91           C
ATOM   1306  CD1 LEU A 192     -59.366 -55.552  66.757  1.00207.22           C
ATOM   1307  CD2 LEU A 192     -58.950 -57.086  68.718  1.00206.74           C
ATOM   1308  N   HIS A 193     -61.827 -56.617  71.765  1.00204.26           N
ATOM   1309  CA  HIS A 193     -61.988 -56.082  73.116  1.00202.85           C
ATOM   1310  C   HIS A 193     -60.783 -55.262  73.513  1.00201.68           C
ATOM   1311  O   HIS A 193     -59.770 -55.797  73.974  1.00201.49           O
ATOM   1312  CB  HIS A 193     -62.201 -57.201  74.122  1.00203.05           C
ATOM   1313  CG  HIS A 193     -63.585 -57.756  74.110  1.00203.48           C
ATOM   1314  ND1 HIS A 193     -64.042 -58.589  73.111  1.00204.12           N
ATOM   1315  CD2 HIS A 193     -64.615 -57.597  74.971  1.00203.92           C
ATOM   1316  CE1 HIS A 193     -65.295 -58.924  73.359  1.00204.31           C
ATOM   1317  NE2 HIS A 193     -65.667 -58.336  74.482  1.00204.61           N
ATOM   1318  N   LYS A 194     -60.901 -53.955  73.330  1.00200.25           N
ATOM   1319  CA  LYS A 194     -59.780 -53.068  73.571  1.00198.91           C
ATOM   1320  C   LYS A 194     -60.117 -51.842  74.406  1.00197.81           C
ATOM   1321  O   LYS A 194     -61.153 -51.202  74.215  1.00197.67           O
ATOM   1322  CB  LYS A 194     -59.032 -52.697  72.259  1.00199.23           C
ATOM   1323  CG  LYS A 194     -59.847 -52.204  71.017  1.00199.04           C
ATOM   1324  CD  LYS A 194     -58.910 -52.066  69.769  1.00198.99           C
ATOM   1325  CE  LYS A 194     -59.626 -51.579  68.497  1.00198.69           C
ATOM   1326  NZ  LYS A 194     -58.794 -51.745  67.258  1.00197.91           N
ATOM   1327  N   PHE A 195     -59.226 -51.539  75.345  1.00196.43           N
ATOM   1328  CA  PHE A 195     -59.324 -50.327  76.141  1.00195.22           C
ATOM   1329  C   PHE A 195     -58.027 -49.556  76.119  1.00193.91           C
ATOM   1330  O   PHE A 195     -56.974 -50.068  75.749  1.00193.48           O
ATOM   1331  CB  PHE A 195     -59.652 -50.642  77.598  1.00195.71           C
ATOM   1332  CG  PHE A 195     -60.709 -51.675  77.769  1.00196.63           C
ATOM   1333  CD1 PHE A 195     -62.058 -51.323  77.711  1.00197.72           C
ATOM   1334  CD2 PHE A 195     -60.364 -53.005  77.992  1.00197.37           C
ATOM   1335  CE1 PHE A 195     -63.060 -52.289  77.872  1.00198.12           C
ATOM   1336  CE2 PHE A 195     -61.350 -53.979  78.153  1.00198.10           C
ATOM   1337  CZ  PHE A 195     -62.705 -53.621  78.094  1.00197.78           C
ATOM   1338  N   ILE A 196     -58.120 -48.311  76.544  1.00192.50           N
ATOM   1339  CA  ILE A 196     -56.946 -47.512  76.752  1.00191.13           C
ATOM   1340  C   ILE A 196     -56.802 -47.180  78.247  1.00190.24           C
ATOM   1341  O   ILE A 196     -57.635 -46.501  78.860  1.00189.99           O
ATOM   1342  CB  ILE A 196     -56.869 -46.306  75.739  1.00191.15           C
ATOM   1343  CG1 ILE A 196     -55.966 -45.170  76.253  1.00191.45           C
ATOM   1344  CG2 ILE A 196     -58.267 -45.849  75.268  1.00190.71           C
ATOM   1345  CD1 ILE A 196     -56.651 -44.089  77.073  1.00191.64           C
ATOM   1346  N   LEU A 197     -55.748 -47.738  78.825  1.00189.12           N
ATOM   1347  CA  LEU A 197     -55.392 -47.528  80.210  1.00188.04           C
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ATOM	1348	C	LEU	A	197	-54.284	-46.486	80.237	1.00188.07	C
ATOM	1349	O	LEU	A	197	-53.244	-46.680	79.604	1.00188.19	O
ATOM	1350	CB	LEU	A	197	-54.870	-48.833	80.796	1.00187.76	C
ATOM	1351	CG	LEU	A	197	-55.797	-50.027	81.031	1.00186.95	C
ATOM	1352	CD1	LEU	A	197	-56.766	-50.300	79.888	1.00186.14	C
ATOM	1353	CD2	LEU	A	197	-54.962	-51.255	81.329	1.00187.38	C
ATOM	1354	N	LEU	A	198	-54.496	-45.392	80.962	1.00187.81	N
ATOM	1355	CA	LEU	A	198	-53.553	-44.276	80.957	1.00187.71	C
ATOM	1356	C	LEU	A	198	-52.740	-44.223	82.249	1.00187.92	C
ATOM	1357	O	LEU	A	198	-53.089	-43.483	83.155	1.00188.01	O
ATOM	1358	CB	LEU	A	198	-54.328	-42.966	80.756	1.00187.56	C
ATOM	1359	CG	LEU	A	198	-53.702	-41.714	80.122	1.00187.06	C
ATOM	1360	CD1	LEU	A	198	-54.762	-40.638	79.870	1.00186.05	C
ATOM	1361	CD2	LEU	A	198	-52.551	-41.142	80.942	1.00186.26	C
ATOM	1362	N	PHE	A	199	-51.658	-44.993	82.336	1.00188.34	N
ATOM	1363	CA	PHE	A	199	-50.891	-45.106	83.588	1.00189.15	C
ATOM	1364	C	PHE	A	199	-50.124	-43.832	83.924	1.00190.22	C
ATOM	1365	O	PHE	A	199	-48.965	-43.679	83.531	1.00190.28	O
ATOM	1366	CB	PHE	A	199	-49.940	-46.299	83.534	1.00188.60	C
ATOM	1367	CG	PHE	A	199	-50.611	-47.622	83.766	1.00188.03	C
ATOM	1368	CD1	PHE	A	199	-51.390	-48.216	82.777	1.00187.61	C
ATOM	1369	CD2	PHE	A	199	-50.458	-48.286	84.967	1.00187.13	C
ATOM	1370	CE1	PHE	A	199	-52.015	-49.453	82.993	1.00187.04	C
ATOM	1371	CE2	PHE	A	199	-51.079	-49.514	85.182	1.00186.59	C
ATOM	1372	CZ	PHE	A	199	-51.855	-50.099	84.195	1.00186.73	C
ATOM	1373	N	ALA	A	200	-50.772	-42.944	84.688	1.00191.63	N
ATOM	1374	CA	ALA	A	200	-50.368	-41.517	84.790	1.00192.78	C
ATOM	1375	C	ALA	A	200	-50.242	-40.913	86.204	1.00193.40	C
ATOM	1376	O	ALA	A	200	-51.027	-41.242	87.103	1.00193.69	O
ATOM	1377	CB	ALA	A	200	-51.304	-40.648	83.942	1.00192.79	C
ATOM	1378	N	VAL	A	201	-49.287	-39.982	86.353	1.00193.95	N
ATOM	1379	CA	VAL	A	201	-48.829	-39.464	87.658	1.00194.31	C
ATOM	1380	C	VAL	A	201	-48.883	-37.922	87.786	1.00194.61	C
ATOM	1381	O	VAL	A	201	-47.850	-37.287	88.019	1.00194.63	O
ATOM	1382	CB	VAL	A	201	-47.347	-39.902	87.946	1.00194.31	C
ATOM	1383	CG1	VAL	A	201	-47.096	-40.011	89.440	1.00194.19	C
ATOM	1384	CG2	VAL	A	201	-46.971	-41.216	87.222	1.00194.15	C
ATOM	1385	N	PHE	A	202	-50.063	-37.321	87.643	1.00195.03	N
ATOM	1386	CA	PHE	A	202	-50.186	-35.857	87.741	1.00195.62	C
ATOM	1387	C	PHE	A	202	-49.821	-35.386	89.145	1.00196.07	C
ATOM	1388	O	PHE	A	202	-50.267	-35.982	90.132	1.00196.31	O
ATOM	1389	CB	PHE	A	202	-51.611	-35.369	87.468	1.00195.67	C
ATOM	1390	CG	PHE	A	202	-52.365	-36.151	86.433	1.00195.87	C
ATOM	1391	CD1	PHE	A	202	-52.656	-37.505	86.621	1.00196.21	C
ATOM	1392	CD2	PHE	A	202	-52.855	-35.510	85.298	1.00195.84	C
ATOM	1393	CE1	PHE	A	202	-53.383	-38.221	85.675	1.00196.14	C
ATOM	1394	CE2	PHE	A	202	-53.588	-36.211	84.349	1.00196.00	C
ATOM	1395	CZ	PHE	A	202	-53.851	-37.573	84.537	1.00196.10	C
ATOM	1396	N	ASP	A	203	-49.043	-34.304	89.235	1.00196.48	N
ATOM	1397	CA	ASP	A	203	-48.616	-33.748	90.531	1.00196.77	C
ATOM	1398	C	ASP	A	203	-49.139	-32.327	90.771	1.00196.76	C
ATOM	1399	O	ASP	A	203	-48.524	-31.367	90.320	1.00196.80	O
ATOM	1400	CB	ASP	A	203	-47.082	-33.776	90.641	1.00196.86	C
ATOM	1401	CG	ASP	A	203	-46.589	-33.413	92.032	1.00197.33	C
ATOM	1402	OD1	ASP	A	203	-46.187	-34.332	92.786	1.00197.59	O
ATOM	1403	OD2	ASP	A	203	-46.616	-32.209	92.375	1.00197.75	O
ATOM	1404	N	GLU	A	204	-50.243	-32.193	91.506	1.00196.82	N
ATOM	1405	CA	GLU	A	204	-50.934	-30.897	91.657	1.00197.03	C
ATOM	1406	C	GLU	A	204	-50.122	-29.699	92.178	1.00197.41	C
ATOM	1407	O	GLU	A	204	-50.657	-28.593	92.304	1.00197.34	O
ATOM	1408	CB	GLU	A	204	-52.235	-31.063	92.448	1.00196.95	C
ATOM	1409	CG	GLU	A	204	-53.495	-30.857	91.609	1.00196.32	C
ATOM	1410	CD	GLU	A	204	-53.442	-31.536	90.245	1.00195.14	C
ATOM	1411	OE1	GLU	A	204	-53.687	-30.836	89.234	1.00194.19	O
ATOM	1412	OE2	GLU	A	204	-53.163	-32.757	90.187	1.00194.28	O
ATOM	1413	N	GLY	A	205	-48.842	-29.922	92.471	1.00197.90	N
ATOM	1414	CA	GLY	A	205	-47.909	-28.842	92.797	1.00198.66	C
ATOM	1415	C	GLY	A	205	-47.252	-28.288	91.545	1.00199.21	C
ATOM	1416	O	GLY	A	205	-46.743	-27.164	91.541	1.00199.20	O
ATOM	1417	N	LYS	A	206	-47.262	-29.104	90.488	1.00199.86	N
ATOM	1418	CA	LYS	A	206	-46.789	-28.737	89.144	1.00200.44	C

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ATOM   1419  C   LYS A 206     -47.992 -28.566  88.199  1.00200.78           C
ATOM   1420  O   LYS A 206     -47.908 -28.851  87.001  1.00200.69           O
ATOM   1421  CB  LYS A 206     -45.845 -29.822  88.580  1.00200.48           C
ATOM   1422  CG  LYS A 206     -44.781 -30.382  89.546  1.00200.57           C
ATOM   1423  CD  LYS A 206     -43.377 -29.813  89.305  1.00200.39           C
ATOM   1424  CE  LYS A 206     -43.232 -28.354  89.738  1.00200.51           C
ATOM   1425  NZ  LYS A 206     -43.635 -28.123  91.156  1.00200.70           N
ATOM   1426  N   SER A 207     -49.106 -28.090  88.754  1.00201.31           N
ATOM   1427  CA  SER A 207     -50.359 -27.927  88.019  1.00201.80           C
ATOM   1428  C   SER A 207     -50.320 -26.656  87.179  1.00202.04           C
ATOM   1429  O   SER A 207     -49.260 -26.073  86.952  1.00202.10           O
ATOM   1430  CB  SER A 207     -51.534 -27.877  89.015  1.00201.83           C
ATOM   1431  OG  SER A 207     -52.793 -27.805  88.363  1.00202.09           O
ATOM   1432  N   TRP A 208     -51.481 -26.236  86.701  1.00202.41           N
ATOM   1433  CA  TRP A 208     -51.628 -24.884  86.227  1.00202.76           C
ATOM   1434  C   TRP A 208     -51.649 -23.975  87.457  1.00203.16           C
ATOM   1435  O   TRP A 208     -51.381 -22.775  87.341  1.00203.29           O
ATOM   1436  CB  TRP A 208     -52.926 -24.740  85.438  1.00202.73           C
ATOM   1437  CG  TRP A 208     -54.154 -24.834  86.285  1.00202.35           C
ATOM   1438  CD1 TRP A 208     -54.890 -25.951  86.547  1.00201.92           C
ATOM   1439  CD2 TRP A 208     -54.783 -23.760  86.988  1.00202.48           C
ATOM   1440  NE1 TRP A 208     -55.941 -25.642  87.368  1.00201.63           N
ATOM   1441  CE2 TRP A 208     -55.899 -24.302  87.659  1.00202.46           C
ATOM   1442  CE3 TRP A 208     -54.512 -22.381  87.116  1.00202.79           C
ATOM   1443  CZ2 TRP A 208     -56.755 -23.513  88.455  1.00203.16           C
ATOM   1444  CZ3 TRP A 208     -55.359 -21.593  87.909  1.00202.51           C
ATOM   1445  CH2 TRP A 208     -56.469 -22.164  88.567  1.00202.80           C
ATOM   1446  N   HIS A 209     -51.940 -24.572  88.625  1.00203.54           N
ATOM   1447  CA  HIS A 209     -52.324 -23.850  89.861  1.00204.02           C
ATOM   1448  C   HIS A 209     -51.242 -23.701  90.948  1.00203.80           C
ATOM   1449  O   HIS A 209     -50.335 -24.534  91.053  1.00203.86           O
ATOM   1450  CB  HIS A 209     -53.591 -24.488  90.473  1.00204.34           C
ATOM   1451  CG  HIS A 209     -53.399 -25.063  91.851  1.00205.91           C
ATOM   1452  ND1 HIS A 209     -52.842 -26.307  92.076  1.00207.18           N
ATOM   1453  CD2 HIS A 209     -53.717 -24.569  93.075  1.00207.00           C
ATOM   1454  CE1 HIS A 209     -52.816 -26.548  93.377  1.00207.58           C
ATOM   1455  NE2 HIS A 209     -53.341 -25.509  94.005  1.00207.56           N
ATOM   1456  N   SER A 210     -51.377 -22.643  91.757  1.00203.50           N
ATOM   1457  CA  SER A 210     -50.536 -22.409  92.934  1.00203.18           C
ATOM   1458  C   SER A 210     -51.397 -22.358  94.193  1.00203.10           C
ATOM   1459  O   SER A 210     -50.884 -22.273  95.307  1.00203.00           O
ATOM   1460  CB  SER A 210     -49.749 -21.106  92.786  1.00203.10           C
ATOM   1461  OG  SER A 210     -50.618 -20.008  92.579  1.00202.81           O
ATOM   1462  N   SER A 224     -50.093 -22.329 111.386  1.00212.81           N
ATOM   1463  CA  SER A 224     -50.460 -21.763 110.085  1.00212.76           C
ATOM   1464  C   SER A 224     -50.376 -22.770 108.914  1.00212.74           C
ATOM   1465  O   SER A 224     -50.027 -23.943 109.113  1.00212.69           O
ATOM   1466  CB  SER A 224     -49.668 -20.471 109.802  1.00212.75           C
ATOM   1467  OG  SER A 224     -48.486 -20.383 110.585  1.00212.55           O
ATOM   1468  N   ALA A 225     -50.719 -22.292 107.712  1.00212.66           N
ATOM   1469  CA  ALA A 225     -50.812 -23.091 106.483  1.00212.64           C
ATOM   1470  C   ALA A 225     -50.049 -24.427 106.520  1.00212.74           C
ATOM   1471  O   ALA A 225     -48.815 -24.441 106.537  1.00212.77           O
ATOM   1472  CB  ALA A 225     -50.384 -22.246 105.278  1.00212.53           C
ATOM   1473  N   ARG A 226     -50.800 -25.537 106.536  1.00212.84           N
ATOM   1474  CA  ARG A 226     -50.246 -26.907 106.649  1.00212.86           C
ATOM   1475  C   ARG A 226     -51.027 -27.975 105.823  1.00212.72           C
ATOM   1476  O   ARG A 226     -51.888 -28.674 106.376  1.00212.87           O
ATOM   1477  CB  ARG A 226     -50.179 -27.330 108.141  1.00212.89           C
ATOM   1478  CG  ARG A 226     -49.016 -28.274 108.558  1.00213.08           C
ATOM   1479  CD  ARG A 226     -49.078 -29.682 107.925  1.00213.60           C
ATOM   1480  NE  ARG A 226     -48.367 -29.757 106.638  1.00213.95           N
ATOM   1481  CZ  ARG A 226     -48.646 -30.615 105.651  1.00214.08           C
ATOM   1482  NH1 ARG A 226     -49.639 -31.488 105.768  1.00214.33           N
ATOM   1483  NH2 ARG A 226     -47.937 -30.592 104.527  1.00213.96           N
ATOM   1484  N   ALA A 227     -50.727 -28.097 104.521  1.00212.37           N
ATOM   1485  CA  ALA A 227     -51.252 -29.186 103.654  1.00212.05           C
ATOM   1486  C   ALA A 227     -51.008 -28.952 102.151  1.00211.86           C
ATOM   1487  O   ALA A 227     -51.956 -28.678 101.407  1.00211.89           O
ATOM   1488  CB  ALA A 227     -52.754 -29.450 103.922  1.00211.97           C
ATOM   1489  N   TRP A 228     -49.751 -29.085 101.710  1.00211.62           N
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ATOM   1490  CA  TRP A 228     -49.336 -28.724 100.325  1.00211.22           C
ATOM   1491  C   TRP A 228     -49.700 -29.824  99.273  1.00211.02           C
ATOM   1492  O   TRP A 228     -49.883 -30.988  99.657  1.00211.24           O
ATOM   1493  CB  TRP A 228     -47.839 -28.311 100.268  1.00211.51           C
ATOM   1494  CG  TRP A 228     -47.262 -27.593 101.524  1.00211.92           C
ATOM   1495  CD1 TRP A 228     -46.306 -28.089 102.375  1.00212.07           C
ATOM   1496  CD2 TRP A 228     -47.597 -26.275 102.036  1.00212.26           C
ATOM   1497  NE1 TRP A 228     -46.033 -27.179 103.376  1.00212.17           N
ATOM   1498  CE2 TRP A 228     -46.807 -26.062 103.195  1.00212.13           C
ATOM   1499  CE3 TRP A 228     -48.487 -25.265 101.633  1.00212.16           C
ATOM   1500  CZ2 TRP A 228     -46.879 -24.878 103.952  1.00211.76           C
ATOM   1501  CZ3 TRP A 228     -48.555 -24.083 102.393  1.00211.89           C
ATOM   1502  CH2 TRP A 228     -47.753 -23.906 103.535  1.00211.78           C
ATOM   1503  N   PRO A 229     -49.809 -29.461  97.958  1.00210.43           N
ATOM   1504  CA  PRO A 229     -50.500 -30.263  96.893  1.00210.03           C
ATOM   1505  C   PRO A 229     -50.000 -31.699  96.562  1.00209.21           C
ATOM   1506  O   PRO A 229     -48.810 -31.987  96.729  1.00208.97           O
ATOM   1507  CB  PRO A 229     -50.395 -29.357  95.656  1.00209.91           C
ATOM   1508  CG  PRO A 229     -50.130 -27.978  96.203  1.00210.02           C
ATOM   1509  CD  PRO A 229     -49.266 -28.206  97.397  1.00210.28           C
ATOM   1510  N   LYS A 230     -50.909 -32.568  96.078  1.00208.56           N
ATOM   1511  CA  LYS A 230     -50.596 -34.002  95.831  1.00207.97           C
ATOM   1512  C   LYS A 230     -51.624 -34.876  95.026  1.00207.87           C
ATOM   1513  O   LYS A 230     -52.831 -34.613  95.070  1.00207.83           O
ATOM   1514  CB  LYS A 230     -50.278 -34.681  97.176  1.00208.06           C
ATOM   1515  CG  LYS A 230     -49.178 -35.749  97.152  1.00207.84           C
ATOM   1516  CD  LYS A 230     -47.847 -35.212  96.618  1.00207.04           C
ATOM   1517  CE  LYS A 230     -47.455 -35.864  95.286  1.00206.14           C
ATOM   1518  NZ  LYS A 230     -48.250 -35.428  94.107  1.00204.46           N
ATOM   1519  N   MET A 231     -51.097 -35.885  94.296  1.00207.48           N
ATOM   1520  CA  MET A 231     -51.792 -37.056  93.643  1.00207.13           C
ATOM   1521  C   MET A 231     -50.674 -37.990  93.087  1.00206.74           C
ATOM   1522  O   MET A 231     -49.499 -37.708  93.342  1.00206.60           O
ATOM   1523  CB  MET A 231     -52.776 -36.645  92.521  1.00207.26           C
ATOM   1524  CG  MET A 231     -54.313 -36.737  92.848  1.00207.51           C
ATOM   1525  SD  MET A 231     -55.434 -36.570  91.381  1.00207.73           S
ATOM   1526  CE  MET A 231     -57.021 -36.195  92.144  1.00207.35           C
ATOM   1527  N   HIS A 232     -51.012 -39.069  92.344  1.00206.31           N
ATOM   1528  CA  HIS A 232     -50.001 -40.055  91.791  1.00205.95           C
ATOM   1529  C   HIS A 232     -50.533 -41.233  90.924  1.00205.03           C
ATOM   1530  O   HIS A 232     -49.898 -42.290  90.869  1.00204.77           O
ATOM   1531  CB  HIS A 232     -49.142 -40.653  92.951  1.00206.11           C
ATOM   1532  CG  HIS A 232     -48.027 -41.578  92.516  1.00206.29           C
ATOM   1533  ND1 HIS A 232     -48.251 -42.851  92.025  1.00205.99           N
ATOM   1534  CD2 HIS A 232     -46.679 -41.428  92.555  1.00205.99           C
ATOM   1535  CE1 HIS A 232     -47.094 -43.427  91.750  1.00205.65           C
ATOM   1536  NE2 HIS A 232     -46.124 -42.585  92.061  1.00205.52           N
ATOM   1537  N   THR A 233     -51.662 -41.105  90.236  1.00204.21           N
ATOM   1538  CA  THR A 233     -52.367 -42.362  89.931  1.00203.58           C
ATOM   1539  C   THR A 233     -53.154 -42.632  88.623  1.00203.15           C
ATOM   1540  O   THR A 233     -53.659 -41.720  87.963  1.00202.88           O
ATOM   1541  CB  THR A 233     -53.227 -42.725  91.137  1.00203.65           C
ATOM   1542  OG1 THR A 233     -53.606 -41.513  91.794  1.00203.80           O
ATOM   1543  CG2 THR A 233     -52.419 -43.518  92.112  1.00203.49           C
ATOM   1544  N   VAL A 234     -53.247 -43.930  88.307  1.00202.78           N
ATOM   1545  CA  VAL A 234     -53.905 -44.493  87.114  1.00202.35           C
ATOM   1546  C   VAL A 234     -55.168 -43.805  86.631  1.00202.51           C
ATOM   1547  O   VAL A 234     -56.086 -43.515  87.402  1.00202.22           O
ATOM   1548  CB  VAL A 234     -54.188 -46.023  87.261  1.00202.16           C
ATOM   1549  CG1 VAL A 234     -55.564 -46.425  86.704  1.00201.42           C
ATOM   1550  CG2 VAL A 234     -53.117 -46.802  86.575  1.00201.67           C
ATOM   1551  N   ASN A 235     -55.179 -43.572  85.322  1.00202.73           N
ATOM   1552  CA  ASN A 235     -56.331 -43.087  84.580  1.00202.81           C
ATOM   1553  C   ASN A 235     -56.895 -41.815  85.168  1.00202.90           C
ATOM   1554  O   ASN A 235     -57.769 -41.180  84.576  1.00202.82           O
ATOM   1555  CB  ASN A 235     -57.403 -44.168  84.512  1.00202.79           C
ATOM   1556  CG  ASN A 235     -58.218 -44.089  83.251  1.00202.90           C
ATOM   1557  OD1 ASN A 235     -57.693 -43.836  82.163  1.00202.47           O
ATOM   1558  ND2 ASN A 235     -59.515 -44.315  83.385  1.00203.78           N
ATOM   1559  N   GLY A 236     -56.350 -41.446  86.323  1.00203.07           N
ATOM   1560  CA  GLY A 236     -56.849 -40.352  87.125  1.00203.48           C
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ATOM   1561  C   GLY A 236     -57.751 -40.889  88.209  1.00203.71           C
ATOM   1562  O   GLY A 236     -58.665 -40.195  88.668  1.00203.76           O
ATOM   1563  N   TYR A 237     -57.501 -42.126  88.625  1.00203.95           N
ATOM   1564  CA  TYR A 237     -58.375 -42.807  89.572  1.00204.42           C
ATOM   1565  C   TYR A 237     -57.618 -43.205  90.834  1.00204.76           C
ATOM   1566  O   TYR A 237     -56.913 -44.214  90.855  1.00204.95           O
ATOM   1567  CB  TYR A 237     -59.007 -44.042  88.926  1.00204.18           C
ATOM   1568  CG  TYR A 237     -60.257 -43.745  88.130  1.00203.80           C
ATOM   1569  CD1 TYR A 237     -61.517 -43.937  88.681  1.00203.24           C
ATOM   1570  CD2 TYR A 237     -60.177 -43.271  86.827  1.00203.32           C
ATOM   1571  CE1 TYR A 237     -62.663 -43.666  87.956  1.00202.72           C
ATOM   1572  CE2 TYR A 237     -61.317 -42.998  86.095  1.00202.96           C
ATOM   1573  CZ  TYR A 237     -62.557 -43.197  86.664  1.00202.86           C
ATOM   1574  OH  TYR A 237     -63.695 -42.926  85.939  1.00203.14           O
ATOM   1575  N   VAL A 238     -57.768 -42.405  91.885  1.00205.06           N
ATOM   1576  CA  VAL A 238     -56.681 -42.167  92.827  1.00205.40           C
ATOM   1577  C   VAL A 238     -56.530 -43.331  93.801  1.00205.57           C
ATOM   1578  O   VAL A 238     -57.325 -44.271  93.788  1.00205.42           O
ATOM   1579  CB  VAL A 238     -56.901 -40.868  93.626  1.00205.54           C
ATOM   1580  CG1 VAL A 238     -55.575 -40.334  94.146  1.00205.62           C
ATOM   1581  CG2 VAL A 238     -57.602 -39.829  92.764  1.00205.51           C
ATOM   1582  N   ASN A 239     -55.504 -43.262  94.643  1.00189.08           N
ATOM   1583  CA  ASN A 239     -55.549 -43.903  95.980  1.00189.98           C
ATOM   1584  C   ASN A 239     -55.888 -45.401  95.988  1.00189.24           C
ATOM   1585  O   ASN A 239     -55.053 -46.243  96.347  1.00189.29           O
ATOM   1586  CB  ASN A 239     -56.529 -43.104  96.880  1.00190.92           C
ATOM   1587  CG  ASN A 239     -56.353 -43.376  98.368  1.00194.67           C
ATOM   1588  OD1 ASN A 239     -57.217 -43.993  98.997  1.00195.15           O
ATOM   1589  ND2 ASN A 239     -55.249 -42.893  98.943  1.00201.47           N
ATOM   1590  N   ARG A 240     -57.171 -45.663  95.688  1.00204.76           N
ATOM   1591  CA  ARG A 240     -57.719 -47.006  95.521  1.00204.03           C
ATOM   1592  C   ARG A 240     -58.881 -46.986  94.532  1.00202.99           C
ATOM   1593  O   ARG A 240     -59.433 -48.033  94.185  1.00202.54           O
ATOM   1594  CB  ARG A 240     -58.155 -47.584  96.884  1.00204.26           C
ATOM   1595  CG  ARG A 240     -58.728 -46.558  97.883  1.00204.78           C
ATOM   1596  CD  ARG A 240     -58.661 -47.043  99.340  1.00204.84           C
ATOM   1597  NE  ARG A 240     -58.592 -45.912 100.275  1.00206.70           N
ATOM   1598  CZ  ARG A 240     -58.733 -45.991 101.600  1.00207.34           C
ATOM   1599  NH1 ARG A 240     -58.966 -47.157 102.199  1.00207.67           N
ATOM   1600  NH2 ARG A 240     -58.644 -44.888 102.336  1.00207.50           N
ATOM   1601  N   SER A 241     -59.223 -45.781  94.075  1.00202.12           N
ATOM   1602  CA  SER A 241     -60.369 -45.550  93.201  1.00201.47           C
ATOM   1603  C   SER A 241     -60.462 -46.597  92.118  1.00200.98           C
ATOM   1604  O   SER A 241     -59.467 -47.206  91.736  1.00200.98           O
ATOM   1605  CB  SER A 241     -60.338 -44.146  92.577  1.00201.44           C
ATOM   1606  OG  SER A 241     -61.322 -43.289  93.143  1.00201.49           O
ATOM   1607  N   LEU A 242     -61.678 -46.805  91.640  1.00200.47           N
ATOM   1608  CA  LEU A 242     -61.941 -47.778  90.601  1.00200.00           C
ATOM   1609  C   LEU A 242     -62.684 -47.069  89.463  1.00199.64           C
ATOM   1610  O   LEU A 242     -63.489 -46.182  89.724  1.00199.70           O
ATOM   1611  CB  LEU A 242     -62.763 -48.945  91.167  1.00199.99           C
ATOM   1612  CG  LEU A 242     -62.405 -49.688  92.474  1.00199.59           C
ATOM   1613  CD1 LEU A 242     -60.897 -49.894  92.695  1.00198.51           C
ATOM   1614  CD2 LEU A 242     -63.056 -49.059  93.704  1.00199.37           C
ATOM   1615  N   PRO A 243     -62.377 -47.411  88.199  1.00199.23           N
ATOM   1616  CA  PRO A 243     -63.041 -46.819  87.043  1.00198.92           C
ATOM   1617  C   PRO A 243     -64.361 -47.474  86.604  1.00198.56           C
ATOM   1618  O   PRO A 243     -65.416 -47.098  87.088  1.00198.20           O
ATOM   1619  CB  PRO A 243     -61.972 -46.918  85.930  1.00199.05           C
ATOM   1620  CG  PRO A 243     -60.761 -47.577  86.567  1.00199.18           C
ATOM   1621  CD  PRO A 243     -61.300 -48.307  87.768  1.00199.34           C
ATOM   1622  N   GLY A 244     -64.309 -48.425  85.681  1.00198.50           N
ATOM   1623  CA  GLY A 244     -65.530 -48.872  85.026  1.00198.60           C
ATOM   1624  C   GLY A 244     -65.639 -50.333  84.630  1.00198.74           C
ATOM   1625  O   GLY A 244     -66.042 -51.174  85.446  1.00199.00           O
ATOM   1626  N   LEU A 245     -65.272 -50.637  83.380  1.00198.60           N
ATOM   1627  CA  LEU A 245     -65.731 -51.870  82.700  1.00198.22           C
ATOM   1628  C   LEU A 245     -64.730 -53.037  82.545  1.00197.59           C
ATOM   1629  O   LEU A 245     -63.537 -52.946  82.871  1.00196.84           O
ATOM   1630  CB  LEU A 245     -66.407 -51.540  81.326  1.00198.59           C
ATOM   1631  CG  LEU A 245     -67.833 -50.955  81.109  1.00198.67           C
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ATOM   1632  CD1 LEU A 245     -68.036 -50.419  79.670  1.00198.05           C
ATOM   1633  CD2 LEU A 245     -68.960 -51.950  81.467  1.00198.60           C
ATOM   1634  N   ILE A 246     -65.283 -54.118  82.006  1.00197.33           N
ATOM   1635  CA  ILE A 246     -64.650 -55.412  81.875  1.00197.40           C
ATOM   1636  C   ILE A 246     -64.766 -55.948  80.435  1.00197.58           C
ATOM   1637  O   ILE A 246     -65.507 -55.381  79.631  1.00198.01           O
ATOM   1638  CB  ILE A 246     -65.345 -56.410  82.815  1.00197.31           C
ATOM   1639  CG1 ILE A 246     -64.857 -57.833  82.546  1.00197.27           C
ATOM   1640  CG2 ILE A 246     -66.865 -56.333  82.652  1.00196.97           C
ATOM   1641  CD1 ILE A 246     -63.333 -58.020  82.691  1.00197.53           C
ATOM   1642  N   GLY A 247     -64.038 -57.034  80.128  1.00197.43           N
ATOM   1643  CA  GLY A 247     -64.151 -57.788  78.865  1.00197.12           C
ATOM   1644  C   GLY A 247     -64.522 -59.256  79.067  1.00197.02           C
ATOM   1645  O   GLY A 247     -64.247 -59.831  80.120  1.00196.96           O
ATOM   1646  N   CYS A 248     -65.142 -59.856  78.048  1.00196.96           N
ATOM   1647  CA  CYS A 248     -65.626 -61.256  78.070  1.00197.01           C
ATOM   1648  C   CYS A 248     -64.548 -62.278  78.448  1.00196.11           C
ATOM   1649  O   CYS A 248     -63.368 -62.017  78.274  1.00196.02           O
ATOM   1650  CB  CYS A 248     -66.269 -61.622  76.721  1.00197.58           C
ATOM   1651  SG  CYS A 248     -68.091 -61.966  76.717  1.00200.71           S
ATOM   1652  N   HIS A 249     -64.957 -63.445  78.942  1.00195.35           N
ATOM   1653  CA  HIS A 249     -64.028 -64.328  79.657  1.00194.80           C
ATOM   1654  C   HIS A 249     -63.208 -65.316  78.833  1.00194.36           C
ATOM   1655  O   HIS A 249     -61.997 -65.430  79.034  1.00194.28           O
ATOM   1656  CB  HIS A 249     -64.700 -65.008  80.872  1.00194.91           C
ATOM   1657  CG  HIS A 249     -65.368 -66.318  80.577  1.00194.89           C
ATOM   1658  ND1 HIS A 249     -66.713 -66.421  80.284  1.00195.18           N
ATOM   1659  CD2 HIS A 249     -64.888 -67.584  80.589  1.00194.59           C
ATOM   1660  CE1 HIS A 249     -67.026 -67.690  80.098  1.00195.11           C
ATOM   1661  NE2 HIS A 249     -65.937 -68.417  80.280  1.00195.01           N
ATOM   1662  N   ARG A 250     -63.857 -66.017  77.910  1.00193.82           N
ATOM   1663  CA  ARG A 250     -63.209 -67.121  77.194  1.00193.32           C
ATOM   1664  C   ARG A 250     -62.211 -66.711  76.103  1.00192.75           C
ATOM   1665  O   ARG A 250     -61.712 -67.567  75.371  1.00192.73           O
ATOM   1666  CB  ARG A 250     -64.255 -68.071  76.602  1.00193.45           C
ATOM   1667  CG  ARG A 250     -64.760 -69.128  77.542  1.00193.58           C
ATOM   1668  CD  ARG A 250     -63.808 -70.290  77.686  1.00194.06           C
ATOM   1669  NE  ARG A 250     -64.574 -71.513  77.915  1.00195.83           N
ATOM   1670  CZ  ARG A 250     -64.999 -71.941  79.106  1.00196.72           C
ATOM   1671  NH1 ARG A 250     -64.726 -71.256  80.213  1.00197.39           N
ATOM   1672  NH2 ARG A 250     -65.698 -73.068  79.195  1.00196.47           N
ATOM   1673  N   LYS A 251     -61.914 -65.422  75.983  1.00191.96           N
ATOM   1674  CA  LYS A 251     -60.928 -64.993  74.995  1.00191.32           C
ATOM   1675  C   LYS A 251     -60.044 -63.835  75.462  1.00190.61           C
ATOM   1676  O   LYS A 251     -59.841 -63.654  76.663  1.00190.64           O
ATOM   1677  CB  LYS A 251     -61.570 -64.744  73.612  1.00191.63           C
ATOM   1678  CG  LYS A 251     -62.994 -64.174  73.605  1.00192.25           C
ATOM   1679  CD  LYS A 251     -62.985 -62.664  73.748  1.00193.41           C
ATOM   1680  CE  LYS A 251     -63.019 -62.260  75.210  1.00193.71           C
ATOM   1681  NZ  LYS A 251     -61.946 -61.285  75.538  1.00194.05           N
ATOM   1682  N   SER A 252     -59.533 -63.055  74.511  1.00189.68           N
ATOM   1683  CA  SER A 252     -58.449 -62.114  74.771  1.00188.78           C
ATOM   1684  C   SER A 252     -58.889 -60.657  74.834  1.00188.37           C
ATOM   1685  O   SER A 252     -59.880 -60.270  74.230  1.00188.19           O
ATOM   1686  CB  SER A 252     -57.335 -62.306  73.736  1.00188.72           C
ATOM   1687  OG  SER A 252     -57.841 -62.843  72.523  1.00188.17           O
ATOM   1688  N   VAL A 253     -58.139 -59.856  75.580  1.00188.01           N
ATOM   1689  CA  VAL A 253     -58.448 -58.448  75.752  1.00187.98           C
ATOM   1690  C   VAL A 253     -57.189 -57.608  75.601  1.00188.17           C
ATOM   1691  O   VAL A 253     -56.211 -57.817  76.329  1.00188.26           O
ATOM   1692  CB  VAL A 253     -59.050 -58.190  77.132  1.00187.95           C
ATOM   1693  CG1 VAL A 253     -59.015 -56.702  77.475  1.00187.84           C
ATOM   1694  CG2 VAL A 253     -60.467 -58.721  77.194  1.00188.25           C
ATOM   1695  N   TYR A 254     -57.237 -56.647  74.675  1.00188.28           N
ATOM   1696  CA  TYR A 254     -56.085 -55.808  74.306  1.00188.34           C
ATOM   1697  C   TYR A 254     -56.147 -54.439  74.939  1.00188.63           C
ATOM   1698  O   TYR A 254     -57.202 -53.801  74.911  1.00188.61           O
ATOM   1699  CB  TYR A 254     -56.056 -55.603  72.796  1.00188.20           C
ATOM   1700  CG  TYR A 254     -55.869 -56.871  72.027  1.00188.01           C
ATOM   1701  CD1 TYR A 254     -54.621 -57.212  71.531  1.00187.87           C
ATOM   1702  CD2 TYR A 254     -56.934 -57.739  71.801  1.00187.63           C
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ATOM   1703  CE1 TYR A 254     -54.430 -58.374  70.832  1.00187.77           C
ATOM   1704  CE2 TYR A 254     -56.756 -58.908  71.103  1.00187.55           C
ATOM   1705  CZ  TYR A 254     -55.497 -59.219  70.622  1.00187.88           C
ATOM   1706  OH  TYR A 254     -55.291 -60.379  69.918  1.00188.62           O
ATOM   1707  N   TRP A 255     -55.027 -53.973  75.496  1.00189.05           N
ATOM   1708  CA  TRP A 255     -54.982 -52.598  76.015  1.00189.54           C
ATOM   1709  C   TRP A 255     -53.805 -51.780  75.507  1.00189.75           C
ATOM   1710  O   TRP A 255     -52.644 -52.174  75.668  1.00189.64           O
ATOM   1711  CB  TRP A 255     -54.987 -52.497  77.558  1.00189.77           C
ATOM   1712  CG  TRP A 255     -55.547 -53.645  78.412  1.00189.70           C
ATOM   1713  CD1 TRP A 255     -56.848 -53.834  78.840  1.00189.16           C
ATOM   1714  CD2 TRP A 255     -54.785 -54.686  78.996  1.00188.95           C
ATOM   1715  NE1 TRP A 255     -56.927 -54.956  79.618  1.00187.80           N
ATOM   1716  CE2 TRP A 255     -55.674 -55.496  79.729  1.00188.41           C
ATOM   1717  CE3 TRP A 255     -53.428 -55.029  78.951  1.00189.34           C
ATOM   1718  CZ2 TRP A 255     -55.248 -56.622  80.410  1.00189.51           C
ATOM   1719  CZ3 TRP A 255     -53.003 -56.146  79.636  1.00189.50           C
ATOM   1720  CH2 TRP A 255     -53.907 -56.930  80.358  1.00189.80           C
ATOM   1721  N   HIS A 256     -54.127 -50.627  74.920  1.00190.24           N
ATOM   1722  CA  HIS A 256     -53.127 -49.619  74.552  1.00190.66           C
ATOM   1723  C   HIS A 256     -52.797 -48.838  75.821  1.00190.81           C
ATOM   1724  O   HIS A 256     -53.637 -48.144  76.405  1.00190.73           O
ATOM   1725  CB  HIS A 256     -53.609 -48.693  73.410  1.00190.66           C
ATOM   1726  CG  HIS A 256     -54.344 -49.408  72.318  1.00190.45           C
ATOM   1727  ND1 HIS A 256     -53.700 -50.051  71.284  1.00190.67           N
ATOM   1728  CD2 HIS A 256     -55.670 -49.601  72.113  1.00190.02           C
ATOM   1729  CE1 HIS A 256     -54.598 -50.610  70.490  1.00190.87           C
ATOM   1730  NE2 HIS A 256     -55.801 -50.349  70.969  1.00190.03           N
ATOM   1731  N   VAL A 257     -51.565 -48.986  76.260  1.00190.98           N
ATOM   1732  CA  VAL A 257     -51.200 -48.524  77.564  1.00191.30           C
ATOM   1733  C   VAL A 257     -50.232 -47.383  77.365  1.00191.50           C
ATOM   1734  O   VAL A 257     -49.188 -47.548  76.739  1.00191.55           O
ATOM   1735  CB  VAL A 257     -50.666 -49.720  78.423  1.00191.43           C
ATOM   1736  CG1 VAL A 257     -49.906 -50.745  77.567  1.00191.85           C
ATOM   1737  CG2 VAL A 257     -49.840 -49.267  79.609  1.00191.63           C
ATOM   1738  N   ILE A 258     -50.621 -46.211  77.854  1.00192.05           N
ATOM   1739  CA  ILE A 258     -49.834 -44.980  77.699  1.00192.92           C
ATOM   1740  C   ILE A 258     -49.149 -44.551  79.010  1.00193.85           C
ATOM   1741  O   ILE A 258     -49.831 -44.158  79.974  1.00194.30           O
ATOM   1742  CB  ILE A 258     -50.716 -43.802  77.171  1.00192.68           C
ATOM   1743  CG1 ILE A 258     -51.419 -44.200  75.869  1.00192.79           C
ATOM   1744  CG2 ILE A 258     -49.888 -42.510  77.005  1.00191.94           C
ATOM   1745  CD1 ILE A 258     -52.623 -43.347  75.506  1.00192.94           C
ATOM   1746  N   GLY A 259     -47.813 -44.620  79.042  1.00194.53           N
ATOM   1747  CA  GLY A 259     -47.017 -44.148  80.197  1.00195.25           C
ATOM   1748  C   GLY A 259     -46.955 -42.628  80.320  1.00195.76           C
ATOM   1749  O   GLY A 259     -46.876 -41.921  79.301  1.00195.90           O
ATOM   1750  N   MET A 260     -46.978 -42.120  81.562  1.00196.03           N
ATOM   1751  CA  MET A 260     -47.095 -40.665  81.808  1.00196.23           C
ATOM   1752  C   MET A 260     -46.229 -40.080  82.941  1.00195.44           C
ATOM   1753  O   MET A 260     -45.615 -40.811  83.725  1.00195.44           O
ATOM   1754  CB  MET A 260     -48.570 -40.274  82.013  1.00196.72           C
ATOM   1755  CG  MET A 260     -48.929 -38.828  81.634  1.00199.11           C
ATOM   1756  SD  MET A 260     -49.113 -38.512  79.842  1.00204.91           S
ATOM   1757  CE  MET A 260     -47.409 -38.439  79.237  1.00203.43           C
ATOM   1758  N   GLY A 261     -46.183 -38.751  82.993  1.00194.61           N
ATOM   1759  CA  GLY A 261     -45.514 -38.046  84.060  1.00193.75           C
ATOM   1760  C   GLY A 261     -44.801 -36.785  83.640  1.00193.18           C
ATOM   1761  O   GLY A 261     -44.836 -36.379  82.486  1.00193.16           O
ATOM   1762  N   THR A 262     -44.148 -36.173  84.613  1.00192.73           N
ATOM   1763  CA  THR A 262     -43.374 -34.977  84.411  1.00192.41           C
ATOM   1764  C   THR A 262     -42.019 -35.180  85.078  1.00192.28           C
ATOM   1765  O   THR A 262     -41.285 -34.233  85.323  1.00192.10           O
ATOM   1766  CB  THR A 262     -44.112 -33.764  84.998  1.00192.39           C
ATOM   1767  OG1 THR A 262     -43.643 -32.562  84.385  1.00192.50           O
ATOM   1768  CG2 THR A 262     -43.940 -33.676  86.520  1.00192.68           C
ATOM   1769  N   THR A 263     -41.700 -36.437  85.368  1.00192.46           N
ATOM   1770  CA  THR A 263     -40.441 -36.816  86.009  1.00192.78           C
ATOM   1771  C   THR A 263     -40.088 -38.285  85.721  1.00193.14           C
ATOM   1772  O   THR A 263     -40.973 -39.095  85.429  1.00193.25           O
ATOM   1773  CB  THR A 263     -40.465 -36.547  87.548  1.00192.74           C
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ATOM	1774	OG1	THR	A	263	-39.196	-36.872	88.126	1.00192.65	O
ATOM	1775	CG2	THR	A	263	-41.545	-37.361	88.243	1.00192.82	C
ATOM	1776	N	PRO	A	264	-38.785	-38.620	85.743	1.00193.52	N
ATOM	1777	CA	PRO	A	264	-38.308	-40.015	85.764	1.00193.92	C
ATOM	1778	C	PRO	A	264	-38.875	-40.910	86.904	1.00194.13	C
ATOM	1779	O	PRO	A	264	-38.159	-41.228	87.867	1.00194.27	O
ATOM	1780	CB	PRO	A	264	-36.779	-39.852	85.905	1.00194.10	C
ATOM	1781	CG	PRO	A	264	-36.544	-38.398	86.275	1.00193.67	C
ATOM	1782	CD	PRO	A	264	-37.666	-37.663	85.650	1.00193.45	C
ATOM	1783	N	GLU	A	265	-40.130	-41.343	86.774	1.00194.08	N
ATOM	1784	CA	GLU	A	265	-40.814	-42.022	87.876	1.00194.35	C
ATOM	1785	C	GLU	A	265	-41.389	-43.380	87.480	1.00193.74	C
ATOM	1786	O	GLU	A	265	-42.573	-43.483	87.142	1.00193.96	O
ATOM	1787	CB	GLU	A	265	-41.912	-41.118	88.439	1.00194.30	C
ATOM	1788	CG	GLU	A	265	-42.306	-41.421	89.882	1.00195.50	C
ATOM	1789	CD	GLU	A	265	-42.968	-40.226	90.594	1.00195.85	C
ATOM	1790	OE1	GLU	A	265	-43.412	-39.267	89.904	1.00197.29	O
ATOM	1791	OE2	GLU	A	265	-43.046	-40.254	91.852	1.00197.60	O
ATOM	1792	N	VAL	A	266	-40.547	-44.412	87.562	1.00193.00	N
ATOM	1793	CA	VAL	A	266	-40.850	-45.769	87.076	1.00191.97	C
ATOM	1794	C	VAL	A	266	-41.887	-46.525	87.888	1.00191.40	C
ATOM	1795	O	VAL	A	266	-41.949	-46.378	89.104	1.00191.31	O
ATOM	1796	CB	VAL	A	266	-39.582	-46.624	87.027	1.00191.93	C
ATOM	1797	CG1	VAL	A	266	-38.759	-46.248	85.814	1.00192.14	C
ATOM	1798	CG2	VAL	A	266	-38.767	-46.458	88.315	1.00191.73	C
ATOM	1799	N	HIS	A	267	-42.690	-47.333	87.195	1.00190.86	N
ATOM	1800	CA	HIS	A	267	-43.689	-48.229	87.816	1.00190.49	C
ATOM	1801	C	HIS	A	267	-43.441	-49.703	87.433	1.00189.94	C
ATOM	1802	O	HIS	A	267	-42.401	-50.020	86.858	1.00190.36	O
ATOM	1803	CB	HIS	A	267	-45.116	-47.816	87.432	1.00190.53	C
ATOM	1804	CG	HIS	A	267	-45.472	-46.423	87.837	1.00191.04	C
ATOM	1805	ND1	HIS	A	267	-46.212	-46.140	88.965	1.00191.44	N
ATOM	1806	CD2	HIS	A	267	-45.184	-45.231	87.265	1.00191.70	C
ATOM	1807	CE1	HIS	A	267	-46.362	-44.831	89.070	1.00192.13	C
ATOM	1808	NE2	HIS	A	267	-45.747	-44.257	88.052	1.00192.19	N
ATOM	1809	N	SER	A	268	-44.383	-50.592	87.752	1.00188.87	N
ATOM	1810	CA	SER	A	268	-44.286	-52.013	87.415	1.00187.81	C
ATOM	1811	C	SER	A	268	-45.643	-52.633	87.696	1.00187.54	C
ATOM	1812	O	SER	A	268	-46.002	-52.862	88.854	1.00187.70	O
ATOM	1813	CB	SER	A	268	-43.200	-52.702	88.246	1.00187.61	C
ATOM	1814	OG	SER	A	268	-42.979	-54.022	87.797	1.00186.77	O
ATOM	1815	N	ILE	A	269	-46.398	-52.900	86.634	1.00186.94	N
ATOM	1816	CA	ILE	A	269	-47.841	-53.170	86.738	1.00186.30	C
ATOM	1817	C	ILE	A	269	-48.226	-54.648	86.571	1.00186.26	C
ATOM	1818	O	ILE	A	269	-47.618	-55.363	85.782	1.00186.45	O
ATOM	1819	CB	ILE	A	269	-48.611	-52.258	85.753	1.00185.99	C
ATOM	1820	CG1	ILE	A	269	-48.727	-50.852	86.339	1.00185.73	C
ATOM	1821	CG2	ILE	A	269	-49.990	-52.796	85.443	1.00185.38	C
ATOM	1822	CD1	ILE	A	269	-47.466	-50.018	86.293	1.00185.46	C
ATOM	1823	N	PHE	A	270	-49.223	-55.110	87.325	1.00186.09	N
ATOM	1824	CA	PHE	A	270	-49.615	-56.517	87.265	1.00186.06	C
ATOM	1825	C	PHE	A	270	-51.127	-56.736	87.300	1.00186.24	C
ATOM	1826	O	PHE	A	270	-51.898	-55.849	87.671	1.00185.97	O
ATOM	1827	CB	PHE	A	270	-49.040	-57.305	88.452	1.00186.09	C
ATOM	1828	CG	PHE	A	270	-47.548	-57.180	88.658	1.00185.85	C
ATOM	1829	CD1	PHE	A	270	-46.763	-58.324	88.732	1.00185.88	C
ATOM	1830	CD2	PHE	A	270	-46.940	-55.942	88.862	1.00185.31	C
ATOM	1831	CE1	PHE	A	270	-45.391	-58.237	88.955	1.00185.71	C
ATOM	1832	CE2	PHE	A	270	-45.571	-55.843	89.074	1.00185.19	C
ATOM	1833	CZ	PHE	A	270	-44.796	-56.990	89.125	1.00185.58	C
ATOM	1834	N	LEU	A	271	-51.514	-57.940	86.885	1.00186.64	N
ATOM	1835	CA	LEU	A	271	-52.728	-58.645	87.332	1.00187.27	C
ATOM	1836	C	LEU	A	271	-52.672	-60.105	86.824	1.00187.96	C
ATOM	1837	O	LEU	A	271	-51.710	-60.479	86.132	1.00188.39	O
ATOM	1838	CB	LEU	A	271	-54.024	-57.933	86.944	1.00186.94	C
ATOM	1839	CG	LEU	A	271	-54.462	-57.853	85.489	1.00186.80	C
ATOM	1840	CD1	LEU	A	271	-55.196	-59.112	85.013	1.00186.15	C
ATOM	1841	CD2	LEU	A	271	-55.359	-56.659	85.360	1.00186.95	C
ATOM	1842	N	GLU	A	272	-53.698	-60.908	87.144	1.00188.36	N
ATOM	1843	CA	GLU	A	272	-53.626	-62.391	87.072	1.00188.44	C
ATOM	1844	C	GLU	A	272	-54.000	-63.052	85.736	1.00188.53	C

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ATOM   1845  O   GLU A 272     -55.117 -62.919  85.212  1.00188.34           O
ATOM   1846  CB  GLU A 272     -54.379 -63.001  88.248  1.00188.38           C
ATOM   1847  CG  GLU A 272     -53.750 -62.657  89.609  1.00188.85           C
ATOM   1848  CD  GLU A 272     -53.440 -61.166  89.797  1.00189.02           C
ATOM   1849  OE1 GLU A 272     -52.254 -60.838  90.045  1.00188.91           O
ATOM   1850  OE2 GLU A 272     -54.370 -60.328  89.673  1.00188.59           O
ATOM   1851  N   GLY A 273     -53.039 -63.809  85.228  1.00188.75           N
ATOM   1852  CA  GLY A 273     -52.891 -63.989  83.799  1.00189.24           C
ATOM   1853  C   GLY A 273     -51.642 -63.203  83.421  1.00189.59           C
ATOM   1854  O   GLY A 273     -51.275 -62.230  84.084  1.00189.17           O
ATOM   1855  N   HIS A 274     -50.985 -63.605  82.346  1.00190.18           N
ATOM   1856  CA  HIS A 274     -49.600 -63.229  82.199  1.00190.98           C
ATOM   1857  C   HIS A 274     -49.270 -61.877  81.599  1.00191.09           C
ATOM   1858  O   HIS A 274     -48.274 -61.304  82.004  1.00191.23           O
ATOM   1859  CB  HIS A 274     -48.785 -64.371  81.596  1.00191.35           C
ATOM   1860  CG  HIS A 274     -48.250 -65.324  82.631  1.00193.95           C
ATOM   1861  ND1 HIS A 274     -49.066 -65.983  83.533  1.00196.26           N
ATOM   1862  CD2 HIS A 274     -46.982 -65.713  82.924  1.00195.66           C
ATOM   1863  CE1 HIS A 274     -48.327 -66.738  84.329  1.00196.27           C
ATOM   1864  NE2 HIS A 274     -47.058 -66.595  83.979  1.00196.19           N
ATOM   1865  N   THR A 275     -50.100 -61.367  80.680  1.00191.54           N
ATOM   1866  CA  THR A 275     -49.899 -60.056  79.965  1.00191.93           C
ATOM   1867  C   THR A 275     -48.900 -60.193  78.775  1.00192.63           C
ATOM   1868  O   THR A 275     -48.026 -59.353  78.537  1.00192.52           O
ATOM   1869  CB  THR A 275     -49.629 -58.832  80.962  1.00191.84           C
ATOM   1870  OG1 THR A 275     -50.425 -57.683  80.625  1.00189.99           O
ATOM   1871  CG2 THR A 275     -48.146 -58.468  81.052  1.00191.98           C
ATOM   1872  N   PHE A 276     -49.100 -61.262  78.006  1.00193.59           N
ATOM   1873  CA  PHE A 276     -48.083 -61.811  77.098  1.00194.33           C
ATOM   1874  C   PHE A 276     -47.720 -60.956  75.890  1.00194.76           C
ATOM   1875  O   PHE A 276     -46.648 -61.157  75.345  1.00194.72           O
ATOM   1876  CB  PHE A 276     -48.408 -63.277  76.669  1.00194.30           C
ATOM   1877  CG  PHE A 276     -47.625 -64.389  77.446  1.00194.85           C
ATOM   1878  CD1 PHE A 276     -48.062 -65.727  77.399  1.00194.09           C
ATOM   1879  CD2 PHE A 276     -46.466 -64.103  78.203  1.00194.64           C
ATOM   1880  CE1 PHE A 276     -47.361 -66.734  78.058  1.00192.41           C
ATOM   1881  CE2 PHE A 276     -45.766 -65.120  78.877  1.00193.27           C
ATOM   1882  CZ  PHE A 276     -46.219 -66.428  78.802  1.00192.82           C
ATOM   1883  N   LEU A 277     -48.563 -60.019  75.453  1.00195.69           N
ATOM   1884  CA  LEU A 277     -48.086 -59.139  74.363  1.00196.79           C
ATOM   1885  C   LEU A 277     -47.125 -58.074  74.935  1.00197.48           C
ATOM   1886  O   LEU A 277     -47.393 -57.450  75.964  1.00197.41           O
ATOM   1887  CB  LEU A 277     -49.219 -58.551  73.439  1.00196.85           C
ATOM   1888  CG  LEU A 277     -49.255 -58.168  71.894  1.00195.94           C
ATOM   1889  CD1 LEU A 277     -48.132 -57.253  71.365  1.00195.01           C
ATOM   1890  CD2 LEU A 277     -49.427 -59.336  70.898  1.00194.92           C
ATOM   1891  N   VAL A 278     -45.961 -57.972  74.298  1.00198.37           N
ATOM   1892  CA  VAL A 278     -45.114 -56.781  74.314  1.00199.42           C
ATOM   1893  C   VAL A 278     -44.734 -56.581  72.819  1.00200.00           C
ATOM   1894  O   VAL A 278     -45.201 -55.626  72.160  1.00200.50           O
ATOM   1895  CB  VAL A 278     -43.948 -56.897  75.358  1.00199.47           C
ATOM   1896  CG1 VAL A 278     -42.624 -56.270  74.865  1.00199.91           C
ATOM   1897  CG2 VAL A 278     -44.388 -56.287  76.694  1.00199.21           C
ATOM   1898  N   ARG A 279     -43.931 -57.494  72.277  1.00200.03           N
ATOM   1899  CA  ARG A 279     -44.138 -57.888  70.907  1.00200.11           C
ATOM   1900  C   ARG A 279     -44.947 -59.118  71.242  1.00200.03           C
ATOM   1901  O   ARG A 279     -45.573 -59.147  72.284  1.00199.70           O
ATOM   1902  CB  ARG A 279     -42.827 -58.253  70.230  1.00200.32           C
ATOM   1903  CG  ARG A 279     -42.969 -58.461  68.714  1.00201.17           C
ATOM   1904  CD  ARG A 279     -41.860 -59.359  68.114  1.00201.58           C
ATOM   1905  NE  ARG A 279     -40.557 -58.690  68.053  1.00201.55           N
ATOM   1906  CZ  ARG A 279     -40.296 -57.588  67.348  1.00200.88           C
ATOM   1907  NH1 ARG A 279     -41.248 -56.991  66.637  1.00200.56           N
ATOM   1908  NH2 ARG A 279     -39.077 -57.070  67.367  1.00200.13           N
ATOM   1909  N   ASN A 280     -44.936 -60.152  70.421  1.00200.41           N
ATOM   1910  CA  ASN A 280     -45.248 -61.445  70.992  1.00200.81           C
ATOM   1911  C   ASN A 280     -43.973 -61.899  71.717  1.00200.96           C
ATOM   1912  O   ASN A 280     -43.614 -63.076  71.719  1.00200.70           O
ATOM   1913  CB  ASN A 280     -45.753 -62.439  69.951  1.00200.83           C
ATOM   1914  CG  ASN A 280     -44.639 -63.037  69.132  1.00201.99           C
ATOM   1915  OD1 ASN A 280     -43.623 -62.386  68.853  1.00203.36           O
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ATOM   1916  ND2 ASN A 280     -44.819 -64.293  68.737  1.00203.39           N
ATOM   1917  N   HIS A 281     -43.271 -60.913  72.286  1.00201.36           N
ATOM   1918  CA  HIS A 281     -42.239 -61.138  73.292  1.00201.63           C
ATOM   1919  C   HIS A 281     -42.974 -61.064  74.613  1.00201.39           C
ATOM   1920  O   HIS A 281     -43.705 -60.096  74.851  1.00201.47           O
ATOM   1921  CB  HIS A 281     -41.143 -60.080  73.229  1.00201.91           C
ATOM   1922  CG  HIS A 281     -39.783 -60.636  73.497  1.00202.85           C
ATOM   1923  ND1 HIS A 281     -39.437 -61.194  74.709  1.00203.51           N
ATOM   1924  CD2 HIS A 281     -38.700 -60.769  72.696  1.00203.71           C
ATOM   1925  CE1 HIS A 281     -38.190 -61.624  74.652  1.00204.01           C
ATOM   1926  NE2 HIS A 281     -37.720 -61.378  73.442  1.00204.37           N
ATOM   1927  N   ARG A 282     -42.779 -62.071  75.466  1.00201.00           N
ATOM   1928  CA  ARG A 282     -43.866 -62.505  76.361  1.00200.74           C
ATOM   1929  C   ARG A 282     -43.659 -62.390  77.892  1.00199.76           C
ATOM   1930  O   ARG A 282     -43.028 -63.231  78.539  1.00199.28           O
ATOM   1931  CB  ARG A 282     -44.354 -63.884  75.900  1.00201.31           C
ATOM   1932  CG  ARG A 282     -44.098 -64.131  74.389  1.00203.64           C
ATOM   1933  CD  ARG A 282     -45.299 -64.675  73.582  1.00208.47           C
ATOM   1934  NE  ARG A 282     -44.864 -65.262  72.299  1.00212.09           N
ATOM   1935  CZ  ARG A 282     -45.475 -66.266  71.652  1.00214.10           C
ATOM   1936  NH1 ARG A 282     -46.574 -66.843  72.149  1.00214.76           N
ATOM   1937  NH2 ARG A 282     -44.968 -66.722  70.507  1.00214.62           N
ATOM   1938  N   GLN A 283     -44.287 -61.351  78.443  1.00198.94           N
ATOM   1939  CA  GLN A 283     -43.788 -60.653  79.624  1.00198.31           C
ATOM   1940  C   GLN A 283     -44.508 -60.875  80.910  1.00197.75           C
ATOM   1941  O   GLN A 283     -45.725 -60.980  80.932  1.00197.61           O
ATOM   1942  CB  GLN A 283     -43.779 -59.146  79.388  1.00198.32           C
ATOM   1943  CG  GLN A 283     -42.414 -58.613  79.033  1.00198.90           C
ATOM   1944  CD  GLN A 283     -42.081 -57.333  79.755  1.00199.31           C
ATOM   1945  OE1 GLN A 283     -42.718 -56.294  79.535  1.00199.43           O
ATOM   1946  NE2 GLN A 283     -41.066 -57.392  80.622  1.00199.57           N
ATOM   1947  N   ALA A 284     -43.717 -60.862  81.982  1.00197.24           N
ATOM   1948  CA  ALA A 284     -44.161 -61.121  83.352  1.00196.62           C
ATOM   1949  C   ALA A 284     -45.095 -60.057  83.917  1.00196.07           C
ATOM   1950  O   ALA A 284     -46.021 -60.380  84.675  1.00196.03           O
ATOM   1951  CB  ALA A 284     -42.948 -61.277  84.266  1.00196.68           C
ATOM   1952  N   SER A 285     -44.839 -58.799  83.554  1.00195.21           N
ATOM   1953  CA  SER A 285     -45.518 -57.666  84.156  1.00194.55           C
ATOM   1954  C   SER A 285     -45.124 -56.377  83.481  1.00194.51           C
ATOM   1955  O   SER A 285     -43.957 -55.977  83.555  1.00194.56           O
ATOM   1956  CB  SER A 285     -45.093 -57.534  85.603  1.00194.51           C
ATOM   1957  OG  SER A 285     -43.908 -56.765  85.681  1.00193.65           O
ATOM   1958  N   LEU A 286     -46.104 -55.706  82.874  1.00194.36           N
ATOM   1959  CA  LEU A 286     -45.901 -54.433  82.156  1.00194.07           C
ATOM   1960  C   LEU A 286     -45.106 -53.431  82.982  1.00193.92           C
ATOM   1961  O   LEU A 286     -45.426 -53.147  84.134  1.00193.89           O
ATOM   1962  CB  LEU A 286     -47.242 -53.814  81.738  1.00194.00           C
ATOM   1963  CG  LEU A 286     -48.400 -54.624  81.113  1.00194.06           C
ATOM   1964  CD1 LEU A 286     -47.966 -55.352  79.846  1.00194.43           C
ATOM   1965  CD2 LEU A 286     -49.135 -55.570  82.100  1.00192.66           C
ATOM   1966  N   GLU A 287     -44.062 -52.896  82.386  1.00193.80           N
ATOM   1967  CA  GLU A 287     -43.104 -52.148  83.153  1.00194.10           C
ATOM   1968  C   GLU A 287     -42.978 -50.750  82.583  1.00193.98           C
ATOM   1969  O   GLU A 287     -42.417 -50.566  81.513  1.00194.25           O
ATOM   1970  CB  GLU A 287     -41.780 -52.890  83.109  1.00194.25           C
ATOM   1971  CG  GLU A 287     -41.364 -53.350  81.713  1.00195.91           C
ATOM   1972  CD  GLU A 287     -39.866 -53.628  81.603  1.00198.47           C
ATOM   1973  OE1 GLU A 287     -39.345 -54.392  82.458  1.00199.40           O
ATOM   1974  OE2 GLU A 287     -39.217 -53.090  80.660  1.00198.92           O
ATOM   1975  N   ILE A 288     -43.515 -49.756  83.279  1.00193.92           N
ATOM   1976  CA  ILE A 288     -43.646 -48.430  82.673  1.00193.91           C
ATOM   1977  C   ILE A 288     -42.749 -47.352  83.272  1.00194.19           C
ATOM   1978  O   ILE A 288     -42.579 -47.250  84.489  1.00194.08           O
ATOM   1979  CB  ILE A 288     -45.102 -47.944  82.647  1.00193.74           C
ATOM   1980  CG1 ILE A 288     -46.046 -49.113  82.399  1.00193.52           C
ATOM   1981  CG2 ILE A 288     -45.287 -46.921  81.550  1.00193.74           C
ATOM   1982  CD1 ILE A 288     -47.490 -48.761  82.561  1.00193.47           C
ATOM   1983  N   SER A 289     -42.200 -46.536  82.376  1.00194.62           N
ATOM   1984  CA  SER A 289     -41.236 -45.485  82.708  1.00195.00           C
ATOM   1985  C   SER A 289     -41.705 -44.088  82.224  1.00195.10           C
ATOM   1986  O   SER A 289     -42.782 -43.987  81.630  1.00194.96           O
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ATOM	1987	CB	SER	A	289	-39.850	-45.857	82.141	1.00195.14	C
ATOM	1988	OG	SER	A	289	-39.890	-46.219	80.766	1.00195.19	O
ATOM	1989	N	PRO	A	290	-40.902	-43.014	82.476	1.00195.25	N
ATOM	1990	CA	PRO	A	290	-41.219	-41.641	82.111	1.00195.09	C
ATOM	1991	C	PRO	A	290	-42.365	-41.501	81.127	1.00194.80	C
ATOM	1992	O	PRO	A	290	-43.510	-41.340	81.563	1.00194.90	O
ATOM	1993	CB	PRO	A	290	-39.900	-41.164	81.500	1.00195.17	C
ATOM	1994	CG	PRO	A	290	-38.833	-41.912	82.329	1.00195.35	C
ATOM	1995	CD	PRO	A	290	-39.565	-43.026	83.100	1.00195.44	C
ATOM	1996	N	ILE	A	291	-42.056	-41.557	79.828	1.00194.26	N
ATOM	1997	CA	ILE	A	291	-43.081	-41.540	78.780	1.00193.60	C
ATOM	1998	C	ILE	A	291	-42.944	-42.770	77.893	1.00193.39	C
ATOM	1999	O	ILE	A	291	-41.967	-42.908	77.162	1.00193.51	O
ATOM	2000	CB	ILE	A	291	-43.078	-40.228	77.944	1.00193.41	C
ATOM	2001	CG1	ILE	A	291	-43.957	-40.386	76.703	1.00193.08	C
ATOM	2002	CG2	ILE	A	291	-41.665	-39.790	77.578	1.00192.89	C
ATOM	2003	CD1	ILE	A	291	-45.435	-40.382	77.007	1.00192.79	C
ATOM	2004	N	THR	A	292	-43.928	-43.661	77.975	1.00192.95	N
ATOM	2005	CA	THR	A	292	-43.813	-44.982	77.370	1.00192.66	C
ATOM	2006	C	THR	A	292	-45.134	-45.432	76.799	1.00192.07	C
ATOM	2007	O	THR	A	292	-46.168	-45.330	77.456	1.00191.71	O
ATOM	2008	CB	THR	A	292	-43.378	-46.070	78.408	1.00192.94	C
ATOM	2009	OG1	THR	A	292	-42.537	-45.491	79.424	1.00193.32	O
ATOM	2010	CG2	THR	A	292	-42.653	-47.260	77.717	1.00193.27	C
ATOM	2011	N	PHE	A	293	-45.093	-45.931	75.569	1.00191.64	N
ATOM	2012	CA	PHE	A	293	-46.222	-46.673	75.021	1.00191.21	C
ATOM	2013	C	PHE	A	293	-45.860	-47.713	73.977	1.00190.60	C
ATOM	2014	O	PHE	A	293	-45.450	-47.396	72.850	1.00190.61	O
ATOM	2015	CB	PHE	A	293	-47.391	-45.782	74.555	1.00191.46	C
ATOM	2016	CG	PHE	A	293	-46.984	-44.445	73.988	1.00192.35	C
ATOM	2017	CD1	PHE	A	293	-46.066	-43.617	74.649	1.00193.40	C
ATOM	2018	CD2	PHE	A	293	-47.573	-43.978	72.818	1.00193.09	C
ATOM	2019	CE1	PHE	A	293	-45.706	-42.365	74.128	1.00193.57	C
ATOM	2020	CE2	PHE	A	293	-47.223	-42.726	72.288	1.00193.66	C
ATOM	2021	CZ	PHE	A	293	-46.287	-41.919	72.946	1.00193.19	C
ATOM	2022	N	LEU	A	294	-45.970	-48.963	74.404	1.00189.74	N
ATOM	2023	CA	LEU	A	294	-46.305	-50.029	73.485	1.00189.04	C
ATOM	2024	C	LEU	A	294	-47.501	-50.755	74.102	1.00188.25	C
ATOM	2025	O	LEU	A	294	-47.893	-50.484	75.242	1.00187.39	O
ATOM	2026	CB	LEU	A	294	-45.092	-50.930	73.092	1.00189.55	C
ATOM	2027	CG	LEU	A	294	-44.992	-51.828	71.814	1.00189.39	C
ATOM	2028	CD1	LEU	A	294	-45.234	-51.115	70.466	1.00188.40	C
ATOM	2029	CD2	LEU	A	294	-43.645	-52.554	71.802	1.00188.48	C
ATOM	2030	N	THR	A	295	-48.058	-51.666	73.311	1.00187.72	N
ATOM	2031	CA	THR	A	295	-49.418	-52.154	73.450	1.00187.10	C
ATOM	2032	C	THR	A	295	-49.460	-53.678	73.603	1.00186.56	C
ATOM	2033	O	THR	A	295	-48.759	-54.405	72.890	1.00186.29	O
ATOM	2034	CB	THR	A	295	-50.271	-51.685	72.240	1.00187.18	C
ATOM	2035	OG1	THR	A	295	-51.482	-52.441	72.177	1.00187.27	O
ATOM	2036	CG2	THR	A	295	-49.493	-51.820	70.908	1.00186.93	C
ATOM	2037	N	ALA	A	296	-50.307	-54.139	74.524	1.00186.01	N
ATOM	2038	CA	ALA	A	296	-50.226	-55.497	75.070	1.00185.48	C
ATOM	2039	C	ALA	A	296	-51.575	-56.157	75.340	1.00185.05	C
ATOM	2040	O	ALA	A	296	-52.596	-55.477	75.495	1.00184.89	O
ATOM	2041	CB	ALA	A	296	-49.397	-55.487	76.343	1.00185.60	C
ATOM	2042	N	GLN	A	297	-51.555	-57.487	75.433	1.00184.48	N
ATOM	2043	CA	GLN	A	297	-52.777	-58.270	75.525	1.00184.20	C
ATOM	2044	C	GLN	A	297	-52.668	-59.404	76.517	1.00183.87	C
ATOM	2045	O	GLN	A	297	-51.553	-59.829	76.826	1.00183.99	O
ATOM	2046	CB	GLN	A	297	-53.111	-58.861	74.170	1.00184.28	C
ATOM	2047	CG	GLN	A	297	-52.210	-59.985	73.754	1.00184.98	C
ATOM	2048	CD	GLN	A	297	-52.860	-60.874	72.724	1.00187.01	C
ATOM	2049	OE1	GLN	A	297	-53.805	-61.615	73.031	1.00187.37	O
ATOM	2050	NE2	GLN	A	297	-52.355	-60.817	71.485	1.00188.03	N
ATOM	2051	N	THR	A	298	-53.834	-59.889	76.977	1.00183.47	N
ATOM	2052	CA	THR	A	298	-53.977	-61.006	77.939	1.00182.95	C
ATOM	2053	C	THR	A	298	-55.212	-61.856	77.713	1.00183.13	C
ATOM	2054	O	THR	A	298	-56.173	-61.425	77.073	1.00183.19	O
ATOM	2055	CB	THR	A	298	-54.235	-60.507	79.328	1.00182.63	C
ATOM	2056	OG1	THR	A	298	-55.174	-59.434	79.249	1.00182.08	O
ATOM	2057	CG2	THR	A	298	-52.972	-60.072	79.981	1.00182.19	C

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ATOM   2058  N   LEU A 299     -55.198 -63.042  78.311  1.00183.18           N
ATOM   2059  CA  LEU A 299     -56.347 -63.926  78.302  1.00183.53           C
ATOM   2060  C   LEU A 299     -57.116 -63.777  79.607  1.00183.91           C
ATOM   2061  O   LEU A 299     -56.937 -62.778  80.302  1.00184.04           O
ATOM   2062  CB  LEU A 299     -55.884 -65.362  78.115  1.00183.46           C
ATOM   2063  CG  LEU A 299     -55.394 -65.825  76.738  1.00183.71           C
ATOM   2064  CD1 LEU A 299     -56.544 -65.884  75.722  1.00183.84           C
ATOM   2065  CD2 LEU A 299     -54.178 -65.025  76.209  1.00183.86           C
ATOM   2066  N   LEU A 300     -57.960 -64.760  79.943  1.00184.39           N
ATOM   2067  CA  LEU A 300     -58.804 -64.701  81.146  1.00184.72           C
ATOM   2068  C   LEU A 300     -59.210 -66.072  81.725  1.00185.41           C
ATOM   2069  O   LEU A 300     -59.093 -67.105  81.058  1.00185.20           O
ATOM   2070  CB  LEU A 300     -60.029 -63.832  80.850  1.00184.38           C
ATOM   2071  CG  LEU A 300     -59.680 -62.414  80.366  1.00183.57           C
ATOM   2072  CD1 LEU A 300     -60.754 -61.779  79.530  1.00182.80           C
ATOM   2073  CD2 LEU A 300     -59.308 -61.517  81.524  1.00183.16           C
ATOM   2074  N   MET A 301     -59.658 -66.074  82.981  1.00186.51           N
ATOM   2075  CA  MET A 301     -60.143 -67.297  83.644  1.00187.69           C
ATOM   2076  C   MET A 301     -61.643 -67.236  84.024  1.00188.10           C
ATOM   2077  O   MET A 301     -62.442 -67.974  83.440  1.00188.03           O
ATOM   2078  CB  MET A 301     -59.261 -67.658  84.848  1.00188.09           C
ATOM   2079  CG  MET A 301     -59.605 -68.995  85.533  1.00189.41           C
ATOM   2080  SD  MET A 301     -58.797 -70.463  84.811  1.00192.97           S
ATOM   2081  CE  MET A 301     -59.150 -71.764  86.019  1.00190.60           C
ATOM   2082  N   ASP A 302     -62.005 -66.385  85.002  1.00188.70           N
ATOM   2083  CA  ASP A 302     -63.423 -66.027  85.322  1.00189.36           C
ATOM   2084  C   ASP A 302     -63.691 -64.815  86.256  1.00189.56           C
ATOM   2085  O   ASP A 302     -62.739 -64.126  86.632  1.00189.65           O
ATOM   2086  CB  ASP A 302     -64.248 -67.235  85.753  1.00189.21           C
ATOM   2087  CG  ASP A 302     -65.412 -67.470  84.826  1.00189.48           C
ATOM   2088  OD1 ASP A 302     -65.178 -67.676  83.615  1.00189.79           O
ATOM   2089  OD2 ASP A 302     -66.566 -67.406  85.294  1.00189.56           O
ATOM   2090  N   LEU A 303     -64.980 -64.586  86.612  1.00189.97           N
ATOM   2091  CA  LEU A 303     -65.533 -63.321  87.268  1.00190.28           C
ATOM   2092  C   LEU A 303     -64.585 -62.538  88.186  1.00190.83           C
ATOM   2093  O   LEU A 303     -64.671 -61.299  88.276  1.00190.78           O
ATOM   2094  CB  LEU A 303     -66.900 -63.543  88.009  1.00190.24           C
ATOM   2095  CG  LEU A 303     -67.795 -62.385  88.571  1.00189.67           C
ATOM   2096  CD1 LEU A 303     -69.229 -62.844  88.819  1.00188.43           C
ATOM   2097  CD2 LEU A 303     -67.278 -61.646  89.831  1.00188.19           C
ATOM   2098  N   GLY A 304     -63.720 -63.278  88.883  1.00191.25           N
ATOM   2099  CA  GLY A 304     -62.716 -62.706  89.763  1.00191.49           C
ATOM   2100  C   GLY A 304     -62.254 -61.396  89.183  1.00191.52           C
ATOM   2101  O   GLY A 304     -61.472 -61.359  88.227  1.00191.15           O
ATOM   2102  N   GLN A 305     -62.794 -60.312  89.720  1.00191.82           N
ATOM   2103  CA  GLN A 305     -62.247 -59.037  89.360  1.00192.11           C
ATOM   2104  C   GLN A 305     -60.817 -59.065  89.856  1.00192.23           C
ATOM   2105  O   GLN A 305     -60.555 -59.170  91.063  1.00192.39           O
ATOM   2106  CB  GLN A 305     -63.070 -57.841  89.868  1.00192.29           C
ATOM   2107  CG  GLN A 305     -63.615 -57.863  91.285  1.00192.07           C
ATOM   2108  CD  GLN A 305     -64.418 -56.602  91.556  1.00191.95           C
ATOM   2109  OE1 GLN A 305     -65.430 -56.344  90.900  1.00191.57           O
ATOM   2110  NE2 GLN A 305     -63.957 -55.798  92.502  1.00191.85           N
ATOM   2111  N   PHE A 306     -59.896 -59.056  88.901  1.00192.28           N
ATOM   2112  CA  PHE A 306     -58.503 -59.202  89.249  1.00192.48           C
ATOM   2113  C   PHE A 306     -57.821 -57.887  89.654  1.00192.65           C
ATOM   2114  O   PHE A 306     -58.115 -56.775  89.167  1.00192.34           O
ATOM   2115  CB  PHE A 306     -57.713 -60.029  88.215  1.00192.52           C
ATOM   2116  CG  PHE A 306     -58.333 -61.385  87.900  1.00192.49           C
ATOM   2117  CD1 PHE A 306     -58.464 -61.816  86.576  1.00192.76           C
ATOM   2118  CD2 PHE A 306     -58.778 -62.226  88.913  1.00192.62           C
ATOM   2119  CE1 PHE A 306     -59.031 -63.051  86.263  1.00192.39           C
ATOM   2120  CE2 PHE A 306     -59.347 -63.467  88.612  1.00192.76           C
ATOM   2121  CZ  PHE A 306     -59.476 -63.873  87.282  1.00192.66           C
ATOM   2122  N   LEU A 307     -56.912 -58.086  90.594  1.00192.99           N
ATOM   2123  CA  LEU A 307     -56.305 -57.080  91.438  1.00193.10           C
ATOM   2124  C   LEU A 307     -55.271 -56.331  90.570  1.00193.22           C
ATOM   2125  O   LEU A 307     -54.567 -56.988  89.793  1.00193.37           O
ATOM   2126  CB  LEU A 307     -55.677 -57.848  92.646  1.00193.11           C
ATOM   2127  CG  LEU A 307     -56.130 -59.314  93.017  1.00191.94           C
ATOM   2128  CD1 LEU A 307     -55.023 -60.183  93.678  1.00190.15           C
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ATOM	2129	CD2	LEU	A	307	-57.447	-59.416	93.829	1.00190.43	C
ATOM	2130	N	LEU	A	308	-55.184	-54.993	90.650	1.00193.34	N
ATOM	2131	CA	LEU	A	308	-54.300	-54.221	89.698	1.00193.43	C
ATOM	2132	C	LEU	A	308	-53.196	-53.306	90.276	1.00193.90	C
ATOM	2133	O	LEU	A	308	-53.411	-52.101	90.476	1.00193.87	O
ATOM	2134	CB	LEU	A	308	-55.128	-53.409	88.691	1.00193.04	C
ATOM	2135	CG	LEU	A	308	-54.593	-53.185	87.275	1.00191.29	C
ATOM	2136	CD1	LEU	A	308	-53.224	-53.771	87.054	1.00189.49	C
ATOM	2137	CD2	LEU	A	308	-55.547	-53.790	86.308	1.00189.92	C
ATOM	2138	N	PHE	A	309	-52.001	-53.867	90.447	1.00194.38	N
ATOM	2139	CA	PHE	A	309	-50.942	-53.232	91.229	1.00195.02	C
ATOM	2140	C	PHE	A	309	-50.157	-52.151	90.513	1.00194.97	C
ATOM	2141	O	PHE	A	309	-50.170	-52.067	89.295	1.00194.96	O
ATOM	2142	CB	PHE	A	309	-49.914	-54.269	91.670	1.00195.56	C
ATOM	2143	CG	PHE	A	309	-50.483	-55.437	92.404	1.00196.50	C
ATOM	2144	CD1	PHE	A	309	-50.671	-56.656	91.747	1.00197.38	C
ATOM	2145	CD2	PHE	A	309	-50.785	-55.343	93.764	1.00198.21	C
ATOM	2146	CE1	PHE	A	309	-51.180	-57.776	92.423	1.00198.69	C
ATOM	2147	CE2	PHE	A	309	-51.300	-56.458	94.470	1.00199.67	C
ATOM	2148	CZ	PHE	A	309	-51.499	-57.683	93.796	1.00198.92	C
ATOM	2149	N	CYS	A	310	-49.472	-51.337	91.312	1.00195.09	N
ATOM	2150	CA	CYS	A	310	-48.287	-50.614	90.892	1.00195.05	C
ATOM	2151	C	CYS	A	310	-47.108	-51.334	91.540	1.00195.00	C
ATOM	2152	O	CYS	A	310	-45.962	-51.175	91.138	1.00194.79	O
ATOM	2153	CB	CYS	A	310	-48.346	-49.165	91.361	1.00195.16	C
ATOM	2154	SG	CYS	A	310	-47.034	-48.115	90.677	1.00195.54	S
ATOM	2155	N	HIS	A	311	-47.424	-52.118	92.564	1.00195.20	N
ATOM	2156	CA	HIS	A	311	-46.495	-53.023	93.238	1.00195.59	C
ATOM	2157	C	HIS	A	311	-45.058	-52.519	93.400	1.00195.54	C
ATOM	2158	O	HIS	A	311	-44.112	-53.156	92.951	1.00195.64	O
ATOM	2159	CB	HIS	A	311	-46.502	-54.388	92.549	1.00195.80	C
ATOM	2160	CG	HIS	A	311	-45.972	-55.504	93.398	1.00197.14	C
ATOM	2161	ND1	HIS	A	311	-44.623	-55.709	93.607	1.00198.44	N
ATOM	2162	CD2	HIS	A	311	-46.609	-56.490	94.075	1.00198.41	C
ATOM	2163	CE1	HIS	A	311	-44.453	-56.768	94.380	1.00199.05	C
ATOM	2164	NE2	HIS	A	311	-45.642	-57.261	94.679	1.00199.18	N
ATOM	2165	N	ILE	A	312	-44.903	-51.363	94.032	1.00195.60	N
ATOM	2166	CA	ILE	A	312	-43.599	-50.924	94.540	1.00195.44	C
ATOM	2167	C	ILE	A	312	-43.824	-50.285	95.918	1.00195.69	C
ATOM	2168	O	ILE	A	312	-44.887	-49.714	96.174	1.00195.75	O
ATOM	2169	CB	ILE	A	312	-42.864	-49.943	93.577	1.00195.24	C
ATOM	2170	CG1	ILE	A	312	-43.395	-50.065	92.144	1.00194.23	C
ATOM	2171	CG2	ILE	A	312	-41.348	-50.147	93.666	1.00195.03	C
ATOM	2172	CD1	ILE	A	312	-42.432	-49.673	91.080	1.00193.39	C
ATOM	2173	N	SER	A	313	-42.845	-50.391	96.811	1.00195.77	N
ATOM	2174	CA	SER	A	313	-43.023	-49.877	98.167	1.00195.98	C
ATOM	2175	C	SER	A	313	-43.455	-48.414	98.209	1.00196.13	C
ATOM	2176	O	SER	A	313	-44.453	-48.082	98.840	1.00196.16	O
ATOM	2177	CB	SER	A	313	-41.767	-50.099	99.010	1.00195.95	C
ATOM	2178	OG	SER	A	313	-41.738	-51.423	99.519	1.00196.00	O
ATOM	2179	N	SER	A	314	-42.717	-47.556	97.511	1.00196.46	N
ATOM	2180	CA	SER	A	314	-42.922	-46.102	97.556	1.00196.85	C
ATOM	2181	C	SER	A	314	-44.234	-45.621	96.924	1.00197.01	C
ATOM	2182	O	SER	A	314	-44.953	-44.792	97.499	1.00197.03	O
ATOM	2183	CB	SER	A	314	-41.740	-45.389	96.885	1.00196.94	C
ATOM	2184	OG	SER	A	314	-41.647	-45.725	95.506	1.00197.02	O
ATOM	2185	N	HIS	A	315	-44.525	-46.135	95.732	1.00197.21	N
ATOM	2186	CA	HIS	A	315	-45.694	-45.723	94.959	1.00197.39	C
ATOM	2187	C	HIS	A	315	-46.972	-46.280	95.578	1.00197.60	C
ATOM	2188	O	HIS	A	315	-48.047	-45.702	95.429	1.00197.42	O
ATOM	2189	CB	HIS	A	315	-45.557	-46.198	93.508	1.00197.31	C
ATOM	2190	CG	HIS	A	315	-44.247	-45.841	92.871	1.00196.79	C
ATOM	2191	ND1	HIS	A	315	-43.123	-46.630	92.989	1.00196.23	N
ATOM	2192	CD2	HIS	A	315	-43.886	-44.785	92.103	1.00196.44	C
ATOM	2193	CE1	HIS	A	315	-42.123	-46.070	92.331	1.00196.29	C
ATOM	2194	NE2	HIS	A	315	-42.560	-44.951	91.781	1.00196.35	N
ATOM	2195	N	GLN	A	316	-46.813	-47.400	96.283	1.00198.01	N
ATOM	2196	CA	GLN	A	316	-47.896	-48.145	96.924	1.00198.41	C
ATOM	2197	C	GLN	A	316	-48.914	-47.257	97.653	1.00198.71	C
ATOM	2198	O	GLN	A	316	-49.894	-46.845	97.043	1.00198.81	O
ATOM	2199	CB	GLN	A	316	-47.320	-49.203	97.875	1.00198.32	C

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ATOM   2200  CG  GLN A 316     -48.193 -50.423  98.055  1.00198.15           C
ATOM   2201  CD  GLN A 316     -48.139 -50.960  99.461  1.00198.00           C
ATOM   2202  OE1 GLN A 316     -47.591 -52.031  99.700  1.00198.28           O
ATOM   2203  NE2 GLN A 316     -48.700 -50.211 100.407  1.00197.95           N
ATOM   2204  N   HIS A 317     -48.685 -46.966  98.937  1.00198.99           N
ATOM   2205  CA  HIS A 317     -49.615 -46.162  99.749  1.00199.28           C
ATOM   2206  C   HIS A 317     -50.478 -45.219  98.882  1.00199.07           C
ATOM   2207  O   HIS A 317     -51.708 -45.329  98.895  1.00199.27           O
ATOM   2208  CB  HIS A 317     -48.853 -45.402 100.854  1.00199.60           C
ATOM   2209  CG  HIS A 317     -49.732 -44.766 101.900  1.00200.91           C
ATOM   2210  ND1 HIS A 317     -50.186 -45.447 103.012  1.00201.66           N
ATOM   2211  CD2 HIS A 317     -50.202 -43.497 102.025  1.00201.93           C
ATOM   2212  CE1 HIS A 317     -50.910 -44.634 103.765  1.00201.75           C
ATOM   2213  NE2 HIS A 317     -50.936 -43.444 103.189  1.00201.92           N
ATOM   2214  N   ASP A 318     -49.839 -44.334  98.106  1.00198.62           N
ATOM   2215  CA  ASP A 318     -50.563 -43.395  97.228  1.00198.03           C
ATOM   2216  C   ASP A 318     -50.680 -43.921  95.791  1.00197.55           C
ATOM   2217  O   ASP A 318     -50.476 -43.184  94.827  1.00197.49           O
ATOM   2218  CB  ASP A 318     -49.911 -41.996  97.265  1.00198.09           C
ATOM   2219  CG  ASP A 318     -48.493 -41.974  96.680  1.00197.77           C
ATOM   2220  OD1 ASP A 318     -48.086 -40.893  96.199  1.00197.13           O
ATOM   2221  OD2 ASP A 318     -47.792 -43.017  96.697  1.00196.94           O
ATOM   2222  N   GLY A 319     -51.048 -45.193  95.663  1.00197.05           N
ATOM   2223  CA  GLY A 319     -50.882 -45.939  94.409  1.00196.41           C
ATOM   2224  C   GLY A 319     -52.088 -46.212  93.526  1.00195.80           C
ATOM   2225  O   GLY A 319     -53.189 -45.695  93.749  1.00195.92           O
ATOM   2226  N   MET A 320     -51.857 -47.051  92.522  1.00194.91           N
ATOM   2227  CA  MET A 320     -52.761 -47.220  91.401  1.00193.89           C
ATOM   2228  C   MET A 320     -53.477 -48.560  91.509  1.00193.24           C
ATOM   2229  O   MET A 320     -52.895 -49.546  91.949  1.00193.11           O
ATOM   2230  CB  MET A 320     -51.949 -47.116  90.106  1.00194.01           C
ATOM   2231  CG  MET A 320     -50.981 -45.909  90.080  1.00194.05           C
ATOM   2232  SD  MET A 320     -49.452 -46.102  89.131  1.00193.92           S
ATOM   2233  CE  MET A 320     -49.986 -45.625  87.486  1.00193.43           C
ATOM   2234  N   GLU A 321     -54.744 -48.584  91.114  1.00192.47           N
ATOM   2235  CA  GLU A 321     -55.592 -49.756  91.286  1.00191.97           C
ATOM   2236  C   GLU A 321     -56.734 -49.752  90.277  1.00191.27           C
ATOM   2237  O   GLU A 321     -57.157 -48.690  89.841  1.00191.06           O
ATOM   2238  CB  GLU A 321     -56.213 -49.735  92.687  1.00192.08           C
ATOM   2239  CG  GLU A 321     -55.360 -50.274  93.859  1.00192.51           C
ATOM   2240  CD  GLU A 321     -56.232 -50.581  95.116  1.00192.89           C
ATOM   2241  OE1 GLU A 321     -57.477 -50.383  95.068  1.00193.68           O
ATOM   2242  OE2 GLU A 321     -55.674 -51.033  96.153  1.00194.14           O
ATOM   2243  N   ALA A 322     -57.244 -50.933  89.932  1.00190.79           N
ATOM   2244  CA  ALA A 322     -58.519 -51.066  89.209  1.00190.57           C
ATOM   2245  C   ALA A 322     -58.944 -52.516  89.007  1.00190.62           C
ATOM   2246  O   ALA A 322     -58.122 -53.432  89.032  1.00190.58           O
ATOM   2247  CB  ALA A 322     -58.449 -50.378  87.894  1.00190.67           C
ATOM   2248  N   TYR A 323     -60.231 -52.733  88.786  1.00190.74           N
ATOM   2249  CA  TYR A 323     -60.716 -54.107  88.727  1.00191.22           C
ATOM   2250  C   TYR A 323     -60.921 -54.650  87.310  1.00191.37           C
ATOM   2251  O   TYR A 323     -60.533 -54.001  86.349  1.00191.42           O
ATOM   2252  CB  TYR A 323     -61.939 -54.286  89.643  1.00191.44           C
ATOM   2253  CG  TYR A 323     -61.543 -54.364  91.112  1.00191.55           C
ATOM   2254  CD1 TYR A 323     -61.861 -53.341  92.006  1.00191.43           C
ATOM   2255  CD2 TYR A 323     -60.812 -55.450  91.594  1.00191.63           C
ATOM   2256  CE1 TYR A 323     -61.475 -53.411  93.342  1.00191.17           C
ATOM   2257  CE2 TYR A 323     -60.427 -55.528  92.920  1.00191.56           C
ATOM   2258  CZ  TYR A 323     -60.756 -54.509  93.785  1.00191.40           C
ATOM   2259  OH  TYR A 323     -60.354 -54.607  95.094  1.00191.75           O
ATOM   2260  N   VAL A 324     -61.488 -55.853  87.194  1.00191.66           N
ATOM   2261  CA  VAL A 324     -61.688 -56.541  85.907  1.00191.96           C
ATOM   2262  C   VAL A 324     -62.677 -57.718  85.989  1.00192.77           C
ATOM   2263  O   VAL A 324     -62.268 -58.858  86.193  1.00192.72           O
ATOM   2264  CB  VAL A 324     -60.352 -57.048  85.326  1.00191.62           C
ATOM   2265  CG1 VAL A 324     -60.061 -56.381  84.022  1.00191.12           C
ATOM   2266  CG2 VAL A 324     -59.211 -56.830  86.305  1.00191.17           C
ATOM   2267  N   LYS A 325     -63.968 -57.444  85.783  1.00193.85           N
ATOM   2268  CA  LYS A 325     -65.068 -58.402  86.095  1.00195.17           C
ATOM   2269  C   LYS A 325     -65.246 -59.677  85.207  1.00195.44           C
ATOM   2270  O   LYS A 325     -66.273 -60.359  85.313  1.00195.65           O
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ATOM   2271  CB  LYS A 325     -66.433 -57.668  86.212  1.00195.16           C
ATOM   2272  CG  LYS A 325     -66.453 -56.327  86.970  1.00195.40           C
ATOM   2273  CD  LYS A 325     -67.896 -55.817  87.148  1.00195.29           C
ATOM   2274  CE  LYS A 325     -68.041 -54.322  86.790  1.00195.32           C
ATOM   2275  NZ  LYS A 325     -67.357 -53.364  87.718  1.00194.77           N
ATOM   2276  N   VAL A 326     -64.270 -59.985  84.350  1.00195.84           N
ATOM   2277  CA  VAL A 326     -64.247 -61.199  83.501  1.00196.24           C
ATOM   2278  C   VAL A 326     -65.551 -62.028  83.437  1.00197.19           C
ATOM   2279  O   VAL A 326     -65.604 -63.121  83.993  1.00197.26           O
ATOM   2280  CB  VAL A 326     -63.108 -62.142  83.971  1.00196.17           C
ATOM   2281  CG1 VAL A 326     -62.628 -63.008  82.849  1.00196.24           C
ATOM   2282  CG2 VAL A 326     -61.948 -61.360  84.519  1.00195.94           C
ATOM   2283  N   ASP A 327     -66.591 -61.547  82.759  1.00198.32           N
ATOM   2284  CA  ASP A 327     -67.893 -62.244  82.834  1.00199.70           C
ATOM   2285  C   ASP A 327     -68.253 -63.194  81.675  1.00200.28           C
ATOM   2286  O   ASP A 327     -67.532 -63.272  80.691  1.00200.39           O
ATOM   2287  CB  ASP A 327     -69.038 -61.258  83.093  1.00199.93           C
ATOM   2288  CG  ASP A 327     -70.184 -61.897  83.885  1.00201.58           C
ATOM   2289  OD1 ASP A 327     -70.070 -62.021  85.129  1.00203.41           O
ATOM   2290  OD2 ASP A 327     -71.198 -62.294  83.267  1.00203.28           O
ATOM   2291  N   SER A 328     -69.366 -63.924  81.830  1.00201.29           N
ATOM   2292  CA  SER A 328     -69.950 -64.806  80.802  1.00202.24           C
ATOM   2293  C   SER A 328     -70.329 -63.967  79.585  1.00202.90           C
ATOM   2294  O   SER A 328     -70.229 -62.739  79.634  1.00202.85           O
ATOM   2295  CB  SER A 328     -71.206 -65.521  81.337  1.00202.40           C
ATOM   2296  OG  SER A 328     -71.189 -65.720  82.747  1.00202.57           O
ATOM   2297  N   CYS A 329     -70.801 -64.600  78.509  1.00203.91           N
ATOM   2298  CA  CYS A 329     -70.847 -63.880  77.226  1.00205.02           C
ATOM   2299  C   CYS A 329     -72.154 -63.498  76.509  1.00205.76           C
ATOM   2300  O   CYS A 329     -73.132 -64.256  76.531  1.00205.72           O
ATOM   2301  CB  CYS A 329     -69.873 -64.497  76.233  1.00204.85           C
ATOM   2302  SG  CYS A 329     -68.166 -64.026  76.613  1.00205.82           S
ATOM   2303  N   PRO A 330     -72.148 -62.303  75.872  1.00206.63           N
ATOM   2304  CA  PRO A 330     -73.126 -61.848  74.879  1.00207.35           C
ATOM   2305  C   PRO A 330     -73.191 -62.689  73.585  1.00208.07           C
ATOM   2306  O   PRO A 330     -74.264 -63.204  73.265  1.00208.17           O
ATOM   2307  CB  PRO A 330     -72.667 -60.413  74.563  1.00207.32           C
ATOM   2308  CG  PRO A 330     -71.866 -59.997  75.751  1.00206.97           C
ATOM   2309  CD  PRO A 330     -71.163 -61.242  76.167  1.00206.61           C
ATOM   2310  N   GLU A 331     -72.064 -62.835  72.871  1.00208.85           N
ATOM   2311  CA  GLU A 331     -72.027 -63.396  71.489  1.00209.54           C
ATOM   2312  C   GLU A 331     -72.593 -64.826  71.265  1.00209.98           C
ATOM   2313  O   GLU A 331     -72.608 -65.334  70.132  1.00210.02           O
ATOM   2314  CB  GLU A 331     -70.624 -63.218  70.864  1.00209.51           C
ATOM   2315  CG  GLU A 331     -70.549 -63.317  69.317  1.00209.70           C
ATOM   2316  CD  GLU A 331     -71.527 -62.398  68.565  1.00209.70           C
ATOM   2317  OE1 GLU A 331     -71.750 -62.631  67.354  1.00209.63           O
ATOM   2318  OE2 GLU A 331     -72.071 -61.447  69.170  1.00209.46           O
ATOM   2319  N   GLU A 332     -73.055 -65.466  72.339  1.00210.51           N
ATOM   2320  CA  GLU A 332     -73.971 -66.607  72.225  1.00210.96           C
ATOM   2321  C   GLU A 332     -75.374 -66.208  72.746  1.00211.32           C
ATOM   2322  O   GLU A 332     -75.550 -66.029  73.964  1.00211.46           O
ATOM   2323  CB  GLU A 332     -73.438 -67.843  72.967  1.00210.91           C
ATOM   2324  CG  GLU A 332     -72.418 -68.671  72.192  1.00210.70           C
ATOM   2325  CD  GLU A 332     -70.983 -68.338  72.556  1.00210.59           C
ATOM   2326  OE1 GLU A 332     -70.265 -69.259  73.005  1.00210.54           O
ATOM   2327  OE2 GLU A 332     -70.574 -67.165  72.402  1.00210.38           O
ATOM   2328  N   PRO A 333     -76.366 -66.039  71.825  1.00211.50           N
ATOM   2329  CA  PRO A 333     -77.746 -65.692  72.213  1.00211.46           C
ATOM   2330  C   PRO A 333     -78.610 -66.922  72.509  1.00211.43           C
ATOM   2331  O   PRO A 333     -78.661 -67.387  73.650  1.00211.39           O
ATOM   2332  CB  PRO A 333     -78.280 -64.960  70.977  1.00211.39           C
ATOM   2333  CG  PRO A 333     -77.540 -65.580  69.819  1.00211.46           C
ATOM   2334  CD  PRO A 333     -76.233 -66.155  70.354  1.00211.53           C
ATOM   2335  N   LYS A 377     -40.696 -90.255  76.524  1.00194.03           N
ATOM   2336  CA  LYS A 377     -40.070 -88.929  76.581  1.00194.11           C
ATOM   2337  C   LYS A 377     -41.125 -87.852  76.918  1.00193.94           C
ATOM   2338  O   LYS A 377     -41.138 -86.749  76.350  1.00193.72           O
ATOM   2339  CB  LYS A 377     -39.313 -88.626  75.267  1.00194.26           C
ATOM   2340  CG  LYS A 377     -38.637 -89.851  74.566  1.00194.32           C
ATOM   2341  CD  LYS A 377     -37.566 -90.563  75.417  1.00194.19           C
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ATOM	2342	CE	LYS	A	377	-36.230	-89.823	75.398	1.00194.12	C
ATOM	2343	NZ	LYS	A	377	-35.330	-90.220	76.523	1.00193.98	N
ATOM	2344	N	HIS	A	378	-41.978	-88.199	77.886	1.00193.88	N
ATOM	2345	CA	HIS	A	378	-43.228	-87.491	78.200	1.00193.78	C
ATOM	2346	C	HIS	A	378	-43.074	-86.222	79.059	1.00193.89	C
ATOM	2347	O	HIS	A	378	-42.047	-85.545	78.958	1.00194.00	O
ATOM	2348	CB	HIS	A	378	-44.238	-88.472	78.815	1.00193.55	C
ATOM	2349	CG	HIS	A	378	-45.107	-89.145	77.802	1.00193.15	C
ATOM	2350	ND1	HIS	A	378	-45.576	-88.495	76.679	1.00192.87	N
ATOM	2351	CD2	HIS	A	378	-45.601	-90.402	77.743	1.00192.88	C
ATOM	2352	CE1	HIS	A	378	-46.310	-89.327	75.965	1.00192.77	C
ATOM	2353	NE2	HIS	A	378	-46.344	-90.490	76.590	1.00193.05	N
ATOM	2354	N	PRO	A	379	-44.110	-85.868	79.864	1.00193.95	N
ATOM	2355	CA	PRO	A	379	-44.017	-84.727	80.781	1.00194.05	C
ATOM	2356	C	PRO	A	379	-43.601	-85.137	82.192	1.00194.20	C
ATOM	2357	O	PRO	A	379	-44.093	-86.136	82.719	1.00194.25	O
ATOM	2358	CB	PRO	A	379	-45.445	-84.180	80.798	1.00194.04	C
ATOM	2359	CG	PRO	A	379	-46.328	-85.348	80.373	1.00193.93	C
ATOM	2360	CD	PRO	A	379	-45.447	-86.486	79.938	1.00193.83	C
ATOM	2361	N	LYS	A	380	-42.710	-84.361	82.799	1.00194.40	N
ATOM	2362	CA	LYS	A	380	-42.096	-84.751	84.068	1.00194.74	C
ATOM	2363	C	LYS	A	380	-43.049	-84.555	85.246	1.00194.94	C
ATOM	2364	O	LYS	A	380	-44.150	-84.006	85.093	1.00194.89	O
ATOM	2365	CB	LYS	A	380	-40.773	-83.996	84.318	1.00194.76	C
ATOM	2366	CG	LYS	A	380	-40.081	-83.423	83.071	1.00194.96	C
ATOM	2367	CD	LYS	A	380	-39.003	-84.323	82.478	1.00194.87	C
ATOM	2368	CE	LYS	A	380	-38.641	-83.867	81.061	1.00194.38	C
ATOM	2369	NZ	LYS	A	380	-37.184	-83.976	80.781	1.00193.98	N
ATOM	2370	N	THR	A	381	-42.604	-85.020	86.413	1.00195.27	N
ATOM	2371	CA	THR	A	381	-43.335	-84.870	87.669	1.00195.50	C
ATOM	2372	C	THR	A	381	-42.330	-84.664	88.842	1.00195.70	C
ATOM	2373	O	THR	A	381	-41.840	-85.625	89.444	1.00195.62	O
ATOM	2374	CB	THR	A	381	-44.394	-86.027	87.845	1.00195.50	C
ATOM	2375	OG1	THR	A	381	-45.206	-85.796	89.000	1.00195.52	O
ATOM	2376	CG2	THR	A	381	-43.748	-87.428	87.894	1.00195.44	C
ATOM	2377	N	TRP	A	382	-42.025	-83.387	89.123	1.00196.07	N
ATOM	2378	CA	TRP	A	382	-40.924	-82.953	90.025	1.00196.40	C
ATOM	2379	C	TRP	A	382	-41.264	-83.016	91.511	1.00196.38	C
ATOM	2380	O	TRP	A	382	-42.428	-82.954	91.890	1.00196.55	O
ATOM	2381	CB	TRP	A	382	-40.451	-81.525	89.675	1.00196.70	C
ATOM	2382	CG	TRP	A	382	-39.824	-81.410	88.303	1.00197.29	C
ATOM	2383	CD1	TRP	A	382	-40.478	-81.375	87.102	1.00197.92	C
ATOM	2384	CD2	TRP	A	382	-38.427	-81.324	87.993	1.00197.75	C
ATOM	2385	NE1	TRP	A	382	-39.578	-81.277	86.067	1.00197.91	N
ATOM	2386	CE2	TRP	A	382	-38.312	-81.248	86.586	1.00197.86	C
ATOM	2387	CE3	TRP	A	382	-37.261	-81.306	88.766	1.00198.15	C
ATOM	2388	CZ2	TRP	A	382	-37.078	-81.155	85.936	1.00197.80	C
ATOM	2389	CZ3	TRP	A	382	-36.026	-81.215	88.114	1.00197.97	C
ATOM	2390	CH2	TRP	A	382	-35.949	-81.141	86.715	1.00197.67	C
ATOM	2391	N	VAL	A	383	-40.244	-83.132	92.356	1.00196.32	N
ATOM	2392	CA	VAL	A	383	-40.471	-83.228	93.798	1.00196.17	C
ATOM	2393	C	VAL	A	383	-39.494	-82.470	94.673	1.00196.39	C
ATOM	2394	O	VAL	A	383	-38.271	-82.571	94.533	1.00196.32	O
ATOM	2395	CB	VAL	A	383	-40.552	-84.675	94.295	1.00196.01	C
ATOM	2396	CG1	VAL	A	383	-41.982	-85.011	94.614	1.00195.59	C
ATOM	2397	CG2	VAL	A	383	-39.915	-85.659	93.285	1.00195.97	C
ATOM	2398	N	HIS	A	384	-40.071	-81.708	95.592	1.00196.73	N
ATOM	2399	CA	HIS	A	384	-39.314	-80.856	96.490	1.00197.10	C
ATOM	2400	C	HIS	A	384	-39.817	-80.894	97.927	1.00196.77	C
ATOM	2401	O	HIS	A	384	-40.946	-80.479	98.230	1.00196.91	O
ATOM	2402	CB	HIS	A	384	-39.337	-79.424	95.988	1.00197.35	C
ATOM	2403	CG	HIS	A	384	-38.615	-79.239	94.699	1.00199.41	C
ATOM	2404	ND1	HIS	A	384	-37.346	-78.708	94.629	1.00201.50	N
ATOM	2405	CD2	HIS	A	384	-38.973	-79.536	93.427	1.00201.38	C
ATOM	2406	CE1	HIS	A	384	-36.959	-78.666	93.365	1.00202.72	C
ATOM	2407	NE2	HIS	A	384	-37.927	-79.166	92.615	1.00202.72	N
ATOM	2408	N	TYR	A	385	-38.964	-81.409	98.805	1.00196.11	N
ATOM	2409	CA	TYR	A	385	-39.164	-81.265	100.223	1.00195.11	C
ATOM	2410	C	TYR	A	385	-38.325	-80.064	100.669	1.00194.39	C
ATOM	2411	O	TYR	A	385	-37.095	-80.147	100.739	1.00194.04	O
ATOM	2412	CB	TYR	A	385	-38.721	-82.526	100.935	1.00195.28	C

ATOM	2413	CG	TYR	A	385	-39.390	-83.811	100.487	1.00195.50	C
ATOM	2414	CD1	TYR	A	385	-38.733	-84.699	99.636	1.00195.63	C
ATOM	2415	CD2	TYR	A	385	-40.657	-84.168	100.956	1.00195.83	C
ATOM	2416	CE1	TYR	A	385	-39.327	-85.906	99.251	1.00195.70	C
ATOM	2417	CE2	TYR	A	385	-41.257	-85.376	100.579	1.00195.80	C
ATOM	2418	CZ	TYR	A	385	-40.586	-86.234	99.726	1.00195.61	C
ATOM	2419	OH	TYR	A	385	-41.171	-87.417	99.346	1.00195.54	O
ATOM	2420	N	ILE	A	386	-39.003	-78.944	100.923	1.00193.52	N
ATOM	2421	CA	ILE	A	386	-38.372	-77.708	101.386	1.00192.60	C
ATOM	2422	C	ILE	A	386	-38.918	-77.324	102.748	1.00192.29	C
ATOM	2423	O	ILE	A	386	-40.114	-77.465	103.012	1.00192.21	O
ATOM	2424	CB	ILE	A	386	-38.644	-76.534	100.445	1.00192.38	C
ATOM	2425	CG1	ILE	A	386	-38.274	-76.901	99.024	1.00192.11	C
ATOM	2426	CG2	ILE	A	386	-37.863	-75.301	100.876	1.00192.12	C
ATOM	2427	CD1	ILE	A	386	-38.755	-75.898	98.043	1.00192.83	C
ATOM	2428	N	ALA	A	387	-38.027	-76.836	103.602	1.00191.75	N
ATOM	2429	CA	ALA	A	387	-38.394	-76.313	104.896	1.00191.24	C
ATOM	2430	C	ALA	A	387	-38.030	-74.851	104.901	1.00191.01	C
ATOM	2431	O	ALA	A	387	-37.080	-74.455	104.237	1.00190.94	O
ATOM	2432	CB	ALA	A	387	-37.633	-77.037	105.977	1.00191.29	C
ATOM	2433	N	ALA	A	388	-38.797	-74.042	105.619	1.00190.93	N
ATOM	2434	CA	ALA	A	388	-38.349	-72.695	105.949	1.00191.23	C
ATOM	2435	C	ALA	A	388	-37.667	-72.814	107.295	1.00191.45	C
ATOM	2436	O	ALA	A	388	-38.192	-73.470	108.197	1.00191.71	O
ATOM	2437	CB	ALA	A	388	-39.506	-71.730	106.015	1.00191.20	C
ATOM	2438	N	GLU	A	389	-36.498	-72.201	107.439	1.00191.58	N
ATOM	2439	CA	GLU	A	389	-35.643	-72.541	108.565	1.00191.88	C
ATOM	2440	C	GLU	A	389	-34.699	-71.412	108.956	1.00191.80	C
ATOM	2441	O	GLU	A	389	-34.112	-70.760	108.096	1.00191.78	O
ATOM	2442	CB	GLU	A	389	-34.905	-73.842	108.235	1.00191.93	C
ATOM	2443	CG	GLU	A	389	-33.646	-74.115	108.997	1.00193.45	C
ATOM	2444	CD	GLU	A	389	-32.665	-74.930	108.176	1.00195.72	C
ATOM	2445	OE1	GLU	A	389	-32.186	-75.961	108.703	1.00197.25	O
ATOM	2446	OE2	GLU	A	389	-32.379	-74.546	107.008	1.00195.75	O
ATOM	2447	N	GLU	A	390	-34.580	-71.189	110.263	1.00191.87	N
ATOM	2448	CA	GLU	A	390	-33.781	-70.107	110.819	1.00191.88	C
ATOM	2449	C	GLU	A	390	-32.323	-70.538	110.917	1.00192.36	C
ATOM	2450	O	GLU	A	390	-32.025	-71.694	111.238	1.00192.44	O
ATOM	2451	CB	GLU	A	390	-34.315	-69.709	112.198	1.00191.87	C
ATOM	2452	CG	GLU	A	390	-35.825	-69.942	112.386	1.00191.50	C
ATOM	2453	CD	GLU	A	390	-36.419	-69.342	113.671	1.00191.47	C
ATOM	2454	OE1	GLU	A	390	-35.724	-69.278	114.708	1.00191.59	O
ATOM	2455	OE2	GLU	A	390	-37.603	-68.944	113.652	1.00190.07	O
ATOM	2456	N	GLU	A	391	-31.426	-69.600	110.635	1.00192.87	N
ATOM	2457	CA	GLU	A	391	-29.983	-69.842	110.602	1.00193.77	C
ATOM	2458	C	GLU	A	391	-29.302	-68.532	111.024	1.00193.99	C
ATOM	2459	O	GLU	A	391	-29.950	-67.680	111.623	1.00194.19	O
ATOM	2460	CB	GLU	A	391	-29.567	-70.253	109.181	1.00193.69	C
ATOM	2461	CG	GLU	A	391	-28.400	-71.265	109.074	1.00194.58	C
ATOM	2462	CD	GLU	A	391	-27.924	-71.537	107.616	1.00194.66	C
ATOM	2463	OE1	GLU	A	391	-28.515	-70.992	106.650	1.00195.23	O
ATOM	2464	OE2	GLU	A	391	-26.941	-72.304	107.442	1.00195.83	O
ATOM	2465	N	ASP	A	392	-28.010	-68.372	110.734	1.00194.42	N
ATOM	2466	CA	ASP	A	392	-27.319	-67.082	110.890	1.00194.82	C
ATOM	2467	C	ASP	A	392	-26.716	-66.665	109.551	1.00195.15	C
ATOM	2468	O	ASP	A	392	-26.310	-67.520	108.765	1.00195.14	O
ATOM	2469	CB	ASP	A	392	-26.200	-67.170	111.940	1.00194.83	C
ATOM	2470	CG	ASP	A	392	-26.719	-67.165	113.371	1.00194.96	C
ATOM	2471	OD1	ASP	A	392	-27.483	-68.083	113.727	1.00195.88	O
ATOM	2472	OD2	ASP	A	392	-26.340	-66.260	114.152	1.00194.34	O
ATOM	2473	N	TRP	A	393	-26.634	-65.364	109.286	1.00195.67	N
ATOM	2474	CA	TRP	A	393	-26.022	-64.917	108.036	1.00196.22	C
ATOM	2475	C	TRP	A	393	-24.877	-63.923	108.170	1.00196.34	C
ATOM	2476	O	TRP	A	393	-25.080	-62.802	108.627	1.00196.21	O
ATOM	2477	CB	TRP	A	393	-27.068	-64.373	107.063	1.00196.66	C
ATOM	2478	CG	TRP	A	393	-26.841	-64.831	105.647	1.00197.26	C
ATOM	2479	CD1	TRP	A	393	-27.671	-64.635	104.581	1.00197.45	C
ATOM	2480	CD2	TRP	A	393	-25.729	-65.602	105.151	1.00198.40	C
ATOM	2481	NE1	TRP	A	393	-27.142	-65.213	103.450	1.00197.41	N
ATOM	2482	CE2	TRP	A	393	-25.954	-65.815	103.769	1.00198.20	C
ATOM	2483	CE3	TRP	A	393	-24.559	-66.137	105.744	1.00198.84	C

ATOM	2484	CZ2	TRP	A	393	-25.052	-66.530	102.962	1.00198.21	C
ATOM	2485	CZ3	TRP	A	393	-23.656	-66.848	104.945	1.00197.95	C
ATOM	2486	CH2	TRP	A	393	-23.912	-67.038	103.567	1.00198.13	C
ATOM	2487	N	ASP	A	394	-23.681	-64.346	107.759	1.00196.75	N
ATOM	2488	CA	ASP	A	394	-22.525	-63.448	107.609	1.00197.30	C
ATOM	2489	C	ASP	A	394	-22.453	-62.985	106.161	1.00197.53	C
ATOM	2490	O	ASP	A	394	-21.992	-63.727	105.289	1.00197.58	O
ATOM	2491	CB	ASP	A	394	-21.203	-64.142	108.028	1.00197.42	C
ATOM	2492	CG	ASP	A	394	-19.999	-63.160	108.162	1.00197.37	C
ATOM	2493	OD1	ASP	A	394	-19.965	-62.121	107.459	1.00196.96	O
ATOM	2494	OD2	ASP	A	394	-19.073	-63.447	108.970	1.00196.85	O
ATOM	2495	N	TYR	A	395	-22.910	-61.760	105.913	1.00197.87	N
ATOM	2496	CA	TYR	A	395	-22.931	-61.200	104.559	1.00198.34	C
ATOM	2497	C	TYR	A	395	-21.532	-61.079	103.929	1.00199.05	C
ATOM	2498	O	TYR	A	395	-21.397	-61.174	102.707	1.00199.12	O
ATOM	2499	CB	TYR	A	395	-23.646	-59.830	104.510	1.00197.83	C
ATOM	2500	CG	TYR	A	395	-25.150	-59.820	104.782	1.00197.13	C
ATOM	2501	CD1	TYR	A	395	-25.999	-60.800	104.258	1.00196.72	C
ATOM	2502	CD2	TYR	A	395	-25.725	-58.799	105.535	1.00196.25	C
ATOM	2503	CE1	TYR	A	395	-27.374	-60.771	104.502	1.00196.14	C
ATOM	2504	CE2	TYR	A	395	-27.093	-58.771	105.787	1.00195.86	C
ATOM	2505	CZ	TYR	A	395	-27.909	-59.753	105.267	1.00196.03	C
ATOM	2506	OH	TYR	A	395	-29.256	-59.717	105.524	1.00195.92	O
ATOM	2507	N	ALA	A	396	-20.504	-60.867	104.755	1.00199.99	N
ATOM	2508	CA	ALA	A	396	-19.140	-60.605	104.256	1.00200.91	C
ATOM	2509	C	ALA	A	396	-18.051	-61.396	104.997	1.00201.51	C
ATOM	2510	O	ALA	A	396	-17.217	-60.815	105.707	1.00201.61	O
ATOM	2511	CB	ALA	A	396	-18.835	-59.095	104.273	1.00200.88	C
ATOM	2512	N	PRO	A	397	-18.043	-62.726	104.816	1.00202.09	N
ATOM	2513	CA	PRO	A	397	-17.157	-63.576	105.594	1.00202.72	C
ATOM	2514	C	PRO	A	397	-15.721	-63.518	105.085	1.00203.34	C
ATOM	2515	O	PRO	A	397	-14.855	-62.947	105.756	1.00203.27	O
ATOM	2516	CB	PRO	A	397	-17.749	-64.980	105.393	1.00202.81	C
ATOM	2517	CG	PRO	A	397	-19.010	-64.794	104.568	1.00202.38	C
ATOM	2518	CD	PRO	A	397	-18.849	-63.509	103.867	1.00201.99	C
ATOM	2519	N	LEU	A	398	-15.497	-64.104	103.906	1.00204.27	N
ATOM	2520	CA	LEU	A	398	-14.188	-64.150	103.236	1.00204.81	C
ATOM	2521	C	LEU	A	398	-13.389	-62.866	103.523	1.00205.04	C
ATOM	2522	O	LEU	A	398	-12.340	-62.916	104.184	1.00204.99	O
ATOM	2523	CB	LEU	A	398	-14.380	-64.403	101.711	1.00205.11	C
ATOM	2524	CG	LEU	A	398	-13.337	-64.853	100.643	1.00205.05	C
ATOM	2525	CD1	LEU	A	398	-12.637	-63.679	99.904	1.00205.38	C
ATOM	2526	CD2	LEU	A	398	-12.306	-65.898	101.143	1.00205.52	C
ATOM	2527	N	VAL	A	399	-13.922	-61.726	103.065	1.00205.16	N
ATOM	2528	CA	VAL	A	399	-13.262	-60.421	103.202	1.00205.03	C
ATOM	2529	C	VAL	A	399	-13.887	-59.567	104.320	1.00204.93	C
ATOM	2530	O	VAL	A	399	-15.113	-59.505	104.467	1.00204.71	O
ATOM	2531	CB	VAL	A	399	-13.161	-59.658	101.819	1.00205.01	C
ATOM	2532	CG1	VAL	A	399	-14.535	-59.303	101.262	1.00204.88	C
ATOM	2533	CG2	VAL	A	399	-12.253	-58.423	101.915	1.00204.93	C
ATOM	2534	N	LEU	A	400	-13.012	-58.952	105.118	1.00204.93	N
ATOM	2535	CA	LEU	A	400	-13.384	-58.004	106.173	1.00204.90	C
ATOM	2536	C	LEU	A	400	-12.197	-57.079	106.493	1.00204.85	C
ATOM	2537	O	LEU	A	400	-11.064	-57.546	106.606	1.00204.80	O
ATOM	2538	CB	LEU	A	400	-13.897	-58.735	107.435	1.00204.88	C
ATOM	2539	CG	LEU	A	400	-13.041	-59.707	108.267	1.00204.70	C
ATOM	2540	CD1	LEU	A	400	-13.669	-59.931	109.643	1.00204.49	C
ATOM	2541	CD2	LEU	A	400	-12.815	-61.040	107.560	1.00204.25	C
ATOM	2542	N	ALA	A	401	-12.451	-55.773	106.604	1.00204.83	N
ATOM	2543	CA	ALA	A	401	-11.406	-54.798	106.972	1.00204.88	C
ATOM	2544	C	ALA	A	401	-11.935	-53.452	107.527	1.00204.95	C
ATOM	2545	O	ALA	A	401	-11.421	-52.383	107.157	1.00204.85	O
ATOM	2546	CB	ALA	A	401	-10.453	-54.561	105.793	1.00204.85	C
ATOM	2547	N	PRO	A	402	-12.935	-53.499	108.443	1.00205.03	N
ATOM	2548	CA	PRO	A	402	-13.609	-52.277	108.911	1.00205.00	C
ATOM	2549	C	PRO	A	402	-13.004	-51.564	110.142	1.00204.92	C
ATOM	2550	O	PRO	A	402	-12.139	-52.116	110.837	1.00204.96	O
ATOM	2551	CB	PRO	A	402	-15.013	-52.788	109.262	1.00205.02	C
ATOM	2552	CG	PRO	A	402	-14.791	-54.205	109.718	1.00204.95	C
ATOM	2553	CD	PRO	A	402	-13.502	-54.701	109.094	1.00205.04	C
ATOM	2554	N	ASP	A	403	-13.466	-50.329	110.365	1.00204.69	N

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ATOM   2555  CA  ASP A 403     -13.345 -49.604 111.644  1.00204.31           C
ATOM   2556  C   ASP A 403     -14.412 -48.487 111.676  1.00204.01           C
ATOM   2557  O   ASP A 403     -15.605 -48.781 111.818  1.00204.10           O
ATOM   2558  CB  ASP A 403     -11.927 -49.064 111.869  1.00204.29           C
ATOM   2559  CG  ASP A 403     -11.475 -49.205 113.316  1.00204.27           C
ATOM   2560  OD1 ASP A 403     -11.915 -50.164 113.992  1.00204.06           O
ATOM   2561  OD2 ASP A 403     -10.675 -48.364 113.780  1.00204.37           O
ATOM   2562  N   ASP A 404     -13.991 -47.225 111.565  1.00203.44           N
ATOM   2563  CA  ASP A 404     -14.872 -46.148 111.094  1.00202.88           C
ATOM   2564  C   ASP A 404     -14.277 -45.715 109.765  1.00202.43           C
ATOM   2565  O   ASP A 404     -14.599 -44.660 109.216  1.00202.21           O
ATOM   2566  CB  ASP A 404     -14.977 -44.987 112.100  1.00202.94           C
ATOM   2567  CG  ASP A 404     -13.640 -44.305 112.379  1.00203.17           C
ATOM   2568  OD1 ASP A 404     -13.651 -43.200 112.971  1.00203.21           O
ATOM   2569  OD2 ASP A 404     -12.581 -44.862 112.020  1.00203.60           O
ATOM   2570  N   ARG A 405     -13.426 -46.609 109.263  1.00202.06           N
ATOM   2571  CA  ARG A 405     -12.523 -46.400 108.142  1.00201.82           C
ATOM   2572  C   ARG A 405     -13.224 -46.158 106.805  1.00201.82           C
ATOM   2573  O   ARG A 405     -12.583 -45.730 105.842  1.00201.77           O
ATOM   2574  CB  ARG A 405     -11.592 -47.619 108.025  1.00201.69           C
ATOM   2575  CG  ARG A 405     -10.108 -47.289 107.939  1.00201.15           C
ATOM   2576  CD  ARG A 405      -9.648 -46.997 106.517  1.00200.18           C
ATOM   2577  NE  ARG A 405      -8.517 -46.069 106.504  1.00199.39           N
ATOM   2578  CZ  ARG A 405      -8.561 -44.821 106.043  1.00198.68           C
ATOM   2579  NH1 ARG A 405      -9.679 -44.333 105.525  1.00198.33           N
ATOM   2580  NH2 ARG A 405      -7.476 -44.060 106.087  1.00198.35           N
ATOM   2581  N   SER A 406     -14.529 -46.430 106.743  1.00201.83           N
ATOM   2582  CA  SER A 406     -15.283 -46.357 105.479  1.00201.92           C
ATOM   2583  C   SER A 406     -16.806 -46.225 105.644  1.00201.83           C
ATOM   2584  O   SER A 406     -17.322 -46.160 106.766  1.00201.85           O
ATOM   2585  CB  SER A 406     -14.978 -47.585 104.601  1.00201.99           C
ATOM   2586  OG  SER A 406     -13.614 -47.635 104.211  1.00202.19           O
ATOM   2587  N   TYR A 407     -17.506 -46.171 104.506  1.00201.67           N
ATOM   2588  CA  TYR A 407     -18.957 -46.329 104.462  1.00201.51           C
ATOM   2589  C   TYR A 407     -19.291 -47.784 104.688  1.00201.36           C
ATOM   2590  O   TYR A 407     -20.339 -48.093 105.243  1.00201.34           O
ATOM   2591  CB  TYR A 407     -19.554 -45.871 103.125  1.00201.57           C
ATOM   2592  CG  TYR A 407     -20.043 -44.431 103.099  1.00201.65           C
ATOM   2593  CD1 TYR A 407     -20.204 -43.703 104.285  1.00201.80           C
ATOM   2594  CD2 TYR A 407     -20.373 -43.806 101.888  1.00201.38           C
ATOM   2595  CE1 TYR A 407     -20.652 -42.388 104.266  1.00201.74           C
ATOM   2596  CE2 TYR A 407     -20.830 -42.490 101.858  1.00201.31           C
ATOM   2597  CZ  TYR A 407     -20.965 -41.789 103.053  1.00201.62           C
ATOM   2598  OH  TYR A 407     -21.410 -40.489 103.053  1.00201.53           O
ATOM   2599  N   LYS A 408     -18.395 -48.670 104.248  1.00201.21           N
ATOM   2600  CA  LYS A 408     -18.503 -50.098 104.552  1.00201.19           C
ATOM   2601  C   LYS A 408     -18.211 -50.380 106.033  1.00201.19           C
ATOM   2602  O   LYS A 408     -18.798 -51.288 106.629  1.00201.12           O
ATOM   2603  CB  LYS A 408     -17.596 -50.947 103.642  1.00201.13           C
ATOM   2604  CG  LYS A 408     -16.132 -51.049 104.062  1.00200.90           C
ATOM   2605  CD  LYS A 408     -15.558 -52.449 103.840  1.00200.27           C
ATOM   2606  CE  LYS A 408     -15.017 -52.630 102.430  1.00200.16           C
ATOM   2607  NZ  LYS A 408     -14.100 -53.799 102.335  1.00199.95           N
ATOM   2608  N   SER A 409     -17.309 -49.588 106.616  1.00201.18           N
ATOM   2609  CA  SER A 409     -16.938 -49.723 108.022  1.00201.13           C
ATOM   2610  C   SER A 409     -18.142 -49.510 108.917  1.00201.15           C
ATOM   2611  O   SER A 409     -18.223 -50.098 109.990  1.00201.17           O
ATOM   2612  CB  SER A 409     -15.846 -48.723 108.401  1.00201.12           C
ATOM   2613  OG  SER A 409     -14.583 -49.099 107.882  1.00201.04           O
ATOM   2614  N   GLN A 410     -19.068 -48.671 108.458  1.00201.13           N
ATOM   2615  CA  GLN A 410     -20.279 -48.337 109.203  1.00201.21           C
ATOM   2616  C   GLN A 410     -21.335 -49.449 109.254  1.00201.03           C
ATOM   2617  O   GLN A 410     -22.159 -49.464 110.175  1.00201.15           O
ATOM   2618  CB  GLN A 410     -20.911 -47.051 108.654  1.00201.21           C
ATOM   2619  CG  GLN A 410     -20.446 -45.774 109.342  1.00201.47           C
ATOM   2620  CD  GLN A 410     -21.369 -44.596 109.067  1.00201.57           C
ATOM   2621  OE1 GLN A 410     -21.432 -44.081 107.946  1.00202.07           O
ATOM   2622  NE2 GLN A 410     -22.090 -44.161 110.097  1.00201.89           N
ATOM   2623  N   TYR A 411     -21.309 -50.372 108.289  1.00200.76           N
ATOM   2624  CA  TYR A 411     -22.386 -51.377 108.137  1.00200.50           C
ATOM   2625  C   TYR A 411     -22.444 -52.446 109.256  1.00200.42           C
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ATOM   2626  O   TYR A 411     -21.409 -52.811 109.827  1.00200.49           O
ATOM   2627  CB  TYR A 411     -22.402 -51.968 106.708  1.00200.30           C
ATOM   2628  CG  TYR A 411     -23.097 -51.052 105.707  1.00200.04           C
ATOM   2629  CD1 TYR A 411     -22.443 -49.942 105.173  1.00199.73           C
ATOM   2630  CD2 TYR A 411     -24.417 -51.276 105.326  1.00199.73           C
ATOM   2631  CE1 TYR A 411     -23.078 -49.088 104.284  1.00199.36           C
ATOM   2632  CE2 TYR A 411     -25.059 -50.427 104.434  1.00199.43           C
ATOM   2633  CZ  TYR A 411     -24.381 -49.339 103.920  1.00199.57           C
ATOM   2634  OH  TYR A 411     -25.011 -48.498 103.040  1.00199.99           O
ATOM   2635  N   LEU A 412     -23.664 -52.918 109.555  1.00200.14           N
ATOM   2636  CA  LEU A 412     -24.000 -53.745 110.751  1.00199.93           C
ATOM   2637  C   LEU A 412     -24.022 -53.011 112.114  1.00199.66           C
ATOM   2638  O   LEU A 412     -23.048 -52.346 112.506  1.00199.67           O
ATOM   2639  CB  LEU A 412     -23.142 -55.023 110.856  1.00199.95           C
ATOM   2640  CG  LEU A 412     -23.194 -55.913 112.109  1.00199.93           C
ATOM   2641  CD1 LEU A 412     -24.032 -57.139 111.875  1.00199.53           C
ATOM   2642  CD2 LEU A 412     -21.806 -56.321 112.559  1.00199.72           C
ATOM   2643  N   ASN A 413     -25.160 -53.140 112.804  1.00199.10           N
ATOM   2644  CA  ASN A 413     -25.339 -52.775 114.223  1.00198.33           C
ATOM   2645  C   ASN A 413     -24.637 -51.496 114.714  1.00198.13           C
ATOM   2646  O   ASN A 413     -23.612 -51.560 115.399  1.00198.06           O
ATOM   2647  CB  ASN A 413     -24.973 -53.980 115.100  1.00198.09           C
ATOM   2648  CG  ASN A 413     -25.394 -55.303 114.480  1.00196.90           C
ATOM   2649  OD1 ASN A 413     -26.395 -55.388 113.770  1.00195.05           O
ATOM   2650  ND2 ASN A 413     -24.617 -56.340 114.740  1.00195.86           N
ATOM   2651  N   ASN A 414     -25.223 -50.343 114.379  1.00197.83           N
ATOM   2652  CA  ASN A 414     -24.624 -49.027 114.642  1.00197.64           C
ATOM   2653  C   ASN A 414     -24.673 -48.587 116.129  1.00197.69           C
ATOM   2654  O   ASN A 414     -25.255 -47.551 116.482  1.00197.70           O
ATOM   2655  CB  ASN A 414     -25.237 -47.963 113.705  1.00197.47           C
ATOM   2656  CG  ASN A 414     -24.184 -47.074 113.030  1.00196.85           C
ATOM   2657  OD1 ASN A 414     -23.087 -47.523 112.697  1.00196.10           O
ATOM   2658  ND2 ASN A 414     -24.533 -45.814 112.807  1.00195.96           N
ATOM   2659  N   GLY A 415     -24.064 -49.405 116.988  1.00197.65           N
ATOM   2660  CA  GLY A 415     -23.748 -49.036 118.365  1.00197.55           C
ATOM   2661  C   GLY A 415     -22.266 -49.316 118.523  1.00197.58           C
ATOM   2662  O   GLY A 415     -21.444 -48.618 117.927  1.00197.45           O
ATOM   2663  N   PRO A 416     -21.907 -50.318 119.347  1.00197.68           N
ATOM   2664  CA  PRO A 416     -20.559 -50.897 119.264  1.00197.77           C
ATOM   2665  C   PRO A 416     -20.266 -51.804 118.028  1.00197.86           C
ATOM   2666  O   PRO A 416     -19.465 -51.410 117.177  1.00197.70           O
ATOM   2667  CB  PRO A 416     -20.417 -51.662 120.597  1.00197.74           C
ATOM   2668  CG  PRO A 416     -21.587 -51.205 121.458  1.00197.57           C
ATOM   2669  CD  PRO A 416     -22.667 -50.883 120.478  1.00197.67           C
ATOM   2670  N   GLN A 417     -20.906 -52.977 117.928  1.00198.06           N
ATOM   2671  CA  GLN A 417     -20.485 -54.052 116.989  1.00198.28           C
ATOM   2672  C   GLN A 417     -20.668 -53.733 115.508  1.00198.18           C
ATOM   2673  O   GLN A 417     -21.762 -53.357 115.096  1.00198.17           O
ATOM   2674  CB  GLN A 417     -21.185 -55.378 117.319  1.00198.40           C
ATOM   2675  CG  GLN A 417     -20.495 -56.608 116.724  1.00199.32           C
ATOM   2676  CD  GLN A 417     -19.035 -56.739 117.158  1.00201.03           C
ATOM   2677  OE1 GLN A 417     -18.735 -56.959 118.339  1.00201.60           O
ATOM   2678  NE2 GLN A 417     -18.118 -56.601 116.198  1.00201.63           N
ATOM   2679  N   ARG A 418     -19.611 -53.950 114.710  1.00198.17           N
ATOM   2680  CA  ARG A 418     -19.492 -53.333 113.366  1.00198.05           C
ATOM   2681  C   ARG A 418     -18.471 -53.958 112.365  1.00197.76           C
ATOM   2682  O   ARG A 418     -18.208 -53.382 111.300  1.00197.52           O
ATOM   2683  CB  ARG A 418     -19.170 -51.848 113.574  1.00198.21           C
ATOM   2684  CG  ARG A 418     -19.599 -50.866 112.492  1.00198.23           C
ATOM   2685  CD  ARG A 418     -19.172 -49.444 112.898  1.00198.16           C
ATOM   2686  NE  ARG A 418     -18.131 -49.475 113.931  1.00198.24           N
ATOM   2687  CZ  ARG A 418     -17.513 -48.411 114.436  1.00198.10           C
ATOM   2688  NH1 ARG A 418     -17.803 -47.190 114.004  1.00198.36           N
ATOM   2689  NH2 ARG A 418     -16.592 -48.577 115.377  1.00197.85           N
ATOM   2690  N   ILE A 419     -17.909 -55.121 112.700  1.00197.53           N
ATOM   2691  CA  ILE A 419     -16.927 -55.814 111.835  1.00197.17           C
ATOM   2692  C   ILE A 419     -17.579 -56.419 110.561  1.00196.94           C
ATOM   2693  O   ILE A 419     -18.499 -55.818 109.994  1.00196.81           O
ATOM   2694  CB  ILE A 419     -16.082 -56.878 112.633  1.00197.22           C
ATOM   2695  CG1 ILE A 419     -16.975 -57.986 113.219  1.00196.85           C
ATOM   2696  CG2 ILE A 419     -15.240 -56.197 113.734  1.00197.10           C
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ATOM	2697	CD1	ILE	A	419	-16.369	-59.373	113.145	1.00196.00	C
ATOM	2698	N	GLY	A	420	-17.090	-57.579	110.105	1.00196.62	N
ATOM	2699	CA	GLY	A	420	-17.791	-58.382	109.091	1.00196.19	C
ATOM	2700	C	GLY	A	420	-19.146	-58.773	109.661	1.00195.95	C
ATOM	2701	O	GLY	A	420	-19.213	-59.301	110.772	1.00196.18	O
ATOM	2702	N	ARG	A	421	-20.214	-58.534	108.897	1.00195.50	N
ATOM	2703	CA	ARG	A	421	-21.585	-58.384	109.442	1.00195.06	C
ATOM	2704	C	ARG	A	421	-22.477	-59.624	109.555	1.00194.69	C
ATOM	2705	O	ARG	A	421	-22.819	-60.240	108.542	1.00194.60	O
ATOM	2706	CB	ARG	A	421	-22.321	-57.316	108.643	1.00195.11	C
ATOM	2707	CG	ARG	A	421	-21.685	-55.962	108.775	1.00195.40	C
ATOM	2708	CD	ARG	A	421	-21.831	-55.131	107.525	1.00196.08	C
ATOM	2709	NE	ARG	A	421	-20.562	-54.978	106.816	1.00196.43	N
ATOM	2710	CZ	ARG	A	421	-19.530	-54.256	107.248	1.00196.74	C
ATOM	2711	NH1	ARG	A	421	-19.577	-53.613	108.409	1.00196.74	N
ATOM	2712	NH2	ARG	A	421	-18.431	-54.185	106.514	1.00197.20	N
ATOM	2713	N	LYS	A	422	-22.888	-59.939	110.789	1.00194.23	N
ATOM	2714	CA	LYS	A	422	-23.628	-61.173	111.111	1.00193.73	C
ATOM	2715	C	LYS	A	422	-25.034	-60.901	111.649	1.00193.37	C
ATOM	2716	O	LYS	A	422	-25.191	-60.224	112.663	1.00193.32	O
ATOM	2717	CB	LYS	A	422	-22.830	-62.026	112.119	1.00193.70	C
ATOM	2718	CG	LYS	A	422	-23.304	-63.479	112.263	1.00193.76	C
ATOM	2719	CD	LYS	A	422	-22.514	-64.274	113.315	1.00193.70	C
ATOM	2720	CE	LYS	A	422	-23.072	-65.703	113.463	1.00193.56	C
ATOM	2721	NZ	LYS	A	422	-22.578	-66.463	114.657	1.00193.14	N
ATOM	2722	N	TYR	A	423	-26.045	-61.439	110.968	1.00193.06	N
ATOM	2723	CA	TYR	A	423	-27.444	-61.323	111.398	1.00193.06	C
ATOM	2724	C	TYR	A	423	-28.137	-62.698	111.429	1.00193.25	C
ATOM	2725	O	TYR	A	423	-27.677	-63.642	110.780	1.00193.29	O
ATOM	2726	CB	TYR	A	423	-28.235	-60.418	110.451	1.00192.99	C
ATOM	2727	CG	TYR	A	423	-27.794	-58.974	110.328	1.00192.84	C
ATOM	2728	CD1	TYR	A	423	-26.617	-58.631	109.652	1.00193.09	C
ATOM	2729	CD2	TYR	A	423	-28.588	-57.943	110.828	1.00192.52	C
ATOM	2730	CE1	TYR	A	423	-26.222	-57.297	109.514	1.00193.14	C
ATOM	2731	CE2	TYR	A	423	-28.203	-56.606	110.696	1.00192.75	C
ATOM	2732	CZ	TYR	A	423	-27.019	-56.291	110.041	1.00193.02	C
ATOM	2733	OH	TYR	A	423	-26.634	-54.975	109.909	1.00192.83	O
ATOM	2734	N	LYS	A	424	-29.250	-62.802	112.161	1.00193.39	N
ATOM	2735	CA	LYS	A	424	-30.039	-64.037	112.188	1.00193.54	C
ATOM	2736	C	LYS	A	424	-31.186	-63.973	111.193	1.00193.67	C
ATOM	2737	O	LYS	A	424	-32.121	-63.180	111.348	1.00193.38	O
ATOM	2738	CB	LYS	A	424	-30.568	-64.355	113.591	1.00193.53	C
ATOM	2739	CG	LYS	A	424	-30.929	-65.839	113.778	1.00193.67	C
ATOM	2740	CD	LYS	A	424	-31.640	-66.168	115.097	1.00193.74	C
ATOM	2741	CE	LYS	A	424	-30.727	-66.043	116.327	1.00194.36	C
ATOM	2742	NZ	LYS	A	424	-29.579	-66.997	116.368	1.00194.53	N
ATOM	2743	N	LYS	A	425	-31.097	-64.823	110.173	1.00194.20	N
ATOM	2744	CA	LYS	A	425	-32.088	-64.866	109.092	1.00194.92	C
ATOM	2745	C	LYS	A	425	-32.901	-66.166	109.043	1.00195.27	C
ATOM	2746	O	LYS	A	425	-32.624	-67.129	109.772	1.00195.36	O
ATOM	2747	CB	LYS	A	425	-31.430	-64.619	107.720	1.00194.96	C
ATOM	2748	CG	LYS	A	425	-30.663	-63.301	107.606	1.00195.28	C
ATOM	2749	CD	LYS	A	425	-30.970	-62.519	106.321	1.00194.71	C
ATOM	2750	CE	LYS	A	425	-32.339	-61.832	106.352	1.00194.47	C
ATOM	2751	NZ	LYS	A	425	-32.778	-61.257	107.678	1.00194.18	N
ATOM	2752	N	VAL	A	426	-33.912	-66.171	108.175	1.00195.72	N
ATOM	2753	CA	VAL	A	426	-34.733	-67.354	107.918	1.00196.15	C
ATOM	2754	C	VAL	A	426	-34.844	-67.619	106.408	1.00196.45	C
ATOM	2755	O	VAL	A	426	-35.724	-67.077	105.726	1.00196.74	O
ATOM	2756	CB	VAL	A	426	-36.145	-67.276	108.608	1.00196.12	C
ATOM	2757	CG1	VAL	A	426	-36.935	-66.039	108.164	1.00195.86	C
ATOM	2758	CG2	VAL	A	426	-36.946	-68.555	108.364	1.00196.15	C
ATOM	2759	N	ARG	A	427	-33.941	-68.447	105.889	1.00196.50	N
ATOM	2760	CA	ARG	A	427	-33.982	-68.801	104.475	1.00196.47	C
ATOM	2761	C	ARG	A	427	-34.549	-70.192	104.220	1.00196.15	C
ATOM	2762	O	ARG	A	427	-34.309	-71.131	104.987	1.00196.09	O
ATOM	2763	CB	ARG	A	427	-32.614	-68.601	103.793	1.00196.69	C
ATOM	2764	CG	ARG	A	427	-31.383	-68.968	104.619	1.00197.55	C
ATOM	2765	CD	ARG	A	427	-30.944	-70.411	104.404	1.00199.66	C
ATOM	2766	NE	ARG	A	427	-30.290	-70.620	103.110	1.00201.25	N
ATOM	2767	CZ	ARG	A	427	-29.574	-71.700	102.797	1.00202.56	C

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ATOM   2768  NH1 ARG A 427     -29.402 -72.678 103.689  1.00203.27           N
ATOM   2769  NH2 ARG A 427     -29.020 -71.805 101.592  1.00202.78           N
ATOM   2770  N   PHE A 428     -35.326 -70.295 103.146  1.00195.78           N
ATOM   2771  CA  PHE A 428     -35.771 -71.570 102.616  1.00195.53           C
ATOM   2772  C   PHE A 428     -34.605 -72.539 102.524  1.00195.97           C
ATOM   2773  O   PHE A 428     -33.499 -72.166 102.141  1.00195.80           O
ATOM   2774  CB  PHE A 428     -36.342 -71.372 101.218  1.00195.04           C
ATOM   2775  CG  PHE A 428     -37.724 -70.811 101.194  1.00193.94           C
ATOM   2776  CD1 PHE A 428     -38.021 -69.608 101.809  1.00193.15           C
ATOM   2777  CD2 PHE A 428     -38.731 -71.478 100.525  1.00193.19           C
ATOM   2778  CE1 PHE A 428     -39.310 -69.097 101.770  1.00193.00           C
ATOM   2779  CE2 PHE A 428     -40.016 -70.964 100.481  1.00192.99           C
ATOM   2780  CZ  PHE A 428     -40.306 -69.772 101.105  1.00193.22           C
ATOM   2781  N   MET A 429     -34.854 -73.786 102.885  1.00196.72           N
ATOM   2782  CA  MET A 429     -33.866 -74.828 102.702  1.00197.64           C
ATOM   2783  C   MET A 429     -34.558 -76.180 102.558  1.00197.86           C
ATOM   2784  O   MET A 429     -35.448 -76.512 103.338  1.00197.80           O
ATOM   2785  CB  MET A 429     -32.839 -74.809 103.840  1.00198.05           C
ATOM   2786  CG  MET A 429     -31.497 -75.457 103.487  1.00199.59           C
ATOM   2787  SD  MET A 429     -31.178 -75.679 101.701  1.00203.00           S
ATOM   2788  CE  MET A 429     -29.511 -76.346 101.703  1.00200.80           C
ATOM   2789  N   ALA A 430     -34.149 -76.941 101.542  1.00198.31           N
ATOM   2790  CA  ALA A 430     -34.791 -78.207 101.190  1.00198.82           C
ATOM   2791  C   ALA A 430     -34.140 -79.401 101.862  1.00199.33           C
ATOM   2792  O   ALA A 430     -32.932 -79.401 102.100  1.00199.31           O
ATOM   2793  CB  ALA A 430     -34.795 -78.397  99.696  1.00198.83           C
ATOM   2794  N   TYR A 431     -34.959 -80.410 102.166  1.00200.09           N
ATOM   2795  CA  TYR A 431     -34.510 -81.660 102.802  1.00200.83           C
ATOM   2796  C   TYR A 431     -34.685 -82.859 101.862  1.00201.06           C
ATOM   2797  O   TYR A 431     -35.238 -82.728 100.757  1.00201.16           O
ATOM   2798  CB  TYR A 431     -35.211 -81.890 104.157  1.00201.01           C
ATOM   2799  CG  TYR A 431     -34.601 -81.085 105.284  1.00201.41           C
ATOM   2800  CD1 TYR A 431     -33.622 -81.638 106.103  1.00202.25           C
ATOM   2801  CD2 TYR A 431     -34.983 -79.756 105.515  1.00201.62           C
ATOM   2802  CE1 TYR A 431     -33.036 -80.891 107.142  1.00202.88           C
ATOM   2803  CE2 TYR A 431     -34.405 -78.995 106.548  1.00201.88           C
ATOM   2804  CZ  TYR A 431     -33.431 -79.570 107.360  1.00202.27           C
ATOM   2805  OH  TYR A 431     -32.849 -78.846 108.388  1.00201.87           O
ATOM   2806  N   THR A 432     -34.208 -84.020 102.302  1.00201.14           N
ATOM   2807  CA  THR A 432     -34.150 -85.184 101.442  1.00201.26           C
ATOM   2808  C   THR A 432     -35.502 -85.823 101.272  1.00201.57           C
ATOM   2809  O   THR A 432     -35.881 -86.157 100.159  1.00201.71           O
ATOM   2810  CB  THR A 432     -33.211 -86.221 101.999  1.00201.16           C
ATOM   2811  OG1 THR A 432     -32.166 -85.557 102.710  1.00201.25           O
ATOM   2812  CG2 THR A 432     -32.627 -87.051 100.873  1.00201.15           C
ATOM   2813  N   ASP A 433     -36.224 -85.996 102.374  1.00201.97           N
ATOM   2814  CA  ASP A 433     -37.490 -86.720 102.360  1.00202.68           C
ATOM   2815  C   ASP A 433     -38.356 -86.326 103.536  1.00203.14           C
ATOM   2816  O   ASP A 433     -37.918 -85.570 104.403  1.00203.11           O
ATOM   2817  CB  ASP A 433     -37.241 -88.225 102.386  1.00202.81           C
ATOM   2818  CG  ASP A 433     -36.132 -88.617 103.349  1.00203.46           C
ATOM   2819  OD1 ASP A 433     -35.964 -89.831 103.617  1.00203.91           O
ATOM   2820  OD2 ASP A 433     -35.423 -87.708 103.837  1.00204.12           O
ATOM   2821  N   GLU A 434     -39.581 -86.855 103.558  1.00203.91           N
ATOM   2822  CA  GLU A 434     -40.597 -86.526 104.570  1.00204.76           C
ATOM   2823  C   GLU A 434     -40.059 -86.469 106.003  1.00204.89           C
ATOM   2824  O   GLU A 434     -40.398 -85.566 106.773  1.00204.91           O
ATOM   2825  CB  GLU A 434     -41.775 -87.502 104.470  1.00205.09           C
ATOM   2826  CG  GLU A 434     -42.914 -87.023 103.550  1.00206.41           C
ATOM   2827  CD  GLU A 434     -44.088 -86.365 104.303  1.00208.04           C
ATOM   2828  OE1 GLU A 434     -45.147 -86.151 103.668  1.00208.33           O
ATOM   2829  OE2 GLU A 434     -43.967 -86.071 105.520  1.00208.79           O
ATOM   2830  N   THR A 435     -39.233 -87.447 106.354  1.00205.16           N
ATOM   2831  CA  THR A 435     -38.397 -87.356 107.542  1.00205.42           C
ATOM   2832  C   THR A 435     -37.460 -86.165 107.355  1.00205.55           C
ATOM   2833  O   THR A 435     -36.369 -86.305 106.805  1.00205.66           O
ATOM   2834  CB  THR A 435     -37.603 -88.682 107.804  1.00205.49           C
ATOM   2835  OG1 THR A 435     -36.249 -88.384 108.172  1.00205.55           O
ATOM   2836  CG2 THR A 435     -37.590 -89.588 106.569  1.00205.49           C
ATOM   2837  N   PHE A 436     -37.895 -84.988 107.787  1.00205.72           N
ATOM   2838  CA  PHE A 436     -37.147 -83.774 107.500  1.00206.15           C
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ATOM	2839	C	PHE	A	436	-35.840	-83.691	108.273	1.00206.58	C
ATOM	2840	O	PHE	A	436	-35.594	-82.730	108.995	1.00206.56	O
ATOM	2841	CB	PHE	A	436	-38.010	-82.553	107.769	1.00206.06	C
ATOM	2842	CG	PHE	A	436	-38.781	-82.083	106.570	1.00206.08	C
ATOM	2843	CD1	PHE	A	436	-39.981	-82.694	106.210	1.00206.07	C
ATOM	2844	CD2	PHE	A	436	-38.318	-81.018	105.806	1.00205.63	C
ATOM	2845	CE1	PHE	A	436	-40.705	-82.255	105.101	1.00205.59	C
ATOM	2846	CE2	PHE	A	436	-39.034	-80.569	104.697	1.00205.53	C
ATOM	2847	CZ	PHE	A	436	-40.230	-81.189	104.343	1.00205.52	C
ATOM	2848	N	LYS	A	437	-34.993	-84.700	108.101	1.00207.26	N
ATOM	2849	CA	LYS	A	437	-33.767	-84.797	108.874	1.00208.06	C
ATOM	2850	C	LYS	A	437	-32.505	-84.529	108.070	1.00208.51	C
ATOM	2851	O	LYS	A	437	-31.723	-83.650	108.443	1.00208.55	O
ATOM	2852	CB	LYS	A	437	-33.668	-86.143	109.604	1.00208.09	C
ATOM	2853	CG	LYS	A	437	-33.897	-86.046	111.125	1.00208.96	C
ATOM	2854	CD	LYS	A	437	-35.121	-86.829	111.648	1.00210.38	C
ATOM	2855	CE	LYS	A	437	-36.449	-86.383	111.029	1.00211.87	C
ATOM	2856	NZ	LYS	A	437	-36.767	-84.926	111.187	1.00212.96	N
ATOM	2857	N	THR	A	438	-32.306	-85.270	106.977	1.00209.24	N
ATOM	2858	CA	THR	A	438	-31.038	-85.189	106.228	1.00209.92	C
ATOM	2859	C	THR	A	438	-30.837	-83.831	105.519	1.00210.44	C
ATOM	2860	O	THR	A	438	-31.498	-83.501	104.520	1.00210.25	O
ATOM	2861	CB	THR	A	438	-30.770	-86.406	105.264	1.00209.90	C
ATOM	2862	OG1	THR	A	438	-31.574	-87.534	105.629	1.00209.91	O
ATOM	2863	CG2	THR	A	438	-29.293	-86.812	105.299	1.00209.52	C
ATOM	2864	N	ARG	A	439	-29.921	-83.061	106.107	1.00211.20	N
ATOM	2865	CA	ARG	A	439	-29.423	-81.784	105.603	1.00211.87	C
ATOM	2866	C	ARG	A	439	-29.113	-81.884	104.104	1.00212.41	C
ATOM	2867	O	ARG	A	439	-28.328	-82.738	103.688	1.00212.39	O
ATOM	2868	CB	ARG	A	439	-28.156	-81.421	106.416	1.00211.78	C
ATOM	2869	CG	ARG	A	439	-27.541	-80.032	106.191	1.00211.29	C
ATOM	2870	CD	ARG	A	439	-28.078	-78.965	107.157	1.00209.41	C
ATOM	2871	NE	ARG	A	439	-29.480	-78.642	106.901	1.00207.33	N
ATOM	2872	CZ	ARG	A	439	-29.918	-77.905	105.885	1.00205.87	C
ATOM	2873	NH1	ARG	A	439	-29.075	-77.387	105.001	1.00205.00	N
ATOM	2874	NH2	ARG	A	439	-31.213	-77.687	105.756	1.00205.38	N
ATOM	2875	N	GLU	A	440	-29.738	-81.037	103.291	1.00213.15	N
ATOM	2876	CA	GLU	A	440	-29.417	-81.028	101.863	1.00214.09	C
ATOM	2877	C	GLU	A	440	-28.146	-80.250	101.576	1.00214.49	C
ATOM	2878	O	GLU	A	440	-28.098	-79.045	101.826	1.00214.49	O
ATOM	2879	CB	GLU	A	440	-30.567	-80.474	101.028	1.00214.20	C
ATOM	2880	CG	GLU	A	440	-31.588	-81.531	100.605	1.00215.04	C
ATOM	2881	CD	GLU	A	440	-31.118	-82.441	99.467	1.00215.75	C
ATOM	2882	OE1	GLU	A	440	-31.848	-83.420	99.169	1.00215.63	O
ATOM	2883	OE2	GLU	A	440	-30.039	-82.182	98.875	1.00216.01	O
ATOM	2884	N	ALA	A	441	-27.128	-80.940	101.050	1.00215.05	N
ATOM	2885	CA	ALA	A	441	-25.830	-80.323	100.753	1.00215.61	C
ATOM	2886	C	ALA	A	441	-26.040	-79.002	100.022	1.00216.07	C
ATOM	2887	O	ALA	A	441	-26.755	-78.938	99.018	1.00216.11	O
ATOM	2888	CB	ALA	A	441	-24.946	-81.263	99.950	1.00215.51	C
ATOM	2889	N	ILE	A	442	-25.431	-77.948	100.554	1.00216.75	N
ATOM	2890	CA	ILE	A	442	-25.762	-76.573	100.156	1.00217.41	C
ATOM	2891	C	ILE	A	442	-24.989	-76.121	98.900	1.00217.62	C
ATOM	2892	O	ILE	A	442	-24.048	-76.785	98.453	1.00217.57	O
ATOM	2893	CB	ILE	A	442	-25.597	-75.534	101.354	1.00217.57	C
ATOM	2894	CG1	ILE	A	442	-25.864	-76.174	102.730	1.00217.95	C
ATOM	2895	CG2	ILE	A	442	-26.515	-74.310	101.174	1.00217.43	C
ATOM	2896	CD1	ILE	A	442	-24.621	-76.737	103.447	1.00218.18	C
ATOM	2897	N	GLN	A	443	-25.429	-74.996	98.333	1.00217.97	N
ATOM	2898	CA	GLN	A	443	-24.770	-74.330	97.203	1.00218.13	C
ATOM	2899	C	GLN	A	443	-24.187	-72.962	97.612	1.00217.76	C
ATOM	2900	O	GLN	A	443	-24.725	-71.903	97.267	1.00217.73	O
ATOM	2901	CB	GLN	A	443	-25.750	-74.185	96.027	1.00218.42	C
ATOM	2902	CG	GLN	A	443	-25.557	-75.201	94.905	1.00219.37	C
ATOM	2903	CD	GLN	A	443	-24.438	-74.801	93.956	1.00220.66	C
ATOM	2904	OE1	GLN	A	443	-23.252	-74.902	94.293	1.00221.38	O
ATOM	2905	NE2	GLN	A	443	-24.812	-74.334	92.763	1.00220.86	N
ATOM	2906	N	HIS	A	444	-23.084	-73.018	98.353	1.00217.26	N
ATOM	2907	CA	HIS	A	444	-22.355	-71.859	98.891	1.00216.79	C
ATOM	2908	C	HIS	A	444	-22.065	-70.715	97.902	1.00216.14	C
ATOM	2909	O	HIS	A	444	-21.353	-69.766	98.253	1.00216.18	O

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ATOM   2910  CB  HIS A 444     -21.051 -72.376  99.489  1.00216.99           C
ATOM   2911  CG  HIS A 444     -20.679 -73.730  98.973  1.00217.80           C
ATOM   2912  ND1 HIS A 444     -20.400 -73.966  97.642  1.00218.37           N
ATOM   2913  CD2 HIS A 444     -20.601 -74.931  99.593  1.00218.52           C
ATOM   2914  CE1 HIS A 444     -20.140 -75.249  97.470  1.00218.80           C
ATOM   2915  NE2 HIS A 444     -20.251 -75.857  98.639  1.00219.07           N
ATOM   2916  N   GLU A 445     -22.594 -70.815  96.678  1.00215.13           N
ATOM   2917  CA  GLU A 445     -22.617 -69.687  95.743  1.00214.25           C
ATOM   2918  C   GLU A 445     -23.982 -68.987  95.750  1.00213.25           C
ATOM   2919  O   GLU A 445     -24.064 -67.788  95.497  1.00213.19           O
ATOM   2920  CB  GLU A 445     -22.204 -70.097  94.311  1.00214.49           C
ATOM   2921  CG  GLU A 445     -23.320 -70.700  93.400  1.00215.92           C
ATOM   2922  CD  GLU A 445     -24.406 -69.689  92.927  1.00217.29           C
ATOM   2923  OE1 GLU A 445     -25.594 -70.085  92.799  1.00217.64           O
ATOM   2924  OE2 GLU A 445     -24.082 -68.503  92.688  1.00217.51           O
ATOM   2925  N   SER A 446     -25.051 -69.734  96.020  1.00212.07           N
ATOM   2926  CA  SER A 446     -26.398 -69.157  96.029  1.00210.95           C
ATOM   2927  C   SER A 446     -26.710 -68.511  97.381  1.00210.04           C
ATOM   2928  O   SER A 446     -27.778 -67.934  97.577  1.00209.81           O
ATOM   2929  CB  SER A 446     -27.465 -70.190  95.616  1.00211.06           C
ATOM   2930  OG  SER A 446     -27.454 -71.341  96.441  1.00210.87           O
ATOM   2931  N   GLY A 447     -25.747 -68.602  98.296  1.00209.02           N
ATOM   2932  CA  GLY A 447     -25.829 -67.972  99.608  1.00207.74           C
ATOM   2933  C   GLY A 447     -27.185 -68.142 100.254  1.00206.81           C
ATOM   2934  O   GLY A 447     -27.590 -69.253 100.600  1.00206.85           O
ATOM   2935  N   ILE A 448     -27.894 -67.030 100.388  1.00205.75           N
ATOM   2936  CA  ILE A 448     -29.201 -67.015 101.022  1.00204.65           C
ATOM   2937  C   ILE A 448     -30.273 -67.753 100.212  1.00203.99           C
ATOM   2938  O   ILE A 448     -31.239 -68.253 100.787  1.00203.86           O
ATOM   2939  CB  ILE A 448     -29.648 -65.564 101.323  1.00204.63           C
ATOM   2940  CG1 ILE A 448     -30.973 -65.552 102.085  1.00204.88           C
ATOM   2941  CG2 ILE A 448     -29.729 -64.734 100.044  1.00204.13           C
ATOM   2942  CD1 ILE A 448     -31.295 -64.228 102.748  1.00205.76           C
ATOM   2943  N   LEU A 449     -30.079 -67.843  98.893  1.00203.13           N
ATOM   2944  CA  LEU A 449     -31.123 -68.304  97.952  1.00202.31           C
ATOM   2945  C   LEU A 449     -31.687 -69.684  98.212  1.00201.65           C
ATOM   2946  O   LEU A 449     -30.956 -70.579  98.634  1.00201.95           O
ATOM   2947  CB  LEU A 449     -30.629 -68.238  96.508  1.00202.22           C
ATOM   2948  CG  LEU A 449     -31.027 -66.943  95.808  1.00202.30           C
ATOM   2949  CD1 LEU A 449     -30.063 -66.624  94.698  1.00202.79           C
ATOM   2950  CD2 LEU A 449     -32.453 -67.025  95.283  1.00202.34           C
ATOM   2951  N   GLY A 450     -32.985 -69.849  97.943  1.00200.63           N
ATOM   2952  CA  GLY A 450     -33.670 -71.135  98.116  1.00199.38           C
ATOM   2953  C   GLY A 450     -33.181 -72.144  97.097  1.00198.39           C
ATOM   2954  O   GLY A 450     -32.446 -71.774  96.182  1.00198.58           O
ATOM   2955  N   PRO A 451     -33.567 -73.423  97.249  1.00197.47           N
ATOM   2956  CA  PRO A 451     -33.191 -74.467  96.288  1.00197.00           C
ATOM   2957  C   PRO A 451     -33.694 -74.134  94.875  1.00196.71           C
ATOM   2958  O   PRO A 451     -34.782 -73.554  94.737  1.00196.99           O
ATOM   2959  CB  PRO A 451     -33.903 -75.706  96.827  1.00196.91           C
ATOM   2960  CG  PRO A 451     -34.966 -75.171  97.728  1.00196.92           C
ATOM   2961  CD  PRO A 451     -34.389 -73.961  98.340  1.00197.17           C
ATOM   2962  N   LEU A 452     -32.917 -74.482  93.843  1.00195.86           N
ATOM   2963  CA  LEU A 452     -33.246 -74.081  92.460  1.00195.01           C
ATOM   2964  C   LEU A 452     -34.441 -74.836  91.884  1.00194.21           C
ATOM   2965  O   LEU A 452     -34.326 -76.000  91.493  1.00194.15           O
ATOM   2966  CB  LEU A 452     -32.023 -74.227  91.546  1.00195.22           C
ATOM   2967  CG  LEU A 452     -32.037 -73.820  90.055  1.00195.66           C
ATOM   2968  CD1 LEU A 452     -32.471 -74.972  89.114  1.00195.52           C
ATOM   2969  CD2 LEU A 452     -32.827 -72.522  89.787  1.00195.45           C
ATOM   2970  N   LEU A 453     -35.584 -74.168  91.821  1.00193.16           N
ATOM   2971  CA  LEU A 453     -36.786 -74.836  91.363  1.00192.42           C
ATOM   2972  C   LEU A 453     -36.961 -74.757  89.864  1.00192.35           C
ATOM   2973  O   LEU A 453     -36.734 -73.707  89.262  1.00192.44           O
ATOM   2974  CB  LEU A 453     -38.009 -74.289  92.068  1.00192.18           C
ATOM   2975  CG  LEU A 453     -38.511 -75.201  93.172  1.00191.21           C
ATOM   2976  CD1 LEU A 453     -37.555 -75.190  94.332  1.00190.72           C
ATOM   2977  CD2 LEU A 453     -39.875 -74.753  93.610  1.00190.38           C
ATOM   2978  N   TYR A 454     -37.392 -75.874  89.278  1.00192.03           N
ATOM   2979  CA  TYR A 454     -37.432 -76.045  87.826  1.00191.57           C
ATOM   2980  C   TYR A 454     -38.604 -76.933  87.422  1.00190.81           C
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ATOM   2981  O   TYR A 454     -38.932 -77.906  88.101  1.00190.56           O
ATOM   2982  CB  TYR A 454     -36.077 -76.615  87.353  1.00192.12           C
ATOM   2983  CG  TYR A 454     -35.903 -76.976  85.873  1.00192.92           C
ATOM   2984  CD1 TYR A 454     -36.682 -76.383  84.869  1.00193.13           C
ATOM   2985  CD2 TYR A 454     -34.900 -77.887  85.477  1.00193.54           C
ATOM   2986  CE1 TYR A 454     -36.506 -76.722  83.515  1.00193.31           C
ATOM   2987  CE2 TYR A 454     -34.711 -78.226  84.122  1.00193.50           C
ATOM   2988  CZ  TYR A 454     -35.521 -77.638  83.148  1.00193.22           C
ATOM   2989  OH  TYR A 454     -35.353 -77.957  81.813  1.00192.97           O
ATOM   2990  N   GLY A 455     -39.243 -76.556  86.321  1.00190.13           N
ATOM   2991  CA  GLY A 455     -40.319 -77.332  85.720  1.00189.43           C
ATOM   2992  C   GLY A 455     -40.705 -76.816  84.339  1.00188.92           C
ATOM   2993  O   GLY A 455     -41.112 -75.652  84.192  1.00188.78           O
ATOM   2994  N   GLU A 456     -40.579 -77.688  83.332  1.00188.29           N
ATOM   2995  CA  GLU A 456     -40.920 -77.360  81.940  1.00187.63           C
ATOM   2996  C   GLU A 456     -42.413 -77.254  81.762  1.00186.62           C
ATOM   2997  O   GLU A 456     -43.173 -77.685  82.613  1.00186.64           O
ATOM   2998  CB  GLU A 456     -40.431 -78.448  80.992  1.00187.96           C
ATOM   2999  CG  GLU A 456     -38.956 -78.765  81.084  1.00189.65           C
ATOM   3000  CD  GLU A 456     -38.667 -80.227  80.782  1.00191.80           C
ATOM   3001  OE1 GLU A 456     -39.159 -80.748  79.744  1.00192.48           O
ATOM   3002  OE2 GLU A 456     -37.945 -80.851  81.594  1.00192.29           O
ATOM   3003  N   VAL A 457     -42.844 -76.696  80.646  1.00185.52           N
ATOM   3004  CA  VAL A 457     -44.251 -76.682  80.354  1.00184.71           C
ATOM   3005  C   VAL A 457     -44.725 -78.122  80.338  1.00184.65           C
ATOM   3006  O   VAL A 457     -44.052 -78.991  79.782  1.00184.46           O
ATOM   3007  CB  VAL A 457     -44.517 -76.071  79.007  1.00184.54           C
ATOM   3008  CG1 VAL A 457     -45.984 -76.005  78.770  1.00184.47           C
ATOM   3009  CG2 VAL A 457     -43.930 -74.702  78.942  1.00184.25           C
ATOM   3010  N   GLY A 458     -45.867 -78.367  80.981  1.00184.76           N
ATOM   3011  CA  GLY A 458     -46.509 -79.694  81.010  1.00184.93           C
ATOM   3012  C   GLY A 458     -46.314 -80.507  82.285  1.00184.96           C
ATOM   3013  O   GLY A 458     -47.008 -81.511  82.525  1.00184.84           O
ATOM   3014  N   ASP A 459     -45.360 -80.062  83.099  1.00185.05           N
ATOM   3015  CA  ASP A 459     -44.960 -80.770  84.307  1.00184.91           C
ATOM   3016  C   ASP A 459     -45.741 -80.293  85.512  1.00184.63           C
ATOM   3017  O   ASP A 459     -46.479 -79.305  85.468  1.00184.45           O
ATOM   3018  CB  ASP A 459     -43.456 -80.601  84.586  1.00185.07           C
ATOM   3019  CG  ASP A 459     -42.575 -81.094  83.443  1.00185.35           C
ATOM   3020  OD1 ASP A 459     -41.427 -80.591  83.330  1.00184.94           O
ATOM   3021  OD2 ASP A 459     -43.026 -81.975  82.667  1.00185.51           O
ATOM   3022  N   THR A 460     -45.530 -81.015  86.597  1.00184.39           N
ATOM   3023  CA  THR A 460     -46.264 -80.834  87.818  1.00184.18           C
ATOM   3024  C   THR A 460     -45.233 -80.856  88.954  1.00183.78           C
ATOM   3025  O   THR A 460     -44.441 -81.797  89.051  1.00183.80           O
ATOM   3026  CB  THR A 460     -47.341 -81.955  87.952  1.00184.38           C
ATOM   3027  OG1 THR A 460     -46.975 -83.086  87.140  1.00184.81           O
ATOM   3028  CG2 THR A 460     -48.685 -81.467  87.461  1.00184.22           C
ATOM   3029  N   LEU A 461     -45.208 -79.801  89.771  1.00183.16           N
ATOM   3030  CA  LEU A 461     -44.312 -79.721  90.924  1.00182.65           C
ATOM   3031  C   LEU A 461     -45.049 -80.089  92.200  1.00182.75           C
ATOM   3032  O   LEU A 461     -45.928 -79.346  92.628  1.00182.96           O
ATOM   3033  CB  LEU A 461     -43.738 -78.317  91.058  1.00182.20           C
ATOM   3034  CG  LEU A 461     -42.369 -78.099  90.434  1.00182.01           C
ATOM   3035  CD1 LEU A 461     -42.309 -78.604  89.019  1.00182.07           C
ATOM   3036  CD2 LEU A 461     -42.031 -76.636  90.457  1.00182.20           C
ATOM   3037  N   LEU A 462     -44.714 -81.246  92.786  1.00182.73           N
ATOM   3038  CA  LEU A 462     -45.225 -81.653  94.108  1.00182.41           C
ATOM   3039  C   LEU A 462     -44.256 -81.115  95.134  1.00182.34           C
ATOM   3040  O   LEU A 462     -43.216 -81.734  95.388  1.00182.50           O
ATOM   3041  CB  LEU A 462     -45.299 -83.172  94.277  1.00182.21           C
ATOM   3042  CG  LEU A 462     -45.759 -84.143  93.191  1.00182.47           C
ATOM   3043  CD1 LEU A 462     -45.836 -85.512  93.804  1.00182.99           C
ATOM   3044  CD2 LEU A 462     -47.104 -83.791  92.579  1.00183.42           C
ATOM   3045  N   ILE A 463     -44.600 -79.967  95.715  1.00182.13           N
ATOM   3046  CA  ILE A 463     -43.713 -79.253  96.627  1.00181.74           C
ATOM   3047  C   ILE A 463     -44.202 -79.362  98.084  1.00181.56           C
ATOM   3048  O   ILE A 463     -45.165 -78.706  98.504  1.00181.22           O
ATOM   3049  CB  ILE A 463     -43.435 -77.801  96.115  1.00181.75           C
ATOM   3050  CG1 ILE A 463     -42.134 -77.245  96.701  1.00182.03           C
ATOM   3051  CG2 ILE A 463     -44.647 -76.882  96.293  1.00181.60           C
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ATOM	3052	CD1	ILE	A	463	-42.304	-76.301	97.877	1.00182.81	C
ATOM	3053	N	ILE	A	464	-43.527	-80.246	98.820	1.00181.50	N
ATOM	3054	CA	ILE	A	464	-43.904	-80.620	100.172	1.00181.55	C
ATOM	3055	C	ILE	A	464	-43.080	-79.851	101.190	1.00181.92	C
ATOM	3056	O	ILE	A	464	-41.871	-80.071	101.340	1.00181.81	O
ATOM	3057	CB	ILE	A	464	-43.736	-82.113	100.418	1.00181.32	C
ATOM	3058	CG1	ILE	A	464	-44.182	-82.908	99.201	1.00181.18	C
ATOM	3059	CG2	ILE	A	464	-44.567	-82.516	101.604	1.00181.52	C
ATOM	3060	CD1	ILE	A	464	-44.293	-84.391	99.451	1.00181.67	C
ATOM	3061	N	PHE	A	465	-43.784	-78.992	101.923	1.00182.40	N
ATOM	3062	CA	PHE	A	465	-43.199	-77.866	102.639	1.00182.70	C
ATOM	3063	C	PHE	A	465	-43.413	-77.827	104.164	1.00183.32	C
ATOM	3064	O	PHE	A	465	-44.548	-77.697	104.645	1.00183.32	O
ATOM	3065	CB	PHE	A	465	-43.749	-76.597	102.017	1.00182.29	C
ATOM	3066	CG	PHE	A	465	-43.504	-75.389	102.819	1.00181.75	C
ATOM	3067	CD1	PHE	A	465	-42.217	-74.925	103.018	1.00181.74	C
ATOM	3068	CD2	PHE	A	465	-44.556	-74.701	103.375	1.00181.85	C
ATOM	3069	CE1	PHE	A	465	-41.982	-73.785	103.765	1.00181.98	C
ATOM	3070	CE2	PHE	A	465	-44.332	-73.559	104.124	1.00182.33	C
ATOM	3071	CZ	PHE	A	465	-43.043	-73.096	104.314	1.00182.03	C
ATOM	3072	N	LYS	A	466	-42.302	-77.911	104.905	1.00184.08	N
ATOM	3073	CA	LYS	A	466	-42.291	-77.833	106.381	1.00184.44	C
ATOM	3074	C	LYS	A	466	-41.833	-76.466	106.873	1.00184.52	C
ATOM	3075	O	LYS	A	466	-40.885	-75.877	106.344	1.00184.51	O
ATOM	3076	CB	LYS	A	466	-41.373	-78.911	106.998	1.00184.45	C
ATOM	3077	CG	LYS	A	466	-41.469	-79.074	108.542	1.00184.35	C
ATOM	3078	CD	LYS	A	466	-40.785	-80.371	109.019	1.00184.77	C
ATOM	3079	CE	LYS	A	466	-41.497	-81.044	110.207	1.00185.18	C
ATOM	3080	NZ	LYS	A	466	-40.869	-80.743	111.525	1.00185.47	N
ATOM	3081	N	ASN	A	467	-42.515	-75.970	107.893	1.00184.65	N
ATOM	3082	CA	ASN	A	467	-42.000	-74.852	108.644	1.00184.85	C
ATOM	3083	C	ASN	A	467	-41.197	-75.408	109.805	1.00185.09	C
ATOM	3084	O	ASN	A	467	-41.634	-76.321	110.506	1.00185.03	O
ATOM	3085	CB	ASN	A	467	-43.132	-73.943	109.130	1.00184.82	C
ATOM	3086	CG	ASN	A	467	-42.637	-72.581	109.602	1.00184.58	C
ATOM	3087	OD1	ASN	A	467	-41.439	-72.377	109.816	1.00184.02	O
ATOM	3088	ND2	ASN	A	467	-43.566	-71.642	109.768	1.00184.19	N
ATOM	3089	N	GLN	A	468	-39.999	-74.878	109.975	1.00185.55	N
ATOM	3090	CA	GLN	A	468	-39.171	-75.236	111.102	1.00186.25	C
ATOM	3091	C	GLN	A	468	-38.598	-73.955	111.672	1.00186.84	C
ATOM	3092	O	GLN	A	468	-37.511	-73.922	112.250	1.00187.04	O
ATOM	3093	CB	GLN	A	468	-38.102	-76.246	110.690	1.00186.20	C
ATOM	3094	CG	GLN	A	468	-38.642	-77.675	110.614	1.00186.22	C
ATOM	3095	CD	GLN	A	468	-37.578	-78.706	110.296	1.00186.27	C
ATOM	3096	OE1	GLN	A	468	-36.570	-78.401	109.646	1.00186.53	O
ATOM	3097	NE2	GLN	A	468	-37.798	-79.941	110.748	1.00185.91	N
ATOM	3098	N	ALA	A	469	-39.368	-72.892	111.487	1.00187.57	N
ATOM	3099	CA	ALA	A	469	-39.114	-71.611	112.104	1.00188.48	C
ATOM	3100	C	ALA	A	469	-40.361	-71.229	112.889	1.00189.23	C
ATOM	3101	O	ALA	A	469	-41.480	-71.421	112.410	1.00189.40	O
ATOM	3102	CB	ALA	A	469	-38.827	-70.590	111.048	1.00188.43	C
ATOM	3103	N	SER	A	470	-40.166	-70.691	114.091	1.00190.15	N
ATOM	3104	CA	SER	A	470	-41.270	-70.329	114.990	1.00191.05	C
ATOM	3105	C	SER	A	470	-42.360	-69.465	114.325	1.00191.57	C
ATOM	3106	O	SER	A	470	-43.480	-69.932	114.082	1.00191.75	O
ATOM	3107	CB	SER	A	470	-40.718	-69.612	116.226	1.00191.09	C
ATOM	3108	OG	SER	A	470	-39.972	-68.462	115.847	1.00191.36	O
ATOM	3109	N	ARG	A	471	-42.009	-68.214	114.034	1.00192.11	N
ATOM	3110	CA	ARG	A	471	-42.909	-67.221	113.445	1.00192.53	C
ATOM	3111	C	ARG	A	471	-43.368	-67.641	112.019	1.00192.72	C
ATOM	3112	O	ARG	A	471	-42.604	-67.505	111.064	1.00192.91	O
ATOM	3113	CB	ARG	A	471	-42.196	-65.855	113.489	1.00192.49	C
ATOM	3114	CG	ARG	A	471	-42.884	-64.695	112.824	1.00192.79	C
ATOM	3115	CD	ARG	A	471	-44.321	-64.493	113.265	1.00193.90	C
ATOM	3116	NE	ARG	A	471	-44.443	-63.634	114.435	1.00194.83	N
ATOM	3117	CZ	ARG	A	471	-45.352	-62.671	114.564	1.00195.05	C
ATOM	3118	NH1	ARG	A	471	-46.213	-62.415	113.582	1.00194.79	N
ATOM	3119	NH2	ARG	A	471	-45.391	-61.948	115.676	1.00195.25	N
ATOM	3120	N	PRO	A	472	-44.625	-68.139	111.881	1.00192.78	N
ATOM	3121	CA	PRO	A	472	-45.109	-68.935	110.734	1.00192.78	C
ATOM	3122	C	PRO	A	472	-45.094	-68.261	109.347	1.00192.82	C

ATOM	3123	O	PRO	A	472	-45.398	-67.066	109.246	1.00192.94	O
ATOM	3124	CB	PRO	A	472	-46.553	-69.251	111.134	1.00192.72	C
ATOM	3125	CG	PRO	A	472	-46.935	-68.146	112.032	1.00192.68	C
ATOM	3126	CD	PRO	A	472	-45.711	-67.922	112.854	1.00192.80	C
ATOM	3127	N	TYR	A	473	-44.761	-69.044	108.307	1.00192.64	N
ATOM	3128	CA	TYR	A	473	-44.769	-68.603	106.892	1.00192.50	C
ATOM	3129	C	TYR	A	473	-45.427	-69.620	105.910	1.00192.69	C
ATOM	3130	O	TYR	A	473	-46.036	-70.599	106.364	1.00192.76	O
ATOM	3131	CB	TYR	A	473	-43.348	-68.322	106.398	1.00192.24	C
ATOM	3132	CG	TYR	A	473	-42.369	-67.698	107.366	1.00191.72	C
ATOM	3133	CD1	TYR	A	473	-41.331	-68.454	107.899	1.00191.61	C
ATOM	3134	CD2	TYR	A	473	-42.434	-66.345	107.694	1.00191.38	C
ATOM	3135	CE1	TYR	A	473	-40.396	-67.892	108.763	1.00191.69	C
ATOM	3136	CE2	TYR	A	473	-41.500	-65.771	108.563	1.00191.57	C
ATOM	3137	CZ	TYR	A	473	-40.482	-66.555	109.095	1.00191.60	C
ATOM	3138	OH	TYR	A	473	-39.552	-66.019	109.961	1.00191.26	O
ATOM	3139	N	ASN	A	474	-45.303	-69.375	104.584	1.00192.70	N
ATOM	3140	CA	ASN	A	474	-45.697	-70.336	103.496	1.00192.53	C
ATOM	3141	C	ASN	A	474	-44.806	-70.366	102.221	1.00192.69	C
ATOM	3142	O	ASN	A	474	-43.604	-70.098	102.305	1.00192.62	O
ATOM	3143	CB	ASN	A	474	-47.194	-70.233	103.129	1.00192.09	C
ATOM	3144	CG	ASN	A	474	-47.595	-68.857	102.664	1.00190.89	C
ATOM	3145	OD1	ASN	A	474	-46.750	-68.018	102.344	1.00188.88	O
ATOM	3146	ND2	ASN	A	474	-48.902	-68.614	102.622	1.00189.71	N
ATOM	3147	N	ILE	A	475	-45.396	-70.723	101.067	1.00193.02	N
ATOM	3148	CA	ILE	A	475	-44.699	-70.778	99.745	1.00193.10	C
ATOM	3149	C	ILE	A	475	-45.588	-70.541	98.531	1.00193.40	C
ATOM	3150	O	ILE	A	475	-46.533	-71.289	98.266	1.00193.16	O
ATOM	3151	CB	ILE	A	475	-44.054	-72.142	99.434	1.00193.05	C
ATOM	3152	CG1	ILE	A	475	-44.768	-73.257	100.197	1.00193.28	C
ATOM	3153	CG2	ILE	A	475	-42.565	-72.108	99.664	1.00192.46	C
ATOM	3154	CD1	ILE	A	475	-45.013	-74.460	99.370	1.00193.99	C
ATOM	3155	N	TYR	A	476	-45.246	-69.531	97.753	1.00193.87	N
ATOM	3156	CA	TYR	A	476	-45.965	-69.310	96.529	1.00194.56	C
ATOM	3157	C	TYR	A	476	-45.035	-68.903	95.419	1.00194.91	C
ATOM	3158	O	TYR	A	476	-44.169	-68.046	95.632	1.00194.98	O
ATOM	3159	CB	TYR	A	476	-47.013	-68.239	96.720	1.00194.82	C
ATOM	3160	CG	TYR	A	476	-48.259	-68.493	95.918	1.00195.52	C
ATOM	3161	CD1	TYR	A	476	-49.049	-69.609	96.171	1.00196.14	C
ATOM	3162	CD2	TYR	A	476	-48.663	-67.614	94.913	1.00196.28	C
ATOM	3163	CE1	TYR	A	476	-50.211	-69.843	95.451	1.00196.18	C
ATOM	3164	CE2	TYR	A	476	-49.831	-67.844	94.180	1.00196.35	C
ATOM	3165	CZ	TYR	A	476	-50.596	-68.963	94.461	1.00195.80	C
ATOM	3166	OH	TYR	A	476	-51.748	-69.216	93.758	1.00195.60	O
ATOM	3167	N	PRO	A	477	-45.218	-69.510	94.227	1.00195.14	N
ATOM	3168	CA	PRO	A	477	-44.427	-69.185	93.058	1.00195.30	C
ATOM	3169	C	PRO	A	477	-45.065	-68.069	92.221	1.00195.62	C
ATOM	3170	O	PRO	A	477	-46.195	-68.206	91.745	1.00195.58	O
ATOM	3171	CB	PRO	A	477	-44.404	-70.506	92.292	1.00195.09	C
ATOM	3172	CG	PRO	A	477	-45.701	-71.147	92.620	1.00194.86	C
ATOM	3173	CD	PRO	A	477	-46.201	-70.567	93.923	1.00195.07	C
ATOM	3174	N	HIS	A	478	-44.344	-66.959	92.089	1.00196.11	N
ATOM	3175	CA	HIS	A	478	-44.658	-65.931	91.108	1.00196.70	C
ATOM	3176	C	HIS	A	478	-44.211	-66.533	89.779	1.00196.77	C
ATOM	3177	O	HIS	A	478	-43.013	-66.690	89.538	1.00196.82	O
ATOM	3178	CB	HIS	A	478	-43.896	-64.643	91.449	1.00196.93	C
ATOM	3179	CG	HIS	A	478	-43.953	-63.575	90.393	1.00197.85	C
ATOM	3180	ND1	HIS	A	478	-43.185	-63.613	89.245	1.00198.43	N
ATOM	3181	CD2	HIS	A	478	-44.636	-62.405	90.343	1.00198.62	C
ATOM	3182	CE1	HIS	A	478	-43.413	-62.530	88.522	1.00198.39	C
ATOM	3183	NE2	HIS	A	478	-44.289	-61.781	89.165	1.00198.95	N
ATOM	3184	N	GLY	A	479	-45.184	-66.912	88.948	1.00196.87	N
ATOM	3185	CA	GLY	A	479	-44.930	-67.646	87.697	1.00196.68	C
ATOM	3186	C	GLY	A	479	-46.117	-68.489	87.244	1.00196.46	C
ATOM	3187	O	GLY	A	479	-46.833	-68.117	86.312	1.00196.46	O
ATOM	3188	N	ILE	A	480	-46.332	-69.623	87.907	1.00196.15	N
ATOM	3189	CA	ILE	A	480	-47.450	-70.503	87.570	1.00195.91	C
ATOM	3190	C	ILE	A	480	-48.767	-69.983	88.137	1.00195.72	C
ATOM	3191	O	ILE	A	480	-48.786	-69.235	89.110	1.00195.53	O
ATOM	3192	CB	ILE	A	480	-47.220	-71.966	88.028	1.00195.98	C
ATOM	3193	CG1	ILE	A	480	-45.821	-72.448	87.648	1.00195.76	C

ATOM	3194	CG2	ILE	A	480	-48.254	-72.899	87.416	1.00195.85	C
ATOM	3195	CD1	ILE	A	480	-44.881	-72.539	88.808	1.00195.74	C
ATOM	3196	N	THR	A	481	-49.860	-70.397	87.510	1.00195.67	N
ATOM	3197	CA	THR	A	481	-51.184	-69.958	87.889	1.00195.79	C
ATOM	3198	C	THR	A	481	-52.009	-71.109	88.462	1.00195.94	C
ATOM	3199	O	THR	A	481	-52.951	-70.883	89.211	1.00196.11	O
ATOM	3200	CB	THR	A	481	-51.923	-69.322	86.692	1.00195.83	C
ATOM	3201	OG1	THR	A	481	-51.974	-70.259	85.607	1.00195.85	O
ATOM	3202	CG2	THR	A	481	-51.229	-68.015	86.237	1.00195.52	C
ATOM	3203	N	ASP	A	482	-51.654	-72.342	88.118	1.00196.15	N
ATOM	3204	CA	ASP	A	482	-52.374	-73.521	88.625	1.00196.32	C
ATOM	3205	C	ASP	A	482	-51.708	-74.071	89.897	1.00196.18	C
ATOM	3206	O	ASP	A	482	-51.084	-75.140	89.885	1.00196.25	O
ATOM	3207	CB	ASP	A	482	-52.474	-74.604	87.528	1.00196.55	C
ATOM	3208	CG	ASP	A	482	-53.440	-75.755	87.881	1.00196.73	C
ATOM	3209	OD1	ASP	A	482	-54.040	-76.321	86.938	1.00196.70	O
ATOM	3210	OD2	ASP	A	482	-53.594	-76.110	89.074	1.00197.00	O
ATOM	3211	N	VAL	A	483	-51.849	-73.338	90.997	1.00195.89	N
ATOM	3212	CA	VAL	A	483	-51.258	-73.753	92.274	1.00195.66	C
ATOM	3213	C	VAL	A	483	-52.322	-74.085	93.326	1.00195.52	C
ATOM	3214	O	VAL	A	483	-52.986	-73.199	93.885	1.00195.62	O
ATOM	3215	CB	VAL	A	483	-50.234	-72.722	92.786	1.00195.67	C
ATOM	3216	CG1	VAL	A	483	-50.636	-71.334	92.355	1.00195.48	C
ATOM	3217	CG2	VAL	A	483	-50.062	-72.819	94.302	1.00195.62	C
ATOM	3218	N	ARG	A	484	-52.461	-75.382	93.581	1.00195.08	N
ATOM	3219	CA	ARG	A	484	-53.549	-75.925	94.379	1.00194.56	C
ATOM	3220	C	ARG	A	484	-52.965	-76.969	95.331	1.00194.29	C
ATOM	3221	O	ARG	A	484	-52.032	-77.666	94.961	1.00194.40	O
ATOM	3222	CB	ARG	A	484	-54.623	-76.498	93.428	1.00194.49	C
ATOM	3223	CG	ARG	A	484	-55.188	-77.865	93.763	1.00194.25	C
ATOM	3224	CD	ARG	A	484	-54.477	-78.991	93.006	1.00193.72	C
ATOM	3225	NE	ARG	A	484	-55.292	-79.502	91.906	1.00193.27	N
ATOM	3226	CZ	ARG	A	484	-55.363	-80.782	91.527	1.00192.74	C
ATOM	3227	NH1	ARG	A	484	-54.675	-81.737	92.150	1.00191.65	N
ATOM	3228	NH2	ARG	A	484	-56.150	-81.110	90.515	1.00192.70	N
ATOM	3229	N	PRO	A	485	-53.493	-77.065	96.566	1.00193.98	N
ATOM	3230	CA	PRO	A	485	-52.993	-78.045	97.524	1.00193.89	C
ATOM	3231	C	PRO	A	485	-53.084	-79.447	96.954	1.00193.98	C
ATOM	3232	O	PRO	A	485	-54.070	-79.776	96.302	1.00193.94	O
ATOM	3233	CB	PRO	A	485	-53.952	-77.902	98.711	1.00193.90	C
ATOM	3234	CG	PRO	A	485	-55.131	-77.175	98.192	1.00193.80	C
ATOM	3235	CD	PRO	A	485	-54.596	-76.275	97.132	1.00194.02	C
ATOM	3236	N	LEU	A	486	-52.068	-80.265	97.216	1.00194.21	N
ATOM	3237	CA	LEU	A	486	-51.882	-81.541	96.521	1.00194.47	C
ATOM	3238	C	LEU	A	486	-53.171	-82.275	96.188	1.00194.88	C
ATOM	3239	O	LEU	A	486	-53.556	-82.361	95.024	1.00195.08	O
ATOM	3240	CB	LEU	A	486	-50.937	-82.468	97.293	1.00194.23	C
ATOM	3241	CG	LEU	A	486	-49.968	-83.369	96.511	1.00193.83	C
ATOM	3242	CD1	LEU	A	486	-50.672	-84.366	95.596	1.00193.52	C
ATOM	3243	CD2	LEU	A	486	-48.963	-82.542	95.721	1.00193.73	C
ATOM	3244	N	TYR	A	487	-53.844	-82.793	97.202	1.00195.37	N
ATOM	3245	CA	TYR	A	487	-54.880	-83.769	96.947	1.00196.05	C
ATOM	3246	C	TYR	A	487	-56.258	-83.221	96.611	1.00196.72	C
ATOM	3247	O	TYR	A	487	-56.991	-83.833	95.839	1.00196.68	O
ATOM	3248	CB	TYR	A	487	-54.962	-84.732	98.105	1.00196.00	C
ATOM	3249	CG	TYR	A	487	-53.809	-85.688	98.147	1.00195.88	C
ATOM	3250	CD1	TYR	A	487	-53.822	-86.848	97.385	1.00196.12	C
ATOM	3251	CD2	TYR	A	487	-52.706	-85.442	98.954	1.00195.97	C
ATOM	3252	CE1	TYR	A	487	-52.756	-87.755	97.427	1.00197.02	C
ATOM	3253	CE2	TYR	A	487	-51.630	-86.338	99.011	1.00196.47	C
ATOM	3254	CZ	TYR	A	487	-51.658	-87.497	98.243	1.00196.84	C
ATOM	3255	OH	TYR	A	487	-50.603	-88.399	98.289	1.00196.89	O
ATOM	3256	N	SER	A	488	-56.620	-82.082	97.185	1.00197.73	N
ATOM	3257	CA	SER	A	488	-57.952	-81.532	96.956	1.00198.78	C
ATOM	3258	C	SER	A	488	-57.898	-80.180	96.269	1.00199.59	C
ATOM	3259	O	SER	A	488	-56.835	-79.589	96.107	1.00199.54	O
ATOM	3260	CB	SER	A	488	-58.732	-81.420	98.276	1.00198.78	C
ATOM	3261	OG	SER	A	488	-60.063	-80.962	98.066	1.00198.64	O
ATOM	3262	N	ARG	A	489	-59.066	-79.710	95.857	1.00200.78	N
ATOM	3263	CA	ARG	A	489	-59.224	-78.353	95.395	1.00202.08	C
ATOM	3264	C	ARG	A	489	-59.933	-77.559	96.529	1.00203.26	C

ATOM	3265	O	ARG	A	489	-60.799	-76.720	96.282	1.00203.59	O
ATOM	3266	CB	ARG	A	489	-59.987	-78.354	94.057	1.00201.96	C
ATOM	3267	CG	ARG	A	489	-59.470	-77.366	92.997	1.00201.96	C
ATOM	3268	CD	ARG	A	489	-59.736	-77.837	91.548	1.00201.88	C
ATOM	3269	NE	ARG	A	489	-61.144	-77.815	91.128	1.00200.66	N
ATOM	3270	CZ	ARG	A	489	-61.927	-78.892	91.021	1.00200.14	C
ATOM	3271	NH1	ARG	A	489	-61.468	-80.106	91.310	1.00199.37	N
ATOM	3272	NH2	ARG	A	489	-63.183	-78.756	90.624	1.00199.89	N
ATOM	3273	N	ARG	A	490	-59.549	-77.836	97.779	1.00204.55	N
ATOM	3274	CA	ARG	A	490	-60.069	-77.120	98.957	1.00205.92	C
ATOM	3275	C	ARG	A	490	-59.480	-75.715	99.089	1.00206.16	C
ATOM	3276	O	ARG	A	490	-58.633	-75.299	98.305	1.00206.28	O
ATOM	3277	CB	ARG	A	490	-59.773	-77.912	100.253	1.00206.00	C
ATOM	3278	CG	ARG	A	490	-58.310	-77.787	100.817	1.00207.10	C
ATOM	3279	CD	ARG	A	490	-58.220	-77.918	102.372	1.00207.30	C
ATOM	3280	NE	ARG	A	490	-57.900	-79.277	102.845	1.00210.60	N
ATOM	3281	CZ	ARG	A	490	-58.151	-79.748	104.075	1.00211.75	C
ATOM	3282	NH1	ARG	A	490	-58.747	-78.985	104.993	1.00212.65	N
ATOM	3283	NH2	ARG	A	490	-57.817	-80.997	104.392	1.00211.74	N
ATOM	3284	N	LEU	A	491	-59.928	-74.986	100.098	1.00206.85	N
ATOM	3285	CA	LEU	A	491	-59.196	-73.818	100.551	1.00207.58	C
ATOM	3286	C	LEU	A	491	-59.086	-73.937	102.068	1.00208.00	C
ATOM	3287	O	LEU	A	491	-60.115	-74.061	102.741	1.00207.93	O
ATOM	3288	CB	LEU	A	491	-59.904	-72.529	100.138	1.00207.74	C
ATOM	3289	CG	LEU	A	491	-60.091	-72.261	98.641	1.00208.14	C
ATOM	3290	CD1	LEU	A	491	-61.426	-72.819	98.119	1.00208.51	C
ATOM	3291	CD2	LEU	A	491	-60.001	-70.773	98.391	1.00208.32	C
ATOM	3292	N	PRO	A	492	-57.845	-73.905	102.611	1.00208.42	N
ATOM	3293	CA	PRO	A	492	-57.596	-74.256	104.006	1.00208.60	C
ATOM	3294	C	PRO	A	492	-58.748	-73.820	104.885	1.00208.66	C
ATOM	3295	O	PRO	A	492	-58.726	-72.714	105.432	1.00208.77	O
ATOM	3296	CB	PRO	A	492	-56.320	-73.469	104.345	1.00208.60	C
ATOM	3297	CG	PRO	A	492	-55.567	-73.455	103.094	1.00208.77	C
ATOM	3298	CD	PRO	A	492	-56.595	-73.495	101.944	1.00208.65	C
ATOM	3299	N	LYS	A	493	-59.762	-74.680	104.966	1.00208.65	N
ATOM	3300	CA	LYS	A	493	-60.947	-74.467	105.803	1.00208.73	C
ATOM	3301	C	LYS	A	493	-61.578	-73.051	105.778	1.00208.57	C
ATOM	3302	O	LYS	A	493	-62.780	-72.918	106.006	1.00208.57	O
ATOM	3303	CB	LYS	A	493	-60.670	-74.917	107.257	1.00208.88	C
ATOM	3304	CG	LYS	A	493	-60.249	-76.401	107.444	1.00208.99	C
ATOM	3305	CD	LYS	A	493	-61.412	-77.411	107.283	1.00208.97	C
ATOM	3306	CE	LYS	A	493	-62.413	-77.380	108.451	1.00208.65	C
ATOM	3307	NZ	LYS	A	493	-61.865	-77.884	109.746	1.00208.06	N
ATOM	3308	N	GLY	A	494	-60.792	-72.007	105.502	1.00208.37	N
ATOM	3309	CA	GLY	A	494	-61.263	-70.638	105.714	1.00208.22	C
ATOM	3310	C	GLY	A	494	-60.824	-69.526	104.777	1.00208.20	C
ATOM	3311	O	GLY	A	494	-61.606	-68.614	104.506	1.00208.22	O
ATOM	3312	N	VAL	A	495	-59.589	-69.587	104.279	1.00208.18	N
ATOM	3313	CA	VAL	A	495	-58.991	-68.450	103.537	1.00208.12	C
ATOM	3314	C	VAL	A	495	-59.292	-68.363	102.023	1.00208.12	C
ATOM	3315	O	VAL	A	495	-59.591	-69.372	101.384	1.00208.15	O
ATOM	3316	CB	VAL	A	495	-57.459	-68.326	103.791	1.00208.12	C
ATOM	3317	CG1	VAL	A	495	-57.200	-67.707	105.165	1.00207.97	C
ATOM	3318	CG2	VAL	A	495	-56.738	-69.677	103.617	1.00207.85	C
ATOM	3319	N	LYS	A	496	-59.191	-67.153	101.465	1.00208.06	N
ATOM	3320	CA	LYS	A	496	-59.552	-66.893	100.055	1.00208.10	C
ATOM	3321	C	LYS	A	496	-58.598	-67.446	98.970	1.00207.71	C
ATOM	3322	O	LYS	A	496	-59.040	-67.686	97.844	1.00207.55	O
ATOM	3323	CB	LYS	A	496	-59.868	-65.402	99.816	1.00208.44	C
ATOM	3324	CG	LYS	A	496	-61.301	-64.936	100.234	1.00209.38	C
ATOM	3325	CD	LYS	A	496	-62.449	-65.585	99.409	1.00210.31	C
ATOM	3326	CE	LYS	A	496	-62.635	-64.960	98.015	1.00210.43	C
ATOM	3327	NZ	LYS	A	496	-63.681	-63.894	97.981	1.00210.65	N
ATOM	3328	N	HIS	A	497	-57.306	-67.591	99.290	1.00207.43	N
ATOM	3329	CA	HIS	A	497	-56.354	-68.401	98.478	1.00207.29	C
ATOM	3330	C	HIS	A	497	-54.894	-68.503	99.011	1.00206.91	C
ATOM	3331	O	HIS	A	497	-54.315	-67.528	99.489	1.00206.75	O
ATOM	3332	CB	HIS	A	497	-56.448	-68.096	96.957	1.00207.46	C
ATOM	3333	CG	HIS	A	497	-55.332	-67.261	96.407	1.00208.03	C
ATOM	3334	ND1	HIS	A	497	-54.104	-67.790	96.067	1.00208.50	N
ATOM	3335	CD2	HIS	A	497	-55.275	-65.947	96.084	1.00208.56	C

ATOM	3336	CE1	HIS	A	497	-53.330	-66.832	95.587	1.00208.47	C
ATOM	3337	NE2	HIS	A	497	-54.016	-65.703	95.587	1.00208.70	N
ATOM	3338	N	LEU	A	498	-54.323	-69.701	98.875	1.00206.47	N
ATOM	3339	CA	LEU	A	498	-53.107	-70.164	99.577	1.00206.07	C
ATOM	3340	C	LEU	A	498	-51.998	-69.209	99.960	1.00206.10	C
ATOM	3341	O	LEU	A	498	-51.357	-69.408	101.000	1.00206.16	O
ATOM	3342	CB	LEU	A	498	-52.480	-71.317	98.825	1.00205.74	C
ATOM	3343	CG	LEU	A	498	-53.277	-72.583	99.023	1.00205.48	C
ATOM	3344	CD1	LEU	A	498	-54.384	-72.693	97.975	1.00205.07	C
ATOM	3345	CD2	LEU	A	498	-52.309	-73.728	98.941	1.00206.00	C
ATOM	3346	N	LYS	A	499	-51.740	-68.204	99.124	1.00206.06	N
ATOM	3347	CA	LYS	A	499	-50.764	-67.184	99.491	1.00206.21	C
ATOM	3348	C	LYS	A	499	-51.345	-66.286	100.581	1.00206.31	C
ATOM	3349	O	LYS	A	499	-50.944	-65.140	100.757	1.00206.14	O
ATOM	3350	CB	LYS	A	499	-50.189	-66.421	98.268	1.00206.24	C
ATOM	3351	CG	LYS	A	499	-51.096	-65.459	97.477	1.00206.38	C
ATOM	3352	CD	LYS	A	499	-50.246	-64.566	96.521	1.00206.30	C
ATOM	3353	CE	LYS	A	499	-51.061	-63.860	95.409	1.00206.77	C
ATOM	3354	NZ	LYS	A	499	-51.473	-62.435	95.684	1.00207.20	N
ATOM	3355	N	ASP	A	500	-52.273	-66.858	101.342	1.00206.71	N
ATOM	3356	CA	ASP	A	500	-53.021	-66.109	102.339	1.00207.27	C
ATOM	3357	C	ASP	A	500	-52.490	-66.134	103.766	1.00207.04	C
ATOM	3358	O	ASP	A	500	-51.946	-65.129	104.238	1.00207.31	O
ATOM	3359	CB	ASP	A	500	-54.499	-66.498	102.332	1.00207.73	C
ATOM	3360	CG	ASP	A	500	-55.370	-65.422	101.707	1.00209.34	C
ATOM	3361	OD1	ASP	A	500	-56.374	-65.002	102.346	1.00211.00	O
ATOM	3362	OD2	ASP	A	500	-55.024	-64.978	100.585	1.00210.71	O
ATOM	3363	N	PHE	A	501	-52.679	-67.264	104.451	1.00206.49	N
ATOM	3364	CA	PHE	A	501	-52.408	-67.365	105.899	1.00205.82	C
ATOM	3365	C	PHE	A	501	-51.723	-68.699	106.320	1.00204.51	C
ATOM	3366	O	PHE	A	501	-51.103	-68.757	107.400	1.00204.23	O
ATOM	3367	CB	PHE	A	501	-53.726	-67.200	106.716	1.00206.51	C
ATOM	3368	CG	PHE	A	501	-54.140	-65.749	107.041	1.00207.26	C
ATOM	3369	CD1	PHE	A	501	-53.929	-65.219	108.328	1.00208.19	C
ATOM	3370	CD2	PHE	A	501	-54.819	-64.958	106.099	1.00207.49	C
ATOM	3371	CE1	PHE	A	501	-54.338	-63.910	108.653	1.00208.46	C
ATOM	3372	CE2	PHE	A	501	-55.228	-63.648	106.413	1.00207.87	C
ATOM	3373	CZ	PHE	A	501	-54.987	-63.125	107.692	1.00207.97	C
ATOM	3374	N	PRO	A	502	-51.833	-69.765	105.481	1.00203.22	N
ATOM	3375	CA	PRO	A	502	-51.579	-71.100	106.039	1.00202.16	C
ATOM	3376	C	PRO	A	502	-50.142	-71.364	106.598	1.00201.87	C
ATOM	3377	O	PRO	A	502	-49.271	-70.479	106.547	1.00201.79	O
ATOM	3378	CB	PRO	A	502	-51.963	-72.042	104.873	1.00202.31	C
ATOM	3379	CG	PRO	A	502	-52.782	-71.200	103.941	1.00202.19	C
ATOM	3380	CD	PRO	A	502	-52.177	-69.848	104.048	1.00202.79	C
ATOM	3381	N	ILE	A	503	-49.952	-72.562	107.172	1.00201.01	N
ATOM	3382	CA	ILE	A	503	-48.675	-73.087	107.747	1.00200.11	C
ATOM	3383	C	ILE	A	503	-48.082	-72.393	108.989	1.00199.16	C
ATOM	3384	O	ILE	A	503	-47.454	-71.332	108.895	1.00199.21	O
ATOM	3385	CB	ILE	A	503	-47.606	-73.353	106.674	1.00199.68	C
ATOM	3386	CG1	ILE	A	503	-48.142	-74.386	105.705	1.00199.39	C
ATOM	3387	CG2	ILE	A	503	-46.318	-73.866	107.294	1.00199.19	C
ATOM	3388	CD1	ILE	A	503	-48.154	-73.890	104.312	1.00200.40	C
ATOM	3389	N	LEU	A	504	-48.297	-73.038	110.138	1.00197.91	N
ATOM	3390	CA	LEU	A	504	-47.787	-72.630	111.439	1.00196.68	C
ATOM	3391	C	LEU	A	504	-46.440	-73.288	111.664	1.00196.07	C
ATOM	3392	O	LEU	A	504	-46.015	-74.094	110.845	1.00195.94	O
ATOM	3393	CB	LEU	A	504	-48.748	-73.098	112.534	1.00196.52	C
ATOM	3394	CG	LEU	A	504	-50.071	-72.366	112.748	1.00195.95	C
ATOM	3395	CD1	LEU	A	504	-51.065	-73.313	113.347	1.00195.62	C
ATOM	3396	CD2	LEU	A	504	-49.897	-71.152	113.642	1.00195.49	C
ATOM	3397	N	PRO	A	505	-45.763	-72.956	112.780	1.00195.54	N
ATOM	3398	CA	PRO	A	505	-44.583	-73.716	113.172	1.00195.09	C
ATOM	3399	C	PRO	A	505	-44.917	-75.186	113.236	1.00194.64	C
ATOM	3400	O	PRO	A	505	-46.002	-75.544	113.677	1.00194.55	O
ATOM	3401	CB	PRO	A	505	-44.290	-73.209	114.589	1.00195.16	C
ATOM	3402	CG	PRO	A	505	-45.527	-72.453	115.013	1.00195.44	C
ATOM	3403	CD	PRO	A	505	-46.041	-71.876	113.739	1.00195.60	C
ATOM	3404	N	GLY	A	506	-44.000	-76.025	112.776	1.00194.37	N
ATOM	3405	CA	GLY	A	506	-44.169	-77.466	112.876	1.00194.28	C
ATOM	3406	C	GLY	A	506	-44.872	-78.143	111.714	1.00194.22	C

ATOM	3407	O	GLY	A	506	-44.295	-79.033	111.089	1.00194.36	O
ATOM	3408	N	GLU	A	507	-46.111	-77.731	111.432	1.00193.98	N
ATOM	3409	CA	GLU	A	507	-46.964	-78.394	110.428	1.00193.96	C
ATOM	3410	C	GLU	A	507	-46.405	-78.337	108.993	1.00193.22	C
ATOM	3411	O	GLU	A	507	-45.718	-77.387	108.623	1.00193.08	O
ATOM	3412	CB	GLU	A	507	-48.408	-77.859	110.487	1.00193.96	C
ATOM	3413	CG	GLU	A	507	-48.528	-76.311	110.424	1.00195.28	C
ATOM	3414	CD	GLU	A	507	-49.899	-75.774	109.919	1.00195.34	C
ATOM	3415	OE1	GLU	A	507	-50.579	-76.445	109.099	1.00197.24	O
ATOM	3416	OE2	GLU	A	507	-50.288	-74.650	110.328	1.00196.04	O
ATOM	3417	N	ILE	A	508	-46.698	-79.371	108.205	1.00192.77	N
ATOM	3418	CA	ILE	A	508	-46.237	-79.495	106.810	1.00192.39	C
ATOM	3419	C	ILE	A	508	-47.427	-79.502	105.848	1.00192.06	C
ATOM	3420	O	ILE	A	508	-48.490	-80.051	106.177	1.00192.21	O
ATOM	3421	CB	ILE	A	508	-45.421	-80.804	106.571	1.00192.37	C
ATOM	3422	CG1	ILE	A	508	-46.293	-82.057	106.806	1.00192.79	C
ATOM	3423	CG2	ILE	A	508	-44.193	-80.843	107.452	1.00192.42	C
ATOM	3424	CD1	ILE	A	508	-45.613	-83.411	106.525	1.00192.67	C
ATOM	3425	N	PHE	A	509	-47.247	-78.906	104.665	1.00191.51	N
ATOM	3426	CA	PHE	A	509	-48.310	-78.821	103.644	1.00190.90	C
ATOM	3427	C	PHE	A	509	-47.822	-79.325	102.289	1.00190.57	C
ATOM	3428	O	PHE	A	509	-46.753	-78.919	101.814	1.00190.77	O
ATOM	3429	CB	PHE	A	509	-48.783	-77.372	103.484	1.00190.85	C
ATOM	3430	CG	PHE	A	509	-50.200	-77.227	102.979	1.00190.61	C
ATOM	3431	CD1	PHE	A	509	-50.836	-78.256	102.289	1.00190.39	C
ATOM	3432	CD2	PHE	A	509	-50.893	-76.034	103.187	1.00190.59	C
ATOM	3433	CE1	PHE	A	509	-52.135	-78.103	101.834	1.00190.83	C
ATOM	3434	CE2	PHE	A	509	-52.195	-75.867	102.737	1.00190.38	C
ATOM	3435	CZ	PHE	A	509	-52.819	-76.902	102.060	1.00190.76	C
ATOM	3436	N	LYS	A	510	-48.611	-80.194	101.661	1.00189.82	N
ATOM	3437	CA	LYS	A	510	-48.270	-80.691	100.337	1.00189.17	C
ATOM	3438	C	LYS	A	510	-48.950	-79.831	99.260	1.00188.79	C
ATOM	3439	O	LYS	A	510	-50.173	-79.848	99.129	1.00188.93	O
ATOM	3440	CB	LYS	A	510	-48.646	-82.168	100.211	1.00189.07	C
ATOM	3441	CG	LYS	A	510	-48.064	-83.075	101.303	1.00188.98	C
ATOM	3442	CD	LYS	A	510	-48.403	-84.543	101.036	1.00189.31	C
ATOM	3443	CE	LYS	A	510	-47.884	-85.491	102.111	1.00189.49	C
ATOM	3444	NZ	LYS	A	510	-47.821	-86.907	101.611	1.00189.76	N
ATOM	3445	N	TYR	A	511	-48.150	-79.063	98.517	1.00188.10	N
ATOM	3446	CA	TYR	A	511	-48.645	-78.160	97.483	1.00187.47	C
ATOM	3447	C	TYR	A	511	-48.475	-78.796	96.106	1.00187.47	C
ATOM	3448	O	TYR	A	511	-47.536	-79.556	95.897	1.00187.29	O
ATOM	3449	CB	TYR	A	511	-47.818	-76.885	97.491	1.00187.15	C
ATOM	3450	CG	TYR	A	511	-48.107	-75.834	98.548	1.00186.97	C
ATOM	3451	CD1	TYR	A	511	-48.091	-76.127	99.913	1.00186.45	C
ATOM	3452	CD2	TYR	A	511	-48.311	-74.511	98.172	1.00187.17	C
ATOM	3453	CE1	TYR	A	511	-48.319	-75.128	100.866	1.00185.95	C
ATOM	3454	CE2	TYR	A	511	-48.538	-73.516	99.115	1.00187.09	C
ATOM	3455	CZ	TYR	A	511	-48.541	-73.824	100.454	1.00186.48	C
ATOM	3456	OH	TYR	A	511	-48.771	-72.803	101.351	1.00186.51	O
ATOM	3457	N	LYS	A	512	-49.369	-78.476	95.166	1.00187.72	N
ATOM	3458	CA	LYS	A	512	-49.214	-78.869	93.745	1.00187.85	C
ATOM	3459	C	LYS	A	512	-49.146	-77.662	92.808	1.00187.96	C
ATOM	3460	O	LYS	A	512	-50.084	-76.861	92.705	1.00187.59	O
ATOM	3461	CB	LYS	A	512	-50.314	-79.839	93.275	1.00187.86	C
ATOM	3462	CG	LYS	A	512	-50.225	-80.268	91.795	1.00187.69	C
ATOM	3463	CD	LYS	A	512	-51.462	-81.077	91.364	1.00188.10	C
ATOM	3464	CE	LYS	A	512	-51.430	-81.551	89.886	1.00188.72	C
ATOM	3465	NZ	LYS	A	512	-50.954	-82.965	89.633	1.00189.26	N
ATOM	3466	N	TRP	A	513	-48.003	-77.561	92.136	1.00188.45	N
ATOM	3467	CA	TRP	A	513	-47.763	-76.589	91.075	1.00188.92	C
ATOM	3468	C	TRP	A	513	-47.767	-77.292	89.697	1.00189.25	C
ATOM	3469	O	TRP	A	513	-46.845	-78.060	89.375	1.00189.49	O
ATOM	3470	CB	TRP	A	513	-46.429	-75.851	91.301	1.00188.75	C
ATOM	3471	CG	TRP	A	513	-46.350	-75.045	92.577	1.00188.70	C
ATOM	3472	CD1	TRP	A	513	-47.389	-74.650	93.371	1.00188.80	C
ATOM	3473	CD2	TRP	A	513	-45.166	-74.512	93.180	1.00188.43	C
ATOM	3474	NE1	TRP	A	513	-46.923	-73.915	94.438	1.00188.76	N
ATOM	3475	CE2	TRP	A	513	-45.562	-73.819	94.343	1.00188.47	C
ATOM	3476	CE3	TRP	A	513	-43.810	-74.561	92.855	1.00188.46	C
ATOM	3477	CZ2	TRP	A	513	-44.653	-73.179	95.173	1.00188.82	C

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ATOM   3478  CZ3 TRP A 513     -42.911 -73.921  93.676  1.00188.57           C
ATOM   3479  CH2 TRP A 513     -43.333 -73.236  94.819  1.00188.92           C
ATOM   3480  N   THR A 514     -48.814 -77.036  88.904  1.00189.18           N
ATOM   3481  CA  THR A 514     -48.930 -77.561  87.546  1.00188.91           C
ATOM   3482  C   THR A 514     -48.650 -76.439  86.548  1.00188.87           C
ATOM   3483  O   THR A 514     -49.243 -75.363  86.628  1.00188.65           O
ATOM   3484  CB  THR A 514     -50.320 -78.150  87.294  1.00188.88           C
ATOM   3485  OG1 THR A 514     -50.639 -79.074  88.338  1.00188.85           O
ATOM   3486  CG2 THR A 514     -50.357 -78.882  85.963  1.00189.31           C
ATOM   3487  N   VAL A 515     -47.746 -76.705  85.607  1.00188.90           N
ATOM   3488  CA  VAL A 515     -47.263 -75.680  84.694  1.00188.85           C
ATOM   3489  C   VAL A 515     -47.740 -75.922  83.294  1.00188.83           C
ATOM   3490  O   VAL A 515     -47.540 -76.999  82.741  1.00188.69           O
ATOM   3491  CB  VAL A 515     -45.753 -75.662  84.612  1.00188.90           C
ATOM   3492  CG1 VAL A 515     -45.273 -74.241  84.743  1.00189.22           C
ATOM   3493  CG2 VAL A 515     -45.138 -76.540  85.688  1.00189.09           C
ATOM   3494  N   THR A 516     -48.340 -74.894  82.715  1.00189.07           N
ATOM   3495  CA  THR A 516     -48.970 -75.004  81.408  1.00189.64           C
ATOM   3496  C   THR A 516     -48.399 -73.986  80.443  1.00189.79           C
ATOM   3497  O   THR A 516     -47.681 -73.083  80.854  1.00189.82           O
ATOM   3498  CB  THR A 516     -50.485 -74.832  81.509  1.00189.69           C
ATOM   3499  OG1 THR A 516     -50.786 -73.734  82.380  1.00190.01           O
ATOM   3500  CG2 THR A 516     -51.125 -76.099  82.065  1.00190.38           C
ATOM   3501  N   VAL A 517     -48.728 -74.121  79.160  1.00190.11           N
ATOM   3502  CA  VAL A 517     -48.012 -73.380  78.112  1.00190.58           C
ATOM   3503  C   VAL A 517     -48.064 -71.876  78.314  1.00190.86           C
ATOM   3504  O   VAL A 517     -47.161 -71.146  77.894  1.00191.14           O
ATOM   3505  CB  VAL A 517     -48.494 -73.749  76.687  1.00190.51           C
ATOM   3506  CG1 VAL A 517     -48.926 -75.197  76.647  1.00190.94           C
ATOM   3507  CG2 VAL A 517     -49.632 -72.836  76.207  1.00190.74           C
ATOM   3508  N   GLU A 518     -49.119 -71.433  78.985  1.00191.03           N
ATOM   3509  CA  GLU A 518     -49.423 -70.023  79.117  1.00191.26           C
ATOM   3510  C   GLU A 518     -48.417 -69.294  79.990  1.00190.81           C
ATOM   3511  O   GLU A 518     -48.125 -68.132  79.729  1.00190.73           O
ATOM   3512  CB  GLU A 518     -50.851 -69.832  79.637  1.00191.65           C
ATOM   3513  CG  GLU A 518     -51.362 -70.951  80.574  1.00193.76           C
ATOM   3514  CD  GLU A 518     -51.956 -72.177  79.839  1.00196.20           C
ATOM   3515  OE1 GLU A 518     -52.684 -72.962  80.500  1.00197.01           O
ATOM   3516  OE2 GLU A 518     -51.704 -72.359  78.619  1.00196.67           O
ATOM   3517  N   ASP A 519     -47.884 -69.982  81.003  1.00190.42           N
ATOM   3518  CA  ASP A 519     -46.921 -69.385  81.949  1.00190.28           C
ATOM   3519  C   ASP A 519     -45.462 -69.694  81.642  1.00189.58           C
ATOM   3520  O   ASP A 519     -44.559 -69.328  82.394  1.00189.31           O
ATOM   3521  CB  ASP A 519     -47.243 -69.725  83.417  1.00190.73           C
ATOM   3522  CG  ASP A 519     -48.330 -70.786  83.572  1.00192.39           C
ATOM   3523  OD1 ASP A 519     -49.272 -70.549  84.372  1.00194.05           O
ATOM   3524  OD2 ASP A 519     -48.245 -71.854  82.918  1.00194.21           O
ATOM   3525  N   GLY A 520     -45.247 -70.365  80.523  1.00189.11           N
ATOM   3526  CA  GLY A 520     -43.908 -70.628  80.040  1.00188.66           C
ATOM   3527  C   GLY A 520     -43.575 -69.832  78.792  1.00188.33           C
ATOM   3528  O   GLY A 520     -44.428 -69.108  78.258  1.00188.41           O
ATOM   3529  N   PRO A 521     -42.339 -69.990  78.293  1.00187.99           N
ATOM   3530  CA  PRO A 521     -41.863 -69.152  77.219  1.00187.72           C
ATOM   3531  C   PRO A 521     -42.645 -69.417  75.962  1.00187.39           C
ATOM   3532  O   PRO A 521     -43.759 -69.935  76.015  1.00187.09           O
ATOM   3533  CB  PRO A 521     -40.413 -69.609  77.045  1.00187.94           C
ATOM   3534  CG  PRO A 521     -40.409 -71.016  77.518  1.00188.00           C
ATOM   3535  CD  PRO A 521     -41.333 -70.994  78.683  1.00188.03           C
ATOM   3536  N   THR A 522     -42.051 -69.069  74.832  1.00187.33           N
ATOM   3537  CA  THR A 522     -42.732 -69.200  73.572  1.00187.29           C
ATOM   3538  C   THR A 522     -41.767 -69.297  72.408  1.00187.54           C
ATOM   3539  O   THR A 522     -40.548 -69.429  72.586  1.00187.57           O
ATOM   3540  CB  THR A 522     -43.593 -67.999  73.348  1.00187.13           C
ATOM   3541  OG1 THR A 522     -42.745 -66.856  73.195  1.00186.60           O
ATOM   3542  CG2 THR A 522     -44.539 -67.802  74.535  1.00186.82           C
ATOM   3543  N   LYS A 523     -42.329 -69.216  71.208  1.00187.76           N
ATOM   3544  CA  LYS A 523     -41.531 -69.318  70.012  1.00188.11           C
ATOM   3545  C   LYS A 523     -40.733 -68.035  69.825  1.00188.39           C
ATOM   3546  O   LYS A 523     -40.038 -67.870  68.830  1.00188.65           O
ATOM   3547  CB  LYS A 523     -42.388 -69.693  68.785  1.00188.02           C
ATOM   3548  CG  LYS A 523     -43.492 -68.710  68.389  1.00188.07           C
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ATOM	3549	CD	LYS	A	523	-44.271	-69.214	67.163	1.00188.17	C
ATOM	3550	CE	LYS	A	523	-44.896	-68.073	66.338	1.00188.28	C
ATOM	3551	NZ	LYS	A	523	-43.986	-67.531	65.276	1.00187.54	N
ATOM	3552	N	SER	A	524	-40.805	-67.140	70.802	1.00188.70	N
ATOM	3553	CA	SER	A	524	-40.050	-65.901	70.713	1.00189.36	C
ATOM	3554	C	SER	A	524	-39.021	-65.705	71.810	1.00189.71	C
ATOM	3555	O	SER	A	524	-37.873	-65.374	71.527	1.00189.79	O
ATOM	3556	CB	SER	A	524	-40.984	-64.697	70.652	1.00189.42	C
ATOM	3557	OG	SER	A	524	-41.007	-64.152	69.342	1.00190.15	O
ATOM	3558	N	ASP	A	525	-39.440	-65.916	73.054	1.00190.28	N
ATOM	3559	CA	ASP	A	525	-38.653	-65.602	74.254	1.00190.65	C
ATOM	3560	C	ASP	A	525	-37.271	-66.241	74.276	1.00190.87	C
ATOM	3561	O	ASP	A	525	-36.705	-66.572	73.240	1.00190.95	O
ATOM	3562	CB	ASP	A	525	-39.424	-66.073	75.492	1.00190.62	C
ATOM	3563	CG	ASP	A	525	-40.865	-65.631	75.483	1.00191.14	C
ATOM	3564	OD1	ASP	A	525	-41.106	-64.405	75.381	1.00192.14	O
ATOM	3565	OD2	ASP	A	525	-41.751	-66.507	75.574	1.00190.66	O
ATOM	3566	N	PRO	A	526	-36.703	-66.389	75.471	1.00191.18	N
ATOM	3567	CA	PRO	A	526	-35.700	-67.418	75.612	1.00191.65	C
ATOM	3568	C	PRO	A	526	-36.444	-68.729	75.673	1.00192.18	C
ATOM	3569	O	PRO	A	526	-37.611	-68.794	75.285	1.00192.09	O
ATOM	3570	CB	PRO	A	526	-35.099	-67.122	76.974	1.00191.64	C
ATOM	3571	CG	PRO	A	526	-36.200	-66.478	77.716	1.00191.56	C
ATOM	3572	CD	PRO	A	526	-36.900	-65.635	76.717	1.00191.15	C
ATOM	3573	N	ARG	A	527	-35.789	-69.769	76.163	1.00192.95	N
ATOM	3574	CA	ARG	A	527	-36.486	-71.022	76.336	1.00193.84	C
ATOM	3575	C	ARG	A	527	-36.738	-71.249	77.812	1.00193.81	C
ATOM	3576	O	ARG	A	527	-37.431	-72.184	78.194	1.00193.90	O
ATOM	3577	CB	ARG	A	527	-35.758	-72.185	75.639	1.00194.20	C
ATOM	3578	CG	ARG	A	527	-35.704	-72.010	74.094	1.00196.14	C
ATOM	3579	CD	ARG	A	527	-36.131	-73.254	73.292	1.00198.99	C
ATOM	3580	NE	ARG	A	527	-35.183	-74.373	73.391	1.00201.47	N
ATOM	3581	CZ	ARG	A	527	-34.306	-74.731	72.446	1.00202.58	C
ATOM	3582	NH1	ARG	A	527	-34.226	-74.069	71.293	1.00202.82	N
ATOM	3583	NH2	ARG	A	527	-33.494	-75.764	72.660	1.00203.06	N
ATOM	3584	N	CYS	A	528	-36.224	-70.346	78.636	1.00193.93	N
ATOM	3585	CA	CYS	A	528	-36.380	-70.481	80.071	1.00194.46	C
ATOM	3586	C	CYS	A	528	-36.580	-69.164	80.774	1.00193.91	C
ATOM	3587	O	CYS	A	528	-35.600	-68.551	81.196	1.00194.03	O
ATOM	3588	CB	CYS	A	528	-35.136	-71.133	80.652	1.00194.92	C
ATOM	3589	SG	CYS	A	528	-35.155	-72.912	80.572	1.00198.51	S
ATOM	3590	N	LEU	A	529	-37.827	-68.726	80.934	1.00193.35	N
ATOM	3591	CA	LEU	A	529	-38.056	-67.432	81.588	1.00192.87	C
ATOM	3592	C	LEU	A	529	-37.739	-67.474	83.077	1.00193.10	C
ATOM	3593	O	LEU	A	529	-37.824	-68.537	83.712	1.00193.13	O
ATOM	3594	CB	LEU	A	529	-39.445	-66.855	81.312	1.00192.34	C
ATOM	3595	CG	LEU	A	529	-40.480	-67.681	80.569	1.00191.19	C
ATOM	3596	CD1	LEU	A	529	-41.101	-68.679	81.487	1.00190.67	C
ATOM	3597	CD2	LEU	A	529	-41.529	-66.747	80.042	1.00190.82	C
ATOM	3598	N	THR	A	530	-37.342	-66.325	83.619	1.00193.16	N
ATOM	3599	CA	THR	A	530	-36.908	-66.269	85.009	1.00193.07	C
ATOM	3600	C	THR	A	530	-37.981	-65.762	85.944	1.00192.95	C
ATOM	3601	O	THR	A	530	-38.657	-64.774	85.680	1.00192.61	O
ATOM	3602	CB	THR	A	530	-35.588	-65.506	85.170	1.00193.15	C
ATOM	3603	OG1	THR	A	530	-34.514	-66.386	84.821	1.00193.25	O
ATOM	3604	CG2	THR	A	530	-35.389	-65.036	86.609	1.00193.02	C
ATOM	3605	N	ARG	A	531	-38.126	-66.491	87.035	1.00193.18	N
ATOM	3606	CA	ARG	A	531	-39.144	-66.234	88.024	1.00193.84	C
ATOM	3607	C	ARG	A	531	-38.600	-66.687	89.382	1.00194.30	C
ATOM	3608	O	ARG	A	531	-37.431	-67.056	89.481	1.00194.41	O
ATOM	3609	CB	ARG	A	531	-40.427	-67.010	87.687	1.00193.99	C
ATOM	3610	CG	ARG	A	531	-41.072	-66.712	86.349	1.00193.38	C
ATOM	3611	CD	ARG	A	531	-41.762	-65.396	86.368	1.00193.41	C
ATOM	3612	NE	ARG	A	531	-41.486	-64.687	85.131	1.00194.84	N
ATOM	3613	CZ	ARG	A	531	-42.267	-64.715	84.054	1.00195.58	C
ATOM	3614	NH1	ARG	A	531	-43.401	-65.420	84.049	1.00195.05	N
ATOM	3615	NH2	ARG	A	531	-41.908	-64.024	82.977	1.00196.06	N
ATOM	3616	N	TYR	A	532	-39.450	-66.688	90.411	1.00194.71	N
ATOM	3617	CA	TYR	A	532	-39.012	-66.907	91.780	1.00195.11	C
ATOM	3618	C	TYR	A	532	-40.171	-67.273	92.670	1.00195.51	C
ATOM	3619	O	TYR	A	532	-41.329	-67.049	92.293	1.00195.45	O

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ATOM   3620  CB  TYR A 532     -38.411 -65.620  92.333  1.00195.25           C
ATOM   3621  CG  TYR A 532     -39.420 -64.512  92.528  1.00194.95           C
ATOM   3622  CD1 TYR A 532     -40.032 -64.305  93.758  1.00194.86           C
ATOM   3623  CD2 TYR A 532     -39.754 -63.672  91.483  1.00194.81           C
ATOM   3624  CE1 TYR A 532     -40.949 -63.289  93.936  1.00195.38           C
ATOM   3625  CE2 TYR A 532     -40.665 -62.653  91.645  1.00195.34           C
ATOM   3626  CZ  TYR A 532     -41.261 -62.462  92.869  1.00195.72           C
ATOM   3627  OH  TYR A 532     -42.175 -61.436  93.009  1.00196.45           O
ATOM   3628  N   TYR A 533     -39.840 -67.800  93.858  1.00195.97           N
ATOM   3629  CA  TYR A 533     -40.798 -67.957  94.965  1.00196.42           C
ATOM   3630  C   TYR A 533     -40.386 -67.183  96.224  1.00197.13           C
ATOM   3631  O   TYR A 533     -39.243 -67.252  96.674  1.00196.95           O
ATOM   3632  CB  TYR A 533     -41.097 -69.437  95.280  1.00195.79           C
ATOM   3633  CG  TYR A 533     -39.883 -70.280  95.546  1.00195.18           C
ATOM   3634  CD1 TYR A 533     -39.328 -70.353  96.811  1.00195.72           C
ATOM   3635  CD2 TYR A 533     -39.293 -71.019  94.539  1.00194.90           C
ATOM   3636  CE1 TYR A 533     -38.200 -71.135  97.065  1.00195.50           C
ATOM   3637  CE2 TYR A 533     -38.163 -71.802  94.780  1.00194.82           C
ATOM   3638  CZ  TYR A 533     -37.625 -71.857  96.044  1.00194.95           C
ATOM   3639  OH  TYR A 533     -36.514 -72.624  96.300  1.00194.63           O
ATOM   3640  N   SER A 534     -41.332 -66.406  96.745  1.00198.28           N
ATOM   3641  CA  SER A 534     -41.208 -65.735  98.031  1.00199.52           C
ATOM   3642  C   SER A 534     -42.060 -66.568  98.983  1.00200.38           C
ATOM   3643  O   SER A 534     -42.621 -67.591  98.571  1.00200.52           O
ATOM   3644  CB  SER A 534     -41.749 -64.294  97.922  1.00199.52           C
ATOM   3645  OG  SER A 534     -41.617 -63.559  99.135  1.00199.50           O
ATOM   3646  N   SER A 535     -42.143 -66.156 100.248  1.00201.40           N
ATOM   3647  CA  SER A 535     -43.286 -66.553 101.071  1.00202.35           C
ATOM   3648  C   SER A 535     -44.214 -65.372 101.235  1.00203.23           C
ATOM   3649  O   SER A 535     -43.795 -64.224 101.069  1.00203.42           O
ATOM   3650  CB  SER A 535     -42.894 -67.063 102.439  1.00202.24           C
ATOM   3651  OG  SER A 535     -44.082 -67.399 103.137  1.00201.75           O
ATOM   3652  N   PHE A 536     -45.470 -65.654 101.578  1.00204.32           N
ATOM   3653  CA  PHE A 536     -46.528 -64.635 101.501  1.00205.38           C
ATOM   3654  C   PHE A 536     -47.434 -64.447 102.742  1.00205.94           C
ATOM   3655  O   PHE A 536     -48.515 -63.843 102.631  1.00206.03           O
ATOM   3656  CB  PHE A 536     -47.389 -64.867 100.247  1.00205.52           C
ATOM   3657  CG  PHE A 536     -46.789 -64.325  98.987  1.00205.45           C
ATOM   3658  CD1 PHE A 536     -47.339 -63.209  98.378  1.00205.58           C
ATOM   3659  CD2 PHE A 536     -45.681 -64.937  98.404  1.00205.97           C
ATOM   3660  CE1 PHE A 536     -46.796 -62.701  97.210  1.00206.71           C
ATOM   3661  CE2 PHE A 536     -45.121 -64.440  97.240  1.00206.66           C
ATOM   3662  CZ  PHE A 536     -45.677 -63.316  96.637  1.00206.99           C
ATOM   3663  N   VAL A 537     -47.009 -64.945 103.908  1.00206.43           N
ATOM   3664  CA  VAL A 537     -47.735 -64.642 105.147  1.00206.75           C
ATOM   3665  C   VAL A 537     -47.642 -63.121 105.406  1.00207.08           C
ATOM   3666  O   VAL A 537     -48.671 -62.461 105.586  1.00207.27           O
ATOM   3667  CB  VAL A 537     -47.322 -65.565 106.350  1.00206.64           C
ATOM   3668  CG1 VAL A 537     -45.922 -65.276 106.814  1.00206.74           C
ATOM   3669  CG2 VAL A 537     -48.315 -65.456 107.517  1.00206.75           C
ATOM   3670  N   ASN A 538     -46.425 -62.568 105.374  1.00207.38           N
ATOM   3671  CA  ASN A 538     -46.223 -61.114 105.231  1.00207.75           C
ATOM   3672  C   ASN A 538     -45.455 -60.864 103.935  1.00207.61           C
ATOM   3673  O   ASN A 538     -44.872 -61.800 103.390  1.00207.66           O
ATOM   3674  CB  ASN A 538     -45.492 -60.510 106.442  1.00207.98           C
ATOM   3675  CG  ASN A 538     -45.837 -59.024 106.670  1.00208.80           C
ATOM   3676  OD1 ASN A 538     -45.695 -58.186 105.769  1.00209.97           O
ATOM   3677  ND2 ASN A 538     -46.271 -58.697 107.889  1.00209.05           N
ATOM   3678  N   MET A 539     -45.456 -59.634 103.418  1.00207.42           N
ATOM   3679  CA  MET A 539     -44.827 -59.436 102.123  1.00207.21           C
ATOM   3680  C   MET A 539     -43.300 -59.456 102.155  1.00206.97           C
ATOM   3681  O   MET A 539     -42.679 -60.366 101.607  1.00206.96           O
ATOM   3682  CB  MET A 539     -45.382 -58.246 101.345  1.00207.28           C
ATOM   3683  CG  MET A 539     -45.082 -58.417  99.849  1.00208.04           C
ATOM   3684  SD  MET A 539     -45.006 -60.183  99.352  1.00209.24           S
ATOM   3685  CE  MET A 539     -43.838 -60.173  97.979  1.00208.32           C
ATOM   3686  N   GLU A 540     -42.709 -58.446 102.780  1.00206.76           N
ATOM   3687  CA  GLU A 540     -41.251 -58.346 102.902  1.00206.60           C
ATOM   3688  C   GLU A 540     -40.880 -58.410 104.379  1.00206.07           C
ATOM   3689  O   GLU A 540     -39.784 -58.839 104.750  1.00206.07           O
ATOM   3690  CB  GLU A 540     -40.718 -57.063 102.232  1.00206.84           C
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ATOM	3691	CG	GLU	A	540	-40.887	-55.757	103.037	1.00207.73	C
ATOM	3692	CD	GLU	A	540	-42.349	-55.299	103.227	1.00208.93	C
ATOM	3693	OE1	GLU	A	540	-43.284	-56.141	103.311	1.00209.36	O
ATOM	3694	OE2	GLU	A	540	-42.555	-54.068	103.310	1.00209.22	O
ATOM	3695	N	ARG	A	541	-41.819	-57.982	105.216	1.00205.35	N
ATOM	3696	CA	ARG	A	541	-41.765	-58.250	106.633	1.00204.75	C
ATOM	3697	C	ARG	A	541	-41.655	-59.788	106.757	1.00204.24	C
ATOM	3698	O	ARG	A	541	-41.484	-60.345	107.851	1.00204.43	O
ATOM	3699	CB	ARG	A	541	-43.007	-57.644	107.296	1.00204.77	C
ATOM	3700	CG	ARG	A	541	-43.114	-57.797	108.793	1.00205.32	C
ATOM	3701	CD	ARG	A	541	-43.674	-56.558	109.436	1.00206.22	C
ATOM	3702	NE	ARG	A	541	-42.611	-55.570	109.611	1.00208.12	N
ATOM	3703	CZ	ARG	A	541	-41.931	-55.375	110.741	1.00209.09	C
ATOM	3704	NH1	ARG	A	541	-42.206	-56.089	111.830	1.00209.37	N
ATOM	3705	NH2	ARG	A	541	-40.976	-54.449	110.787	1.00209.42	N
ATOM	3706	N	ASP	A	542	-41.734	-60.449	105.599	1.00203.28	N
ATOM	3707	CA	ASP	A	542	-41.325	-61.836	105.420	1.00202.39	C
ATOM	3708	C	ASP	A	542	-40.032	-61.908	104.615	1.00201.99	C
ATOM	3709	O	ASP	A	542	-38.945	-62.047	105.177	1.00201.70	O
ATOM	3710	CB	ASP	A	542	-42.409	-62.611	104.684	1.00202.26	C
ATOM	3711	CG	ASP	A	542	-43.174	-63.537	105.582	1.00201.56	C
ATOM	3712	OD1	ASP	A	542	-43.299	-63.242	106.785	1.00200.88	O
ATOM	3713	OD2	ASP	A	542	-43.646	-64.572	105.074	1.00200.81	O
ATOM	3714	N	LEU	A	543	-40.177	-61.804	103.292	1.00201.69	N
ATOM	3715	CA	LEU	A	543	-39.062	-61.838	102.333	1.00201.33	C
ATOM	3716	C	LEU	A	543	-37.762	-61.284	102.917	1.00201.16	C
ATOM	3717	O	LEU	A	543	-36.779	-62.018	103.033	1.00201.31	O
ATOM	3718	CB	LEU	A	543	-39.429	-61.099	101.026	1.00201.22	C
ATOM	3719	CG	LEU	A	543	-38.293	-60.544	100.153	1.00200.47	C
ATOM	3720	CD1	LEU	A	543	-37.910	-61.526	99.088	1.00199.99	C
ATOM	3721	CD2	LEU	A	543	-38.684	-59.225	99.527	1.00200.29	C
ATOM	3722	N	ALA	A	544	-37.771	-60.004	103.302	1.00200.71	N
ATOM	3723	CA	ALA	A	544	-36.564	-59.322	103.772	1.00200.07	C
ATOM	3724	C	ALA	A	544	-35.788	-60.161	104.789	1.00199.54	C
ATOM	3725	O	ALA	A	544	-34.567	-60.063	104.871	1.00199.79	O
ATOM	3726	CB	ALA	A	544	-36.895	-57.933	104.332	1.00200.06	C
ATOM	3727	N	SER	A	545	-36.490	-61.020	105.522	1.00198.53	N
ATOM	3728	CA	SER	A	545	-35.849	-61.838	106.533	1.00197.60	C
ATOM	3729	C	SER	A	545	-35.263	-63.144	105.999	1.00197.04	C
ATOM	3730	O	SER	A	545	-34.663	-63.897	106.755	1.00196.80	O
ATOM	3731	CB	SER	A	545	-36.823	-62.092	107.659	1.00197.65	C
ATOM	3732	OG	SER	A	545	-37.656	-60.959	107.799	1.00197.61	O
ATOM	3733	N	GLY	A	546	-35.428	-63.403	104.702	1.00196.61	N
ATOM	3734	CA	GLY	A	546	-34.719	-64.508	104.024	1.00196.22	C
ATOM	3735	C	GLY	A	546	-35.483	-65.436	103.075	1.00195.79	C
ATOM	3736	O	GLY	A	546	-34.911	-66.365	102.482	1.00195.48	O
ATOM	3737	N	LEU	A	547	-36.774	-65.176	102.915	1.00195.56	N
ATOM	3738	CA	LEU	A	547	-37.664	-66.080	102.186	1.00195.32	C
ATOM	3739	C	LEU	A	547	-37.606	-65.925	100.657	1.00194.90	C
ATOM	3740	O	LEU	A	547	-38.564	-65.448	100.020	1.00194.92	O
ATOM	3741	CB	LEU	A	547	-39.101	-65.939	102.711	1.00195.47	C
ATOM	3742	CG	LEU	A	547	-39.237	-66.063	104.233	1.00195.62	C
ATOM	3743	CD1	LEU	A	547	-40.567	-65.503	104.673	1.00195.63	C
ATOM	3744	CD2	LEU	A	547	-39.033	-67.497	104.744	1.00195.51	C
ATOM	3745	N	ILE	A	548	-36.484	-66.350	100.077	1.00194.08	N
ATOM	3746	CA	ILE	A	548	-36.280	-66.233	98.641	1.00193.09	C
ATOM	3747	C	ILE	A	548	-35.686	-67.503	98.024	1.00192.88	C
ATOM	3748	O	ILE	A	548	-34.841	-68.167	98.632	1.00192.57	O
ATOM	3749	CB	ILE	A	548	-35.434	-64.985	98.304	1.00192.81	C
ATOM	3750	CG1	ILE	A	548	-35.506	-64.663	96.819	1.00192.06	C
ATOM	3751	CG2	ILE	A	548	-34.005	-65.157	98.763	1.00192.87	C
ATOM	3752	CD1	ILE	A	548	-36.900	-64.408	96.342	1.00191.84	C
ATOM	3753	N	GLY	A	549	-36.165	-67.825	96.819	1.00192.73	N
ATOM	3754	CA	GLY	A	549	-35.701	-68.976	96.021	1.00192.27	C
ATOM	3755	C	GLY	A	549	-36.144	-68.937	94.554	1.00191.81	C
ATOM	3756	O	GLY	A	549	-37.291	-68.569	94.260	1.00191.55	O
ATOM	3757	N	PRO	A	550	-35.241	-69.342	93.628	1.00191.49	N
ATOM	3758	CA	PRO	A	550	-35.427	-69.157	92.188	1.00191.25	C
ATOM	3759	C	PRO	A	550	-36.267	-70.245	91.497	1.00191.03	C
ATOM	3760	O	PRO	A	550	-35.950	-71.449	91.583	1.00190.93	O
ATOM	3761	CB	PRO	A	550	-33.988	-69.153	91.656	1.00191.17	C

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ATOM   3762  CG  PRO A 550     -33.252 -70.052  92.579  1.00191.26           C
ATOM   3763  CD  PRO A 550     -33.967 -70.027  93.917  1.00191.45           C
ATOM   3764  N   LEU A 551     -37.325 -69.799  90.816  1.00190.64           N
ATOM   3765  CA  LEU A 551     -38.216 -70.678  90.084  1.00190.41           C
ATOM   3766  C   LEU A 551     -37.979 -70.501  88.609  1.00190.96           C
ATOM   3767  O   LEU A 551     -37.928 -69.385  88.109  1.00190.93           O
ATOM   3768  CB  LEU A 551     -39.661 -70.363  90.426  1.00189.94           C
ATOM   3769  CG  LEU A 551     -40.771 -71.360  90.087  1.00188.89           C
ATOM   3770  CD1 LEU A 551     -41.635 -70.768  89.030  1.00188.65           C
ATOM   3771  CD2 LEU A 551     -40.301 -72.766  89.697  1.00187.48           C
ATOM   3772  N   LEU A 552     -37.829 -71.617  87.915  1.00191.81           N
ATOM   3773  CA  LEU A 552     -37.459 -71.595  86.518  1.00192.70           C
ATOM   3774  C   LEU A 552     -38.546 -72.295  85.723  1.00193.88           C
ATOM   3775  O   LEU A 552     -38.782 -73.487  85.924  1.00194.05           O
ATOM   3776  CB  LEU A 552     -36.122 -72.318  86.338  1.00192.12           C
ATOM   3777  CG  LEU A 552     -35.084 -71.704  85.407  1.00191.07           C
ATOM   3778  CD1 LEU A 552     -34.260 -70.648  86.107  1.00189.44           C
ATOM   3779  CD2 LEU A 552     -34.191 -72.795  84.908  1.00190.55           C
ATOM   3780  N   ILE A 553     -39.217 -71.553  84.842  1.00195.30           N
ATOM   3781  CA  ILE A 553     -40.192 -72.148  83.926  1.00196.99           C
ATOM   3782  C   ILE A 553     -39.626 -72.227  82.498  1.00198.56           C
ATOM   3783  O   ILE A 553     -39.067 -71.241  81.993  1.00198.73           O
ATOM   3784  CB  ILE A 553     -41.508 -71.378  83.919  1.00196.69           C
ATOM   3785  CG1 ILE A 553     -41.906 -70.984  85.336  1.00196.84           C
ATOM   3786  CG2 ILE A 553     -42.591 -72.217  83.298  1.00196.60           C
ATOM   3787  CD1 ILE A 553     -43.226 -70.204  85.434  1.00197.09           C
ATOM   3788  N   CYS A 554     -39.779 -73.392  81.851  1.00200.46           N
ATOM   3789  CA  CYS A 554     -39.080 -73.680  80.590  1.00202.37           C
ATOM   3790  C   CYS A 554     -39.832 -74.443  79.507  1.00204.39           C
ATOM   3791  O   CYS A 554     -40.743 -75.216  79.782  1.00204.49           O
ATOM   3792  CB  CYS A 554     -37.780 -74.418  80.881  1.00201.93           C
ATOM   3793  SG  CYS A 554     -36.631 -73.458  81.872  1.00201.16           S
ATOM   3794  N   TYR A 555     -39.392 -74.207  78.273  1.00207.19           N
ATOM   3795  CA  TYR A 555     -39.762 -74.925  77.048  1.00210.07           C
ATOM   3796  C   TYR A 555     -39.631 -76.452  77.160  1.00211.83           C
ATOM   3797  O   TYR A 555     -38.891 -76.960  78.003  1.00212.00           O
ATOM   3798  CB  TYR A 555     -38.813 -74.427  75.964  1.00210.46           C
ATOM   3799  CG  TYR A 555     -39.236 -74.621  74.536  1.00211.55           C
ATOM   3800  CD1 TYR A 555     -40.102 -73.712  73.913  1.00212.42           C
ATOM   3801  CD2 TYR A 555     -38.721 -75.679  73.778  1.00212.37           C
ATOM   3802  CE1 TYR A 555     -40.477 -73.874  72.573  1.00212.77           C
ATOM   3803  CE2 TYR A 555     -39.084 -75.852  72.437  1.00212.71           C
ATOM   3804  CZ  TYR A 555     -39.962 -74.948  71.842  1.00212.37           C
ATOM   3805  OH  TYR A 555     -40.321 -75.120  70.522  1.00211.75           O
ATOM   3806  N   LYS A 556     -40.334 -77.178  76.296  1.00214.04           N
ATOM   3807  CA  LYS A 556     -40.355 -78.638  76.350  1.00216.86           C
ATOM   3808  C   LYS A 556     -39.085 -79.260  75.741  1.00217.74           C
ATOM   3809  O   LYS A 556     -38.603 -78.755  74.728  1.00218.02           O
ATOM   3810  CB  LYS A 556     -41.611 -79.135  75.630  1.00216.13           C
ATOM   3811  CG  LYS A 556     -41.974 -80.582  75.897  1.00216.10           C
ATOM   3812  CD  LYS A 556     -42.105 -80.872  77.381  1.00214.92           C
ATOM   3813  CE  LYS A 556     -42.288 -82.352  77.622  1.00214.33           C
ATOM   3814  NZ  LYS A 556     -42.033 -82.670  79.041  1.00213.83           N
ATOM   3815  N   GLU A 557     -38.545 -80.326  76.364  1.00219.53           N
ATOM   3816  CA  GLU A 557     -37.347 -81.095  75.858  1.00221.09           C
ATOM   3817  C   GLU A 557     -36.826 -82.270  76.742  1.00222.25           C
ATOM   3818  O   GLU A 557     -36.703 -82.109  77.961  1.00222.53           O
ATOM   3819  CB  GLU A 557     -36.166 -80.156  75.512  1.00221.26           C
ATOM   3820  CG  GLU A 557     -35.637 -79.283  76.668  1.00221.96           C
ATOM   3821  CD  GLU A 557     -35.150 -77.909  76.209  1.00222.89           C
ATOM   3822  OE1 GLU A 557     -35.103 -77.663  74.978  1.00223.14           O
ATOM   3823  OE2 GLU A 557     -34.819 -77.073  77.087  1.00223.04           O
ATOM   3824  N   SER A 558     -36.521 -83.427  76.120  1.00223.64           N
ATOM   3825  CA  SER A 558     -35.807 -84.591  76.768  1.00224.53           C
ATOM   3826  C   SER A 558     -35.316 -85.676  75.768  1.00226.42           C
ATOM   3827  O   SER A 558     -36.128 -86.460  75.243  1.00226.55           O
ATOM   3828  CB  SER A 558     -36.627 -85.241  77.911  1.00224.77           C
ATOM   3829  OG  SER A 558     -37.265 -86.456  77.531  1.00224.24           O
ATOM   3830  N   VAL A 559     -33.991 -85.731  75.549  1.00228.24           N
ATOM   3831  CA  VAL A 559     -33.350 -86.477  74.420  1.00230.02           C
ATOM   3832  C   VAL A 559     -34.165 -86.330  73.100  1.00231.36           C
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ATOM	3833	O	VAL	A	559	-34.513	-87.327	72.433	1.00231.58	O
ATOM	3834	CB	VAL	A	559	-32.977	-87.968	74.771	1.00229.90	C
ATOM	3835	CG1	VAL	A	559	-31.954	-88.524	73.774	1.00229.78	C
ATOM	3836	CG2	VAL	A	559	-32.409	-88.069	76.183	1.00229.93	C
ATOM	3837	N	ASP	A	560	-34.448	-85.057	72.768	1.00232.89	N
ATOM	3838	CA	ASP	A	560	-35.320	-84.587	71.657	1.00234.25	C
ATOM	3839	C	ASP	A	560	-35.536	-83.047	71.804	1.00234.71	C
ATOM	3840	O	ASP	A	560	-35.215	-82.469	72.861	1.00234.88	O
ATOM	3841	CB	ASP	A	560	-36.674	-85.336	71.650	1.00234.05	C
ATOM	3842	CG	ASP	A	560	-37.257	-85.521	70.244	1.00233.88	C
ATOM	3843	OD1	ASP	A	560	-38.445	-85.949	70.176	1.00233.48	O
ATOM	3844	OD2	ASP	A	560	-36.544	-85.249	69.221	1.00233.30	O
ATOM	3845	N	GLN	A	561	-36.068	-82.402	70.753	1.00235.32	N
ATOM	3846	CA	GLN	A	561	-36.428	-80.947	70.731	1.00235.58	C
ATOM	3847	C	GLN	A	561	-35.301	-80.011	70.215	1.00236.18	C
ATOM	3848	O	GLN	A	561	-35.239	-79.744	69.010	1.00236.21	O
ATOM	3849	CB	GLN	A	561	-37.047	-80.460	72.065	1.00235.73	C
ATOM	3850	CG	GLN	A	561	-38.285	-81.261	72.546	1.00235.51	C
ATOM	3851	CD	GLN	A	561	-39.614	-80.545	72.337	1.00235.49	C
ATOM	3852	OE1	GLN	A	561	-39.658	-79.362	72.001	1.00235.68	O
ATOM	3853	NE2	GLN	A	561	-40.709	-81.266	72.556	1.00235.37	N
ATOM	3854	N	ARG	A	562	-34.439	-79.509	71.109	1.00236.70	N
ATOM	3855	CA	ARG	A	562	-33.203	-78.806	70.700	1.00237.26	C
ATOM	3856	C	ARG	A	562	-32.092	-78.751	71.752	1.00237.53	C
ATOM	3857	O	ARG	A	562	-32.327	-78.367	72.903	1.00237.49	O
ATOM	3858	CB	ARG	A	562	-33.487	-77.408	70.135	1.00237.33	C
ATOM	3859	CG	ARG	A	562	-33.022	-77.250	68.700	1.00237.80	C
ATOM	3860	CD	ARG	A	562	-33.679	-76.078	68.004	1.00238.74	C
ATOM	3861	NE	ARG	A	562	-33.200	-75.952	66.628	1.00239.61	N
ATOM	3862	CZ	ARG	A	562	-33.820	-75.277	65.661	1.00240.09	C
ATOM	3863	NH1	ARG	A	562	-34.969	-74.655	65.903	1.00240.32	N
ATOM	3864	NH2	ARG	A	562	-33.289	-75.229	64.442	1.00240.17	N
ATOM	3865	N	GLY	A	563	-30.886	-79.138	71.325	1.00237.89	N
ATOM	3866	CA	GLY	A	563	-29.680	-79.125	72.159	1.00238.31	C
ATOM	3867	C	GLY	A	563	-29.662	-80.149	73.282	1.00238.58	C
ATOM	3868	O	GLY	A	563	-29.568	-79.781	74.460	1.00238.72	O
ATOM	3869	N	ASN	A	564	-29.751	-81.430	72.912	1.00238.72	N
ATOM	3870	CA	ASN	A	564	-29.762	-82.555	73.866	1.00238.81	C
ATOM	3871	C	ASN	A	564	-29.065	-83.797	73.276	1.00238.84	C
ATOM	3872	O	ASN	A	564	-29.658	-84.886	73.215	1.00238.81	O
ATOM	3873	CB	ASN	A	564	-31.207	-82.898	74.315	1.00238.82	C
ATOM	3874	CG	ASN	A	564	-31.602	-82.256	75.662	1.00238.65	C
ATOM	3875	OD1	ASN	A	564	-31.061	-82.601	76.717	1.00238.45	O
ATOM	3876	ND2	ASN	A	564	-32.581	-81.352	75.623	1.00238.05	N
ATOM	3877	N	GLN	A	565	-27.808	-83.625	72.851	1.00238.90	N
ATOM	3878	CA	GLN	A	565	-27.041	-84.709	72.198	1.00238.98	C
ATOM	3879	C	GLN	A	565	-25.731	-85.148	72.902	1.00239.10	C
ATOM	3880	O	GLN	A	565	-25.327	-86.307	72.752	1.00239.20	O
ATOM	3881	CB	GLN	A	565	-26.782	-84.389	70.714	1.00238.92	C
ATOM	3882	CG	GLN	A	565	-26.697	-85.619	69.789	1.00238.54	C
ATOM	3883	CD	GLN	A	565	-25.337	-86.325	69.800	1.00238.24	C
ATOM	3884	OE1	GLN	A	565	-24.294	-85.713	70.046	1.00238.05	O
ATOM	3885	NE2	GLN	A	565	-25.351	-87.622	69.521	1.00238.16	N
ATOM	3886	N	ILE	A	566	-25.065	-84.243	73.637	1.00239.13	N
ATOM	3887	CA	ILE	A	566	-23.883	-84.605	74.481	1.00238.97	C
ATOM	3888	C	ILE	A	566	-23.964	-84.113	75.968	1.00239.01	C
ATOM	3889	O	ILE	A	566	-23.523	-84.834	76.875	1.00239.03	O
ATOM	3890	CB	ILE	A	566	-22.479	-84.319	73.772	1.00239.02	C
ATOM	3891	CG1	ILE	A	566	-22.218	-85.315	72.620	1.00238.82	C
ATOM	3892	CG2	ILE	A	566	-21.311	-84.358	74.775	1.00239.05	C
ATOM	3893	CD1	ILE	A	566	-21.028	-84.987	71.709	1.00238.66	C
ATOM	3894	N	MET	A	567	-24.524	-82.910	76.193	1.00238.87	N
ATOM	3895	CA	MET	A	567	-24.914	-82.372	77.538	1.00238.69	C
ATOM	3896	C	MET	A	567	-25.568	-80.979	77.473	1.00238.15	C
ATOM	3897	O	MET	A	567	-25.205	-80.158	76.627	1.00238.12	O
ATOM	3898	CB	MET	A	567	-23.730	-82.318	78.532	1.00238.85	C
ATOM	3899	CG	MET	A	567	-23.857	-83.230	79.787	1.00239.51	C
ATOM	3900	SD	MET	A	567	-24.731	-82.564	81.248	1.00240.49	S
ATOM	3901	CE	MET	A	567	-23.614	-81.269	81.805	1.00240.09	C
ATOM	3902	N	SER	A	568	-26.525	-80.719	78.368	1.00237.57	N
ATOM	3903	CA	SER	A	568	-26.999	-79.345	78.609	1.00236.99	C

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ATOM   3904  C   SER A 568     -26.355 -78.755  79.890  1.00236.47           C
ATOM   3905  O   SER A 568     -26.834 -78.991  81.015  1.00236.51           O
ATOM   3906  CB  SER A 568     -28.542 -79.246  78.611  1.00237.03           C
ATOM   3907  OG  SER A 568     -29.118 -79.661  79.840  1.00237.01           O
ATOM   3908  N   ASP A 569     -25.260 -78.002  79.682  1.00235.61           N
ATOM   3909  CA  ASP A 569     -24.389 -77.415  80.742  1.00234.46           C
ATOM   3910  C   ASP A 569     -25.174 -76.615  81.826  1.00233.35           C
ATOM   3911  O   ASP A 569     -26.008 -75.761  81.489  1.00233.36           O
ATOM   3912  CB  ASP A 569     -23.255 -76.545  80.114  1.00234.68           C
ATOM   3913  CG  ASP A 569     -22.288 -77.344  79.178  1.00234.63           C
ATOM   3914  OD1 ASP A 569     -21.772 -78.415  79.577  1.00234.70           O
ATOM   3915  OD2 ASP A 569     -22.010 -76.866  78.048  1.00233.96           O
ATOM   3916  N   LYS A 570     -24.863 -76.883  83.106  1.00231.71           N
ATOM   3917  CA  LYS A 570     -25.709 -76.538  84.294  1.00229.88           C
ATOM   3918  C   LYS A 570     -26.360 -75.141  84.419  1.00228.61           C
ATOM   3919  O   LYS A 570     -26.067 -74.202  83.658  1.00228.53           O
ATOM   3920  CB  LYS A 570     -24.986 -76.884  85.625  1.00229.87           C
ATOM   3921  CG  LYS A 570     -24.614 -78.361  85.823  1.00229.29           C
ATOM   3922  CD  LYS A 570     -25.799 -79.281  85.628  1.00228.02           C
ATOM   3923  CE  LYS A 570     -25.407 -80.455  84.781  1.00227.27           C
ATOM   3924  NZ  LYS A 570     -26.405 -80.624  83.702  1.00226.80           N
ATOM   3925  N   ARG A 571     -27.236 -75.032  85.421  1.00226.77           N
ATOM   3926  CA  ARG A 571     -28.006 -73.818  85.699  1.00224.85           C
ATOM   3927  C   ARG A 571     -27.433 -73.055  86.914  1.00222.81           C
ATOM   3928  O   ARG A 571     -27.016 -73.672  87.914  1.00222.46           O
ATOM   3929  CB  ARG A 571     -29.502 -74.140  85.899  1.00225.35           C
ATOM   3930  CG  ARG A 571     -30.008 -75.478  85.312  1.00226.93           C
ATOM   3931  CD  ARG A 571     -30.365 -76.485  86.437  1.00230.67           C
ATOM   3932  NE  ARG A 571     -29.302 -77.449  86.792  1.00233.69           N
ATOM   3933  CZ  ARG A 571     -28.401 -77.307  87.777  1.00234.84           C
ATOM   3934  NH1 ARG A 571     -28.377 -76.215  88.540  1.00235.33           N
ATOM   3935  NH2 ARG A 571     -27.503 -78.267  87.997  1.00234.98           N
ATOM   3936  N   ASN A 572     -27.435 -71.719  86.806  1.00220.19           N
ATOM   3937  CA  ASN A 572     -26.714 -70.815  87.720  1.00217.53           C
ATOM   3938  C   ASN A 572     -27.408 -69.437  87.893  1.00215.36           C
ATOM   3939  O   ASN A 572     -27.671 -68.748  86.913  1.00214.96           O
ATOM   3940  CB  ASN A 572     -25.281 -70.645  87.197  1.00217.69           C
ATOM   3941  CG  ASN A 572     -24.217 -70.734  88.298  1.00218.12           C
ATOM   3942  OD1 ASN A 572     -24.444 -70.349  89.449  1.00218.30           O
ATOM   3943  ND2 ASN A 572     -23.034 -71.231  87.929  1.00218.62           N
ATOM   3944  N   VAL A 573     -27.689 -69.043  89.137  1.00212.83           N
ATOM   3945  CA  VAL A 573     -28.538 -67.871  89.431  1.00210.38           C
ATOM   3946  C   VAL A 573     -27.908 -66.758  90.248  1.00208.61           C
ATOM   3947  O   VAL A 573     -27.354 -66.992  91.318  1.00208.23           O
ATOM   3948  CB  VAL A 573     -29.817 -68.258  90.202  1.00210.53           C
ATOM   3949  CG1 VAL A 573     -30.961 -68.514  89.252  1.00210.63           C
ATOM   3950  CG2 VAL A 573     -29.566 -69.451  91.133  1.00210.62           C
ATOM   3951  N   ILE A 574     -28.042 -65.539  89.745  1.00206.58           N
ATOM   3952  CA  ILE A 574     -27.658 -64.348  90.478  1.00204.79           C
ATOM   3953  C   ILE A 574     -28.947 -63.651  90.917  1.00203.90           C
ATOM   3954  O   ILE A 574     -29.891 -63.543  90.141  1.00203.61           O
ATOM   3955  CB  ILE A 574     -26.749 -63.399  89.623  1.00204.68           C
ATOM   3956  CG1 ILE A 574     -25.449 -64.089  89.201  1.00204.48           C
ATOM   3957  CG2 ILE A 574     -26.385 -62.126  90.365  1.00204.14           C
ATOM   3958  CD1 ILE A 574     -25.317 -64.343  87.712  1.00204.38           C
ATOM   3959  N   LEU A 575     -28.988 -63.209  92.172  1.00202.88           N
ATOM   3960  CA  LEU A 575     -30.111 -62.442  92.705  1.00201.81           C
ATOM   3961  C   LEU A 575     -29.663 -61.116  93.289  1.00201.42           C
ATOM   3962  O   LEU A 575     -28.967 -61.079  94.300  1.00201.01           O
ATOM   3963  CB  LEU A 575     -30.849 -63.236  93.774  1.00201.62           C
ATOM   3964  CG  LEU A 575     -31.590 -62.419  94.830  1.00201.04           C
ATOM   3965  CD1 LEU A 575     -32.582 -61.461  94.199  1.00200.63           C
ATOM   3966  CD2 LEU A 575     -32.283 -63.341  95.794  1.00200.65           C
ATOM   3967  N   PHE A 576     -30.089 -60.035  92.645  1.00201.27           N
ATOM   3968  CA  PHE A 576     -29.794 -58.685  93.104  1.00201.35           C
ATOM   3969  C   PHE A 576     -30.800 -58.282  94.166  1.00201.49           C
ATOM   3970  O   PHE A 576     -31.980 -58.045  93.864  1.00201.78           O
ATOM   3971  CB  PHE A 576     -29.793 -57.693  91.932  1.00201.20           C
ATOM   3972  CG  PHE A 576     -28.540 -57.741  91.112  1.00201.20           C
ATOM   3973  CD1 PHE A 576     -28.442 -58.588  90.014  1.00201.05           C
ATOM   3974  CD2 PHE A 576     -27.439 -56.960  91.451  1.00201.47           C
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ATOM   3975  CE1 PHE A 576     -27.263 -58.654  89.261  1.00201.04           C
ATOM   3976  CE2 PHE A 576     -26.252 -57.020  90.700  1.00201.44           C
ATOM   3977  CZ  PHE A 576     -26.168 -57.870  89.606  1.00201.13           C
ATOM   3978  N   SER A 577     -30.333 -58.213  95.414  1.00201.42           N
ATOM   3979  CA  SER A 577     -31.232 -57.975  96.548  1.00201.04           C
ATOM   3980  C   SER A 577     -30.715 -57.099  97.692  1.00200.56           C
ATOM   3981  O   SER A 577     -29.688 -57.382  98.327  1.00200.25           O
ATOM   3982  CB  SER A 577     -31.755 -59.301  97.108  1.00201.17           C
ATOM   3983  OG  SER A 577     -32.847 -59.073  97.982  1.00201.40           O
ATOM   3984  N   VAL A 578     -31.471 -56.034  97.935  1.00200.06           N
ATOM   3985  CA  VAL A 578     -31.351 -55.240  99.141  1.00199.63           C
ATOM   3986  C   VAL A 578     -32.288 -55.837 100.179  1.00199.30           C
ATOM   3987  O   VAL A 578     -33.513 -55.850 100.004  1.00199.06           O
ATOM   3988  CB  VAL A 578     -31.683 -53.748  98.896  1.00199.61           C
ATOM   3989  CG1 VAL A 578     -31.754 -52.974 100.188  1.00199.52           C
ATOM   3990  CG2 VAL A 578     -30.645 -53.133  98.014  1.00199.93           C
ATOM   3991  N   PHE A 579     -31.680 -56.350 101.245  1.00198.97           N
ATOM   3992  CA  PHE A 579     -32.392 -56.821 102.416  1.00198.67           C
ATOM   3993  C   PHE A 579     -32.448 -55.714 103.460  1.00198.75           C
ATOM   3994  O   PHE A 579     -31.405 -55.216 103.903  1.00198.75           O
ATOM   3995  CB  PHE A 579     -31.684 -58.037 102.985  1.00198.42           C
ATOM   3996  CG  PHE A 579     -31.714 -59.215 102.084  1.00197.92           C
ATOM   3997  CD1 PHE A 579     -32.787 -60.098 102.121  1.00197.17           C
ATOM   3998  CD2 PHE A 579     -30.673 -59.444 101.192  1.00197.84           C
ATOM   3999  CE1 PHE A 579     -32.824 -61.193 101.292  1.00197.14           C
ATOM   4000  CE2 PHE A 579     -30.696 -60.541 100.352  1.00197.90           C
ATOM   4001  CZ  PHE A 579     -31.776 -61.420 100.401  1.00197.84           C
ATOM   4002  N   ASP A 580     -33.664 -55.330 103.847  1.00198.77           N
ATOM   4003  CA  ASP A 580     -33.857 -54.217 104.774  1.00198.78           C
ATOM   4004  C   ASP A 580     -34.122 -54.716 106.181  1.00198.66           C
ATOM   4005  O   ASP A 580     -35.265 -54.695 106.654  1.00198.58           O
ATOM   4006  CB  ASP A 580     -34.995 -53.305 104.309  1.00198.90           C
ATOM   4007  CG  ASP A 580     -34.870 -51.890 104.856  1.00199.17           C
ATOM   4008  OD1 ASP A 580     -33.728 -51.389 104.973  1.00198.90           O
ATOM   4009  OD2 ASP A 580     -35.918 -51.275 105.157  1.00199.82           O
ATOM   4010  N   GLU A 581     -33.051 -55.148 106.843  1.00198.53           N
ATOM   4011  CA  GLU A 581     -33.129 -55.720 108.177  1.00198.53           C
ATOM   4012  C   GLU A 581     -34.095 -54.945 109.051  1.00198.81           C
ATOM   4013  O   GLU A 581     -34.768 -55.519 109.908  1.00198.82           O
ATOM   4014  CB  GLU A 581     -31.748 -55.773 108.825  1.00198.36           C
ATOM   4015  CG  GLU A 581     -30.855 -56.886 108.305  1.00197.96           C
ATOM   4016  CD  GLU A 581     -31.358 -58.291 108.639  1.00197.69           C
ATOM   4017  OE1 GLU A 581     -32.123 -58.466 109.618  1.00197.57           O
ATOM   4018  OE2 GLU A 581     -30.971 -59.230 107.910  1.00197.11           O
ATOM   4019  N   ASN A 582     -34.179 -53.642 108.796  1.00199.19           N
ATOM   4020  CA  ASN A 582     -35.067 -52.740 109.526  1.00199.78           C
ATOM   4021  C   ASN A 582     -36.539 -53.149 109.538  1.00199.99           C
ATOM   4022  O   ASN A 582     -37.353 -52.558 110.258  1.00200.27           O
ATOM   4023  CB  ASN A 582     -34.944 -51.322 108.968  1.00199.88           C
ATOM   4024  CG  ASN A 582     -33.510 -50.855 108.871  1.00200.19           C
ATOM   4025  OD1 ASN A 582     -32.624 -51.351 109.575  1.00199.90           O
ATOM   4026  ND2 ASN A 582     -33.271 -49.890 107.990  1.00200.93           N
ATOM   4027  N   ARG A 583     -36.879 -54.157 108.748  1.00200.04           N
ATOM   4028  CA  ARG A 583     -38.249 -54.604 108.660  1.00200.20           C
ATOM   4029  C   ARG A 583     -38.358 -56.076 109.023  1.00199.97           C
ATOM   4030  O   ARG A 583     -39.465 -56.593 109.182  1.00199.91           O
ATOM   4031  CB  ARG A 583     -38.763 -54.377 107.241  1.00200.42           C
ATOM   4032  CG  ARG A 583     -40.200 -53.878 107.153  1.00201.79           C
ATOM   4033  CD  ARG A 583     -40.251 -52.354 107.087  1.00204.00           C
ATOM   4034  NE  ARG A 583     -41.152 -51.854 106.038  1.00206.00           N
ATOM   4035  CZ  ARG A 583     -40.808 -51.652 104.760  1.00207.03           C
ATOM   4036  NH1 ARG A 583     -41.705 -51.186 103.894  1.00207.21           N
ATOM   4037  NH2 ARG A 583     -39.573 -51.916 104.334  1.00207.50           N
ATOM   4038  N   SER A 584     -37.205 -56.738 109.167  1.00199.82           N
ATOM   4039  CA  SER A 584     -37.140 -58.210 109.253  1.00199.55           C
ATOM   4040  C   SER A 584     -37.823 -58.771 110.505  1.00199.27           C
ATOM   4041  O   SER A 584     -37.719 -58.202 111.595  1.00199.25           O
ATOM   4042  CB  SER A 584     -35.696 -58.756 109.059  1.00199.57           C
ATOM   4043  OG  SER A 584     -35.058 -59.172 110.259  1.00199.37           O
ATOM   4044  N   TRP A 585     -38.536 -59.881 110.320  1.00198.75           N
ATOM   4045  CA  TRP A 585     -39.297 -60.517 111.385  1.00198.21           C
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ATOM	4046	C	TRP	A	585	-38.415	-61.041	112.533	1.00198.06	C
ATOM	4047	O	TRP	A	585	-38.858	-61.823	113.376	1.00198.06	O
ATOM	4048	CB	TRP	A	585	-40.247	-61.571	110.790	1.00198.06	C
ATOM	4049	CG	TRP	A	585	-41.667	-61.121	110.880	1.00197.88	C
ATOM	4050	CD1	TRP	A	585	-42.092	-59.866	111.191	1.00198.23	C
ATOM	4051	CD2	TRP	A	585	-42.854	-61.903	110.676	1.00198.00	C
ATOM	4052	NE1	TRP	A	585	-43.463	-59.811	111.204	1.00198.46	N
ATOM	4053	CE2	TRP	A	585	-43.960	-61.047	110.892	1.00198.35	C
ATOM	4054	CE3	TRP	A	585	-43.094	-63.236	110.331	1.00198.31	C
ATOM	4055	CZ2	TRP	A	585	-45.293	-61.482	110.776	1.00198.40	C
ATOM	4056	CZ3	TRP	A	585	-44.429	-63.676	110.220	1.00198.48	C
ATOM	4057	CH2	TRP	A	585	-45.506	-62.796	110.444	1.00198.43	C
ATOM	4058	N	TYR	A	586	-37.171	-60.563	112.554	1.00197.90	N
ATOM	4059	CA	TYR	A	586	-36.164	-60.892	113.557	1.00197.86	C
ATOM	4060	C	TYR	A	586	-35.523	-59.575	113.974	1.00197.91	C
ATOM	4061	O	TYR	A	586	-34.330	-59.511	114.274	1.00197.78	O
ATOM	4062	CB	TYR	A	586	-35.115	-61.835	112.954	1.00197.84	C
ATOM	4063	CG	TYR	A	586	-35.657	-63.205	112.598	1.00197.90	C
ATOM	4064	CD1	TYR	A	586	-36.775	-63.342	111.771	1.00198.11	C
ATOM	4065	CD2	TYR	A	586	-35.052	-64.366	113.074	1.00197.88	C
ATOM	4066	CE1	TYR	A	586	-37.297	-64.584	111.446	1.00197.83	C
ATOM	4067	CE2	TYR	A	586	-35.565	-65.631	112.741	1.00197.95	C
ATOM	4068	CZ	TYR	A	586	-36.691	-65.724	111.923	1.00197.78	C
ATOM	4069	OH	TYR	A	586	-37.223	-66.943	111.580	1.00197.65	O
ATOM	4070	N	LEU	A	587	-36.353	-58.533	113.993	1.00198.17	N
ATOM	4071	CA	LEU	A	587	-35.932	-57.133	114.124	1.00198.48	C
ATOM	4072	C	LEU	A	587	-34.967	-56.893	115.272	1.00198.71	C
ATOM	4073	O	LEU	A	587	-33.751	-56.862	115.070	1.00198.68	O
ATOM	4074	CB	LEU	A	587	-37.164	-56.225	114.292	1.00198.49	C
ATOM	4075	CG	LEU	A	587	-37.055	-54.722	114.016	1.00198.11	C
ATOM	4076	CD1	LEU	A	587	-37.313	-54.470	112.552	1.00197.83	C
ATOM	4077	CD2	LEU	A	587	-38.054	-53.946	114.857	1.00197.56	C
ATOM	4078	N	THR	A	588	-35.533	-56.722	116.468	1.00199.01	N
ATOM	4079	CA	THR	A	588	-34.781	-56.419	117.694	1.00199.25	C
ATOM	4080	C	THR	A	588	-34.368	-57.695	118.419	1.00199.02	C
ATOM	4081	O	THR	A	588	-33.627	-57.660	119.410	1.00198.83	O
ATOM	4082	CB	THR	A	588	-35.573	-55.485	118.647	1.00199.43	C
ATOM	4083	OG1	THR	A	588	-36.979	-55.739	118.508	1.00200.11	O
ATOM	4084	CG2	THR	A	588	-35.288	-54.005	118.333	1.00199.55	C
ATOM	4085	N	GLU	A	589	-34.867	-58.818	117.915	1.00198.89	N
ATOM	4086	CA	GLU	A	589	-34.262	-60.096	118.196	1.00198.95	C
ATOM	4087	C	GLU	A	589	-32.758	-59.931	117.971	1.00198.82	C
ATOM	4088	O	GLU	A	589	-31.970	-60.115	118.895	1.00198.83	O
ATOM	4089	CB	GLU	A	589	-34.861	-61.170	117.281	1.00199.06	C
ATOM	4090	CG	GLU	A	589	-33.994	-62.422	117.061	1.00199.84	C
ATOM	4091	CD	GLU	A	589	-33.880	-63.335	118.284	1.00200.62	C
ATOM	4092	OE1	GLU	A	589	-33.252	-64.414	118.163	1.00200.71	O
ATOM	4093	OE2	GLU	A	589	-34.411	-62.985	119.361	1.00201.26	O
ATOM	4094	N	ASN	A	590	-32.385	-59.517	116.759	1.00198.70	N
ATOM	4095	CA	ASN	A	590	-30.988	-59.353	116.358	1.00198.55	C
ATOM	4096	C	ASN	A	590	-30.159	-58.323	117.130	1.00198.67	C
ATOM	4097	O	ASN	A	590	-28.933	-58.342	117.017	1.00198.57	O
ATOM	4098	CB	ASN	A	590	-30.904	-59.045	114.864	1.00198.44	C
ATOM	4099	CG	ASN	A	590	-31.011	-60.282	114.005	1.00198.24	C
ATOM	4100	OD1	ASN	A	590	-30.078	-60.626	113.290	1.00197.90	O
ATOM	4101	ND2	ASN	A	590	-32.149	-60.954	114.065	1.00198.25	N
ATOM	4102	N	ILE	A	591	-30.810	-57.433	117.893	1.00198.94	N
ATOM	4103	CA	ILE	A	591	-30.092	-56.386	118.665	1.00199.21	C
ATOM	4104	C	ILE	A	591	-29.644	-56.824	120.063	1.00199.41	C
ATOM	4105	O	ILE	A	591	-28.639	-56.325	120.582	1.00199.42	O
ATOM	4106	CB	ILE	A	591	-30.843	-54.998	118.756	1.00199.16	C
ATOM	4107	CG1	ILE	A	591	-31.941	-55.004	119.832	1.00199.20	C
ATOM	4108	CG2	ILE	A	591	-31.359	-54.550	117.388	1.00199.07	C
ATOM	4109	CD1	ILE	A	591	-32.197	-53.641	120.480	1.00199.21	C
ATOM	4110	N	GLN	A	592	-30.395	-57.741	120.672	1.00199.64	N
ATOM	4111	CA	GLN	A	592	-29.947	-58.399	121.895	1.00199.91	C
ATOM	4112	C	GLN	A	592	-28.808	-59.354	121.558	1.00200.02	C
ATOM	4113	O	GLN	A	592	-27.939	-59.622	122.384	1.00200.11	O
ATOM	4114	CB	GLN	A	592	-31.095	-59.147	122.581	1.00199.91	C
ATOM	4115	CG	GLN	A	592	-31.810	-58.344	123.667	1.00200.05	C
ATOM	4116	CD	GLN	A	592	-32.693	-57.245	123.104	1.00200.20	C

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ATOM   4117  OE1 GLN A 592     -33.643 -57.514 122.370  1.00200.11           O
ATOM   4118  NE2 GLN A 592     -32.387 -55.998 123.454  1.00200.26           N
ATOM   4119  N   ARG A 593     -28.820 -59.842 120.324  1.00200.21           N
ATOM   4120  CA  ARG A 593     -27.816 -60.766 119.822  1.00200.47           C
ATOM   4121  C   ARG A 593     -26.473 -60.066 119.601  1.00200.29           C
ATOM   4122  O   ARG A 593     -25.755 -59.756 120.555  1.00200.17           O
ATOM   4123  CB  ARG A 593     -28.299 -61.399 118.503  1.00200.80           C
ATOM   4124  CG  ARG A 593     -29.672 -62.083 118.566  1.00201.85           C
ATOM   4125  CD  ARG A 593     -29.616 -63.616 118.563  1.00203.46           C
ATOM   4126  NE  ARG A 593     -28.516 -64.156 119.360  1.00204.72           N
ATOM   4127  CZ  ARG A 593     -27.541 -64.924 118.882  1.00205.38           C
ATOM   4128  NH1 ARG A 593     -27.521 -65.279 117.596  1.00205.27           N
ATOM   4129  NH2 ARG A 593     -26.584 -65.347 119.702  1.00205.73           N
ATOM   4130  N   PHE A 594     -26.167 -59.805 118.331  1.00200.21           N
ATOM   4131  CA  PHE A 594     -24.843 -59.373 117.882  1.00200.10           C
ATOM   4132  C   PHE A 594     -24.415 -58.027 118.496  1.00199.44           C
ATOM   4133  O   PHE A 594     -23.268 -57.877 118.931  1.00199.33           O
ATOM   4134  CB  PHE A 594     -24.795 -59.364 116.333  1.00200.63           C
ATOM   4135  CG  PHE A 594     -23.443 -59.757 115.743  1.00201.91           C
ATOM   4136  CD1 PHE A 594     -22.750 -58.878 114.893  1.00202.89           C
ATOM   4137  CD2 PHE A 594     -22.865 -61.003 116.029  1.00202.76           C
ATOM   4138  CE1 PHE A 594     -21.499 -59.227 114.343  1.00202.97           C
ATOM   4139  CE2 PHE A 594     -21.614 -61.362 115.486  1.00203.05           C
ATOM   4140  CZ  PHE A 594     -20.932 -60.468 114.639  1.00202.63           C
ATOM   4141  N   LEU A 595     -25.340 -57.066 118.542  1.00198.68           N
ATOM   4142  CA  LEU A 595     -25.093 -55.778 119.183  1.00197.95           C
ATOM   4143  C   LEU A 595     -24.913 -56.050 120.665  1.00197.74           C
ATOM   4144  O   LEU A 595     -25.766 -56.705 121.274  1.00197.81           O
ATOM   4145  CB  LEU A 595     -26.263 -54.814 118.955  1.00197.72           C
ATOM   4146  CG  LEU A 595     -26.088 -53.298 119.119  1.00197.15           C
ATOM   4147  CD1 LEU A 595     -26.026 -52.853 120.583  1.00196.96           C
ATOM   4148  CD2 LEU A 595     -24.884 -52.787 118.338  1.00196.64           C
ATOM   4149  N   PRO A 596     -23.793 -55.568 121.246  1.00197.38           N
ATOM   4150  CA  PRO A 596     -23.433 -55.848 122.632  1.00197.00           C
ATOM   4151  C   PRO A 596     -24.508 -55.415 123.620  1.00196.63           C
ATOM   4152  O   PRO A 596     -25.346 -56.229 124.018  1.00196.55           O
ATOM   4153  CB  PRO A 596     -22.152 -55.027 122.830  1.00197.02           C
ATOM   4154  CG  PRO A 596     -21.585 -54.904 121.475  1.00197.11           C
ATOM   4155  CD  PRO A 596     -22.777 -54.720 120.596  1.00197.36           C
ATOM   4156  N   ASN A 597     -24.489 -54.142 123.998  1.00196.22           N
ATOM   4157  CA  ASN A 597     -25.405 -53.646 125.015  1.00195.81           C
ATOM   4158  C   ASN A 597     -26.563 -52.811 124.473  1.00195.44           C
ATOM   4159  O   ASN A 597     -26.348 -51.801 123.796  1.00195.42           O
ATOM   4160  CB  ASN A 597     -24.666 -52.919 126.163  1.00195.79           C
ATOM   4161  CG  ASN A 597     -23.230 -52.532 125.809  1.00195.66           C
ATOM   4162  OD1 ASN A 597     -22.911 -52.205 124.663  1.00196.05           O
ATOM   4163  ND2 ASN A 597     -22.359 -52.562 126.807  1.00195.13           N
ATOM   4164  N   PRO A 598     -27.800 -53.270 124.732  1.00195.06           N
ATOM   4165  CA  PRO A 598     -28.972 -52.417 124.656  1.00194.81           C
ATOM   4166  C   PRO A 598     -29.144 -51.586 125.938  1.00194.64           C
ATOM   4167  O   PRO A 598     -30.210 -51.005 126.138  1.00194.58           O
ATOM   4168  CB  PRO A 598     -30.129 -53.420 124.492  1.00194.74           C
ATOM   4169  CG  PRO A 598     -29.493 -54.784 124.395  1.00194.74           C
ATOM   4170  CD  PRO A 598     -28.172 -54.657 125.051  1.00194.98           C
ATOM   4171  N   ALA A 599     -28.103 -51.535 126.786  1.00194.50           N
ATOM   4172  CA  ALA A 599     -28.076 -50.707 128.021  1.00194.26           C
ATOM   4173  C   ALA A 599     -28.391 -49.243 127.703  1.00194.08           C
ATOM   4174  O   ALA A 599     -28.643 -48.415 128.599  1.00193.91           O
ATOM   4175  CB  ALA A 599     -26.729 -50.831 128.743  1.00194.22           C
ATOM   4176  N   GLY A 600     -28.320 -48.960 126.402  1.00193.92           N
ATOM   4177  CA  GLY A 600     -28.965 -47.831 125.752  1.00193.61           C
ATOM   4178  C   GLY A 600     -29.698 -48.428 124.565  1.00193.28           C
ATOM   4179  O   GLY A 600     -29.139 -48.528 123.473  1.00193.12           O
ATOM   4180  N   VAL A 601     -30.944 -48.842 124.799  1.00193.13           N
ATOM   4181  CA  VAL A 601     -31.756 -49.595 123.827  1.00193.09           C
ATOM   4182  C   VAL A 601     -32.204 -48.836 122.557  1.00193.27           C
ATOM   4183  O   VAL A 601     -33.217 -49.206 121.948  1.00193.32           O
ATOM   4184  CB  VAL A 601     -33.015 -50.240 124.500  1.00193.00           C
ATOM   4185  CG1 VAL A 601     -32.959 -51.757 124.429  1.00192.76           C
ATOM   4186  CG2 VAL A 601     -33.211 -49.743 125.933  1.00192.57           C
ATOM   4187  N   GLN A 602     -31.441 -47.810 122.158  1.00193.31           N
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ATOM   4188  CA  GLN A 602     -31.754 -46.920 121.008  1.00193.25           C
ATOM   4189  C   GLN A 602     -32.307 -47.625 119.758  1.00193.25           C
ATOM   4190  O   GLN A 602     -31.870 -48.724 119.436  1.00193.26           O
ATOM   4191  CB  GLN A 602     -30.519 -46.080 120.624  1.00193.24           C
ATOM   4192  CG  GLN A 602     -29.186 -46.850 120.659  1.00193.06           C
ATOM   4193  CD  GLN A 602     -28.370 -46.705 119.357  1.00192.70           C
ATOM   4194  OE1 GLN A 602     -28.947 -46.531 118.166  1.00192.32           O
ATOM   4195  NE2 GLN A 602     -26.925 -46.842 119.660  1.00192.41           N
ATOM   4196  N   LEU A 603     -33.263 -46.989 119.071  1.00193.32           N
ATOM   4197  CA  LEU A 603     -33.847 -47.513 117.809  1.00193.48           C
ATOM   4198  C   LEU A 603     -33.992 -46.407 116.741  1.00193.51           C
ATOM   4199  O   LEU A 603     -33.229 -45.442 116.775  1.00193.48           O
ATOM   4200  CB  LEU A 603     -35.199 -48.213 118.066  1.00193.49           C
ATOM   4201  CG  LEU A 603     -35.364 -49.747 118.155  1.00193.45           C
ATOM   4202  CD1 LEU A 603     -34.696 -50.473 116.984  1.00193.16           C
ATOM   4203  CD2 LEU A 603     -34.909 -50.343 119.497  1.00193.42           C
ATOM   4204  N   GLU A 604     -34.929 -46.577 115.792  1.00193.54           N
ATOM   4205  CA  GLU A 604     -35.395 -45.510 114.864  1.00193.64           C
ATOM   4206  C   GLU A 604     -34.422 -44.318 114.744  1.00193.68           C
ATOM   4207  O   GLU A 604     -34.435 -43.411 115.581  1.00193.79           O
ATOM   4208  CB  GLU A 604     -36.811 -45.043 115.284  1.00193.69           C
ATOM   4209  CG  GLU A 604     -37.286 -43.659 114.762  1.00193.82           C
ATOM   4210  CD  GLU A 604     -37.867 -42.735 115.865  1.00193.74           C
ATOM   4211  OE1 GLU A 604     -38.443 -43.235 116.859  1.00193.68           O
ATOM   4212  OE2 GLU A 604     -37.750 -41.494 115.731  1.00193.30           O
ATOM   4213  N   ASP A 605     -33.589 -44.312 113.705  1.00193.63           N
ATOM   4214  CA  ASP A 605     -32.442 -43.395 113.663  1.00193.60           C
ATOM   4215  C   ASP A 605     -32.045 -43.002 112.234  1.00193.75           C
ATOM   4216  O   ASP A 605     -32.327 -43.741 111.300  1.00193.70           O
ATOM   4217  CB  ASP A 605     -31.269 -44.043 114.422  1.00193.52           C
ATOM   4218  CG  ASP A 605     -29.976 -43.267 114.304  1.00193.35           C
ATOM   4219  OD1 ASP A 605     -29.239 -43.497 113.330  1.00193.12           O
ATOM   4220  OD2 ASP A 605     -29.683 -42.441 115.192  1.00193.62           O
ATOM   4221  N   PRO A 606     -31.433 -41.811 112.052  1.00194.02           N
ATOM   4222  CA  PRO A 606     -30.821 -41.479 110.754  1.00194.23           C
ATOM   4223  C   PRO A 606     -29.844 -42.535 110.186  1.00194.41           C
ATOM   4224  O   PRO A 606     -30.125 -43.125 109.137  1.00194.40           O
ATOM   4225  CB  PRO A 606     -30.099 -40.151 111.036  1.00194.22           C
ATOM   4226  CG  PRO A 606     -30.893 -39.527 112.141  1.00194.19           C
ATOM   4227  CD  PRO A 606     -31.351 -40.677 113.001  1.00194.10           C
ATOM   4228  N   GLU A 607     -28.727 -42.770 110.877  1.00194.65           N
ATOM   4229  CA  GLU A 607     -27.633 -43.611 110.360  1.00194.96           C
ATOM   4230  C   GLU A 607     -27.769 -45.111 110.630  1.00195.04           C
ATOM   4231  O   GLU A 607     -27.250 -45.928 109.875  1.00195.13           O
ATOM   4232  CB  GLU A 607     -26.267 -43.114 110.862  1.00195.01           C
ATOM   4233  CG  GLU A 607     -26.120 -42.999 112.388  1.00195.70           C
ATOM   4234  CD  GLU A 607     -26.501 -41.622 112.945  1.00196.55           C
ATOM   4235  OE1 GLU A 607     -26.589 -41.488 114.189  1.00196.62           O
ATOM   4236  OE2 GLU A 607     -26.708 -40.675 112.152  1.00196.86           O
ATOM   4237  N   PHE A 608     -28.453 -45.461 111.712  1.00195.24           N
ATOM   4238  CA  PHE A 608     -28.661 -46.855 112.112  1.00195.37           C
ATOM   4239  C   PHE A 608     -29.646 -47.556 111.178  1.00195.44           C
ATOM   4240  O   PHE A 608     -29.443 -48.714 110.817  1.00195.22           O
ATOM   4241  CB  PHE A 608     -29.111 -46.891 113.583  1.00195.46           C
ATOM   4242  CG  PHE A 608     -29.721 -48.201 114.039  1.00195.41           C
ATOM   4243  CD1 PHE A 608     -28.933 -49.337 114.222  1.00195.19           C
ATOM   4244  CD2 PHE A 608     -31.084 -48.270 114.353  1.00195.20           C
ATOM   4245  CE1 PHE A 608     -29.502 -50.533 114.672  1.00194.96           C
ATOM   4246  CE2 PHE A 608     -31.661 -49.456 114.804  1.00194.69           C
ATOM   4247  CZ  PHE A 608     -30.869 -50.590 114.964  1.00194.89           C
ATOM   4248  N   GLN A 609     -30.700 -46.844 110.782  1.00195.78           N
ATOM   4249  CA  GLN A 609     -31.635 -47.347 109.783  1.00196.24           C
ATOM   4250  C   GLN A 609     -30.871 -47.608 108.489  1.00196.75           C
ATOM   4251  O   GLN A 609     -31.037 -48.658 107.872  1.00196.96           O
ATOM   4252  CB  GLN A 609     -32.796 -46.373 109.536  1.00196.11           C
ATOM   4253  CG  GLN A 609     -33.709 -46.107 110.739  1.00195.84           C
ATOM   4254  CD  GLN A 609     -34.450 -47.334 111.233  1.00195.58           C
ATOM   4255  OE1 GLN A 609     -34.917 -48.155 110.444  1.00195.51           O
ATOM   4256  NE2 GLN A 609     -34.571 -47.459 112.550  1.00195.39           N
ATOM   4257  N   ALA A 610     -30.012 -46.668 108.096  1.00197.26           N
ATOM   4258  CA  ALA A 610     -29.140 -46.856 106.929  1.00197.71           C
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ATOM   4259  C   ALA A 610     -28.074 -47.957 107.147  1.00197.97           C
ATOM   4260  O   ALA A 610     -27.492 -48.481 106.189  1.00197.87           O
ATOM   4261  CB  ALA A 610     -28.491 -45.519 106.521  1.00197.65           C
ATOM   4262  N   SER A 611     -27.854 -48.318 108.409  1.00198.32           N
ATOM   4263  CA  SER A 611     -26.786 -49.233 108.787  1.00198.75           C
ATOM   4264  C   SER A 611     -27.133 -50.692 108.547  1.00199.13           C
ATOM   4265  O   SER A 611     -26.300 -51.576 108.747  1.00198.96           O
ATOM   4266  CB  SER A 611     -26.432 -49.024 110.256  1.00198.72           C
ATOM   4267  OG  SER A 611     -25.463 -49.956 110.682  1.00199.01           O
ATOM   4268  N   ASN A 612     -28.364 -50.945 108.120  1.00199.92           N
ATOM   4269  CA  ASN A 612     -28.841 -52.319 107.931  1.00200.82           C
ATOM   4270  C   ASN A 612     -29.507 -52.576 106.572  1.00201.44           C
ATOM   4271  O   ASN A 612     -29.888 -53.714 106.258  1.00201.55           O
ATOM   4272  CB  ASN A 612     -29.780 -52.719 109.072  1.00200.73           C
ATOM   4273  CG  ASN A 612     -29.201 -52.413 110.430  1.00200.43           C
ATOM   4274  OD1 ASN A 612     -28.275 -53.081 110.890  1.00200.14           O
ATOM   4275  ND2 ASN A 612     -29.739 -51.391 111.079  1.00200.14           N
ATOM   4276  N   ILE A 613     -29.655 -51.511 105.783  1.00202.05           N
ATOM   4277  CA  ILE A 613     -30.092 -51.625 104.399  1.00202.64           C
ATOM   4278  C   ILE A 613     -28.965 -52.345 103.657  1.00202.86           C
ATOM   4279  O   ILE A 613     -27.962 -51.736 103.279  1.00202.95           O
ATOM   4280  CB  ILE A 613     -30.373 -50.226 103.771  1.00202.73           C
ATOM   4281  CG1 ILE A 613     -31.292 -49.386 104.678  1.00202.88           C
ATOM   4282  CG2 ILE A 613     -30.952 -50.366 102.357  1.00203.04           C
ATOM   4283  CD1 ILE A 613     -31.464 -47.907 104.254  1.00202.85           C
ATOM   4284  N   MET A 614     -29.125 -53.655 103.483  1.00203.17           N
ATOM   4285  CA  MET A 614     -28.044 -54.502 102.979  1.00203.54           C
ATOM   4286  C   MET A 614     -28.121 -54.798 101.479  1.00203.72           C
ATOM   4287  O   MET A 614     -28.776 -55.756 101.049  1.00203.89           O
ATOM   4288  CB  MET A 614     -27.953 -55.788 103.801  1.00203.61           C
ATOM   4289  CG  MET A 614     -27.468 -55.548 105.217  1.00203.98           C
ATOM   4290  SD  MET A 614     -25.784 -54.905 105.249  1.00205.28           S
ATOM   4291  CE  MET A 614     -25.594 -54.406 106.968  1.00204.40           C
ATOM   4292  N   HIS A 615     -27.437 -53.968 100.696  1.00203.74           N
ATOM   4293  CA  HIS A 615     -27.405 -54.105  99.253  1.00203.80           C
ATOM   4294  C   HIS A 615     -26.437 -55.229  98.907  1.00203.90           C
ATOM   4295  O   HIS A 615     -25.229 -55.065  99.074  1.00203.90           O
ATOM   4296  CB  HIS A 615     -26.951 -52.787  98.622  1.00203.82           C
ATOM   4297  CG  HIS A 615     -27.641 -51.571  99.174  1.00204.36           C
ATOM   4298  ND1 HIS A 615     -27.263 -50.971 100.355  1.00204.98           N
ATOM   4299  CD2 HIS A 615     -28.666 -50.827  98.691  1.00204.89           C
ATOM   4300  CE1 HIS A 615     -28.031 -49.919 100.582  1.00205.08           C
ATOM   4301  NE2 HIS A 615     -28.895 -49.812  99.589  1.00204.89           N
ATOM   4302  N   SER A 616     -26.967 -56.371  98.447  1.00204.06           N
ATOM   4303  CA  SER A 616     -26.151 -57.581  98.187  1.00204.15           C
ATOM   4304  C   SER A 616     -26.632 -58.450  97.026  1.00204.32           C
ATOM   4305  O   SER A 616     -27.800 -58.390  96.638  1.00204.39           O
ATOM   4306  CB  SER A 616     -26.133 -58.483  99.415  1.00204.12           C
ATOM   4307  OG  SER A 616     -27.103 -59.513  99.272  1.00203.65           O
ATOM   4308  N   ILE A 617     -25.728 -59.292  96.517  1.00204.46           N
ATOM   4309  CA  ILE A 617     -26.072 -60.335  95.534  1.00204.57           C
ATOM   4310  C   ILE A 617     -25.939 -61.743  96.108  1.00204.52           C
ATOM   4311  O   ILE A 617     -24.832 -62.272  96.242  1.00204.46           O
ATOM   4312  CB  ILE A 617     -25.268 -60.238  94.204  1.00204.59           C
ATOM   4313  CG1 ILE A 617     -23.797 -59.839  94.436  1.00204.72           C
ATOM   4314  CG2 ILE A 617     -25.970 -59.314  93.241  1.00204.81           C
ATOM   4315  CD1 ILE A 617     -23.473 -58.368  94.205  1.00204.99           C
ATOM   4316  N   ASN A 618     -27.085 -62.339  96.426  1.00204.58           N
ATOM   4317  CA  ASN A 618     -27.166 -63.619  97.146  1.00204.69           C
ATOM   4318  C   ASN A 618     -26.662 -63.576  98.599  1.00204.88           C
ATOM   4319  O   ASN A 618     -26.016 -64.522  99.083  1.00205.07           O
ATOM   4320  CB  ASN A 618     -26.485 -64.743  96.362  1.00204.51           C
ATOM   4321  CG  ASN A 618     -27.049 -64.895  94.985  1.00204.21           C
ATOM   4322  OD1 ASN A 618     -27.732 -63.997  94.484  1.00203.79           O
ATOM   4323  ND2 ASN A 618     -26.776 -66.037  94.354  1.00203.95           N
ATOM   4324  N   GLY A 619     -26.976 -62.478  99.291  1.00204.82           N
ATOM   4325  CA  GLY A 619     -26.570 -62.300 100.681  1.00204.60           C
ATOM   4326  C   GLY A 619     -25.115 -61.899 100.792  1.00204.42           C
ATOM   4327  O   GLY A 619     -24.734 -61.178 101.704  1.00204.51           O
ATOM   4328  N   TYR A 620     -24.294 -62.374  99.863  1.00204.20           N
ATOM   4329  CA  TYR A 620     -22.897 -61.986  99.818  1.00204.01           C
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ATOM	4330	C	TYR	A	620	-22.803	-60.534	99.343	1.00203.96	C
ATOM	4331	O	TYR	A	620	-23.587	-60.100	98.494	1.00203.85	O
ATOM	4332	CB	TYR	A	620	-22.093	-62.948	98.934	1.00203.96	C
ATOM	4333	CG	TYR	A	620	-22.084	-64.409	99.403	1.00203.80	C
ATOM	4334	CD1	TYR	A	620	-22.314	-64.754	100.739	1.00203.44	C
ATOM	4335	CD2	TYR	A	620	-21.807	-65.442	98.510	1.00203.82	C
ATOM	4336	CE1	TYR	A	620	-22.286	-66.086	101.157	1.00203.17	C
ATOM	4337	CE2	TYR	A	620	-21.778	-66.779	98.928	1.00203.49	C
ATOM	4338	CZ	TYR	A	620	-22.019	-67.092	100.248	1.00203.37	C
ATOM	4339	OH	TYR	A	620	-21.982	-68.411	100.653	1.00203.50	O
ATOM	4340	N	VAL	A	621	-21.866	-59.786	99.923	1.00203.94	N
ATOM	4341	CA	VAL	A	621	-21.754	-58.339	99.703	1.00203.92	C
ATOM	4342	C	VAL	A	621	-20.281	-57.916	99.706	1.00203.97	C
ATOM	4343	O	VAL	A	621	-19.420	-58.684	100.121	1.00203.93	O
ATOM	4344	CB	VAL	A	621	-22.570	-57.538	100.777	1.00203.88	C
ATOM	4345	CG1	VAL	A	621	-21.857	-57.527	102.127	1.00203.72	C
ATOM	4346	CG2	VAL	A	621	-22.847	-56.120	100.316	1.00203.64	C
ATOM	4347	N	PHE	A	622	-20.001	-56.700	99.237	1.00204.01	N
ATOM	4348	CA	PHE	A	622	-18.647	-56.123	99.266	1.00203.98	C
ATOM	4349	C	PHE	A	622	-17.555	-57.082	98.781	1.00204.04	C
ATOM	4350	O	PHE	A	622	-16.583	-57.359	99.491	1.00203.87	O
ATOM	4351	CB	PHE	A	622	-18.314	-55.576	100.663	1.00203.85	C
ATOM	4352	CG	PHE	A	622	-18.899	-54.220	100.942	1.00203.47	C
ATOM	4353	CD1	PHE	A	622	-19.947	-54.075	101.838	1.00202.91	C
ATOM	4354	CD2	PHE	A	622	-18.397	-53.087	100.305	1.00203.25	C
ATOM	4355	CE1	PHE	A	622	-20.485	-52.826	102.099	1.00202.91	C
ATOM	4356	CE2	PHE	A	622	-18.931	-51.835	100.556	1.00203.02	C
ATOM	4357	CZ	PHE	A	622	-19.976	-51.702	101.458	1.00203.14	C
ATOM	4358	N	ASP	A	623	-17.735	-57.575	97.559	1.00204.28	N
ATOM	4359	CA	ASP	A	623	-16.838	-58.554	96.958	1.00204.59	C
ATOM	4360	C	ASP	A	623	-16.712	-59.788	97.842	1.00204.62	C
ATOM	4361	O	ASP	A	623	-15.665	-60.440	97.866	1.00204.70	O
ATOM	4362	CB	ASP	A	623	-15.464	-57.936	96.649	1.00204.70	C
ATOM	4363	CG	ASP	A	623	-15.541	-56.822	95.606	1.00205.43	C
ATOM	4364	OD1	ASP	A	623	-14.784	-56.878	94.614	1.00206.11	O
ATOM	4365	OD2	ASP	A	623	-16.360	-55.888	95.768	1.00206.16	O
ATOM	4366	N	SER	A	624	-17.780	-60.095	98.578	1.00204.72	N
ATOM	4367	CA	SER	A	624	-17.829	-61.337	99.335	1.00204.91	C
ATOM	4368	C	SER	A	624	-18.267	-62.432	98.413	1.00204.99	C
ATOM	4369	O	SER	A	624	-19.012	-62.182	97.453	1.00204.77	O
ATOM	4370	CB	SER	A	624	-18.780	-61.283	100.520	1.00204.97	C
ATOM	4371	OG	SER	A	624	-18.743	-62.525	101.207	1.00205.03	O
ATOM	4372	N	LEU	A	625	-17.842	-63.649	98.759	1.00205.21	N
ATOM	4373	CA	LEU	A	625	-17.757	-64.757	97.804	1.00205.31	C
ATOM	4374	C	LEU	A	625	-18.343	-64.394	96.403	1.00205.53	C
ATOM	4375	O	LEU	A	625	-19.544	-64.093	96.208	1.00205.18	O
ATOM	4376	CB	LEU	A	625	-18.180	-66.140	98.402	1.00205.13	C
ATOM	4377	CG	LEU	A	625	-17.309	-66.923	99.431	1.00204.01	C
ATOM	4378	CD1	LEU	A	625	-17.971	-68.237	99.830	1.00203.00	C
ATOM	4379	CD2	LEU	A	625	-15.888	-67.219	98.972	1.00202.64	C
ATOM	4380	N	GLN	A	626	-17.400	-64.369	95.465	1.00205.83	N
ATOM	4381	CA	GLN	A	626	-17.583	-64.061	94.060	1.00206.15	C
ATOM	4382	C	GLN	A	626	-18.247	-65.239	93.312	1.00206.26	C
ATOM	4383	O	GLN	A	626	-19.345	-65.666	93.696	1.00206.59	O
ATOM	4384	CB	GLN	A	626	-16.205	-63.694	93.477	1.00206.20	C
ATOM	4385	CG	GLN	A	626	-15.253	-64.859	93.089	1.00206.94	C
ATOM	4386	CD	GLN	A	626	-15.113	-65.957	94.148	1.00207.83	C
ATOM	4387	OE1	GLN	A	626	-14.743	-65.693	95.299	1.00208.57	O
ATOM	4388	NE2	GLN	A	626	-15.399	-67.200	93.751	1.00207.68	N
ATOM	4389	N	LEU	A	627	-17.601	-65.741	92.251	1.00206.07	N
ATOM	4390	CA	LEU	A	627	-18.011	-66.975	91.572	1.00205.77	C
ATOM	4391	C	LEU	A	627	-16.875	-67.563	90.743	1.00205.36	C
ATOM	4392	O	LEU	A	627	-16.177	-66.843	90.018	1.00205.22	O
ATOM	4393	CB	LEU	A	627	-19.228	-66.735	90.671	1.00205.96	C
ATOM	4394	CG	LEU	A	627	-20.419	-67.692	90.832	1.00206.51	C
ATOM	4395	CD1	LEU	A	627	-21.637	-67.128	90.086	1.00206.56	C
ATOM	4396	CD2	LEU	A	627	-20.109	-69.152	90.410	1.00207.21	C
ATOM	4397	N	SER	A	628	-16.711	-68.879	90.852	1.00204.90	N
ATOM	4398	CA	SER	A	628	-15.754	-69.608	90.031	1.00204.40	C
ATOM	4399	C	SER	A	628	-16.381	-70.073	88.713	1.00203.92	C
ATOM	4400	O	SER	A	628	-17.436	-70.726	88.705	1.00203.90	O

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ATOM   4401  CB  SER A 628     -15.181 -70.802  90.799  1.00204.49           C
ATOM   4402  OG  SER A 628     -13.989 -71.271  90.183  1.00204.82           O
ATOM   4403  N   VAL A 629     -15.724 -69.696  87.614  1.00203.20           N
ATOM   4404  CA  VAL A 629     -16.010 -70.190  86.257  1.00202.47           C
ATOM   4405  C   VAL A 629     -14.696 -70.300  85.474  1.00201.87           C
ATOM   4406  O   VAL A 629     -13.623 -70.004  86.014  1.00201.86           O
ATOM   4407  CB  VAL A 629     -17.025 -69.295  85.480  1.00202.49           C
ATOM   4408  CG1 VAL A 629     -18.457 -69.766  85.707  1.00202.66           C
ATOM   4409  CG2 VAL A 629     -16.869 -67.825  85.849  1.00202.52           C
ATOM   4410  N   CYS A 630     -14.774 -70.743  84.217  1.00201.07           N
ATOM   4411  CA  CYS A 630     -13.581 -70.828  83.353  1.00200.30           C
ATOM   4412  C   CYS A 630     -13.849 -70.506  81.874  1.00199.57           C
ATOM   4413  O   CYS A 630     -15.003 -70.429  81.453  1.00199.64           O
ATOM   4414  CB  CYS A 630     -12.831 -72.160  83.538  1.00200.40           C
ATOM   4415  SG  CYS A 630     -13.507 -73.671  82.799  1.00200.62           S
ATOM   4416  N   LEU A 631     -12.784 -70.302  81.098  1.00198.49           N
ATOM   4417  CA  LEU A 631     -12.931 -69.764  79.745  1.00197.39           C
ATOM   4418  C   LEU A 631     -13.227 -70.856  78.731  1.00196.91           C
ATOM   4419  O   LEU A 631     -12.826 -71.996  78.917  1.00196.75           O
ATOM   4420  CB  LEU A 631     -11.721 -68.912  79.358  1.00197.13           C
ATOM   4421  CG  LEU A 631     -10.662 -69.434  78.412  1.00196.21           C
ATOM   4422  CD1 LEU A 631     -10.856 -68.749  77.090  1.00195.32           C
ATOM   4423  CD2 LEU A 631      -9.321 -69.092  78.991  1.00195.99           C
ATOM   4424  N   HIS A 632     -13.936 -70.481  77.667  1.00196.45           N
ATOM   4425  CA  HIS A 632     -14.561 -71.412  76.716  1.00196.12           C
ATOM   4426  C   HIS A 632     -15.784 -72.142  77.283  1.00195.72           C
ATOM   4427  O   HIS A 632     -16.551 -72.755  76.532  1.00195.61           O
ATOM   4428  CB  HIS A 632     -13.555 -72.404  76.124  1.00196.35           C
ATOM   4429  CG  HIS A 632     -12.527 -71.772  75.241  1.00196.80           C
ATOM   4430  ND1 HIS A 632     -12.634 -70.478  74.777  1.00197.40           N
ATOM   4431  CD2 HIS A 632     -11.386 -72.272  74.708  1.00197.06           C
ATOM   4432  CE1 HIS A 632     -11.593 -70.201  74.012  1.00197.81           C
ATOM   4433  NE2 HIS A 632     -10.822 -71.273  73.952  1.00197.56           N
ATOM   4434  N   GLU A 633     -15.947 -72.091  78.605  1.00195.28           N
ATOM   4435  CA  GLU A 633     -17.187 -72.511  79.261  1.00194.99           C
ATOM   4436  C   GLU A 633     -18.329 -71.641  78.763  1.00194.45           C
ATOM   4437  O   GLU A 633     -18.149 -70.446  78.520  1.00194.46           O
ATOM   4438  CB  GLU A 633     -17.089 -72.324  80.775  1.00195.19           C
ATOM   4439  CG  GLU A 633     -17.025 -73.587  81.631  1.00195.40           C
ATOM   4440  CD  GLU A 633     -17.115 -73.267  83.129  1.00195.21           C
ATOM   4441  OE1 GLU A 633     -17.573 -72.154  83.492  1.00194.95           O
ATOM   4442  OE2 GLU A 633     -16.727 -74.133  83.945  1.00195.39           O
ATOM   4443  N   VAL A 634     -19.512 -72.225  78.638  1.00193.71           N
ATOM   4444  CA  VAL A 634     -20.633 -71.481  78.095  1.00192.98           C
ATOM   4445  C   VAL A 634     -21.954 -71.992  78.677  1.00192.57           C
ATOM   4446  O   VAL A 634     -22.257 -73.186  78.572  1.00192.75           O
ATOM   4447  CB  VAL A 634     -20.591 -71.505  76.528  1.00192.93           C
ATOM   4448  CG1 VAL A 634     -20.719 -72.931  75.972  1.00192.91           C
ATOM   4449  CG2 VAL A 634     -21.623 -70.569  75.931  1.00192.72           C
ATOM   4450  N   ALA A 635     -22.703 -71.099  79.334  1.00191.78           N
ATOM   4451  CA  ALA A 635     -24.072 -71.394  79.804  1.00191.01           C
ATOM   4452  C   ALA A 635     -24.862 -70.139  80.152  1.00190.53           C
ATOM   4453  O   ALA A 635     -24.316 -69.034  80.183  1.00190.26           O
ATOM   4454  CB  ALA A 635     -24.079 -72.382  80.986  1.00191.01           C
ATOM   4455  N   TYR A 636     -26.152 -70.343  80.412  1.00190.13           N
ATOM   4456  CA  TYR A 636     -27.113 -69.285  80.699  1.00189.95           C
ATOM   4457  C   TYR A 636     -26.933 -68.725  82.095  1.00190.12           C
ATOM   4458  O   TYR A 636     -26.682 -69.494  83.026  1.00190.47           O
ATOM   4459  CB  TYR A 636     -28.509 -69.889  80.685  1.00189.67           C
ATOM   4460  CG  TYR A 636     -29.165 -70.080  79.346  1.00189.07           C
ATOM   4461  CD1 TYR A 636     -30.546 -70.181  79.263  1.00189.36           C
ATOM   4462  CD2 TYR A 636     -28.432 -70.164  78.173  1.00188.22           C
ATOM   4463  CE1 TYR A 636     -31.188 -70.366  78.048  1.00189.62           C
ATOM   4464  CE2 TYR A 636     -29.063 -70.346  76.943  1.00188.59           C
ATOM   4465  CZ  TYR A 636     -30.447 -70.446  76.888  1.00189.18           C
ATOM   4466  OH  TYR A 636     -31.111 -70.625  75.689  1.00189.28           O
ATOM   4467  N   TRP A 637     -27.091 -67.410  82.255  1.00190.14           N
ATOM   4468  CA  TRP A 637     -27.340 -66.835  83.584  1.00190.39           C
ATOM   4469  C   TRP A 637     -28.822 -66.484  83.758  1.00189.97           C
ATOM   4470  O   TRP A 637     -29.455 -65.988  82.828  1.00190.22           O
ATOM   4471  CB  TRP A 637     -26.506 -65.576  83.849  1.00191.21           C
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ATOM   4472  CG  TRP A 637     -25.018 -65.762  84.074  1.00192.38           C
ATOM   4473  CD1 TRP A 637     -24.026 -64.976  83.571  1.00193.56           C
ATOM   4474  CD2 TRP A 637     -24.359 -66.767  84.871  1.00193.47           C
ATOM   4475  NE1 TRP A 637     -22.792 -65.428  83.986  1.00193.82           N
ATOM   4476  CE2 TRP A 637     -22.965 -66.524  84.783  1.00193.49           C
ATOM   4477  CE3 TRP A 637     -24.805 -67.854  85.635  1.00193.84           C
ATOM   4478  CZ2 TRP A 637     -22.018 -67.325  85.426  1.00193.08           C
ATOM   4479  CZ3 TRP A 637     -23.863 -68.650  86.271  1.00193.29           C
ATOM   4480  CH2 TRP A 637     -22.486 -68.381  86.166  1.00193.30           C
ATOM   4481  N   TYR A 638     -29.375 -66.739  84.942  1.00189.20           N
ATOM   4482  CA  TYR A 638     -30.715 -66.267  85.267  1.00188.49           C
ATOM   4483  C   TYR A 638     -30.602 -65.278  86.399  1.00188.49           C
ATOM   4484  O   TYR A 638     -30.047 -65.602  87.447  1.00188.83           O
ATOM   4485  CB  TYR A 638     -31.623 -67.416  85.673  1.00188.01           C
ATOM   4486  CG  TYR A 638     -31.534 -68.590  84.754  1.00187.42           C
ATOM   4487  CD1 TYR A 638     -32.020 -68.524  83.460  1.00187.25           C
ATOM   4488  CD2 TYR A 638     -30.952 -69.765  85.173  1.00187.38           C
ATOM   4489  CE1 TYR A 638     -31.927 -69.609  82.605  1.00187.11           C
ATOM   4490  CE2 TYR A 638     -30.857 -70.855  84.332  1.00187.43           C
ATOM   4491  CZ  TYR A 638     -31.345 -70.771  83.053  1.00187.24           C
ATOM   4492  OH  TYR A 638     -31.250 -71.864  82.234  1.00187.35           O
ATOM   4493  N   ILE A 639     -31.124 -64.073  86.184  1.00188.32           N
ATOM   4494  CA  ILE A 639     -30.985 -62.976  87.149  1.00188.04           C
ATOM   4495  C   ILE A 639     -32.284 -62.205  87.408  1.00188.02           C
ATOM   4496  O   ILE A 639     -33.175 -62.148  86.555  1.00187.97           O
ATOM   4497  CB  ILE A 639     -29.825 -62.021  86.766  1.00187.88           C
ATOM   4498  CG1 ILE A 639     -29.825 -61.724  85.270  1.00187.58           C
ATOM   4499  CG2 ILE A 639     -28.505 -62.652  87.103  1.00187.94           C
ATOM   4500  CD1 ILE A 639     -28.443 -61.460  84.705  1.00186.94           C
ATOM   4501  N   LEU A 640     -32.381 -61.627  88.602  1.00188.04           N
ATOM   4502  CA  LEU A 640     -33.598 -60.938  89.047  1.00188.19           C
ATOM   4503  C   LEU A 640     -33.340 -59.828  90.061  1.00188.18           C
ATOM   4504  O   LEU A 640     -32.323 -59.838  90.757  1.00188.32           O
ATOM   4505  CB  LEU A 640     -34.637 -61.927  89.615  1.00188.24           C
ATOM   4506  CG  LEU A 640     -34.412 -63.419  89.942  1.00188.62           C
ATOM   4507  CD1 LEU A 640     -33.074 -63.742  90.612  1.00189.40           C
ATOM   4508  CD2 LEU A 640     -35.559 -63.940  90.802  1.00188.22           C
ATOM   4509  N   SER A 641     -34.251 -58.864  90.136  1.00188.10           N
ATOM   4510  CA  SER A 641     -34.196 -57.902  91.216  1.00188.34           C
ATOM   4511  C   SER A 641     -35.349 -58.144  92.142  1.00188.81           C
ATOM   4512  O   SER A 641     -36.498 -58.232  91.709  1.00188.73           O
ATOM   4513  CB  SER A 641     -34.236 -56.467  90.725  1.00188.23           C
ATOM   4514  OG  SER A 641     -34.448 -55.595  91.824  1.00187.83           O
ATOM   4515  N   ILE A 642     -35.015 -58.246  93.424  1.00189.56           N
ATOM   4516  CA  ILE A 642     -35.970 -58.549  94.481  1.00190.23           C
ATOM   4517  C   ILE A 642     -35.574 -57.761  95.740  1.00191.15           C
ATOM   4518  O   ILE A 642     -34.377 -57.599  96.014  1.00190.97           O
ATOM   4519  CB  ILE A 642     -36.014 -60.078  94.764  1.00189.90           C
ATOM   4520  CG1 ILE A 642     -37.448 -60.605  94.810  1.00188.82           C
ATOM   4521  CG2 ILE A 642     -35.256 -60.436  96.022  1.00190.10           C
ATOM   4522  CD1 ILE A 642     -37.830 -61.365  93.586  1.00187.00           C
ATOM   4523  N   GLY A 643     -36.578 -57.252  96.469  1.00192.29           N
ATOM   4524  CA  GLY A 643     -36.393 -56.522  97.751  1.00193.60           C
ATOM   4525  C   GLY A 643     -35.791 -55.121  97.694  1.00194.39           C
ATOM   4526  O   GLY A 643     -36.213 -54.226  98.420  1.00194.02           O
ATOM   4527  N   ALA A 644     -34.763 -54.970  96.859  1.00195.45           N
ATOM   4528  CA  ALA A 644     -34.190 -53.686  96.470  1.00196.31           C
ATOM   4529  C   ALA A 644     -35.163 -53.011  95.544  1.00196.93           C
ATOM   4530  O   ALA A 644     -35.089 -53.182  94.327  1.00196.94           O
ATOM   4531  CB  ALA A 644     -32.893 -53.921  95.731  1.00196.29           C
ATOM   4532  N   GLN A 645     -36.091 -52.261  96.105  1.00197.85           N
ATOM   4533  CA  GLN A 645     -37.130 -51.670  95.276  1.00199.11           C
ATOM   4534  C   GLN A 645     -37.065 -50.150  95.294  1.00199.13           C
ATOM   4535  O   GLN A 645     -35.993 -49.588  95.532  1.00199.07           O
ATOM   4536  CB  GLN A 645     -38.524 -52.219  95.635  1.00199.61           C
ATOM   4537  CG  GLN A 645     -38.623 -52.925  96.994  1.00202.09           C
ATOM   4538  CD  GLN A 645     -38.194 -52.036  98.162  1.00205.38           C
ATOM   4539  OE1 GLN A 645     -38.622 -50.876  98.280  1.00207.23           O
ATOM   4540  NE2 GLN A 645     -37.341 -52.579  99.029  1.00205.78           N
ATOM   4541  N   THR A 646     -38.199 -49.498  95.023  1.00199.43           N
ATOM   4542  CA  THR A 646     -38.264 -48.043  94.856  1.00199.76           C
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ATOM   4543  C   THR A 646     -37.508 -47.595  93.584  1.00199.95           C
ATOM   4544  O   THR A 646     -37.806 -46.522  93.024  1.00200.29           O
ATOM   4545  CB  THR A 646     -37.773 -47.274  96.143  1.00199.87           C
ATOM   4546  OG1 THR A 646     -38.514 -47.722  97.289  1.00199.89           O
ATOM   4547  CG2 THR A 646     -37.910 -45.734  96.002  1.00199.71           C
ATOM   4548  N   ASP A 647     -36.563 -48.431  93.125  1.00199.81           N
ATOM   4549  CA  ASP A 647     -35.671 -48.109  91.991  1.00199.67           C
ATOM   4550  C   ASP A 647     -35.446 -49.282  91.032  1.00198.91           C
ATOM   4551  O   ASP A 647     -35.929 -50.395  91.267  1.00199.02           O
ATOM   4552  CB  ASP A 647     -34.309 -47.616  92.510  1.00200.20           C
ATOM   4553  CG  ASP A 647     -33.655 -46.564  91.591  1.00201.85           C
ATOM   4554  OD1 ASP A 647     -34.355 -45.980  90.717  1.00203.83           O
ATOM   4555  OD2 ASP A 647     -32.434 -46.312  91.764  1.00203.19           O
ATOM   4556  N   PHE A 648     -34.713 -49.021  89.949  1.00197.97           N
ATOM   4557  CA  PHE A 648     -34.303 -50.076  89.028  1.00197.00           C
ATOM   4558  C   PHE A 648     -32.794 -50.322  89.035  1.00196.49           C
ATOM   4559  O   PHE A 648     -32.024 -49.577  89.643  1.00196.35           O
ATOM   4560  CB  PHE A 648     -34.825 -49.818  87.605  1.00196.83           C
ATOM   4561  CG  PHE A 648     -34.222 -48.619  86.925  1.00196.21           C
ATOM   4562  CD1 PHE A 648     -32.896 -48.625  86.504  1.00195.73           C
ATOM   4563  CD2 PHE A 648     -34.997 -47.502  86.664  1.00195.81           C
ATOM   4564  CE1 PHE A 648     -32.351 -47.531  85.864  1.00195.66           C
ATOM   4565  CE2 PHE A 648     -34.458 -46.402  86.025  1.00195.79           C
ATOM   4566  CZ  PHE A 648     -33.134 -46.415  85.625  1.00195.92           C
ATOM   4567  N   LEU A 649     -32.385 -51.373  88.340  1.00195.85           N
ATOM   4568  CA  LEU A 649     -30.994 -51.750  88.288  1.00195.40           C
ATOM   4569  C   LEU A 649     -30.493 -51.999  86.875  1.00194.99           C
ATOM   4570  O   LEU A 649     -30.840 -53.012  86.265  1.00195.19           O
ATOM   4571  CB  LEU A 649     -30.799 -53.021  89.094  1.00195.47           C
ATOM   4572  CG  LEU A 649     -30.726 -52.860  90.598  1.00195.92           C
ATOM   4573  CD1 LEU A 649     -30.885 -54.228  91.242  1.00196.75           C
ATOM   4574  CD2 LEU A 649     -29.407 -52.189  90.996  1.00196.27           C
ATOM   4575  N   SER A 650     -29.680 -51.090  86.347  1.00194.21           N
ATOM   4576  CA  SER A 650     -28.873 -51.434  85.183  1.00193.46           C
ATOM   4577  C   SER A 650     -27.721 -52.270  85.732  1.00193.04           C
ATOM   4578  O   SER A 650     -27.109 -51.873  86.720  1.00192.87           O
ATOM   4579  CB  SER A 650     -28.407 -50.187  84.420  1.00193.41           C
ATOM   4580  OG  SER A 650     -28.420 -49.028  85.232  1.00193.09           O
ATOM   4581  N   VAL A 651     -27.468 -53.443  85.138  1.00192.61           N
ATOM   4582  CA  VAL A 651     -26.526 -54.426  85.723  1.00192.28           C
ATOM   4583  C   VAL A 651     -25.274 -54.726  84.891  1.00192.25           C
ATOM   4584  O   VAL A 651     -25.328 -54.768  83.661  1.00192.25           O
ATOM   4585  CB  VAL A 651     -27.208 -55.745  86.135  1.00192.12           C
ATOM   4586  CG1 VAL A 651     -28.344 -55.476  87.104  1.00191.95           C
ATOM   4587  CG2 VAL A 651     -27.699 -56.495  84.928  1.00192.09           C
ATOM   4588  N   PHE A 652     -24.168 -54.974  85.592  1.00192.20           N
ATOM   4589  CA  PHE A 652     -22.829 -54.768  85.046  1.00192.25           C
ATOM   4590  C   PHE A 652     -22.253 -55.970  84.286  1.00192.08           C
ATOM   4591  O   PHE A 652     -22.765 -56.311  83.227  1.00191.99           O
ATOM   4592  CB  PHE A 652     -21.888 -54.239  86.148  1.00192.49           C
ATOM   4593  CG  PHE A 652     -20.821 -53.285  85.655  1.00193.15           C
ATOM   4594  CD1 PHE A 652     -19.641 -53.108  86.387  1.00193.69           C
ATOM   4595  CD2 PHE A 652     -20.982 -52.566  84.463  1.00194.09           C
ATOM   4596  CE1 PHE A 652     -18.627 -52.224  85.942  1.00194.27           C
ATOM   4597  CE2 PHE A 652     -19.974 -51.679  83.999  1.00194.65           C
ATOM   4598  CZ  PHE A 652     -18.794 -51.508  84.744  1.00194.18           C
ATOM   4599  N   PHE A 653     -21.216 -56.604  84.841  1.00192.04           N
ATOM   4600  CA  PHE A 653     -20.343 -57.589  84.159  1.00191.98           C
ATOM   4601  C   PHE A 653     -19.226 -56.877  83.417  1.00191.72           C
ATOM   4602  O   PHE A 653     -19.441 -56.317  82.346  1.00191.55           O
ATOM   4603  CB  PHE A 653     -21.082 -58.517  83.176  1.00192.25           C
ATOM   4604  CG  PHE A 653     -21.986 -59.548  83.828  1.00192.87           C
ATOM   4605  CD1 PHE A 653     -21.631 -60.182  85.016  1.00193.32           C
ATOM   4606  CD2 PHE A 653     -23.187 -59.920  83.209  1.00193.24           C
ATOM   4607  CE1 PHE A 653     -22.481 -61.144  85.596  1.00193.57           C
ATOM   4608  CE2 PHE A 653     -24.039 -60.884  83.777  1.00193.01           C
ATOM   4609  CZ  PHE A 653     -23.687 -61.494  84.970  1.00193.06           C
ATOM   4610  N   SER A 654     -18.030 -56.910  83.989  1.00191.71           N
ATOM   4611  CA  SER A 654     -16.883 -56.225  83.404  1.00191.86           C
ATOM   4612  C   SER A 654     -16.386 -56.965  82.166  1.00191.85           C
ATOM   4613  O   SER A 654     -16.168 -58.178  82.216  1.00191.88           O
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ATOM	4614	CB	SER	A	654	-15.761	-56.084	84.440	1.00191.94	C
ATOM	4615	OG	SER	A	654	-14.761	-55.163	84.025	1.00191.97	O
ATOM	4616	N	GLY	A	655	-16.238	-56.230	81.059	1.00191.80	N
ATOM	4617	CA	GLY	A	655	-15.716	-56.763	79.785	1.00191.66	C
ATOM	4618	C	GLY	A	655	-16.548	-57.840	79.088	1.00191.46	C
ATOM	4619	O	GLY	A	655	-16.276	-58.232	77.937	1.00191.45	O
ATOM	4620	N	TYR	A	656	-17.564	-58.327	79.787	1.00191.05	N
ATOM	4621	CA	TYR	A	656	-18.386	-59.370	79.250	1.00190.60	C
ATOM	4622	C	TYR	A	656	-19.658	-58.841	78.650	1.00190.32	C
ATOM	4623	O	TYR	A	656	-20.142	-57.766	79.006	1.00190.16	O
ATOM	4624	CB	TYR	A	656	-18.681	-60.400	80.312	1.00190.78	C
ATOM	4625	CG	TYR	A	656	-17.713	-61.537	80.261	1.00191.12	C
ATOM	4626	CD1	TYR	A	656	-17.531	-62.265	79.088	1.00191.52	C
ATOM	4627	CD2	TYR	A	656	-16.975	-61.894	81.384	1.00191.71	C
ATOM	4628	CE1	TYR	A	656	-16.637	-63.330	79.036	1.00192.25	C
ATOM	4629	CE2	TYR	A	656	-16.074	-62.958	81.349	1.00192.09	C
ATOM	4630	CZ	TYR	A	656	-15.910	-63.675	80.172	1.00192.09	C
ATOM	4631	OH	TYR	A	656	-15.020	-64.731	80.133	1.00191.81	O
ATOM	4632	N	THR	A	657	-20.189	-59.621	77.723	1.00190.03	N
ATOM	4633	CA	THR	A	657	-21.333	-59.219	76.944	1.00189.76	C
ATOM	4634	C	THR	A	657	-22.261	-60.407	76.807	1.00189.53	C
ATOM	4635	O	THR	A	657	-21.804	-61.549	76.698	1.00189.24	O
ATOM	4636	CB	THR	A	657	-20.887	-58.747	75.551	1.00189.87	C
ATOM	4637	OG1	THR	A	657	-19.782	-57.842	75.682	1.00189.74	O
ATOM	4638	CG2	THR	A	657	-22.023	-58.056	74.829	1.00189.94	C
ATOM	4639	N	PHE	A	658	-23.561	-60.131	76.801	1.00189.49	N
ATOM	4640	CA	PHE	A	658	-24.553	-61.191	76.721	1.00189.69	C
ATOM	4641	C	PHE	A	658	-25.594	-61.062	75.611	1.00189.78	C
ATOM	4642	O	PHE	A	658	-25.778	-59.988	75.025	1.00189.71	O
ATOM	4643	CB	PHE	A	658	-25.251	-61.364	78.060	1.00189.78	C
ATOM	4644	CG	PHE	A	658	-25.712	-60.091	78.663	1.00189.88	C
ATOM	4645	CD1	PHE	A	658	-24.971	-59.482	79.662	1.00190.05	C
ATOM	4646	CD2	PHE	A	658	-26.896	-59.500	78.245	1.00190.56	C
ATOM	4647	CE1	PHE	A	658	-25.400	-58.294	80.242	1.00190.66	C
ATOM	4648	CE2	PHE	A	658	-27.339	-58.308	78.815	1.00191.17	C
ATOM	4649	CZ	PHE	A	658	-26.589	-57.703	79.818	1.00190.84	C
ATOM	4650	N	LYS	A	659	-26.255	-62.195	75.345	1.00189.92	N
ATOM	4651	CA	LYS	A	659	-27.300	-62.335	74.329	1.00190.12	C
ATOM	4652	C	LYS	A	659	-28.646	-62.541	75.035	1.00190.47	C
ATOM	4653	O	LYS	A	659	-29.150	-63.659	75.184	1.00190.60	O
ATOM	4654	CB	LYS	A	659	-26.975	-63.481	73.337	1.00190.11	C
ATOM	4655	CG	LYS	A	659	-27.968	-63.704	72.161	1.00189.80	C
ATOM	4656	CD	LYS	A	659	-27.645	-64.991	71.386	1.00189.62	C
ATOM	4657	CE	LYS	A	659	-28.834	-65.515	70.592	1.00188.89	C
ATOM	4658	NZ	LYS	A	659	-29.004	-64.776	69.318	1.00188.81	N
ATOM	4659	N	HIS	A	660	-29.203	-61.430	75.489	1.00190.71	N
ATOM	4660	CA	HIS	A	660	-30.514	-61.402	76.087	1.00190.97	C
ATOM	4661	C	HIS	A	660	-31.464	-60.910	75.013	1.00191.27	C
ATOM	4662	O	HIS	A	660	-31.150	-59.936	74.329	1.00191.16	O
ATOM	4663	CB	HIS	A	660	-30.457	-60.475	77.297	1.00190.93	C
ATOM	4664	CG	HIS	A	660	-31.661	-59.614	77.473	1.00191.09	C
ATOM	4665	ND1	HIS	A	660	-32.776	-60.030	78.166	1.00191.14	N
ATOM	4666	CD2	HIS	A	660	-31.914	-58.347	77.071	1.00191.63	C
ATOM	4667	CE1	HIS	A	660	-33.674	-59.062	78.169	1.00191.76	C
ATOM	4668	NE2	HIS	A	660	-33.176	-58.028	77.513	1.00192.23	N
ATOM	4669	N	LYS	A	661	-32.597	-61.599	74.850	1.00191.85	N
ATOM	4670	CA	LYS	A	661	-33.634	-61.255	73.853	1.00192.68	C
ATOM	4671	C	LYS	A	661	-33.157	-61.462	72.401	1.00192.88	C
ATOM	4672	O	LYS	A	661	-33.620	-60.790	71.467	1.00192.83	O
ATOM	4673	CB	LYS	A	661	-34.239	-59.836	74.097	1.00192.90	C
ATOM	4674	CG	LYS	A	661	-33.368	-58.584	73.696	1.00193.40	C
ATOM	4675	CD	LYS	A	661	-33.955	-57.227	74.192	1.00193.26	C
ATOM	4676	CE	LYS	A	661	-32.953	-56.048	74.072	1.00193.54	C
ATOM	4677	NZ	LYS	A	661	-33.485	-54.740	74.607	1.00193.49	N
ATOM	4678	N	MET	A	662	-32.249	-62.422	72.230	1.00193.23	N
ATOM	4679	CA	MET	A	662	-31.486	-62.639	70.973	1.00193.57	C
ATOM	4680	C	MET	A	662	-31.007	-61.371	70.213	1.00193.10	C
ATOM	4681	O	MET	A	662	-31.068	-61.284	68.989	1.00192.96	O
ATOM	4682	CB	MET	A	662	-32.130	-63.713	70.059	1.00193.98	C
ATOM	4683	CG	MET	A	662	-33.623	-63.560	69.769	1.00195.82	C
ATOM	4684	SD	MET	A	662	-33.994	-62.549	68.309	1.00199.65	S

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ATOM   4685  CE  MET A 662     -34.108 -63.787  66.999  1.00199.17           C
ATOM   4686  N   VAL A 663     -30.533 -60.398  70.980  1.00192.79           N
ATOM   4687  CA  VAL A 663     -29.714 -59.302  70.489  1.00192.63           C
ATOM   4688  C   VAL A 663     -28.437 -59.453  71.313  1.00192.54           C
ATOM   4689  O   VAL A 663     -28.344 -60.383  72.099  1.00192.48           O
ATOM   4690  CB  VAL A 663     -30.422 -57.945  70.733  1.00192.66           C
ATOM   4691  CG1 VAL A 663     -29.496 -56.755  70.493  1.00192.73           C
ATOM   4692  CG2 VAL A 663     -31.638 -57.831  69.842  1.00192.86           C
ATOM   4693  N   TYR A 664     -27.437 -58.598  71.128  1.00192.56           N
ATOM   4694  CA  TYR A 664     -26.309 -58.583  72.060  1.00192.61           C
ATOM   4695  C   TYR A 664     -26.197 -57.192  72.689  1.00192.13           C
ATOM   4696  O   TYR A 664     -25.977 -56.206  71.974  1.00192.27           O
ATOM   4697  CB  TYR A 664     -25.004 -58.997  71.368  1.00193.31           C
ATOM   4698  CG  TYR A 664     -24.844 -60.493  71.095  1.00194.69           C
ATOM   4699  CD1 TYR A 664     -25.759 -61.185  70.288  1.00196.55           C
ATOM   4700  CD2 TYR A 664     -23.753 -61.215  71.607  1.00195.83           C
ATOM   4701  CE1 TYR A 664     -25.613 -62.573  70.008  1.00196.80           C
ATOM   4702  CE2 TYR A 664     -23.597 -62.610  71.335  1.00196.33           C
ATOM   4703  CZ  TYR A 664     -24.539 -63.279  70.534  1.00195.83           C
ATOM   4704  OH  TYR A 664     -24.424 -64.631  70.248  1.00194.57           O
ATOM   4705  N   GLU A 665     -26.402 -57.118  74.009  1.00191.29           N
ATOM   4706  CA  GLU A 665     -26.278 -55.880  74.782  1.00190.51           C
ATOM   4707  C   GLU A 665     -25.225 -56.141  75.819  1.00190.15           C
ATOM   4708  O   GLU A 665     -24.879 -57.294  76.050  1.00189.91           O
ATOM   4709  CB  GLU A 665     -27.588 -55.515  75.490  1.00190.39           C
ATOM   4710  CG  GLU A 665     -28.746 -55.073  74.581  1.00190.66           C
ATOM   4711  CD  GLU A 665     -28.486 -53.771  73.804  1.00191.12           C
ATOM   4712  OE1 GLU A 665     -29.275 -53.474  72.876  1.00191.16           O
ATOM   4713  OE2 GLU A 665     -27.508 -53.046  74.108  1.00191.01           O
ATOM   4714  N   ASP A 666     -24.714 -55.081  76.442  1.00190.11           N
ATOM   4715  CA  ASP A 666     -23.717 -55.225  77.520  1.00190.19           C
ATOM   4716  C   ASP A 666     -24.242 -54.869  78.920  1.00190.05           C
ATOM   4717  O   ASP A 666     -23.531 -55.049  79.916  1.00190.00           O
ATOM   4718  CB  ASP A 666     -22.387 -54.493  77.197  1.00190.23           C
ATOM   4719  CG  ASP A 666     -22.312 -53.054  77.754  1.00190.73           C
ATOM   4720  OD1 ASP A 666     -21.331 -52.340  77.440  1.00190.85           O
ATOM   4721  OD2 ASP A 666     -23.210 -52.618  78.504  1.00191.71           O
ATOM   4722  N   THR A 667     -25.472 -54.359  78.991  1.00189.84           N
ATOM   4723  CA  THR A 667     -26.077 -54.013  80.269  1.00189.69           C
ATOM   4724  C   THR A 667     -27.545 -54.303  80.291  1.00189.84           C
ATOM   4725  O   THR A 667     -28.280 -53.964  79.370  1.00189.75           O
ATOM   4726  CB  THR A 667     -25.878 -52.550  80.620  1.00189.63           C
ATOM   4727  OG1 THR A 667     -24.485 -52.315  80.833  1.00189.89           O
ATOM   4728  CG2 THR A 667     -26.637 -52.202  81.891  1.00189.46           C
ATOM   4729  N   LEU A 668     -27.958 -54.921  81.383  1.00190.30           N
ATOM   4730  CA  LEU A 668     -29.320 -55.358  81.551  1.00190.97           C
ATOM   4731  C   LEU A 668     -30.034 -54.400  82.489  1.00191.51           C
ATOM   4732  O   LEU A 668     -29.608 -54.214  83.626  1.00191.64           O
ATOM   4733  CB  LEU A 668     -29.325 -56.771  82.138  1.00190.75           C
ATOM   4734  CG  LEU A 668     -30.441 -57.769  81.843  1.00190.49           C
ATOM   4735  CD1 LEU A 668     -30.291 -58.937  82.783  1.00189.90           C
ATOM   4736  CD2 LEU A 668     -31.834 -57.156  81.970  1.00190.61           C
ATOM   4737  N   THR A 669     -31.110 -53.786  82.007  1.00192.17           N
ATOM   4738  CA  THR A 669     -31.936 -52.932  82.855  1.00192.84           C
ATOM   4739  C   THR A 669     -33.007 -53.772  83.543  1.00193.24           C
ATOM   4740  O   THR A 669     -33.744 -54.509  82.891  1.00193.25           O
ATOM   4741  CB  THR A 669     -32.543 -51.741  82.078  1.00192.85           C
ATOM   4742  OG1 THR A 669     -32.949 -52.169  80.770  1.00193.47           O
ATOM   4743  CG2 THR A 669     -31.513 -50.621  81.935  1.00192.93           C
ATOM   4744  N   LEU A 670     -33.064 -53.665  84.868  1.00193.97           N
ATOM   4745  CA  LEU A 670     -33.914 -54.523  85.704  1.00194.67           C
ATOM   4746  C   LEU A 670     -34.730 -53.781  86.763  1.00195.12           C
ATOM   4747  O   LEU A 670     -34.174 -53.141  87.674  1.00195.23           O
ATOM   4748  CB  LEU A 670     -33.077 -55.595  86.411  1.00194.63           C
ATOM   4749  CG  LEU A 670     -32.680 -56.888  85.703  1.00195.02           C
ATOM   4750  CD1 LEU A 670     -32.126 -57.856  86.726  1.00195.61           C
ATOM   4751  CD2 LEU A 670     -33.843 -57.534  84.973  1.00195.81           C
ATOM   4752  N   PHE A 671     -36.049 -53.926  86.655  1.00195.47           N
ATOM   4753  CA  PHE A 671     -37.026 -53.335  87.578  1.00195.92           C
ATOM   4754  C   PHE A 671     -37.031 -53.885  89.061  1.00196.28           C
ATOM   4755  O   PHE A 671     -35.962 -53.981  89.674  1.00196.41           O
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ATOM	4756	CB	PHE	A	671	-38.392	-53.350	86.881	1.00195.26	C
ATOM	4757	CG	PHE	A	671	-38.645	-52.136	86.014	1.00194.25	C
ATOM	4758	CD1	PHE	A	671	-39.543	-52.188	84.965	1.00192.96	C
ATOM	4759	CD2	PHE	A	671	-37.997	-50.932	86.265	1.00193.15	C
ATOM	4760	CE1	PHE	A	671	-39.797	-51.059	84.191	1.00191.98	C
ATOM	4761	CE2	PHE	A	671	-38.244	-49.810	85.490	1.00192.46	C
ATOM	4762	CZ	PHE	A	671	-39.146	-49.877	84.454	1.00192.65	C
ATOM	4763	N	PRO	A	672	-38.209	-54.112	89.690	1.00196.71	N
ATOM	4764	CA	PRO	A	672	-38.304	-54.938	90.903	1.00197.00	C
ATOM	4765	C	PRO	A	672	-39.141	-56.242	90.790	1.00197.59	C
ATOM	4766	O	PRO	A	672	-39.214	-57.031	91.741	1.00197.40	O
ATOM	4767	CB	PRO	A	672	-38.987	-53.975	91.873	1.00197.23	C
ATOM	4768	CG	PRO	A	672	-39.760	-52.946	90.915	1.00197.09	C
ATOM	4769	CD	PRO	A	672	-39.474	-53.394	89.500	1.00196.71	C
ATOM	4770	N	PHE	A	673	-39.791	-56.437	89.650	1.00198.26	N
ATOM	4771	CA	PHE	A	673	-40.380	-57.725	89.304	1.00199.11	C
ATOM	4772	C	PHE	A	673	-39.263	-58.604	88.820	1.00198.72	C
ATOM	4773	O	PHE	A	673	-39.369	-59.833	88.794	1.00198.47	O
ATOM	4774	CB	PHE	A	673	-41.433	-57.561	88.165	1.00200.31	C
ATOM	4775	CG	PHE	A	673	-40.861	-57.522	86.686	1.00202.03	C
ATOM	4776	CD1	PHE	A	673	-40.533	-58.720	85.979	1.00203.13	C
ATOM	4777	CD2	PHE	A	673	-40.750	-56.295	85.978	1.00202.52	C
ATOM	4778	CE1	PHE	A	673	-40.044	-58.684	84.621	1.00201.99	C
ATOM	4779	CE2	PHE	A	673	-40.273	-56.255	84.626	1.00201.55	C
ATOM	4780	CZ	PHE	A	673	-39.920	-57.451	83.953	1.00201.55	C
ATOM	4781	N	SER	A	674	-38.175	-57.920	88.484	1.00198.43	N
ATOM	4782	CA	SER	A	674	-37.411	-58.193	87.271	1.00198.17	C
ATOM	4783	C	SER	A	674	-36.849	-59.585	87.074	1.00197.76	C
ATOM	4784	O	SER	A	674	-35.793	-59.929	87.602	1.00197.86	O
ATOM	4785	CB	SER	A	674	-36.355	-57.107	87.023	1.00198.33	C
ATOM	4786	OG	SER	A	674	-36.815	-56.149	86.070	1.00198.32	O
ATOM	4787	N	GLY	A	675	-37.574	-60.369	86.287	1.00197.11	N
ATOM	4788	CA	GLY	A	675	-37.092	-61.663	85.866	1.00196.49	C
ATOM	4789	C	GLY	A	675	-36.608	-61.543	84.448	1.00195.85	C
ATOM	4790	O	GLY	A	675	-37.403	-61.268	83.552	1.00195.98	O
ATOM	4791	N	GLU	A	676	-35.304	-61.713	84.252	1.00195.11	N
ATOM	4792	CA	GLU	A	676	-34.746	-61.782	82.912	1.00194.69	C
ATOM	4793	C	GLU	A	676	-33.620	-62.797	82.793	1.00193.77	C
ATOM	4794	O	GLU	A	676	-32.924	-63.063	83.766	1.00193.82	O
ATOM	4795	CB	GLU	A	676	-34.309	-60.406	82.414	1.00195.02	C
ATOM	4796	CG	GLU	A	676	-35.467	-59.521	81.903	1.00197.27	C
ATOM	4797	CD	GLU	A	676	-36.212	-60.065	80.655	1.00200.28	C
ATOM	4798	OE1	GLU	A	676	-36.198	-61.299	80.375	1.00200.93	O
ATOM	4799	OE2	GLU	A	676	-36.838	-59.231	79.954	1.00201.78	O
ATOM	4800	N	THR	A	677	-33.440	-63.321	81.579	1.00192.71	N
ATOM	4801	CA	THR	A	677	-32.642	-64.524	81.304	1.00191.40	C
ATOM	4802	C	THR	A	677	-31.584	-64.318	80.209	1.00190.68	C
ATOM	4803	O	THR	A	677	-31.915	-64.315	79.028	1.00190.57	O
ATOM	4804	CB	THR	A	677	-33.584	-65.658	80.838	1.00191.36	C
ATOM	4805	OG1	THR	A	677	-34.681	-65.786	81.756	1.00191.17	O
ATOM	4806	CG2	THR	A	677	-32.838	-66.974	80.699	1.00190.70	C
ATOM	4807	N	VAL	A	678	-30.317	-64.171	80.584	1.00189.80	N
ATOM	4808	CA	VAL	A	678	-29.263	-63.911	79.587	1.00189.13	C
ATOM	4809	C	VAL	A	678	-28.497	-65.154	79.158	1.00188.62	C
ATOM	4810	O	VAL	A	678	-28.698	-66.236	79.703	1.00188.71	O
ATOM	4811	CB	VAL	A	678	-28.242	-62.848	80.055	1.00189.13	C
ATOM	4812	CG1	VAL	A	678	-28.957	-61.609	80.558	1.00189.54	C
ATOM	4813	CG2	VAL	A	678	-27.308	-63.409	81.120	1.00189.06	C
ATOM	4814	N	PHE	A	679	-27.614	-64.983	78.178	1.00187.94	N
ATOM	4815	CA	PHE	A	679	-26.739	-66.058	77.727	1.00187.44	C
ATOM	4816	C	PHE	A	679	-25.375	-65.475	77.405	1.00187.14	C
ATOM	4817	O	PHE	A	679	-25.283	-64.335	76.969	1.00187.05	O
ATOM	4818	CB	PHE	A	679	-27.356	-66.781	76.526	1.00187.41	C
ATOM	4819	CG	PHE	A	679	-26.503	-67.893	75.950	1.00187.14	C
ATOM	4820	CD1	PHE	A	679	-26.590	-68.207	74.597	1.00187.06	C
ATOM	4821	CD2	PHE	A	679	-25.630	-68.626	76.747	1.00187.03	C
ATOM	4822	CE1	PHE	A	679	-25.823	-69.223	74.048	1.00187.12	C
ATOM	4823	CE2	PHE	A	679	-24.854	-69.640	76.205	1.00186.97	C
ATOM	4824	CZ	PHE	A	679	-24.952	-69.942	74.856	1.00187.09	C
ATOM	4825	N	MET	A	680	-24.326	-66.270	77.616	1.00186.90	N
ATOM	4826	CA	MET	A	680	-22.970	-65.754	77.685	1.00186.63	C

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ATOM   4827  C   MET A 680     -21.882 -66.740  77.255  1.00187.01           C
ATOM   4828  O   MET A 680     -21.796 -67.863  77.766  1.00187.03           O
ATOM   4829  CB  MET A 680     -22.703 -65.321  79.115  1.00186.52           C
ATOM   4830  CG  MET A 680     -21.644 -64.284  79.254  1.00186.07           C
ATOM   4831  SD  MET A 680     -21.693 -63.661  80.925  1.00185.74           S
ATOM   4832  CE  MET A 680     -23.291 -62.855  80.946  1.00185.24           C
ATOM   4833  N   SER A 681     -21.041 -66.289  76.326  1.00187.33           N
ATOM   4834  CA  SER A 681     -19.847 -67.021  75.909  1.00187.64           C
ATOM   4835  C   SER A 681     -18.668 -66.590  76.795  1.00187.91           C
ATOM   4836  O   SER A 681     -18.092 -65.519  76.593  1.00188.02           O
ATOM   4837  CB  SER A 681     -19.566 -66.758  74.415  1.00187.63           C
ATOM   4838  OG  SER A 681     -18.370 -67.376  73.954  1.00187.33           O
ATOM   4839  N   MET A 682     -18.330 -67.412  77.788  1.00188.14           N
ATOM   4840  CA  MET A 682     -17.248 -67.096  78.723  1.00188.54           C
ATOM   4841  C   MET A 682     -15.884 -67.338  78.099  1.00188.84           C
ATOM   4842  O   MET A 682     -15.412 -68.471  78.076  1.00188.94           O
ATOM   4843  CB  MET A 682     -17.365 -67.946  79.985  1.00188.51           C
ATOM   4844  CG  MET A 682     -18.703 -67.866  80.686  1.00189.17           C
ATOM   4845  SD  MET A 682     -19.010 -66.221  81.342  1.00189.81           S
ATOM   4846  CE  MET A 682     -17.595 -66.025  82.419  1.00190.14           C
ATOM   4847  N   GLU A 683     -15.254 -66.282  77.589  1.00189.31           N
ATOM   4848  CA  GLU A 683     -13.897 -66.389  77.020  1.00189.84           C
ATOM   4849  C   GLU A 683     -13.038 -65.113  77.150  1.00189.80           C
ATOM   4850  O   GLU A 683     -12.218 -64.809  76.277  1.00189.89           O
ATOM   4851  CB  GLU A 683     -13.908 -66.934  75.566  1.00190.04           C
ATOM   4852  CG  GLU A 683     -15.169 -66.661  74.726  1.00190.98           C
ATOM   4853  CD  GLU A 683     -15.400 -65.182  74.435  1.00192.40           C
ATOM   4854  OE1 GLU A 683     -15.768 -64.433  75.367  1.00192.68           O
ATOM   4855  OE2 GLU A 683     -15.231 -64.768  73.265  1.00193.41           O
ATOM   4856  N   ASN A 684     -13.221 -64.388  78.252  1.00189.75           N
ATOM   4857  CA  ASN A 684     -12.392 -63.231  78.566  1.00189.80           C
ATOM   4858  C   ASN A 684     -11.708 -63.431  79.920  1.00189.98           C
ATOM   4859  O   ASN A 684     -12.263 -63.067  80.951  1.00190.01           O
ATOM   4860  CB  ASN A 684     -13.226 -61.944  78.549  1.00189.71           C
ATOM   4861  CG  ASN A 684     -12.475 -60.760  77.953  1.00189.79           C
ATOM   4862  OD1 ASN A 684     -11.348 -60.893  77.474  1.00190.04           O
ATOM   4863  ND2 ASN A 684     -13.110 -59.594  77.968  1.00189.86           N
ATOM   4864  N   PRO A 685     -10.504 -64.029  79.915  1.00190.20           N
ATOM   4865  CA  PRO A 685      -9.731 -64.402  81.101  1.00190.48           C
ATOM   4866  C   PRO A 685      -9.300 -63.253  82.007  1.00190.89           C
ATOM   4867  O   PRO A 685      -8.572 -62.357  81.573  1.00190.71           O
ATOM   4868  CB  PRO A 685      -8.490 -65.070  80.505  1.00190.51           C
ATOM   4869  CG  PRO A 685      -8.388 -64.521  79.131  1.00190.44           C
ATOM   4870  CD  PRO A 685      -9.800 -64.409  78.680  1.00190.25           C
ATOM   4871  N   GLY A 686      -9.741 -63.307  83.264  1.00191.61           N
ATOM   4872  CA  GLY A 686      -9.332 -62.346  84.298  1.00192.51           C
ATOM   4873  C   GLY A 686     -10.345 -62.027  85.394  1.00193.03           C
ATOM   4874  O   GLY A 686     -11.459 -62.570  85.416  1.00193.00           O
ATOM   4875  N   LEU A 687      -9.941 -61.154  86.320  1.00193.54           N
ATOM   4876  CA  LEU A 687     -10.857 -60.602  87.316  1.00193.93           C
ATOM   4877  C   LEU A 687     -11.821 -59.716  86.558  1.00193.92           C
ATOM   4878  O   LEU A 687     -11.405 -58.955  85.675  1.00193.98           O
ATOM   4879  CB  LEU A 687     -10.107 -59.801  88.411  1.00194.15           C
ATOM   4880  CG  LEU A 687      -9.669 -58.318  88.306  1.00194.48           C
ATOM   4881  CD1 LEU A 687     -10.780 -57.341  88.735  1.00194.50           C
ATOM   4882  CD2 LEU A 687      -8.407 -58.045  89.128  1.00194.08           C
ATOM   4883  N   TRP A 688     -13.105 -59.844  86.864  1.00193.88           N
ATOM   4884  CA  TRP A 688     -14.088 -58.922  86.320  1.00193.97           C
ATOM   4885  C   TRP A 688     -15.026 -58.509  87.428  1.00194.14           C
ATOM   4886  O   TRP A 688     -15.585 -59.354  88.121  1.00194.05           O
ATOM   4887  CB  TRP A 688     -14.847 -59.518  85.129  1.00193.78           C
ATOM   4888  CG  TRP A 688     -13.966 -59.900  83.958  1.00193.64           C
ATOM   4889  CD1 TRP A 688     -13.637 -61.166  83.569  1.00193.43           C
ATOM   4890  CD2 TRP A 688     -13.303 -59.014  83.035  1.00193.54           C
ATOM   4891  NE1 TRP A 688     -12.818 -61.126  82.467  1.00193.56           N
ATOM   4892  CE2 TRP A 688     -12.596 -59.820  82.119  1.00193.55           C
ATOM   4893  CE3 TRP A 688     -13.235 -57.620  82.897  1.00193.38           C
ATOM   4894  CZ2 TRP A 688     -11.833 -59.279  81.075  1.00193.43           C
ATOM   4895  CZ3 TRP A 688     -12.481 -57.084  81.855  1.00193.41           C
ATOM   4896  CH2 TRP A 688     -11.792 -57.913  80.960  1.00193.37           C
ATOM   4897  N   ILE A 689     -15.161 -57.198  87.598  1.00194.55           N
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ATOM	4898	CA	ILE	A	689	-15.964	-56.617	88.671	1.00195.02	C
ATOM	4899	C	ILE	A	689	-17.451	-56.559	88.300	1.00195.04	C
ATOM	4900	O	ILE	A	689	-17.976	-55.523	87.895	1.00194.93	O
ATOM	4901	CB	ILE	A	689	-15.375	-55.230	89.185	1.00195.18	C
ATOM	4902	CG1	ILE	A	689	-16.213	-54.655	90.354	1.00195.52	C
ATOM	4903	CG2	ILE	A	689	-15.157	-54.222	88.016	1.00195.30	C
ATOM	4904	CD1	ILE	A	689	-15.466	-53.692	91.313	1.00195.18	C
ATOM	4905	N	LEU	A	690	-18.117	-57.701	88.425	1.00195.42	N
ATOM	4906	CA	LEU	A	690	-19.566	-57.745	88.316	1.00195.92	C
ATOM	4907	C	LEU	A	690	-20.144	-56.870	89.400	1.00196.44	C
ATOM	4908	O	LEU	A	690	-19.759	-56.964	90.564	1.00196.58	O
ATOM	4909	CB	LEU	A	690	-20.105	-59.178	88.451	1.00195.81	C
ATOM	4910	CG	LEU	A	690	-21.561	-59.523	88.843	1.00195.48	C
ATOM	4911	CD1	LEU	A	690	-21.760	-59.532	90.358	1.00195.52	C
ATOM	4912	CD2	LEU	A	690	-22.635	-58.659	88.163	1.00195.26	C
ATOM	4913	N	GLY	A	691	-21.069	-56.015	89.000	1.00197.05	N
ATOM	4914	CA	GLY	A	691	-21.819	-55.212	89.934	1.00197.86	C
ATOM	4915	C	GLY	A	691	-23.030	-54.731	89.195	1.00198.39	C
ATOM	4916	O	GLY	A	691	-23.714	-55.512	88.541	1.00198.25	O
ATOM	4917	N	CYS	A	692	-23.280	-53.436	89.285	1.00199.21	N
ATOM	4918	CA	CYS	A	692	-24.329	-52.839	88.505	1.00200.20	C
ATOM	4919	C	CYS	A	692	-23.909	-51.472	88.002	1.00201.25	C
ATOM	4920	O	CYS	A	692	-23.142	-50.756	88.649	1.00201.12	O
ATOM	4921	CB	CYS	A	692	-25.635	-52.781	89.289	1.00199.92	C
ATOM	4922	SG	CYS	A	692	-25.684	-51.507	90.504	1.00199.43	S
ATOM	4923	N	HIS	A	693	-24.441	-51.144	86.827	1.00202.81	N
ATOM	4924	CA	HIS	A	693	-24.155	-49.928	86.057	1.00204.22	C
ATOM	4925	C	HIS	A	693	-24.519	-48.647	86.818	1.00204.73	C
ATOM	4926	O	HIS	A	693	-24.290	-47.529	86.332	1.00204.78	O
ATOM	4927	CB	HIS	A	693	-24.942	-49.990	84.740	1.00204.54	C
ATOM	4928	CG	HIS	A	693	-24.206	-49.453	83.550	1.00206.09	C
ATOM	4929	ND1	HIS	A	693	-24.267	-48.128	83.169	1.00207.51	N
ATOM	4930	CD2	HIS	A	693	-23.415	-50.069	82.637	1.00207.48	C
ATOM	4931	CE1	HIS	A	693	-23.536	-47.949	82.081	1.00208.18	C
ATOM	4932	NE2	HIS	A	693	-23.009	-49.112	81.736	1.00208.42	N
ATOM	4933	N	ASN	A	694	-25.103	-48.823	88.001	1.00205.44	N
ATOM	4934	CA	ASN	A	694	-25.403	-47.716	88.894	1.00206.08	C
ATOM	4935	C	ASN	A	694	-24.289	-47.646	89.926	1.00206.13	C
ATOM	4936	O	ASN	A	694	-24.051	-48.613	90.646	1.00206.23	O
ATOM	4937	CB	ASN	A	694	-26.771	-47.911	89.566	1.00206.32	C
ATOM	4938	CG	ASN	A	694	-27.879	-48.294	88.569	1.00207.34	C
ATOM	4939	OD1	ASN	A	694	-28.138	-47.578	87.588	1.00208.16	O
ATOM	4940	ND2	ASN	A	694	-28.541	-49.428	88.828	1.00208.17	N
ATOM	4941	N	SER	A	695	-23.586	-46.516	89.965	1.00206.21	N
ATOM	4942	CA	SER	A	695	-22.475	-46.334	90.892	1.00206.22	C
ATOM	4943	C	SER	A	695	-22.895	-45.523	92.119	1.00206.27	C
ATOM	4944	O	SER	A	695	-22.311	-44.477	92.418	1.00206.29	O
ATOM	4945	CB	SER	A	695	-21.265	-45.707	90.189	1.00206.23	C
ATOM	4946	OG	SER	A	695	-20.446	-46.685	89.570	1.00206.02	O
ATOM	4947	N	ASP	A	696	-23.924	-46.018	92.811	1.00206.30	N
ATOM	4948	CA	ASP	A	696	-24.366	-45.478	94.107	1.00206.28	C
ATOM	4949	C	ASP	A	696	-24.858	-46.580	95.046	1.00205.81	C
ATOM	4950	O	ASP	A	696	-25.273	-46.302	96.171	1.00205.70	O
ATOM	4951	CB	ASP	A	696	-25.418	-44.360	93.950	1.00206.65	C
ATOM	4952	CG	ASP	A	696	-26.408	-44.623	92.815	1.00207.59	C
ATOM	4953	OD1	ASP	A	696	-26.567	-43.729	91.948	1.00208.42	O
ATOM	4954	OD2	ASP	A	696	-27.021	-45.716	92.787	1.00208.34	O
ATOM	4955	N	PHE	A	697	-24.807	-47.823	94.563	1.00205.37	N
ATOM	4956	CA	PHE	A	697	-24.994	-49.007	95.397	1.00205.07	C
ATOM	4957	C	PHE	A	697	-23.721	-49.816	95.380	1.00204.69	C
ATOM	4958	O	PHE	A	697	-23.319	-50.350	96.403	1.00204.55	O
ATOM	4959	CB	PHE	A	697	-26.135	-49.910	94.910	1.00205.31	C
ATOM	4960	CG	PHE	A	697	-27.286	-49.176	94.313	1.00205.87	C
ATOM	4961	CD1	PHE	A	697	-28.044	-48.292	95.078	1.00206.64	C
ATOM	4962	CD2	PHE	A	697	-27.627	-49.377	92.980	1.00206.30	C
ATOM	4963	CE1	PHE	A	697	-29.116	-47.601	94.516	1.00207.10	C
ATOM	4964	CE2	PHE	A	697	-28.698	-48.699	92.406	1.00206.57	C
ATOM	4965	CZ	PHE	A	697	-29.446	-47.809	93.175	1.00206.67	C
ATOM	4966	N	ARG	A	698	-23.092	-49.921	94.212	1.00204.46	N
ATOM	4967	CA	ARG	A	698	-21.838	-50.675	94.082	1.00204.33	C
ATOM	4968	C	ARG	A	698	-20.708	-50.086	94.940	1.00204.27	C

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ATOM   4969  O   ARG A 698     -19.554 -50.510  94.846  1.00204.52           O
ATOM   4970  CB  ARG A 698     -21.404 -50.881  92.612  1.00204.31           C
ATOM   4971  CG  ARG A 698     -21.674 -49.734  91.658  1.00204.30           C
ATOM   4972  CD  ARG A 698     -20.895 -49.868  90.361  1.00204.21           C
ATOM   4973  NE  ARG A 698     -19.733 -48.988  90.359  1.00204.58           N
ATOM   4974  CZ  ARG A 698     -18.532 -49.313  90.832  1.00205.10           C
ATOM   4975  NH1 ARG A 698     -17.551 -48.421  90.788  1.00205.24           N
ATOM   4976  NH2 ARG A 698     -18.304 -50.520  91.348  1.00205.04           N
ATOM   4977  N   ASN A 699     -21.063 -49.111  95.775  1.00203.96           N
ATOM   4978  CA  ASN A 699     -20.187 -48.576  96.818  1.00203.55           C
ATOM   4979  C   ASN A 699     -20.798 -48.844  98.194  1.00203.15           C
ATOM   4980  O   ASN A 699     -20.078 -48.992  99.183  1.00203.10           O
ATOM   4981  CB  ASN A 699     -19.939 -47.078  96.609  1.00203.55           C
ATOM   4982  CG  ASN A 699     -21.206 -46.317  96.229  1.00203.86           C
ATOM   4983  OD1 ASN A 699     -22.315 -46.857  96.276  1.00204.22           O
ATOM   4984  ND2 ASN A 699     -21.042 -45.056  95.848  1.00204.11           N
ATOM   4985  N   ARG A 700     -22.133 -48.902  98.230  1.00202.64           N
ATOM   4986  CA  ARG A 700     -22.906 -49.334  99.403  1.00202.08           C
ATOM   4987  C   ARG A 700     -22.884 -50.879  99.507  1.00201.87           C
ATOM   4988  O   ARG A 700     -23.770 -51.494 100.126  1.00201.82           O
ATOM   4989  CB  ARG A 700     -24.362 -48.834  99.303  1.00201.97           C
ATOM   4990  CG  ARG A 700     -24.561 -47.315  99.244  1.00201.33           C
ATOM   4991  CD  ARG A 700     -25.133 -46.751 100.537  1.00200.27           C
ATOM   4992  NE  ARG A 700     -25.558 -45.357 100.404  1.00200.23           N
ATOM   4993  CZ  ARG A 700     -24.754 -44.295 100.508  1.00200.45           C
ATOM   4994  NH1 ARG A 700     -25.249 -43.073 100.373  1.00200.51           N
ATOM   4995  NH2 ARG A 700     -23.456 -44.437 100.744  1.00200.51           N
ATOM   4996  N   GLY A 701     -21.861 -51.489  98.904  1.00201.48           N
ATOM   4997  CA  GLY A 701     -21.758 -52.944  98.784  1.00200.93           C
ATOM   4998  C   GLY A 701     -22.067 -53.332  97.357  1.00200.47           C
ATOM   4999  O   GLY A 701     -21.437 -52.821  96.433  1.00200.53           O
ATOM   5000  N   MET A 702     -23.028 -54.243  97.188  1.00199.87           N
ATOM   5001  CA  MET A 702     -23.681 -54.496  95.897  1.00199.18           C
ATOM   5002  C   MET A 702     -22.724 -54.867  94.751  1.00198.87           C
ATOM   5003  O   MET A 702     -23.033 -54.623  93.588  1.00198.95           O
ATOM   5004  CB  MET A 702     -24.559 -53.286  95.520  1.00199.10           C
ATOM   5005  CG  MET A 702     -25.596 -53.500  94.422  1.00198.97           C
ATOM   5006  SD  MET A 702     -26.859 -54.714  94.821  1.00199.01           S
ATOM   5007  CE  MET A 702     -28.204 -54.156  93.787  1.00198.60           C
ATOM   5008  N   THR A 703     -21.563 -55.440  95.072  1.00198.40           N
ATOM   5009  CA  THR A 703     -20.661 -55.969  94.040  1.00197.90           C
ATOM   5010  C   THR A 703     -20.118 -57.315  94.424  1.00197.45           C
ATOM   5011  O   THR A 703     -19.903 -57.602  95.597  1.00197.28           O
ATOM   5012  CB  THR A 703     -19.428 -55.073  93.749  1.00198.02           C
ATOM   5013  OG1 THR A 703     -18.768 -54.731  94.976  1.00198.46           O
ATOM   5014  CG2 THR A 703     -19.803 -53.814  92.962  1.00197.84           C
ATOM   5015  N   ALA A 704     -19.892 -58.135  93.415  1.00197.15           N
ATOM   5016  CA  ALA A 704     -19.154 -59.357  93.592  1.00197.23           C
ATOM   5017  C   ALA A 704     -18.029 -59.371  92.562  1.00197.27           C
ATOM   5018  O   ALA A 704     -17.848 -58.391  91.846  1.00197.30           O
ATOM   5019  CB  ALA A 704     -20.071 -60.536  93.425  1.00197.30           C
ATOM   5020  N   LEU A 705     -17.265 -60.463  92.509  1.00197.35           N
ATOM   5021  CA  LEU A 705     -16.226 -60.658  91.488  1.00197.42           C
ATOM   5022  C   LEU A 705     -16.487 -61.902  90.644  1.00197.41           C
ATOM   5023  O   LEU A 705     -17.263 -62.765  91.032  1.00197.46           O
ATOM   5024  CB  LEU A 705     -14.856 -60.789  92.147  1.00197.40           C
ATOM   5025  CG  LEU A 705     -13.938 -59.574  92.114  1.00197.76           C
ATOM   5026  CD1 LEU A 705     -12.953 -59.683  93.263  1.00198.23           C
ATOM   5027  CD2 LEU A 705     -13.220 -59.443  90.755  1.00197.83           C
ATOM   5028  N   LEU A 706     -15.848 -62.003  89.485  1.00197.42           N
ATOM   5029  CA  LEU A 706     -15.865 -63.271  88.766  1.00197.53           C
ATOM   5030  C   LEU A 706     -14.479 -63.600  88.232  1.00197.81           C
ATOM   5031  O   LEU A 706     -13.712 -62.701  87.844  1.00197.89           O
ATOM   5032  CB  LEU A 706     -16.938 -63.301  87.672  1.00197.33           C
ATOM   5033  CG  LEU A 706     -16.732 -62.487  86.397  1.00197.22           C
ATOM   5034  CD1 LEU A 706     -16.203 -63.379  85.286  1.00197.23           C
ATOM   5035  CD2 LEU A 706     -18.030 -61.839  85.969  1.00196.79           C
ATOM   5036  N   LYS A 707     -14.161 -64.892  88.248  1.00198.01           N
ATOM   5037  CA  LYS A 707     -12.851 -65.375  87.823  1.00198.18           C
ATOM   5038  C   LYS A 707     -12.968 -66.317  86.633  1.00198.11           C
ATOM   5039  O   LYS A 707     -13.954 -67.047  86.499  1.00198.21           O
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ATOM   5040  CB  LYS A 707     -12.078 -66.028  88.986  1.00198.24           C
ATOM   5041  CG  LYS A 707     -12.862 -67.023  89.870  1.00198.39           C
ATOM   5042  CD  LYS A 707     -11.966 -67.568  91.002  1.00198.37           C
ATOM   5043  CE  LYS A 707     -12.738 -68.406  92.026  1.00198.18           C
ATOM   5044  NZ  LYS A 707     -11.854 -69.002  93.075  1.00197.47           N
ATOM   5045  N   VAL A 708     -11.963 -66.277  85.763  1.00197.91           N
ATOM   5046  CA  VAL A 708     -11.970 -67.062  84.542  1.00197.70           C
ATOM   5047  C   VAL A 708     -10.547 -67.495  84.229  1.00197.71           C
ATOM   5048  O   VAL A 708      -9.631 -66.676  84.270  1.00197.71           O
ATOM   5049  CB  VAL A 708     -12.513 -66.245  83.342  1.00197.69           C
ATOM   5050  CG1 VAL A 708     -13.431 -67.099  82.509  1.00197.74           C
ATOM   5051  CG2 VAL A 708     -13.256 -64.989  83.797  1.00197.50           C
ATOM   5052  N   SER A 709     -10.372 -68.783  83.929  1.00197.82           N
ATOM   5053  CA  SER A 709      -9.081 -69.367  83.505  1.00197.96           C
ATOM   5054  C   SER A 709      -9.313 -70.781  82.981  1.00197.95           C
ATOM   5055  O   SER A 709     -10.236 -71.447  83.426  1.00197.99           O
ATOM   5056  CB  SER A 709      -8.086 -69.411  84.668  1.00198.00           C
ATOM   5057  OG  SER A 709      -8.692 -69.949  85.835  1.00198.21           O
ATOM   5058  N   SER A 710      -8.475 -71.248  82.058  1.00197.97           N
ATOM   5059  CA  SER A 710      -8.672 -72.568  81.424  1.00198.08           C
ATOM   5060  C   SER A 710      -8.928 -73.750  82.408  1.00198.26           C
ATOM   5061  O   SER A 710      -8.518 -73.709  83.573  1.00198.13           O
ATOM   5062  CB  SER A 710      -7.515 -72.876  80.455  1.00198.11           C
ATOM   5063  OG  SER A 710      -7.320 -71.829  79.511  1.00197.53           O
ATOM   5064  N   CYS A 711      -9.608 -74.793  81.921  1.00198.52           N
ATOM   5065  CA  CYS A 711     -10.077 -75.914  82.754  1.00198.91           C
ATOM   5066  C   CYS A 711      -9.394 -77.240  82.429  1.00198.88           C
ATOM   5067  O   CYS A 711      -8.167 -77.297  82.373  1.00198.87           O
ATOM   5068  CB  CYS A 711     -11.593 -76.067  82.617  1.00199.07           C
ATOM   5069  SG  CYS A 711     -12.552 -75.148  83.844  1.00200.34           S
ATOM   5070  N   ASP A 712     -10.192 -78.300  82.242  1.00199.02           N
ATOM   5071  CA  ASP A 712      -9.691 -79.616  81.781  1.00199.19           C
ATOM   5072  C   ASP A 712     -10.717 -80.619  81.201  1.00199.30           C
ATOM   5073  O   ASP A 712     -10.625 -80.961  80.018  1.00199.46           O
ATOM   5074  CB  ASP A 712      -8.808 -80.301  82.839  1.00199.18           C
ATOM   5075  CG  ASP A 712      -7.335 -80.287  82.463  1.00198.90           C
ATOM   5076  OD1 ASP A 712      -6.527 -79.766  83.256  1.00198.74           O
ATOM   5077  OD2 ASP A 712      -6.989 -80.785  81.369  1.00198.36           O
ATOM   5078  N   LYS A 713     -11.658 -81.099  82.025  1.00199.26           N
ATOM   5079  CA  LYS A 713     -12.614 -82.181  81.656  1.00199.04           C
ATOM   5080  C   LYS A 713     -11.972 -83.562  81.394  1.00198.97           C
ATOM   5081  O   LYS A 713     -10.787 -83.795  81.652  1.00198.72           O
ATOM   5082  CB  LYS A 713     -13.510 -81.791  80.459  1.00198.97           C
ATOM   5083  CG  LYS A 713     -14.523 -80.684  80.707  1.00198.37           C
ATOM   5084  CD  LYS A 713     -15.815 -81.202  81.304  1.00197.74           C
ATOM   5085  CE  LYS A 713     -15.790 -81.122  82.815  1.00197.50           C
ATOM   5086  NZ  LYS A 713     -17.135 -80.760  83.319  1.00197.88           N
TER    5087      LYS A 713
ATOM   5088  N   PHE B1691     -11.473 -60.640  49.225  1.00219.51           N
ATOM   5089  CA  PHE B1691     -11.829 -59.653  50.290  1.00219.65           C
ATOM   5090  C   PHE B1691     -10.936 -59.830  51.517  1.00219.45           C
ATOM   5091  O   PHE B1691     -10.571 -60.953  51.863  1.00219.42           O
ATOM   5092  CB  PHE B1691     -13.316 -59.757  50.672  1.00219.86           C
ATOM   5093  CG  PHE B1691     -14.261 -59.123  49.661  1.00220.52           C
ATOM   5094  CD1 PHE B1691     -14.810 -59.882  48.619  1.00220.83           C
ATOM   5095  CD2 PHE B1691     -14.608 -57.771  49.756  1.00220.82           C
ATOM   5096  CE1 PHE B1691     -15.687 -59.302  47.683  1.00220.51           C
ATOM   5097  CE2 PHE B1691     -15.481 -57.181  48.823  1.00220.58           C
ATOM   5098  CZ  PHE B1691     -16.021 -57.950  47.789  1.00220.38           C
ATOM   5099  N   GLN B1692     -10.610 -58.717  52.173  1.00219.27           N
ATOM   5100  CA  GLN B1692      -9.568 -58.669  53.212  1.00219.14           C
ATOM   5101  C   GLN B1692     -10.059 -58.364  54.647  1.00219.08           C
ATOM   5102  O   GLN B1692     -11.229 -58.017  54.851  1.00219.27           O
ATOM   5103  CB  GLN B1692      -8.510 -57.633  52.812  1.00219.10           C
ATOM   5104  CG  GLN B1692      -7.641 -58.038  51.640  1.00219.27           C
ATOM   5105  CD  GLN B1692      -6.750 -59.221  51.965  1.00219.82           C
ATOM   5106  OE1 GLN B1692      -6.623 -59.624  53.128  1.00219.51           O
ATOM   5107  NE2 GLN B1692      -6.127 -59.789  50.933  1.00220.34           N
ATOM   5108  N   LYS B1693      -9.156 -58.512  55.629  1.00218.78           N
ATOM   5109  CA  LYS B1693      -9.356 -58.020  57.016  1.00218.33           C
ATOM   5110  C   LYS B1693      -8.476 -56.776  57.235  1.00217.89           C
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ATOM	5111	O	LYS	B1693	-7.408	-56.663	56.619	1.00217.98	O
ATOM	5112	CB	LYS	B1693	-8.962	-59.075	58.065	1.00218.40	C
ATOM	5113	CG	LYS	B1693	-9.712	-60.407	58.038	1.00218.51	C
ATOM	5114	CD	LYS	B1693	-9.193	-61.335	59.149	1.00218.40	C
ATOM	5115	CE	LYS	B1693	-9.705	-62.767	58.999	1.00218.31	C
ATOM	5116	NZ	LYS	B1693	-9.525	-63.565	60.251	1.00217.97	N
ATOM	5117	N	LYS	B1694	-8.894	-55.860	58.113	1.00217.20	N
ATOM	5118	CA	LYS	B1694	-8.069	-54.674	58.403	1.00216.45	C
ATOM	5119	C	LYS	B1694	-7.768	-54.433	59.888	1.00215.95	C
ATOM	5120	O	LYS	B1694	-8.631	-54.583	60.754	1.00215.91	O
ATOM	5121	CB	LYS	B1694	-8.631	-53.400	57.744	1.00216.43	C
ATOM	5122	CG	LYS	B1694	-7.537	-52.410	57.329	1.00216.33	C
ATOM	5123	CD	LYS	B1694	-8.064	-51.044	56.918	1.00216.37	C
ATOM	5124	CE	LYS	B1694	-6.908	-50.050	56.781	1.00216.47	C
ATOM	5125	NZ	LYS	B1694	-7.356	-48.649	56.551	1.00216.35	N
ATOM	5126	N	THR	B1695	-6.517	-54.072	60.153	1.00215.29	N
ATOM	5127	CA	THR	B1695	-6.075	-53.641	61.464	1.00214.61	C
ATOM	5128	C	THR	B1695	-6.099	-52.107	61.510	1.00214.30	C
ATOM	5129	O	THR	B1695	-5.165	-51.445	61.059	1.00214.24	O
ATOM	5130	CB	THR	B1695	-4.693	-54.262	61.826	1.00214.56	C
ATOM	5131	OG1	THR	B1695	-4.080	-53.503	62.869	1.00214.52	O
ATOM	5132	CG2	THR	B1695	-3.749	-54.338	60.609	1.00214.50	C
ATOM	5133	N	ARG	B1696	-7.196	-51.559	62.034	1.00213.96	N
ATOM	5134	CA	ARG	B1696	-7.476	-50.118	62.006	1.00213.69	C
ATOM	5135	C	ARG	B1696	-7.156	-49.454	63.327	1.00213.54	C
ATOM	5136	O	ARG	B1696	-7.942	-49.549	64.259	1.00213.43	O
ATOM	5137	CB	ARG	B1696	-8.956	-49.882	61.700	1.00213.59	C
ATOM	5138	CG	ARG	B1696	-9.327	-50.109	60.261	1.00213.84	C
ATOM	5139	CD	ARG	B1696	-10.755	-50.607	60.100	1.00213.82	C
ATOM	5140	NE	ARG	B1696	-11.091	-50.779	58.683	1.00214.04	N
ATOM	5141	CZ	ARG	B1696	-12.183	-51.388	58.224	1.00214.00	C
ATOM	5142	NH1	ARG	B1696	-13.065	-51.905	59.070	1.00214.35	N
ATOM	5143	NH2	ARG	B1696	-12.390	-51.486	56.914	1.00213.43	N
ATOM	5144	N	HIS	B1697	-6.016	-48.776	63.418	1.00213.57	N
ATOM	5145	CA	HIS	B1697	-5.670	-48.087	64.660	1.00213.73	C
ATOM	5146	C	HIS	B1697	-6.400	-46.762	64.709	1.00213.59	C
ATOM	5147	O	HIS	B1697	-6.859	-46.263	63.685	1.00213.64	O
ATOM	5148	CB	HIS	B1697	-4.162	-47.838	64.833	1.00213.85	C
ATOM	5149	CG	HIS	B1697	-3.303	-48.463	63.779	1.00215.03	C
ATOM	5150	ND1	HIS	B1697	-2.555	-47.714	62.896	1.00216.25	N
ATOM	5151	CD2	HIS	B1697	-3.062	-49.760	63.470	1.00216.00	C
ATOM	5152	CE1	HIS	B1697	-1.895	-48.522	62.083	1.00216.51	C
ATOM	5153	NE2	HIS	B1697	-2.185	-49.769	62.409	1.00216.49	N
ATOM	5154	N	TYR	B1698	-6.514	-46.218	65.918	1.00213.56	N
ATOM	5155	CA	TYR	B1698	-7.056	-44.886	66.169	1.00213.42	C
ATOM	5156	C	TYR	B1698	-6.149	-44.205	67.199	1.00213.47	C
ATOM	5157	O	TYR	B1698	-6.115	-44.596	68.372	1.00213.57	O
ATOM	5158	CB	TYR	B1698	-8.492	-44.968	66.703	1.00213.22	C
ATOM	5159	CG	TYR	B1698	-9.550	-45.329	65.678	1.00212.97	C
ATOM	5160	CD1	TYR	B1698	-9.744	-46.649	65.278	1.00212.82	C
ATOM	5161	CD2	TYR	B1698	-10.378	-44.351	65.128	1.00213.18	C
ATOM	5162	CE1	TYR	B1698	-10.726	-46.986	64.341	1.00212.83	C
ATOM	5163	CE2	TYR	B1698	-11.367	-44.679	64.191	1.00213.17	C
ATOM	5164	CZ	TYR	B1698	-11.535	-46.000	63.806	1.00212.86	C
ATOM	5165	OH	TYR	B1698	-12.500	-46.334	62.882	1.00212.56	O
ATOM	5166	N	PHE	B1699	-5.400	-43.204	66.754	1.00213.36	N
ATOM	5167	CA	PHE	B1699	-4.497	-42.486	67.637	1.00213.28	C
ATOM	5168	C	PHE	B1699	-5.295	-41.420	68.362	1.00213.29	C
ATOM	5169	O	PHE	B1699	-5.699	-40.418	67.769	1.00213.29	O
ATOM	5170	CB	PHE	B1699	-3.340	-41.903	66.840	1.00213.28	C
ATOM	5171	CG	PHE	B1699	-2.481	-42.946	66.190	1.00213.43	C
ATOM	5172	CD1	PHE	B1699	-3.019	-43.830	65.256	1.00213.69	C
ATOM	5173	CD2	PHE	B1699	-1.137	-43.054	66.515	1.00213.69	C
ATOM	5174	CE1	PHE	B1699	-2.228	-44.803	64.654	1.00213.95	C
ATOM	5175	CE2	PHE	B1699	-0.328	-44.016	65.912	1.00213.94	C
ATOM	5176	CZ	PHE	B1699	-0.876	-44.896	64.982	1.00213.93	C
ATOM	5177	N	ILE	B1700	-5.524	-41.665	69.651	1.00213.29	N
ATOM	5178	CA	ILE	B1700	-6.520	-40.942	70.444	1.00213.21	C
ATOM	5179	C	ILE	B1700	-5.982	-40.573	71.835	1.00213.54	C
ATOM	5180	O	ILE	B1700	-5.097	-41.247	72.364	1.00213.54	O
ATOM	5181	CB	ILE	B1700	-7.838	-41.768	70.533	1.00212.92	C

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ATOM   5182  CG1 ILE B1700      -8.873 -41.088  71.429  1.00212.49           C
ATOM   5183  CG2 ILE B1700      -7.556 -43.187  70.991  1.00212.57           C
ATOM   5184  CD1 ILE B1700     -10.252 -41.676  71.298  1.00212.15           C
ATOM   5185  N   ALA B1701      -6.511 -39.492  72.409  1.00213.94           N
ATOM   5186  CA  ALA B1701      -6.048 -38.985  73.705  1.00214.28           C
ATOM   5187  C   ALA B1701      -7.181 -38.375  74.532  1.00214.50           C
ATOM   5188  O   ALA B1701      -8.354 -38.467  74.154  1.00214.37           O
ATOM   5189  CB  ALA B1701      -4.921 -37.970  73.504  1.00214.30           C
ATOM   5190  N   ALA B1702      -6.817 -37.763  75.660  1.00214.86           N
ATOM   5191  CA  ALA B1702      -7.779 -37.109  76.538  1.00215.38           C
ATOM   5192  C   ALA B1702      -7.275 -35.739  76.971  1.00215.83           C
ATOM   5193  O   ALA B1702      -6.196 -35.640  77.553  1.00215.80           O
ATOM   5194  CB  ALA B1702      -8.059 -37.977  77.745  1.00215.32           C
ATOM   5195  N   VAL B1703      -8.056 -34.694  76.675  1.00216.52           N
ATOM   5196  CA  VAL B1703      -7.682 -33.287  76.950  1.00217.42           C
ATOM   5197  C   VAL B1703      -8.881 -32.480  77.523  1.00217.58           C
ATOM   5198  O   VAL B1703      -9.902 -33.077  77.872  1.00217.47           O
ATOM   5199  CB  VAL B1703      -7.058 -32.561  75.686  1.00217.42           C
ATOM   5200  CG1 VAL B1703      -5.971 -31.559  76.102  1.00217.45           C
ATOM   5201  CG2 VAL B1703      -6.477 -33.552  74.670  1.00217.56           C
ATOM   5202  N   GLU B1704      -8.747 -31.145  77.632  1.00218.08           N
ATOM   5203  CA  GLU B1704      -9.806 -30.254  78.178  1.00218.38           C
ATOM   5204  C   GLU B1704      -9.856 -28.817  77.598  1.00218.96           C
ATOM   5205  O   GLU B1704      -8.867 -28.313  77.052  1.00218.86           O
ATOM   5206  CB  GLU B1704      -9.722 -30.145  79.710  1.00218.48           C
ATOM   5207  CG  GLU B1704      -8.832 -31.153  80.429  1.00218.59           C
ATOM   5208  CD  GLU B1704      -7.402 -30.662  80.581  1.00218.80           C
ATOM   5209  OE1 GLU B1704      -6.752 -30.385  79.547  1.00218.79           O
ATOM   5210  OE2 GLU B1704      -6.928 -30.554  81.736  1.00218.80           O
ATOM   5211  N   ARG B1705     -11.021 -28.175  77.756  1.00219.65           N
ATOM   5212  CA  ARG B1705     -11.301 -26.781  77.352  1.00220.47           C
ATOM   5213  C   ARG B1705     -12.656 -26.375  77.945  1.00220.89           C
ATOM   5214  O   ARG B1705     -12.722 -25.654  78.939  1.00220.70           O
ATOM   5215  CB  ARG B1705     -11.321 -26.631  75.821  1.00220.57           C
ATOM   5216  CG  ARG B1705     -11.911 -27.823  75.047  1.00221.08           C
ATOM   5217  CD  ARG B1705     -12.769 -27.360  73.879  1.00222.34           C
ATOM   5218  NE  ARG B1705     -12.962 -28.394  72.854  1.00223.71           N
ATOM   5219  CZ  ARG B1705     -13.944 -29.302  72.844  1.00224.27           C
ATOM   5220  NH1 ARG B1705     -14.847 -29.337  73.822  1.00224.26           N
ATOM   5221  NH2 ARG B1705     -14.021 -30.185  71.847  1.00224.09           N
ATOM   5222  N   LEU B1706     -13.714 -26.780  77.239  1.00221.84           N
ATOM   5223  CA  LEU B1706     -15.017 -27.257  77.775  1.00222.53           C
ATOM   5224  C   LEU B1706     -16.347 -26.726  77.227  1.00223.01           C
ATOM   5225  O   LEU B1706     -16.818 -27.167  76.172  1.00223.00           O
ATOM   5226  CB  LEU B1706     -15.080 -27.402  79.311  1.00222.60           C
ATOM   5227  CG  LEU B1706     -16.342 -28.178  79.773  1.00222.49           C
ATOM   5228  CD1 LEU B1706     -16.357 -29.659  79.381  1.00223.04           C
ATOM   5229  CD2 LEU B1706     -16.615 -28.048  81.244  1.00223.33           C
ATOM   5230  N   TRP B1707     -16.981 -25.836  77.976  1.00223.61           N
ATOM   5231  CA  TRP B1707     -18.401 -25.676  77.801  1.00224.36           C
ATOM   5232  C   TRP B1707     -18.796 -24.257  77.529  1.00224.98           C
ATOM   5233  O   TRP B1707     -18.728 -23.399  78.405  1.00224.93           O
ATOM   5234  CB  TRP B1707     -19.139 -26.201  79.018  1.00224.30           C
ATOM   5235  CG  TRP B1707     -20.456 -26.759  78.680  1.00224.26           C
ATOM   5236  CD1 TRP B1707     -20.774 -28.075  78.552  1.00224.14           C
ATOM   5237  CD2 TRP B1707     -21.650 -26.023  78.408  1.00224.20           C
ATOM   5238  NE1 TRP B1707     -22.102 -28.210  78.232  1.00224.09           N
ATOM   5239  CE2 TRP B1707     -22.664 -26.965  78.134  1.00224.19           C
ATOM   5240  CE3 TRP B1707     -21.966 -24.657  78.380  1.00224.02           C
ATOM   5241  CZ2 TRP B1707     -23.975 -26.588  77.827  1.00224.23           C
ATOM   5242  CZ3 TRP B1707     -23.264 -24.280  78.071  1.00224.11           C
ATOM   5243  CH2 TRP B1707     -24.254 -25.244  77.798  1.00224.37           C
ATOM   5244  N   ASP B1708     -19.221 -24.035  76.294  1.00225.98           N
ATOM   5245  CA  ASP B1708     -19.655 -22.730  75.838  1.00226.97           C
ATOM   5246  C   ASP B1708     -21.180 -22.696  75.806  1.00227.55           C
ATOM   5247  O   ASP B1708     -21.834 -23.735  75.669  1.00227.46           O
ATOM   5248  CB  ASP B1708     -19.091 -22.430  74.436  1.00227.06           C
ATOM   5249  CG  ASP B1708     -17.569 -22.589  74.350  1.00227.32           C
ATOM   5250  OD1 ASP B1708     -17.105 -23.458  73.575  1.00227.58           O
ATOM   5251  OD2 ASP B1708     -16.837 -21.843  75.042  1.00227.38           O
ATOM   5252  N   TYR B1709     -21.736 -21.497  75.938  1.00228.43           N
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ATOM   5253  CA  TYR B1709     -23.167 -21.291  75.760  1.00229.27           C
ATOM   5254  C   TYR B1709     -23.452 -20.289  74.624  1.00229.55           C
ATOM   5255  O   TYR B1709     -24.082 -20.660  73.625  1.00229.65           O
ATOM   5256  CB  TYR B1709     -23.822 -20.875  77.082  1.00229.59           C
ATOM   5257  CG  TYR B1709     -25.312 -20.585  77.005  1.00230.27           C
ATOM   5258  CD1 TYR B1709     -26.261 -21.583  77.266  1.00230.09           C
ATOM   5259  CD2 TYR B1709     -25.775 -19.296  76.696  1.00231.17           C
ATOM   5260  CE1 TYR B1709     -27.641 -21.304  77.205  1.00230.35           C
ATOM   5261  CE2 TYR B1709     -27.147 -19.008  76.630  1.00231.25           C
ATOM   5262  CZ  TYR B1709     -28.072 -20.012  76.884  1.00230.73           C
ATOM   5263  OH  TYR B1709     -29.415 -19.705  76.817  1.00230.55           O
ATOM   5264  N   GLY B1710     -22.981 -19.046  74.775  1.00229.71           N
ATOM   5265  CA  GLY B1710     -23.213 -17.967  73.801  1.00230.00           C
ATOM   5266  C   GLY B1710     -23.953 -18.326  72.513  1.00230.31           C
ATOM   5267  O   GLY B1710     -23.347 -18.842  71.567  1.00230.38           O
ATOM   5268  N   MET B1711     -25.265 -18.065  72.490  1.00230.53           N
ATOM   5269  CA  MET B1711     -26.115 -18.227  71.291  1.00230.68           C
ATOM   5270  C   MET B1711     -26.983 -16.968  71.082  1.00230.74           C
ATOM   5271  O   MET B1711     -26.754 -16.185  70.147  1.00230.77           O
ATOM   5272  CB  MET B1711     -26.993 -19.488  71.403  1.00230.66           C
ATOM   5273  CG  MET B1711     -27.409 -20.133  70.062  1.00230.70           C
ATOM   5274  SD  MET B1711     -29.037 -19.720  69.356  1.00230.60           S
ATOM   5275  CE  MET B1711     -30.197 -20.390  70.554  1.00230.21           C
ATOM   5276  N   SER B1712     -27.972 -16.791  71.963  1.00230.69           N
ATOM   5277  CA  SER B1712     -28.812 -15.585  72.022  1.00230.55           C
ATOM   5278  C   SER B1712     -29.528 -15.494  73.381  1.00230.43           C
ATOM   5279  O   SER B1712     -29.691 -14.401  73.948  1.00230.41           O
ATOM   5280  CB  SER B1712     -29.828 -15.555  70.867  1.00230.54           C
ATOM   5281  OG  SER B1712     -30.600 -16.744  70.821  1.00230.40           O
ATOM   5282  N   SER B1713     -29.922 -16.661  73.894  1.00230.12           N
ATOM   5283  CA  SER B1713     -30.700 -16.794  75.127  1.00229.76           C
ATOM   5284  C   SER B1713     -29.838 -16.737  76.392  1.00229.75           C
ATOM   5285  O   SER B1713     -30.334 -16.897  77.513  1.00229.60           O
ATOM   5286  CB  SER B1713     -31.483 -18.101  75.074  1.00229.58           C
ATOM   5287  OG  SER B1713     -30.735 -19.083  74.381  1.00228.91           O
ATOM   5288  N   GLY B1725     -22.161  -9.815  79.352  1.00193.00           N
ATOM   5289  CA  GLY B1725     -22.448 -11.272  79.286  1.00193.22           C
ATOM   5290  C   GLY B1725     -21.739 -12.069  80.373  1.00193.23           C
ATOM   5291  O   GLY B1725     -20.508 -12.179  80.367  1.00193.36           O
ATOM   5292  N   SER B1726     -22.522 -12.649  81.286  1.00193.14           N
ATOM   5293  CA  SER B1726     -21.997 -13.260  82.522  1.00192.82           C
ATOM   5294  C   SER B1726     -21.571 -14.738  82.418  1.00192.60           C
ATOM   5295  O   SER B1726     -21.107 -15.307  83.408  1.00192.49           O
ATOM   5296  CB  SER B1726     -22.987 -13.056  83.692  1.00192.86           C
ATOM   5297  OG  SER B1726     -22.986 -11.711  84.172  1.00192.44           O
ATOM   5298  N   VAL B1727     -21.711 -15.337  81.229  1.00192.39           N
ATOM   5299  CA  VAL B1727     -21.405 -16.772  80.973  1.00192.21           C
ATOM   5300  C   VAL B1727     -20.201 -17.357  81.755  1.00192.12           C
ATOM   5301  O   VAL B1727     -19.165 -16.684  81.868  1.00192.28           O
ATOM   5302  CB  VAL B1727     -21.211 -17.063  79.448  1.00192.17           C
ATOM   5303  CG1 VAL B1727     -22.546 -17.374  78.772  1.00191.88           C
ATOM   5304  CG2 VAL B1727     -20.473 -15.911  78.749  1.00192.11           C
ATOM   5305  N   PRO B1728     -20.339 -18.599  82.308  1.00191.80           N
ATOM   5306  CA  PRO B1728     -19.239 -19.221  83.059  1.00191.48           C
ATOM   5307  C   PRO B1728     -18.291 -20.086  82.224  1.00191.21           C
ATOM   5308  O   PRO B1728     -18.700 -20.727  81.257  1.00191.13           O
ATOM   5309  CB  PRO B1728     -19.967 -20.094  84.092  1.00191.38           C
ATOM   5310  CG  PRO B1728     -21.274 -20.440  83.458  1.00191.40           C
ATOM   5311  CD  PRO B1728     -21.528 -19.474  82.303  1.00191.71           C
ATOM   5312  N   GLN B1729     -17.021 -20.070  82.612  1.00191.00           N
ATOM   5313  CA  GLN B1729     -16.022 -21.012  82.121  1.00190.65           C
ATOM   5314  C   GLN B1729     -16.276 -22.335  82.837  1.00190.31           C
ATOM   5315  O   GLN B1729     -16.724 -22.349  83.988  1.00190.36           O
ATOM   5316  CB  GLN B1729     -14.612 -20.482  82.447  1.00190.82           C
ATOM   5317  CG  GLN B1729     -13.439 -21.474  82.302  1.00190.66           C
ATOM   5318  CD  GLN B1729     -12.300 -21.224  83.302  1.00190.55           C
ATOM   5319  OE1 GLN B1729     -11.568 -22.148  83.657  1.00190.02           O
ATOM   5320  NE2 GLN B1729     -12.154 -19.977  83.759  1.00190.31           N
ATOM   5321  N   PHE B1730     -16.015 -23.437  82.145  1.00189.72           N
ATOM   5322  CA  PHE B1730     -15.983 -24.752  82.767  1.00189.11           C
ATOM   5323  C   PHE B1730     -14.736 -25.473  82.249  1.00188.93           C
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ATOM   5324  O   PHE B1730     -14.267 -25.172  81.144  1.00189.09           O
ATOM   5325  CB  PHE B1730     -17.245 -25.528  82.413  1.00188.91           C
ATOM   5326  CG  PHE B1730     -18.379 -25.362  83.390  1.00188.37           C
ATOM   5327  CD1 PHE B1730     -18.690 -26.383  84.284  1.00187.80           C
ATOM   5328  CD2 PHE B1730     -19.166 -24.212  83.386  1.00187.94           C
ATOM   5329  CE1 PHE B1730     -19.750 -26.250  85.172  1.00187.62           C
ATOM   5330  CE2 PHE B1730     -20.230 -24.069  84.277  1.00187.70           C
ATOM   5331  CZ  PHE B1730     -20.523 -25.091  85.168  1.00187.79           C
ATOM   5332  N   LYS B1731     -14.202 -26.418  83.027  1.00188.47           N
ATOM   5333  CA  LYS B1731     -12.930 -27.063  82.679  1.00188.06           C
ATOM   5334  C   LYS B1731     -12.923 -28.594  82.816  1.00188.06           C
ATOM   5335  O   LYS B1731     -11.978 -29.167  83.364  1.00187.98           O
ATOM   5336  CB  LYS B1731     -11.790 -26.445  83.495  1.00187.86           C
ATOM   5337  CG  LYS B1731     -10.436 -26.510  82.816  1.00187.11           C
ATOM   5338  CD  LYS B1731      -9.307 -26.418  83.826  1.00186.15           C
ATOM   5339  CE  LYS B1731      -9.182 -27.693  84.638  1.00185.61           C
ATOM   5340  NZ  LYS B1731      -9.043 -28.876  83.753  1.00184.87           N
ATOM   5341  N   LYS B1732     -13.972 -29.242  82.299  1.00188.11           N
ATOM   5342  CA  LYS B1732     -14.093 -30.713  82.265  1.00188.11           C
ATOM   5343  C   LYS B1732     -13.149 -31.352  81.238  1.00188.59           C
ATOM   5344  O   LYS B1732     -12.535 -30.647  80.434  1.00188.47           O
ATOM   5345  CB  LYS B1732     -15.538 -31.139  81.974  1.00187.70           C
ATOM   5346  CG  LYS B1732     -16.441 -31.238  83.185  1.00186.42           C
ATOM   5347  CD  LYS B1732     -17.879 -31.447  82.765  1.00184.01           C
ATOM   5348  CE  LYS B1732     -18.668 -30.159  82.817  1.00182.50           C
ATOM   5349  NZ  LYS B1732     -19.856 -30.243  81.954  1.00180.84           N
ATOM   5350  N   VAL B1733     -13.047 -32.685  81.275  1.00189.24           N
ATOM   5351  CA  VAL B1733     -12.142 -33.454  80.400  1.00189.80           C
ATOM   5352  C   VAL B1733     -12.897 -34.032  79.206  1.00190.32           C
ATOM   5353  O   VAL B1733     -14.083 -34.319  79.319  1.00190.42           O
ATOM   5354  CB  VAL B1733     -11.487 -34.653  81.135  1.00189.67           C
ATOM   5355  CG1 VAL B1733     -10.027 -34.768  80.740  1.00189.73           C
ATOM   5356  CG2 VAL B1733     -11.623 -34.533  82.644  1.00189.41           C
ATOM   5357  N   VAL B1734     -12.212 -34.191  78.070  1.00190.91           N
ATOM   5358  CA  VAL B1734     -12.785 -34.849  76.884  1.00191.46           C
ATOM   5359  C   VAL B1734     -11.775 -35.768  76.214  1.00192.01           C
ATOM   5360  O   VAL B1734     -10.565 -35.589  76.382  1.00192.08           O
ATOM   5361  CB  VAL B1734     -13.292 -33.846  75.802  1.00191.38           C
ATOM   5362  CG1 VAL B1734     -14.687 -33.329  76.129  1.00191.04           C
ATOM   5363  CG2 VAL B1734     -12.288 -32.711  75.573  1.00191.38           C
ATOM   5364  N   PHE B1735     -12.284 -36.744  75.462  1.00192.58           N
ATOM   5365  CA  PHE B1735     -11.475 -37.499  74.510  1.00193.25           C
ATOM   5366  C   PHE B1735     -11.199 -36.658  73.263  1.00193.80           C
ATOM   5367  O   PHE B1735     -11.989 -35.773  72.927  1.00193.95           O
ATOM   5368  CB  PHE B1735     -12.213 -38.753  74.088  1.00193.19           C
ATOM   5369  CG  PHE B1735     -12.101 -39.878  75.056  1.00193.45           C
ATOM   5370  CD1 PHE B1735     -10.896 -40.551  75.222  1.00193.69           C
ATOM   5371  CD2 PHE B1735     -13.209 -40.297  75.780  1.00193.73           C
ATOM   5372  CE1 PHE B1735     -10.790 -41.622  76.116  1.00193.79           C
ATOM   5373  CE2 PHE B1735     -13.114 -41.372  76.669  1.00193.94           C
ATOM   5374  CZ  PHE B1735     -11.902 -42.032  76.841  1.00193.66           C
ATOM   5375  N   GLN B1736     -10.091 -36.931  72.573  1.00194.41           N
ATOM   5376  CA  GLN B1736      -9.748 -36.197  71.351  1.00195.12           C
ATOM   5377  C   GLN B1736      -8.930 -37.069  70.429  1.00195.59           C
ATOM   5378  O   GLN B1736      -7.974 -37.705  70.863  1.00195.52           O
ATOM   5379  CB  GLN B1736      -8.963 -34.923  71.679  1.00195.20           C
ATOM   5380  CG  GLN B1736      -8.612 -34.043  70.469  1.00195.86           C
ATOM   5381  CD  GLN B1736      -9.615 -32.921  70.218  1.00196.66           C
ATOM   5382  OE1 GLN B1736      -9.945 -32.604  69.067  1.00196.53           O
ATOM   5383  NE2 GLN B1736     -10.095 -32.306  71.296  1.00197.06           N
ATOM   5384  N   GLU B1737      -9.311 -37.089  69.156  1.00196.43           N
ATOM   5385  CA  GLU B1737      -8.596 -37.854  68.135  1.00197.55           C
ATOM   5386  C   GLU B1737      -7.395 -37.072  67.609  1.00197.79           C
ATOM   5387  O   GLU B1737      -7.528 -35.912  67.230  1.00198.07           O
ATOM   5388  CB  GLU B1737      -9.540 -38.202  66.979  1.00197.51           C
ATOM   5389  CG  GLU B1737      -8.947 -39.121  65.902  1.00198.26           C
ATOM   5390  CD  GLU B1737     -10.010 -39.757  64.997  1.00198.58           C
ATOM   5391  OE1 GLU B1737      -9.634 -40.338  63.950  1.00199.65           O
ATOM   5392  OE2 GLU B1737     -11.219 -39.685  65.331  1.00200.06           O
ATOM   5393  N   PHE B1738      -6.225 -37.705  67.589  1.00198.19           N
ATOM   5394  CA  PHE B1738      -5.019 -37.074  67.036  1.00198.49           C
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ATOM	5395	C	PHE	B1738	-4.626	-37.688	65.685	1.00198.41	C
ATOM	5396	O	PHE	B1738	-5.392	-38.472	65.118	1.00198.36	O
ATOM	5397	CB	PHE	B1738	-3.860	-37.098	68.047	1.00198.76	C
ATOM	5398	CG	PHE	B1738	-3.808	-35.884	68.944	1.00199.20	C
ATOM	5399	CD1	PHE	B1738	-2.927	-34.838	68.669	1.00199.52	C
ATOM	5400	CD2	PHE	B1738	-4.643	-35.784	70.059	1.00199.72	C
ATOM	5401	CE1	PHE	B1738	-2.871	-33.711	69.494	1.00199.84	C
ATOM	5402	CE2	PHE	B1738	-4.599	-34.658	70.892	1.00200.11	C
ATOM	5403	CZ	PHE	B1738	-3.709	-33.619	70.608	1.00199.95	C
ATOM	5404	N	THR	B1739	-3.443	-37.330	65.181	1.00198.26	N
ATOM	5405	CA	THR	B1739	-3.050	-37.676	63.816	1.00198.06	C
ATOM	5406	C	THR	B1739	-2.087	-38.863	63.702	1.00198.00	C
ATOM	5407	O	THR	B1739	-2.138	-39.605	62.725	1.00197.91	O
ATOM	5408	CB	THR	B1739	-2.476	-36.455	63.078	1.00198.01	C
ATOM	5409	OG1	THR	B1739	-2.701	-36.591	61.672	1.00198.15	O
ATOM	5410	CG2	THR	B1739	-0.991	-36.301	63.342	1.00197.84	C
ATOM	5411	N	ASP	B1740	-1.206	-39.022	64.685	1.00198.05	N
ATOM	5412	CA	ASP	B1740	-0.259	-40.144	64.717	1.00198.24	C
ATOM	5413	C	ASP	B1740	0.318	-40.348	66.124	1.00198.11	C
ATOM	5414	O	ASP	B1740	-0.251	-39.855	67.103	1.00198.21	O
ATOM	5415	CB	ASP	B1740	0.853	-39.997	63.649	1.00198.44	C
ATOM	5416	CG	ASP	B1740	1.503	-38.602	63.626	1.00199.14	C
ATOM	5417	OD1	ASP	B1740	1.382	-37.846	64.618	1.00200.07	O
ATOM	5418	OD2	ASP	B1740	2.148	-38.263	62.603	1.00199.46	O
ATOM	5419	N	GLY	B1741	1.426	-41.088	66.222	1.00197.91	N
ATOM	5420	CA	GLY	B1741	2.111	-41.326	67.501	1.00197.55	C
ATOM	5421	C	GLY	B1741	2.730	-40.082	68.126	1.00197.28	C
ATOM	5422	O	GLY	B1741	2.815	-39.973	69.351	1.00197.21	O
ATOM	5423	N	SER	B1742	3.153	-39.144	67.278	1.00197.00	N
ATOM	5424	CA	SER	B1742	3.731	-37.865	67.707	1.00196.67	C
ATOM	5425	C	SER	B1742	2.678	-36.890	68.257	1.00196.40	C
ATOM	5426	O	SER	B1742	2.917	-35.677	68.328	1.00196.26	O
ATOM	5427	CB	SER	B1742	4.502	-37.225	66.542	1.00196.71	C
ATOM	5428	OG	SER	B1742	5.099	-35.995	66.920	1.00196.79	O
ATOM	5429	N	PHE	B1743	1.523	-37.437	68.644	1.00196.11	N
ATOM	5430	CA	PHE	B1743	0.402	-36.678	69.202	1.00195.88	C
ATOM	5431	C	PHE	B1743	0.521	-35.167	68.976	1.00195.85	C
ATOM	5432	O	PHE	B1743	0.677	-34.396	69.924	1.00195.89	O
ATOM	5433	CB	PHE	B1743	0.235	-36.989	70.695	1.00195.74	C
ATOM	5434	CG	PHE	B1743	-0.383	-38.333	70.981	1.00195.51	C
ATOM	5435	CD1	PHE	B1743	-1.764	-38.465	71.120	1.00195.29	C
ATOM	5436	CD2	PHE	B1743	0.412	-39.463	71.134	1.00195.18	C
ATOM	5437	CE1	PHE	B1743	-2.342	-39.705	71.396	1.00194.90	C
ATOM	5438	CE2	PHE	B1743	-0.156	-40.705	71.409	1.00195.04	C
ATOM	5439	CZ	PHE	B1743	-1.536	-40.825	71.541	1.00195.04	C
ATOM	5440	N	THR	B1744	0.461	-34.755	67.712	1.00195.77	N
ATOM	5441	CA	THR	B1744	0.520	-33.336	67.372	1.00195.58	C
ATOM	5442	C	THR	B1744	-0.755	-32.804	66.699	1.00195.86	C
ATOM	5443	O	THR	B1744	-1.476	-32.029	67.326	1.00195.98	O
ATOM	5444	CB	THR	B1744	1.792	-32.968	66.591	1.00195.34	C
ATOM	5445	OG1	THR	B1744	2.295	-34.132	65.933	1.00194.85	O
ATOM	5446	CG2	THR	B1744	2.847	-32.466	67.546	1.00194.98	C
ATOM	5447	N	GLN	B1745	-1.052	-33.222	65.462	1.00196.00	N
ATOM	5448	CA	GLN	B1745	-2.208	-32.665	64.719	1.00196.11	C
ATOM	5449	C	GLN	B1745	-3.523	-32.900	65.450	1.00195.81	C
ATOM	5450	O	GLN	B1745	-3.877	-34.042	65.733	1.00195.54	O
ATOM	5451	CB	GLN	B1745	-2.309	-33.190	63.277	1.00196.28	C
ATOM	5452	CG	GLN	B1745	-0.999	-33.171	62.461	1.00197.61	C
ATOM	5453	CD	GLN	B1745	-0.695	-31.841	61.772	1.00199.22	C
ATOM	5454	OE1	GLN	B1745	-1.260	-30.794	62.110	1.00200.22	O
ATOM	5455	NE2	GLN	B1745	0.217	-31.881	60.798	1.00199.45	N
ATOM	5456	N	PRO	B1746	-4.263	-31.813	65.735	1.00195.82	N
ATOM	5457	CA	PRO	B1746	-5.422	-31.953	66.599	1.00195.84	C
ATOM	5458	C	PRO	B1746	-6.512	-32.704	65.862	1.00195.90	C
ATOM	5459	O	PRO	B1746	-7.468	-33.150	66.489	1.00196.00	O
ATOM	5460	CB	PRO	B1746	-5.844	-30.503	66.865	1.00195.85	C
ATOM	5461	CG	PRO	B1746	-5.376	-29.748	65.670	1.00195.86	C
ATOM	5462	CD	PRO	B1746	-4.103	-30.430	65.240	1.00195.91	C
ATOM	5463	N	LEU	B1747	-6.350	-32.830	64.540	1.00195.92	N
ATOM	5464	CA	LEU	B1747	-7.260	-33.578	63.661	1.00195.84	C
ATOM	5465	C	LEU	B1747	-8.637	-32.895	63.515	1.00195.91	C

ATOM	5466	O	LEU	B1747	-9.670	-33.540	63.703	1.00195.92	O
ATOM	5467	CB	LEU	B1747	-7.390	-35.036	64.156	1.00195.68	C
ATOM	5468	CG	LEU	B1747	-7.487	-36.279	63.257	1.00195.09	C
ATOM	5469	CD1	LEU	B1747	-8.913	-36.545	62.768	1.00194.15	C
ATOM	5470	CD2	LEU	B1747	-6.477	-36.249	62.098	1.00194.65	C
ATOM	5471	N	TYR	B1748	-8.633	-31.598	63.180	1.00195.97	N
ATOM	5472	CA	TYR	B1748	-9.854	-30.777	63.017	1.00196.07	C
ATOM	5473	C	TYR	B1748	-11.134	-31.603	62.814	1.00195.71	C
ATOM	5474	O	TYR	B1748	-11.222	-32.408	61.879	1.00195.69	O
ATOM	5475	CB	TYR	B1748	-9.705	-29.823	61.822	1.00196.64	C
ATOM	5476	CG	TYR	B1748	-9.175	-28.415	62.090	1.00197.57	C
ATOM	5477	CD1	TYR	B1748	-7.804	-28.124	61.980	1.00198.23	C
ATOM	5478	CD2	TYR	B1748	-10.053	-27.357	62.382	1.00198.42	C
ATOM	5479	CE1	TYR	B1748	-7.312	-26.818	62.192	1.00198.23	C
ATOM	5480	CE2	TYR	B1748	-9.572	-26.045	62.598	1.00198.60	C
ATOM	5481	CZ	TYR	B1748	-8.200	-25.785	62.501	1.00198.09	C
ATOM	5482	OH	TYR	B1748	-7.720	-24.504	62.711	1.00197.38	O
ATOM	5483	N	ARG	B1749	-12.122	-31.391	63.683	1.00195.24	N
ATOM	5484	CA	ARG	B1749	-13.412	-32.079	63.598	1.00194.66	C
ATOM	5485	C	ARG	B1749	-14.219	-31.624	62.387	1.00194.62	C
ATOM	5486	O	ARG	B1749	-14.679	-30.480	62.329	1.00194.69	O
ATOM	5487	CB	ARG	B1749	-14.207	-31.856	64.880	1.00194.41	C
ATOM	5488	CG	ARG	B1749	-13.740	-32.713	66.017	1.00193.81	C
ATOM	5489	CD	ARG	B1749	-14.009	-34.174	65.695	1.00192.94	C
ATOM	5490	NE	ARG	B1749	-14.416	-34.943	66.870	1.00192.19	N
ATOM	5491	CZ	ARG	B1749	-15.580	-34.799	67.507	1.00191.38	C
ATOM	5492	NH1	ARG	B1749	-16.477	-33.895	67.107	1.00190.59	N
ATOM	5493	NH2	ARG	B1749	-15.840	-35.557	68.566	1.00190.68	N
ATOM	5494	N	GLY	B1750	-14.389	-32.525	61.423	1.00194.44	N
ATOM	5495	CA	GLY	B1750	-14.995	-32.169	60.141	1.00194.29	C
ATOM	5496	C	GLY	B1750	-16.484	-31.901	60.202	1.00194.19	C
ATOM	5497	O	GLY	B1750	-17.186	-32.505	61.007	1.00194.11	O
ATOM	5498	N	GLU	B1751	-16.953	-31.003	59.335	1.00194.17	N
ATOM	5499	CA	GLU	B1751	-18.379	-30.649	59.188	1.00194.40	C
ATOM	5500	C	GLU	B1751	-19.331	-31.827	59.225	1.00194.30	C
ATOM	5501	O	GLU	B1751	-20.517	-31.672	59.540	1.00194.19	O
ATOM	5502	CB	GLU	B1751	-18.616	-29.943	57.855	1.00194.47	C
ATOM	5503	CG	GLU	B1751	-18.234	-28.487	57.827	1.00195.94	C
ATOM	5504	CD	GLU	B1751	-16.755	-28.256	57.571	1.00198.14	C
ATOM	5505	OE1	GLU	B1751	-16.007	-29.255	57.441	1.00199.20	O
ATOM	5506	OE2	GLU	B1751	-16.345	-27.069	57.496	1.00198.90	O
ATOM	5507	N	LEU	B1752	-18.806	-32.991	58.853	1.00194.39	N
ATOM	5508	CA	LEU	B1752	-19.587	-34.215	58.786	1.00194.56	C
ATOM	5509	C	LEU	B1752	-19.776	-34.856	60.149	1.00194.65	C
ATOM	5510	O	LEU	B1752	-20.754	-35.580	60.344	1.00195.01	O
ATOM	5511	CB	LEU	B1752	-19.009	-35.227	57.779	1.00194.48	C
ATOM	5512	CG	LEU	B1752	-17.514	-35.472	57.500	1.00194.94	C
ATOM	5513	CD1	LEU	B1752	-16.938	-34.403	56.572	1.00195.63	C
ATOM	5514	CD2	LEU	B1752	-16.642	-35.634	58.753	1.00195.19	C
ATOM	5515	N	ASN	B1753	-18.852	-34.601	61.083	1.00194.51	N
ATOM	5516	CA	ASN	B1753	-19.016	-35.066	62.470	1.00194.34	C
ATOM	5517	C	ASN	B1753	-18.638	-34.058	63.546	1.00194.07	C
ATOM	5518	O	ASN	B1753	-17.691	-34.258	64.311	1.00194.09	O
ATOM	5519	CB	ASN	B1753	-18.354	-36.437	62.718	1.00194.47	C
ATOM	5520	CG	ASN	B1753	-16.922	-36.510	62.214	1.00195.09	C
ATOM	5521	OD1	ASN	B1753	-16.300	-35.486	61.889	1.00195.68	O
ATOM	5522	ND2	ASN	B1753	-16.385	-37.734	62.149	1.00195.22	N
ATOM	5523	N	GLU	B1754	-19.398	-32.968	63.596	1.00193.78	N
ATOM	5524	CA	GLU	B1754	-19.199	-31.940	64.609	1.00193.50	C
ATOM	5525	C	GLU	B1754	-20.342	-31.952	65.592	1.00192.80	C
ATOM	5526	O	GLU	B1754	-20.267	-31.328	66.645	1.00192.85	O
ATOM	5527	CB	GLU	B1754	-19.049	-30.563	63.977	1.00193.82	C
ATOM	5528	CG	GLU	B1754	-20.330	-29.931	63.472	1.00195.26	C
ATOM	5529	CD	GLU	B1754	-20.128	-28.463	63.111	1.00197.97	C
ATOM	5530	OE1	GLU	B1754	-19.081	-28.130	62.494	1.00198.74	O
ATOM	5531	OE2	GLU	B1754	-21.012	-27.638	63.452	1.00199.38	O
ATOM	5532	N	HIS	B1755	-21.404	-32.661	65.223	1.00192.02	N
ATOM	5533	CA	HIS	B1755	-22.457	-33.052	66.157	1.00191.30	C
ATOM	5534	C	HIS	B1755	-21.866	-33.753	67.387	1.00190.60	C
ATOM	5535	O	HIS	B1755	-22.297	-33.535	68.520	1.00190.32	O
ATOM	5536	CB	HIS	B1755	-23.503	-33.943	65.450	1.00191.44	C

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ATOM   5537  CG  HIS B1755     -22.964 -35.239  64.903  1.00191.38           C
ATOM   5538  ND1 HIS B1755     -21.880 -35.309  64.053  1.00191.34           N
ATOM   5539  CD2 HIS B1755     -23.395 -36.514  65.060  1.00191.32           C
ATOM   5540  CE1 HIS B1755     -21.653 -36.572  63.731  1.00191.10           C
ATOM   5541  NE2 HIS B1755     -22.561 -37.323  64.325  1.00191.03           N
ATOM   5542  N   LEU B1756     -20.859 -34.578  67.129  1.00189.88           N
ATOM   5543  CA  LEU B1756     -20.117 -35.297  68.139  1.00189.20           C
ATOM   5544  C   LEU B1756     -19.653 -34.324  69.216  1.00188.69           C
ATOM   5545  O   LEU B1756     -19.806 -34.598  70.397  1.00188.38           O
ATOM   5546  CB  LEU B1756     -18.931 -35.998  67.468  1.00189.42           C
ATOM   5547  CG  LEU B1756     -18.598 -37.482  67.688  1.00189.38           C
ATOM   5548  CD1 LEU B1756     -19.828 -38.366  67.614  1.00189.44           C
ATOM   5549  CD2 LEU B1756     -17.554 -37.946  66.687  1.00189.17           C
ATOM   5550  N   GLY B1757     -19.083 -33.197  68.792  1.00188.32           N
ATOM   5551  CA  GLY B1757     -18.872 -32.018  69.654  1.00188.08           C
ATOM   5552  C   GLY B1757     -18.112 -32.103  70.982  1.00187.76           C
ATOM   5553  O   GLY B1757     -16.880 -31.880  71.011  1.00188.03           O
ATOM   5554  N   LEU B1758     -18.853 -32.378  72.075  1.00186.99           N
ATOM   5555  CA  LEU B1758     -18.325 -32.421  73.480  1.00185.76           C
ATOM   5556  C   LEU B1758     -18.033 -33.839  74.010  1.00184.72           C
ATOM   5557  O   LEU B1758     -17.810 -34.024  75.209  1.00184.46           O
ATOM   5558  CB  LEU B1758     -19.231 -31.630  74.478  1.00185.77           C
ATOM   5559  CG  LEU B1758     -18.880 -30.328  75.259  1.00185.16           C
ATOM   5560  CD1 LEU B1758     -18.031 -30.630  76.468  1.00184.73           C
ATOM   5561  CD2 LEU B1758     -18.262 -29.179  74.444  1.00184.12           C
ATOM   5562  N   LEU B1759     -18.040 -34.821  73.108  1.00183.42           N
ATOM   5563  CA  LEU B1759     -17.555 -36.156  73.412  1.00182.36           C
ATOM   5564  C   LEU B1759     -16.523 -36.607  72.381  1.00182.44           C
ATOM   5565  O   LEU B1759     -16.077 -35.806  71.560  1.00182.39           O
ATOM   5566  CB  LEU B1759     -18.716 -37.144  73.538  1.00181.85           C
ATOM   5567  CG  LEU B1759     -19.486 -37.771  72.382  1.00180.00           C
ATOM   5568  CD1 LEU B1759     -19.204 -37.064  71.123  1.00179.10           C
ATOM   5569  CD2 LEU B1759     -19.156 -39.226  72.226  1.00178.06           C
ATOM   5570  N   GLY B1760     -16.162 -37.890  72.426  1.00182.46           N
ATOM   5571  CA  GLY B1760     -15.036 -38.439  71.661  1.00182.29           C
ATOM   5572  C   GLY B1760     -15.319 -38.874  70.239  1.00182.16           C
ATOM   5573  O   GLY B1760     -16.473 -38.938  69.832  1.00182.01           O
ATOM   5574  N   PRO B1761     -14.258 -39.186  69.473  1.00182.26           N
ATOM   5575  CA  PRO B1761     -14.419 -39.506  68.069  1.00182.59           C
ATOM   5576  C   PRO B1761     -14.937 -40.920  67.852  1.00182.88           C
ATOM   5577  O   PRO B1761     -14.861 -41.763  68.752  1.00182.85           O
ATOM   5578  CB  PRO B1761     -13.001 -39.372  67.522  1.00182.40           C
ATOM   5579  CG  PRO B1761     -12.159 -39.776  68.630  1.00182.17           C
ATOM   5580  CD  PRO B1761     -12.843 -39.262  69.872  1.00182.30           C
ATOM   5581  N   TYR B1762     -15.466 -41.149  66.653  1.00183.17           N
ATOM   5582  CA  TYR B1762     -16.006 -42.430  66.263  1.00183.32           C
ATOM   5583  C   TYR B1762     -14.867 -43.414  66.094  1.00183.51           C
ATOM   5584  O   TYR B1762     -13.877 -43.103  65.426  1.00183.37           O
ATOM   5585  CB  TYR B1762     -16.766 -42.292  64.944  1.00183.36           C
ATOM   5586  CG  TYR B1762     -18.155 -41.683  65.052  1.00183.67           C
ATOM   5587  CD1 TYR B1762     -19.208 -42.400  65.629  1.00183.91           C
ATOM   5588  CD2 TYR B1762     -18.431 -40.405  64.541  1.00183.96           C
ATOM   5589  CE1 TYR B1762     -20.497 -41.858  65.720  1.00183.79           C
ATOM   5590  CE2 TYR B1762     -19.723 -39.853  64.621  1.00183.81           C
ATOM   5591  CZ  TYR B1762     -20.749 -40.590  65.217  1.00183.74           C
ATOM   5592  OH  TYR B1762     -22.026 -40.077  65.323  1.00183.29           O
ATOM   5593  N   ILE B1763     -15.007 -44.577  66.739  1.00183.97           N
ATOM   5594  CA  ILE B1763     -14.133 -45.752  66.533  1.00184.33           C
ATOM   5595  C   ILE B1763     -14.967 -46.885  65.904  1.00184.60           C
ATOM   5596  O   ILE B1763     -16.025 -47.261  66.432  1.00184.41           O
ATOM   5597  CB  ILE B1763     -13.432 -46.246  67.846  1.00184.35           C
ATOM   5598  CG1 ILE B1763     -12.865 -45.072  68.663  1.00184.45           C
ATOM   5599  CG2 ILE B1763     -12.327 -47.249  67.518  1.00184.01           C
ATOM   5600  CD1 ILE B1763     -12.152 -45.468  69.962  1.00184.23           C
ATOM   5601  N   ARG B1764     -14.477 -47.417  64.780  1.00184.92           N
ATOM   5602  CA  ARG B1764     -15.303 -48.196  63.847  1.00185.43           C
ATOM   5603  C   ARG B1764     -14.626 -49.471  63.349  1.00184.94           C
ATOM   5604  O   ARG B1764     -13.439 -49.461  63.031  1.00185.02           O
ATOM   5605  CB  ARG B1764     -15.668 -47.332  62.628  1.00185.52           C
ATOM   5606  CG  ARG B1764     -15.845 -45.830  62.916  1.00186.62           C
ATOM   5607  CD  ARG B1764     -15.955 -44.990  61.642  1.00186.79           C
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ATOM	5608	NE	ARG	B1764	-17.270	-45.144	61.019	1.00189.51	N
ATOM	5609	CZ	ARG	B1764	-18.298	-44.318	61.194	1.00190.00	C
ATOM	5610	NH1	ARG	B1764	-18.181	-43.249	61.972	1.00190.42	N
ATOM	5611	NH2	ARG	B1764	-19.446	-44.565	60.579	1.00190.54	N
ATOM	5612	N	ALA	B1765	-15.394	-50.554	63.246	1.00184.63	N
ATOM	5613	CA	ALA	B1765	-14.857	-51.834	62.792	1.00184.45	C
ATOM	5614	C	ALA	B1765	-15.883	-52.740	62.126	1.00184.44	C
ATOM	5615	O	ALA	B1765	-17.078	-52.644	62.395	1.00184.35	O
ATOM	5616	CB	ALA	B1765	-14.230	-52.559	63.950	1.00184.53	C
ATOM	5617	N	GLU	B1766	-15.395	-53.632	61.266	1.00184.49	N
ATOM	5618	CA	GLU	B1766	-16.213	-54.704	60.703	1.00184.82	C
ATOM	5619	C	GLU	B1766	-16.156	-55.967	61.580	1.00184.76	C
ATOM	5620	O	GLU	B1766	-15.577	-55.932	62.669	1.00184.87	O
ATOM	5621	CB	GLU	B1766	-15.791	-55.003	59.269	1.00184.69	C
ATOM	5622	CG	GLU	B1766	-16.333	-54.006	58.256	1.00185.18	C
ATOM	5623	CD	GLU	B1766	-15.835	-54.272	56.839	1.00185.62	C
ATOM	5624	OE1	GLU	B1766	-15.273	-53.334	56.226	1.00187.00	O
ATOM	5625	OE2	GLU	B1766	-15.993	-55.413	56.338	1.00186.58	O
ATOM	5626	N	VAL	B1767	-16.767	-57.066	61.119	1.00184.70	N
ATOM	5627	CA	VAL	B1767	-16.868	-58.299	61.920	1.00184.58	C
ATOM	5628	C	VAL	B1767	-15.483	-58.882	62.193	1.00184.50	C
ATOM	5629	O	VAL	B1767	-14.932	-58.678	63.268	1.00184.48	O
ATOM	5630	CB	VAL	B1767	-17.854	-59.364	61.309	1.00184.64	C
ATOM	5631	CG1	VAL	B1767	-17.830	-60.689	62.095	1.00184.83	C
ATOM	5632	CG2	VAL	B1767	-19.278	-58.830	61.274	1.00184.49	C
ATOM	5633	N	GLU	B1768	-14.905	-59.570	61.218	1.00184.45	N
ATOM	5634	CA	GLU	B1768	-13.649	-60.263	61.440	1.00184.59	C
ATOM	5635	C	GLU	B1768	-12.467	-59.287	61.392	1.00184.51	C
ATOM	5636	O	GLU	B1768	-11.582	-59.408	60.547	1.00184.53	O
ATOM	5637	CB	GLU	B1768	-13.498	-61.370	60.399	1.00184.82	C
ATOM	5638	CG	GLU	B1768	-12.783	-62.615	60.909	1.00185.47	C
ATOM	5639	CD	GLU	B1768	-13.718	-63.636	61.533	1.00185.86	C
ATOM	5640	OE1	GLU	B1768	-14.953	-63.394	61.550	1.00185.68	O
ATOM	5641	OE2	GLU	B1768	-13.205	-64.685	61.998	1.00185.90	O
ATOM	5642	N	ASP	B1769	-12.451	-58.331	62.318	1.00184.54	N
ATOM	5643	CA	ASP	B1769	-11.554	-57.166	62.232	1.00184.61	C
ATOM	5644	C	ASP	B1769	-10.475	-57.036	63.319	1.00184.74	C
ATOM	5645	O	ASP	B1769	-10.268	-57.932	64.142	1.00184.80	O
ATOM	5646	CB	ASP	B1769	-12.379	-55.868	62.191	1.00184.51	C
ATOM	5647	CG	ASP	B1769	-12.446	-55.243	60.809	1.00184.13	C
ATOM	5648	OD1	ASP	B1769	-12.417	-55.979	59.803	1.00184.46	O
ATOM	5649	OD2	ASP	B1769	-12.541	-54.002	60.730	1.00183.48	O
ATOM	5650	N	ASN	B1770	-9.796	-55.891	63.286	1.00184.84	N
ATOM	5651	CA	ASN	B1770	-8.785	-55.517	64.256	1.00185.01	C
ATOM	5652	C	ASN	B1770	-8.979	-54.090	64.722	1.00185.21	C
ATOM	5653	O	ASN	B1770	-9.012	-53.155	63.920	1.00185.36	O
ATOM	5654	CB	ASN	B1770	-7.400	-55.625	63.640	1.00184.93	C
ATOM	5655	CG	ASN	B1770	-6.647	-56.827	64.110	1.00184.86	C
ATOM	5656	OD1	ASN	B1770	-7.065	-57.524	65.035	1.00184.66	O
ATOM	5657	ND2	ASN	B1770	-5.513	-57.080	63.479	1.00185.17	N
ATOM	5658	N	ILE	B1771	-9.093	-53.925	66.027	1.00185.40	N
ATOM	5659	CA	ILE	B1771	-9.220	-52.607	66.609	1.00185.74	C
ATOM	5660	C	ILE	B1771	-7.966	-52.340	67.422	1.00186.01	C
ATOM	5661	O	ILE	B1771	-7.484	-53.225	68.122	1.00186.16	O
ATOM	5662	CB	ILE	B1771	-10.495	-52.513	67.484	1.00185.84	C
ATOM	5663	CG1	ILE	B1771	-11.749	-52.601	66.601	1.00185.82	C
ATOM	5664	CG2	ILE	B1771	-10.511	-51.232	68.317	1.00186.10	C
ATOM	5665	CD1	ILE	B1771	-13.071	-52.600	67.358	1.00185.61	C
ATOM	5666	N	MET	B1772	-7.432	-51.127	67.314	1.00186.38	N
ATOM	5667	CA	MET	B1772	-6.244	-50.735	68.069	1.00186.89	C
ATOM	5668	C	MET	B1772	-6.339	-49.316	68.602	1.00187.12	C
ATOM	5669	O	MET	B1772	-6.798	-48.418	67.903	1.00187.36	O
ATOM	5670	CB	MET	B1772	-5.013	-50.849	67.189	1.00186.77	C
ATOM	5671	CG	MET	B1772	-3.762	-50.311	67.816	1.00186.79	C
ATOM	5672	SD	MET	B1772	-2.429	-50.524	66.657	1.00187.35	S
ATOM	5673	CE	MET	B1772	-2.230	-52.313	66.689	1.00187.53	C
ATOM	5674	N	VAL	B1773	-5.891	-49.113	69.836	1.00187.42	N
ATOM	5675	CA	VAL	B1773	-5.875	-47.776	70.418	1.00187.75	C
ATOM	5676	C	VAL	B1773	-4.535	-47.490	71.061	1.00187.89	C
ATOM	5677	O	VAL	B1773	-4.151	-48.123	72.051	1.00188.10	O
ATOM	5678	CB	VAL	B1773	-7.041	-47.558	71.425	1.00187.82	C

ATOM	5679	CG1	VAL	B1773	-6.660	-46.570	72.526	1.00187.81	C
ATOM	5680	CG2	VAL	B1773	-8.298	-47.094	70.691	1.00188.03	C
ATOM	5681	N	THR	B1774	-3.820	-46.542	70.477	1.00187.91	N
ATOM	5682	CA	THR	B1774	-2.590	-46.082	71.069	1.00188.12	C
ATOM	5683	C	THR	B1774	-2.933	-44.761	71.754	1.00188.31	C
ATOM	5684	O	THR	B1774	-3.219	-43.760	71.089	1.00188.40	O
ATOM	5685	CB	THR	B1774	-1.479	-45.975	70.018	1.00188.13	C
ATOM	5686	OG1	THR	B1774	-1.642	-47.029	69.060	1.00188.06	O
ATOM	5687	CG2	THR	B1774	-0.097	-46.102	70.670	1.00188.22	C
ATOM	5688	N	PHE	B1775	-2.918	-44.793	73.090	1.00188.52	N
ATOM	5689	CA	PHE	B1775	-3.554	-43.780	73.954	1.00188.62	C
ATOM	5690	C	PHE	B1775	-2.558	-43.019	74.833	1.00188.85	C
ATOM	5691	O	PHE	B1775	-1.692	-43.620	75.476	1.00188.88	O
ATOM	5692	CB	PHE	B1775	-4.632	-44.476	74.818	1.00188.39	C
ATOM	5693	CG	PHE	B1775	-5.339	-43.582	75.834	1.00187.88	C
ATOM	5694	CD1	PHE	B1775	-5.751	-44.117	77.057	1.00187.15	C
ATOM	5695	CD2	PHE	B1775	-5.627	-42.243	75.570	1.00187.57	C
ATOM	5696	CE1	PHE	B1775	-6.418	-43.341	78.001	1.00186.65	C
ATOM	5697	CE2	PHE	B1775	-6.289	-41.456	76.519	1.00187.40	C
ATOM	5698	CZ	PHE	B1775	-6.686	-42.012	77.733	1.00187.16	C
ATOM	5699	N	ARG	B1776	-2.693	-41.693	74.844	1.00189.10	N
ATOM	5700	CA	ARG	B1776	-1.969	-40.849	75.785	1.00189.37	C
ATOM	5701	C	ARG	B1776	-2.901	-40.008	76.647	1.00189.67	C
ATOM	5702	O	ARG	B1776	-3.838	-39.376	76.147	1.00189.57	O
ATOM	5703	CB	ARG	B1776	-0.975	-39.945	75.063	1.00189.29	C
ATOM	5704	CG	ARG	B1776	0.426	-40.487	75.041	1.00188.94	C
ATOM	5705	CD	ARG	B1776	1.373	-39.431	74.562	1.00188.55	C
ATOM	5706	NE	ARG	B1776	2.690	-39.981	74.273	1.00188.68	N
ATOM	5707	CZ	ARG	B1776	3.627	-39.350	73.571	1.00188.97	C
ATOM	5708	NH1	ARG	B1776	3.397	-38.141	73.070	1.00189.08	N
ATOM	5709	NH2	ARG	B1776	4.801	-39.931	73.364	1.00189.11	N
ATOM	5710	N	ASN	B1777	-2.635	-40.018	77.950	1.00190.10	N
ATOM	5711	CA	ASN	B1777	-3.330	-39.141	78.886	1.00190.53	C
ATOM	5712	C	ASN	B1777	-2.573	-37.829	79.053	1.00190.94	C
ATOM	5713	O	ASN	B1777	-1.341	-37.808	79.181	1.00191.09	O
ATOM	5714	CB	ASN	B1777	-3.529	-39.826	80.248	1.00190.43	C
ATOM	5715	CG	ASN	B1777	-4.251	-38.935	81.270	1.00189.99	C
ATOM	5716	OD1	ASN	B1777	-4.914	-37.951	80.916	1.00188.90	O
ATOM	5717	ND2	ASN	B1777	-4.122	-39.290	82.547	1.00189.48	N
ATOM	5718	N	GLN	B1778	-3.326	-36.735	79.031	1.00191.29	N
ATOM	5719	CA	GLN	B1778	-2.788	-35.412	79.304	1.00191.60	C
ATOM	5720	C	GLN	B1778	-3.791	-34.761	80.255	1.00191.71	C
ATOM	5721	O	GLN	B1778	-4.799	-34.213	79.811	1.00191.91	O
ATOM	5722	CB	GLN	B1778	-2.623	-34.612	77.995	1.00191.63	C
ATOM	5723	CG	GLN	B1778	-1.549	-35.168	77.021	1.00191.79	C
ATOM	5724	CD	GLN	B1778	-1.894	-35.011	75.524	1.00191.66	C
ATOM	5725	OE1	GLN	B1778	-1.068	-35.313	74.655	1.00191.29	O
ATOM	5726	NE2	GLN	B1778	-3.110	-34.551	75.226	1.00191.59	N
ATOM	5727	N	ALA	B1779	-3.535	-34.865	81.562	1.00191.75	N
ATOM	5728	CA	ALA	B1779	-4.453	-34.354	82.597	1.00191.77	C
ATOM	5729	C	ALA	B1779	-3.909	-34.512	84.027	1.00191.82	C
ATOM	5730	O	ALA	B1779	-2.754	-34.905	84.219	1.00191.93	O
ATOM	5731	CB	ALA	B1779	-5.825	-35.029	82.475	1.00191.75	C
ATOM	5732	N	SER	B1780	-4.746	-34.191	85.019	1.00191.77	N
ATOM	5733	CA	SER	B1780	-4.435	-34.416	86.438	1.00191.65	C
ATOM	5734	C	SER	B1780	-4.681	-35.880	86.815	1.00191.55	C
ATOM	5735	O	SER	B1780	-3.810	-36.737	86.617	1.00191.48	O
ATOM	5736	CB	SER	B1780	-5.265	-33.488	87.341	1.00191.64	C
ATOM	5737	OG	SER	B1780	-4.687	-32.201	87.461	1.00191.57	O
ATOM	5738	N	ARG	B1781	-5.871	-36.147	87.362	1.00191.49	N
ATOM	5739	CA	ARG	B1781	-6.315	-37.497	87.714	1.00191.41	C
ATOM	5740	C	ARG	B1781	-6.101	-38.407	86.493	1.00191.90	C
ATOM	5741	O	ARG	B1781	-6.673	-38.153	85.432	1.00192.08	O
ATOM	5742	CB	ARG	B1781	-7.796	-37.474	88.158	1.00191.02	C
ATOM	5743	CG	ARG	B1781	-8.285	-38.694	88.947	1.00189.00	C
ATOM	5744	CD	ARG	B1781	-9.785	-38.870	88.789	1.00185.54	C
ATOM	5745	NE	ARG	B1781	-10.557	-38.027	89.696	1.00182.92	N
ATOM	5746	CZ	ARG	B1781	-11.723	-37.461	89.397	1.00181.04	C
ATOM	5747	NH1	ARG	B1781	-12.264	-37.606	88.200	1.00179.66	N
ATOM	5748	NH2	ARG	B1781	-12.346	-36.729	90.301	1.00180.13	N
ATOM	5749	N	PRO	B1782	-5.229	-39.432	86.619	1.00192.19	N

ATOM	5750	CA	PRO	B1782	-5.027	-40.400	85.533	1.00192.36	C
ATOM	5751	C	PRO	B1782	-6.331	-41.113	85.137	1.00192.50	C
ATOM	5752	O	PRO	B1782	-7.112	-41.496	86.014	1.00192.58	O
ATOM	5753	CB	PRO	B1782	-4.041	-41.401	86.141	1.00192.42	C
ATOM	5754	CG	PRO	B1782	-3.345	-40.644	87.226	1.00192.33	C
ATOM	5755	CD	PRO	B1782	-4.372	-39.725	87.784	1.00192.23	C
ATOM	5756	N	TYR	B1783	-6.563	-41.271	83.832	1.00192.57	N
ATOM	5757	CA	TYR	B1783	-7.778	-41.928	83.322	1.00192.61	C
ATOM	5758	C	TYR	B1783	-7.437	-43.148	82.450	1.00192.69	C
ATOM	5759	O	TYR	B1783	-6.289	-43.594	82.443	1.00192.65	O
ATOM	5760	CB	TYR	B1783	-8.666	-40.932	82.555	1.00192.58	C
ATOM	5761	CG	TYR	B1783	-9.003	-39.637	83.283	1.00192.40	C
ATOM	5762	CD1	TYR	B1783	-9.524	-39.644	84.580	1.00192.49	C
ATOM	5763	CD2	TYR	B1783	-8.830	-38.402	82.654	1.00192.23	C
ATOM	5764	CE1	TYR	B1783	-9.840	-38.444	85.241	1.00192.78	C
ATOM	5765	CE2	TYR	B1783	-9.142	-37.202	83.301	1.00192.37	C
ATOM	5766	CZ	TYR	B1783	-9.646	-37.226	84.592	1.00192.56	C
ATOM	5767	OH	TYR	B1783	-9.955	-36.037	85.230	1.00192.36	O
ATOM	5768	N	SER	B1784	-8.427	-43.684	81.727	1.00192.87	N
ATOM	5769	CA	SER	B1784	-8.231	-44.888	80.898	1.00193.19	C
ATOM	5770	C	SER	B1784	-9.284	-45.113	79.803	1.00193.36	C
ATOM	5771	O	SER	B1784	-10.384	-44.563	79.867	1.00193.43	O
ATOM	5772	CB	SER	B1784	-8.162	-46.138	81.787	1.00193.24	C
ATOM	5773	OG	SER	B1784	-8.281	-47.326	81.018	1.00193.21	O
ATOM	5774	N	PHE	B1785	-8.920	-45.929	78.806	1.00193.49	N
ATOM	5775	CA	PHE	B1785	-9.860	-46.477	77.811	1.00193.56	C
ATOM	5776	C	PHE	B1785	-10.501	-47.731	78.379	1.00193.31	C
ATOM	5777	O	PHE	B1785	-9.841	-48.504	79.077	1.00193.20	O
ATOM	5778	CB	PHE	B1785	-9.155	-46.820	76.481	1.00193.73	C
ATOM	5779	CG	PHE	B1785	-8.052	-47.870	76.609	1.00194.47	C
ATOM	5780	CD1	PHE	B1785	-6.850	-47.584	77.273	1.00194.83	C
ATOM	5781	CD2	PHE	B1785	-8.208	-49.137	76.049	1.00194.85	C
ATOM	5782	CE1	PHE	B1785	-5.830	-48.547	77.386	1.00194.51	C
ATOM	5783	CE2	PHE	B1785	-7.190	-50.105	76.159	1.00194.34	C
ATOM	5784	CZ	PHE	B1785	-6.003	-49.803	76.828	1.00194.17	C
ATOM	5785	N	TYR	B1786	-11.787	-47.912	78.093	1.00193.10	N
ATOM	5786	CA	TYR	B1786	-12.514	-49.127	78.461	1.00192.98	C
ATOM	5787	C	TYR	B1786	-13.831	-49.201	77.724	1.00193.10	C
ATOM	5788	O	TYR	B1786	-14.569	-48.218	77.661	1.00193.03	O
ATOM	5789	CB	TYR	B1786	-12.771	-49.230	79.982	1.00192.76	C
ATOM	5790	CG	TYR	B1786	-13.877	-50.208	80.356	1.00192.26	C
ATOM	5791	CD1	TYR	B1786	-15.186	-49.765	80.528	1.00192.08	C
ATOM	5792	CD2	TYR	B1786	-13.621	-51.572	80.515	1.00191.87	C
ATOM	5793	CE1	TYR	B1786	-16.214	-50.645	80.853	1.00192.31	C
ATOM	5794	CE2	TYR	B1786	-14.649	-52.463	80.842	1.00192.06	C
ATOM	5795	CZ	TYR	B1786	-15.945	-51.986	81.005	1.00192.27	C
ATOM	5796	OH	TYR	B1786	-16.987	-52.827	81.321	1.00192.23	O
ATOM	5797	N	SER	B1787	-14.109	-50.375	77.165	1.00193.35	N
ATOM	5798	CA	SER	B1787	-15.456	-50.735	76.751	1.00193.69	C
ATOM	5799	C	SER	B1787	-15.690	-52.209	77.056	1.00194.07	C
ATOM	5800	O	SER	B1787	-14.951	-52.825	77.826	1.00194.21	O
ATOM	5801	CB	SER	B1787	-15.684	-50.451	75.270	1.00193.45	C
ATOM	5802	OG	SER	B1787	-15.918	-51.649	74.558	1.00193.32	O
ATOM	5803	N	SER	B1788	-16.716	-52.773	76.439	1.00194.53	N
ATOM	5804	CA	SER	B1788	-17.059	-54.160	76.668	1.00195.07	C
ATOM	5805	C	SER	B1788	-16.057	-55.138	76.030	1.00195.42	C
ATOM	5806	O	SER	B1788	-15.202	-55.653	76.755	1.00195.60	O
ATOM	5807	CB	SER	B1788	-18.504	-54.399	76.268	1.00195.13	C
ATOM	5808	OG	SER	B1788	-19.301	-53.391	76.869	1.00195.23	O
ATOM	5809	N	LEU	B1789	-16.120	-55.394	74.716	1.00195.69	N
ATOM	5810	CA	LEU	B1789	-15.061	-56.213	74.091	1.00196.02	C
ATOM	5811	C	LEU	B1789	-13.754	-55.467	74.236	1.00196.28	C
ATOM	5812	O	LEU	B1789	-13.394	-54.617	73.433	1.00196.25	O
ATOM	5813	CB	LEU	B1789	-15.306	-56.594	72.612	1.00195.92	C
ATOM	5814	CG	LEU	B1789	-15.724	-58.005	72.127	1.00195.77	C
ATOM	5815	CD1	LEU	B1789	-15.491	-58.174	70.610	1.00194.04	C
ATOM	5816	CD2	LEU	B1789	-15.052	-59.147	72.899	1.00195.86	C
ATOM	5817	N	ILE	B1790	-13.075	-55.767	75.322	1.00196.73	N
ATOM	5818	CA	ILE	B1790	-11.755	-55.268	75.532	1.00197.24	C
ATOM	5819	C	ILE	B1790	-10.938	-56.536	75.763	1.00197.62	C
ATOM	5820	O	ILE	B1790	-10.079	-56.602	76.638	1.00197.77	O

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ATOM   5821  CB  ILE B1790     -11.739 -54.217  76.679  1.00197.25           C
ATOM   5822  CG1 ILE B1790     -10.414 -53.450  76.677  1.00197.55           C
ATOM   5823  CG2 ILE B1790     -12.108 -54.843  78.051  1.00197.12           C
ATOM   5824  CD1 ILE B1790     -10.517 -52.035  77.178  1.00198.01           C
ATOM   5825  N   SER B1791     -11.236 -57.540  74.936  1.00198.02           N
ATOM   5826  CA  SER B1791     -10.723 -58.902  75.076  1.00198.54           C
ATOM   5827  C   SER B1791      -9.242 -58.998  75.419  1.00198.95           C
ATOM   5828  O   SER B1791      -8.400 -59.148  74.532  1.00199.07           O
ATOM   5829  CB  SER B1791     -11.006 -59.699  73.804  1.00198.50           C
ATOM   5830  OG  SER B1791     -12.397 -59.801  73.584  1.00198.58           O
ATOM   5831  N   TYR B1792      -8.934 -58.916  76.713  1.00199.49           N
ATOM   5832  CA  TYR B1792      -7.564 -59.083  77.193  1.00200.02           C
ATOM   5833  C   TYR B1792      -7.161 -60.544  76.986  1.00200.37           C
ATOM   5834  O   TYR B1792      -7.955 -61.347  76.483  1.00200.19           O
ATOM   5835  CB  TYR B1792      -7.409 -58.670  78.671  1.00200.05           C
ATOM   5836  CG  TYR B1792      -7.835 -57.243  79.051  1.00200.23           C
ATOM   5837  CD1 TYR B1792      -8.575 -57.012  80.220  1.00200.46           C
ATOM   5838  CD2 TYR B1792      -7.482 -56.130  78.269  1.00199.94           C
ATOM   5839  CE1 TYR B1792      -8.967 -55.722  80.595  1.00200.29           C
ATOM   5840  CE2 TYR B1792      -7.873 -54.831  78.638  1.00199.66           C
ATOM   5841  CZ  TYR B1792      -8.617 -54.641  79.801  1.00199.99           C
ATOM   5842  OH  TYR B1792      -9.016 -53.380  80.184  1.00199.89           O
ATOM   5843  N   GLU B1793      -5.939 -60.896  77.375  1.00201.01           N
ATOM   5844  CA  GLU B1793      -5.399 -62.181  76.961  1.00201.76           C
ATOM   5845  C   GLU B1793      -4.656 -63.006  78.008  1.00202.40           C
ATOM   5846  O   GLU B1793      -3.911 -62.466  78.828  1.00202.56           O
ATOM   5847  CB  GLU B1793      -4.531 -62.000  75.709  1.00201.65           C
ATOM   5848  CG  GLU B1793      -4.724 -63.106  74.710  1.00201.71           C
ATOM   5849  CD  GLU B1793      -6.093 -63.738  74.856  1.00202.29           C
ATOM   5850  OE1 GLU B1793      -7.098 -63.092  74.482  1.00202.73           O
ATOM   5851  OE2 GLU B1793      -6.164 -64.873  75.373  1.00202.48           O
ATOM   5852  N   GLU B1794      -4.892 -64.321  77.964  1.00203.14           N
ATOM   5853  CA  GLU B1794      -4.058 -65.336  78.627  1.00203.95           C
ATOM   5854  C   GLU B1794      -3.987 -65.230  80.149  1.00204.43           C
ATOM   5855  O   GLU B1794      -5.012 -65.155  80.822  1.00204.44           O
ATOM   5856  CB  GLU B1794      -2.635 -65.323  78.048  1.00203.95           C
ATOM   5857  CG  GLU B1794      -2.543 -65.488  76.531  1.00204.36           C
ATOM   5858  CD  GLU B1794      -1.209 -65.012  75.958  1.00204.23           C
ATOM   5859  OE1 GLU B1794      -0.340 -64.563  76.741  1.00204.20           O
ATOM   5860  OE2 GLU B1794      -1.033 -65.083  74.719  1.00204.57           O
ATOM   5861  N   ASP B1795      -2.755 -65.242  80.665  1.00205.25           N
ATOM   5862  CA  ASP B1795      -2.448 -65.152  82.098  1.00206.08           C
ATOM   5863  C   ASP B1795      -0.991 -64.702  82.314  1.00206.69           C
ATOM   5864  O   ASP B1795      -0.287 -64.401  81.342  1.00206.82           O
ATOM   5865  CB  ASP B1795      -2.709 -66.498  82.798  1.00206.05           C
ATOM   5866  CG  ASP B1795      -1.655 -67.554  82.473  1.00205.79           C
ATOM   5867  OD1 ASP B1795      -1.284 -67.701  81.288  1.00205.33           O
ATOM   5868  OD2 ASP B1795      -1.208 -68.247  83.414  1.00205.55           O
ATOM   5869  N   GLN B1796      -0.544 -64.667  83.576  1.00207.40           N
ATOM   5870  CA  GLN B1796       0.831 -64.254  83.930  1.00208.04           C
ATOM   5871  C   GLN B1796       1.307 -64.745  85.321  1.00208.33           C
ATOM   5872  O   GLN B1796       0.491 -65.100  86.180  1.00208.45           O
ATOM   5873  CB  GLN B1796       0.964 -62.721  83.841  1.00208.11           C
ATOM   5874  CG  GLN B1796       2.332 -62.220  83.360  1.00208.41           C
ATOM   5875  CD  GLN B1796       2.516 -62.344  81.851  1.00208.59           C
ATOM   5876  OE1 GLN B1796       1.728 -61.804  81.069  1.00208.66           O
ATOM   5877  NE2 GLN B1796       3.567 -63.049  81.438  1.00208.51           N
ATOM   5878  N   ARG B1797       2.630 -64.775  85.521  1.00208.58           N
ATOM   5879  CA  ARG B1797       3.235 -64.943  86.845  1.00208.74           C
ATOM   5880  C   ARG B1797       2.847 -63.712  87.672  1.00208.86           C
ATOM   5881  O   ARG B1797       3.521 -62.679  87.632  1.00208.87           O
ATOM   5882  CB  ARG B1797       4.758 -65.097  86.715  1.00208.73           C
ATOM   5883  CG  ARG B1797       5.556 -65.103  88.022  1.00209.07           C
ATOM   5884  CD  ARG B1797       5.593 -66.471  88.691  1.00209.62           C
ATOM   5885  NE  ARG B1797       4.556 -66.613  89.712  1.00210.01           N
ATOM   5886  CZ  ARG B1797       3.389 -67.228  89.532  1.00210.22           C
ATOM   5887  NH1 ARG B1797       3.085 -67.775  88.359  1.00210.40           N
ATOM   5888  NH2 ARG B1797       2.520 -67.298  90.533  1.00210.16           N
ATOM   5889  N   GLN B1798       1.739 -63.840  88.401  1.00209.04           N
ATOM   5890  CA  GLN B1798       1.034 -62.693  88.980  1.00209.22           C
ATOM   5891  C   GLN B1798       0.640 -62.940  90.446  1.00209.55           C
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ATOM   5892  O   GLN B1798       0.923 -64.007  90.996  1.00209.62           O
ATOM   5893  CB  GLN B1798      -0.207 -62.387  88.130  1.00209.03           C
ATOM   5894  CG  GLN B1798      -0.480 -60.913  87.894  1.00208.53           C
ATOM   5895  CD  GLN B1798       0.306 -60.330  86.736  1.00208.12           C
ATOM   5896  OE1 GLN B1798       1.537 -60.292  86.756  1.00207.82           O
ATOM   5897  NE2 GLN B1798      -0.408 -59.853  85.724  1.00208.06           N
ATOM   5898  N   GLY B1799      -0.003 -61.950  91.071  1.00209.90           N
ATOM   5899  CA  GLY B1799      -0.460 -62.053  92.461  1.00210.35           C
ATOM   5900  C   GLY B1799      -1.965 -61.884  92.597  1.00210.71           C
ATOM   5901  O   GLY B1799      -2.437 -60.867  93.114  1.00210.75           O
ATOM   5902  N   ALA B1800      -2.702 -62.900  92.138  1.00211.03           N
ATOM   5903  CA  ALA B1800      -4.179 -62.916  92.063  1.00211.35           C
ATOM   5904  C   ALA B1800      -4.769 -62.140  90.858  1.00211.62           C
ATOM   5905  O   ALA B1800      -5.934 -61.730  90.880  1.00211.71           O
ATOM   5906  CB  ALA B1800      -4.826 -62.490  93.407  1.00211.26           C
ATOM   5907  N   GLU B1801      -3.954 -61.968  89.812  1.00211.92           N
ATOM   5908  CA  GLU B1801      -4.344 -61.356  88.511  1.00212.14           C
ATOM   5909  C   GLU B1801      -4.702 -59.844  88.513  1.00212.19           C
ATOM   5910  O   GLU B1801      -5.864 -59.476  88.271  1.00212.14           O
ATOM   5911  CB  GLU B1801      -5.436 -62.188  87.792  1.00212.22           C
ATOM   5912  CG  GLU B1801      -5.531 -61.979  86.262  1.00212.17           C
ATOM   5913  CD  GLU B1801      -4.657 -62.943  85.461  1.00211.93           C
ATOM   5914  OE1 GLU B1801      -4.800 -64.175  85.637  1.00211.69           O
ATOM   5915  OE2 GLU B1801      -3.838 -62.469  84.645  1.00211.64           O
ATOM   5916  N   PRO B1802      -3.705 -58.967  88.792  1.00212.20           N
ATOM   5917  CA  PRO B1802      -3.842 -57.544  88.462  1.00212.12           C
ATOM   5918  C   PRO B1802      -4.169 -57.319  86.980  1.00211.97           C
ATOM   5919  O   PRO B1802      -3.269 -57.205  86.140  1.00211.85           O
ATOM   5920  CB  PRO B1802      -2.461 -56.971  88.811  1.00212.20           C
ATOM   5921  CG  PRO B1802      -1.940 -57.873  89.870  1.00212.12           C
ATOM   5922  CD  PRO B1802      -2.431 -59.238  89.489  1.00212.16           C
ATOM   5923  N   ARG B1803      -5.462 -57.279  86.678  1.00211.85           N
ATOM   5924  CA  ARG B1803      -5.950 -56.992  85.336  1.00211.81           C
ATOM   5925  C   ARG B1803      -6.374 -55.516  85.252  1.00211.69           C
ATOM   5926  O   ARG B1803      -7.200 -55.124  84.410  1.00211.67           O
ATOM   5927  CB  ARG B1803      -7.107 -57.940  84.995  1.00211.84           C
ATOM   5928  CG  ARG B1803      -7.481 -57.968  83.522  1.00211.93           C
ATOM   5929  CD  ARG B1803      -7.785 -59.377  83.057  1.00212.02           C
ATOM   5930  NE  ARG B1803      -6.646 -60.279  83.238  1.00211.87           N
ATOM   5931  CZ  ARG B1803      -5.654 -60.435  82.364  1.00211.79           C
ATOM   5932  NH1 ARG B1803      -5.635 -59.750  81.227  1.00211.54           N
ATOM   5933  NH2 ARG B1803      -4.670 -61.282  82.629  1.00211.75           N
ATOM   5934  N   LYS B1804      -5.778 -54.704  86.129  1.00211.42           N
ATOM   5935  CA  LYS B1804      -6.171 -53.310  86.313  1.00211.14           C
ATOM   5936  C   LYS B1804      -5.649 -52.410  85.191  1.00211.03           C
ATOM   5937  O   LYS B1804      -4.442 -52.353  84.930  1.00210.94           O
ATOM   5938  CB  LYS B1804      -5.720 -52.791  87.691  1.00211.02           C
ATOM   5939  CG  LYS B1804      -6.155 -53.646  88.894  1.00210.85           C
ATOM   5940  CD  LYS B1804      -7.640 -53.498  89.238  1.00210.53           C
ATOM   5941  CE  LYS B1804      -8.048 -54.505  90.308  1.00210.46           C
ATOM   5942  NZ  LYS B1804      -9.522 -54.596  90.479  1.00210.02           N
ATOM   5943  N   ASN B1805      -6.574 -51.722  84.523  1.00210.90           N
ATOM   5944  CA  ASN B1805      -6.220 -50.751  83.497  1.00210.80           C
ATOM   5945  C   ASN B1805      -6.123 -49.339  84.067  1.00210.57           C
ATOM   5946  O   ASN B1805      -7.133 -48.728  84.441  1.00210.41           O
ATOM   5947  CB  ASN B1805      -7.205 -50.797  82.327  1.00210.99           C
ATOM   5948  CG  ASN B1805      -6.590 -50.292  81.021  1.00211.63           C
ATOM   5949  OD1 ASN B1805      -5.387 -50.451  80.773  1.00212.28           O
ATOM   5950  ND2 ASN B1805      -7.421 -49.689  80.174  1.00212.05           N
ATOM   5951  N   PHE B1806      -4.889 -48.840  84.119  1.00210.37           N
ATOM   5952  CA  PHE B1806      -4.560 -47.543  84.709  1.00210.10           C
ATOM   5953  C   PHE B1806      -3.582 -46.781  83.795  1.00209.86           C
ATOM   5954  O   PHE B1806      -2.462 -47.246  83.550  1.00209.98           O
ATOM   5955  CB  PHE B1806      -3.952 -47.764  86.101  1.00210.09           C
ATOM   5956  CG  PHE B1806      -4.041 -46.571  87.005  1.00210.14           C
ATOM   5957  CD1 PHE B1806      -2.886 -45.949  87.468  1.00210.28           C
ATOM   5958  CD2 PHE B1806      -5.281 -46.071  87.402  1.00210.25           C
ATOM   5959  CE1 PHE B1806      -2.961 -44.840  88.312  1.00210.49           C
ATOM   5960  CE2 PHE B1806      -5.370 -44.962  88.243  1.00210.38           C
ATOM   5961  CZ  PHE B1806      -4.208 -44.344  88.700  1.00210.41           C
ATOM   5962  N   VAL B1807      -4.011 -45.626  83.279  1.00209.36           N
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ATOM	5963	CA	VAL	B1807	-3.184	-44.848	82.346	1.00208.86	C
ATOM	5964	C	VAL	B1807	-2.764	-43.500	82.933	1.00208.67	C
ATOM	5965	O	VAL	B1807	-3.515	-42.518	82.882	1.00208.50	O
ATOM	5966	CB	VAL	B1807	-3.876	-44.644	80.980	1.00208.79	C
ATOM	5967	CG1	VAL	B1807	-2.934	-43.967	79.999	1.00208.75	C
ATOM	5968	CG2	VAL	B1807	-4.357	-45.971	80.422	1.00208.69	C
ATOM	5969	N	LYS	B1808	-1.549	-43.476	83.482	1.00208.51	N
ATOM	5970	CA	LYS	B1808	-0.981	-42.296	84.139	1.00208.29	C
ATOM	5971	C	LYS	B1808	-0.643	-41.197	83.134	1.00208.28	C
ATOM	5972	O	LYS	B1808	-0.267	-41.496	82.001	1.00208.29	O
ATOM	5973	CB	LYS	B1808	0.266	-42.681	84.948	1.00208.30	C
ATOM	5974	CG	LYS	B1808	-0.026	-43.299	86.319	1.00208.10	C
ATOM	5975	CD	LYS	B1808	1.254	-43.516	87.115	1.00207.97	C
ATOM	5976	CE	LYS	B1808	0.964	-44.013	88.516	1.00207.27	C
ATOM	5977	NZ	LYS	B1808	2.227	-44.200	89.276	1.00207.11	N
ATOM	5978	N	PRO	B1809	-0.781	-39.919	83.543	1.00208.25	N
ATOM	5979	CA	PRO	B1809	-0.525	-38.788	82.652	1.00208.38	C
ATOM	5980	C	PRO	B1809	0.816	-38.875	81.917	1.00208.60	C
ATOM	5981	O	PRO	B1809	1.810	-39.334	82.484	1.00208.58	O
ATOM	5982	CB	PRO	B1809	-0.554	-37.593	83.603	1.00208.30	C
ATOM	5983	CG	PRO	B1809	-1.496	-38.016	84.667	1.00208.14	C
ATOM	5984	CD	PRO	B1809	-1.201	-39.461	84.880	1.00208.16	C
ATOM	5985	N	ASN	B1810	0.811	-38.443	80.656	1.00208.87	N
ATOM	5986	CA	ASN	B1810	1.960	-38.533	79.738	1.00209.21	C
ATOM	5987	C	ASN	B1810	2.474	-39.939	79.377	1.00208.54	C
ATOM	5988	O	ASN	B1810	3.232	-40.084	78.414	1.00208.62	O
ATOM	5989	CB	ASN	B1810	3.110	-37.601	80.158	1.00209.77	C
ATOM	5990	CG	ASN	B1810	3.029	-36.236	79.486	1.00212.63	C
ATOM	5991	OD1	ASN	B1810	2.383	-36.078	78.441	1.00213.00	O
ATOM	5992	ND2	ASN	B1810	3.708	-35.242	80.076	1.00217.71	N
ATOM	5993	N	GLU	B1811	2.064	-40.966	80.124	1.00207.70	N
ATOM	5994	CA	GLU	B1811	2.414	-42.343	79.756	1.00206.72	C
ATOM	5995	C	GLU	B1811	1.510	-42.812	78.616	1.00206.10	C
ATOM	5996	O	GLU	B1811	0.451	-42.226	78.367	1.00205.91	O
ATOM	5997	CB	GLU	B1811	2.406	-43.303	80.971	1.00206.81	C
ATOM	5998	CG	GLU	B1811	1.136	-44.156	81.190	1.00206.67	C
ATOM	5999	CD	GLU	B1811	1.351	-45.350	82.133	1.00206.49	C
ATOM	6000	OE1	GLU	B1811	2.355	-45.369	82.876	1.00206.29	O
ATOM	6001	OE2	GLU	B1811	0.509	-46.275	82.131	1.00205.81	O
ATOM	6002	N	THR	B1812	1.949	-43.852	77.915	1.00205.33	N
ATOM	6003	CA	THR	B1812	1.220	-44.370	76.766	1.00204.60	C
ATOM	6004	C	THR	B1812	0.799	-45.824	77.010	1.00204.02	C
ATOM	6005	O	THR	B1812	1.640	-46.724	77.074	1.00203.91	O
ATOM	6006	CB	THR	B1812	2.061	-44.226	75.463	1.00204.69	C
ATOM	6007	OG1	THR	B1812	2.546	-42.881	75.348	1.00204.57	O
ATOM	6008	CG2	THR	B1812	1.242	-44.568	74.223	1.00204.69	C
ATOM	6009	N	LYS	B1813	-0.503	-46.038	77.178	1.00203.35	N
ATOM	6010	CA	LYS	B1813	-1.047	-47.393	77.275	1.00202.80	C
ATOM	6011	C	LYS	B1813	-1.778	-47.775	75.999	1.00202.33	C
ATOM	6012	O	LYS	B1813	-2.846	-47.249	75.679	1.00202.16	O
ATOM	6013	CB	LYS	B1813	-1.936	-47.590	78.511	1.00202.86	C
ATOM	6014	CG	LYS	B1813	-1.171	-48.023	79.760	1.00202.79	C
ATOM	6015	CD	LYS	B1813	-1.980	-48.989	80.613	1.00202.44	C
ATOM	6016	CE	LYS	B1813	-1.094	-49.691	81.637	1.00202.20	C
ATOM	6017	NZ	LYS	B1813	-1.797	-50.826	82.305	1.00201.89	N
ATOM	6018	N	THR	B1814	-1.174	-48.705	75.278	1.00201.81	N
ATOM	6019	CA	THR	B1814	-1.638	-49.096	73.968	1.00201.31	C
ATOM	6020	C	THR	B1814	-2.324	-50.455	74.035	1.00201.12	C
ATOM	6021	O	THR	B1814	-1.689	-51.441	74.433	1.00201.09	O
ATOM	6022	CB	THR	B1814	-0.455	-49.130	72.972	1.00201.29	C
ATOM	6023	OG1	THR	B1814	-0.798	-49.936	71.840	1.00201.11	O
ATOM	6024	CG2	THR	B1814	0.825	-49.679	73.639	1.00201.01	C
ATOM	6025	N	TYR	B1815	-3.613	-50.508	73.670	1.00200.80	N
ATOM	6026	CA	TYR	B1815	-4.318	-51.807	73.581	1.00200.44	C
ATOM	6027	C	TYR	B1815	-5.158	-52.094	72.325	1.00199.62	C
ATOM	6028	O	TYR	B1815	-5.761	-51.198	71.740	1.00199.26	O
ATOM	6029	CB	TYR	B1815	-5.084	-52.155	74.865	1.00200.96	C
ATOM	6030	CG	TYR	B1815	-4.726	-53.544	75.378	1.00201.91	C
ATOM	6031	CD1	TYR	B1815	-5.504	-54.660	75.047	1.00202.48	C
ATOM	6032	CD2	TYR	B1815	-3.579	-53.747	76.162	1.00202.41	C
ATOM	6033	CE1	TYR	B1815	-5.165	-55.940	75.497	1.00202.38	C

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ATOM   6034  CE2 TYR B1815      -3.232 -55.019  76.617  1.00202.43           C
ATOM   6035  CZ  TYR B1815      -4.030 -56.109  76.281  1.00202.28           C
ATOM   6036  OH  TYR B1815      -3.696 -57.368  76.732  1.00202.30           O
ATOM   6037  N   PHE B1816      -5.182 -53.380  71.959  1.00198.87           N
ATOM   6038  CA  PHE B1816      -5.597 -53.865  70.644  1.00198.17           C
ATOM   6039  C   PHE B1816      -5.931 -55.366  70.666  1.00197.98           C
ATOM   6040  O   PHE B1816      -5.219 -56.163  71.273  1.00197.83           O
ATOM   6041  CB  PHE B1816      -4.519 -53.505  69.612  1.00198.02           C
ATOM   6042  CG  PHE B1816      -4.069 -54.640  68.754  1.00197.37           C
ATOM   6043  CD1 PHE B1816      -2.862 -55.265  69.009  1.00197.16           C
ATOM   6044  CD2 PHE B1816      -4.824 -55.056  67.670  1.00197.01           C
ATOM   6045  CE1 PHE B1816      -2.424 -56.305  68.216  1.00197.28           C
ATOM   6046  CE2 PHE B1816      -4.398 -56.095  66.874  1.00197.04           C
ATOM   6047  CZ  PHE B1816      -3.193 -56.721  67.145  1.00197.46           C
ATOM   6048  N   TRP B1817      -7.016 -55.726  69.981  1.00197.98           N
ATOM   6049  CA  TRP B1817      -7.739 -56.997  70.190  1.00198.05           C
ATOM   6050  C   TRP B1817      -8.625 -57.379  69.002  1.00197.76           C
ATOM   6051  O   TRP B1817      -9.194 -56.507  68.338  1.00197.77           O
ATOM   6052  CB  TRP B1817      -8.641 -56.882  71.430  1.00198.32           C
ATOM   6053  CG  TRP B1817      -9.231 -55.480  71.620  1.00198.83           C
ATOM   6054  CD1 TRP B1817      -8.625 -54.413  72.230  1.00199.31           C
ATOM   6055  CD2 TRP B1817     -10.517 -55.007  71.191  1.00198.74           C
ATOM   6056  NE1 TRP B1817      -9.447 -53.312  72.208  1.00198.99           N
ATOM   6057  CE2 TRP B1817     -10.615 -53.644  71.579  1.00198.36           C
ATOM   6058  CE3 TRP B1817     -11.592 -55.595  70.521  1.00198.82           C
ATOM   6059  CZ2 TRP B1817     -11.736 -52.865  71.320  1.00197.90           C
ATOM   6060  CZ3 TRP B1817     -12.713 -54.814  70.264  1.00199.16           C
ATOM   6061  CH2 TRP B1817     -12.772 -53.459  70.664  1.00198.67           C
ATOM   6062  N   LYS B1818      -8.768 -58.677  68.746  1.00197.35           N
ATOM   6063  CA  LYS B1818      -9.698 -59.126  67.719  1.00196.94           C
ATOM   6064  C   LYS B1818     -11.089 -58.756  68.184  1.00196.73           C
ATOM   6065  O   LYS B1818     -11.418 -58.938  69.352  1.00196.71           O
ATOM   6066  CB  LYS B1818      -9.601 -60.636  67.505  1.00196.90           C
ATOM   6067  CG  LYS B1818     -10.314 -61.155  66.249  1.00196.89           C
ATOM   6068  CD  LYS B1818      -9.396 -61.160  65.016  1.00197.01           C
ATOM   6069  CE  LYS B1818     -10.072 -61.776  63.776  1.00196.86           C
ATOM   6070  NZ  LYS B1818     -10.063 -63.279  63.737  1.00196.43           N
ATOM   6071  N   VAL B1819     -11.888 -58.195  67.285  1.00196.58           N
ATOM   6072  CA  VAL B1819     -13.286 -57.910  67.595  1.00196.52           C
ATOM   6073  C   VAL B1819     -14.172 -59.036  67.091  1.00196.51           C
ATOM   6074  O   VAL B1819     -14.694 -58.993  65.980  1.00196.51           O
ATOM   6075  CB  VAL B1819     -13.771 -56.529  67.069  1.00196.53           C
ATOM   6076  CG1 VAL B1819     -13.385 -56.304  65.611  1.00196.27           C
ATOM   6077  CG2 VAL B1819     -15.279 -56.383  67.269  1.00196.58           C
ATOM   6078  N   GLN B1820     -14.328 -60.049  67.931  1.00196.55           N
ATOM   6079  CA  GLN B1820     -15.114 -61.235  67.608  1.00196.52           C
ATOM   6080  C   GLN B1820     -16.580 -60.888  67.282  1.00196.35           C
ATOM   6081  O   GLN B1820     -17.014 -59.740  67.453  1.00196.35           O
ATOM   6082  CB  GLN B1820     -15.003 -62.237  68.774  1.00196.60           C
ATOM   6083  CG  GLN B1820     -15.792 -63.537  68.628  1.00196.91           C
ATOM   6084  CD  GLN B1820     -15.332 -64.398  67.462  1.00197.16           C
ATOM   6085  OE1 GLN B1820     -14.139 -64.637  67.279  1.00197.10           O
ATOM   6086  NE2 GLN B1820     -16.288 -64.878  66.675  1.00197.48           N
ATOM   6087  N   HIS B1821     -17.314 -61.888  66.793  1.00196.09           N
ATOM   6088  CA  HIS B1821     -18.757 -61.826  66.577  1.00196.11           C
ATOM   6089  C   HIS B1821     -19.562 -61.590  67.894  1.00195.57           C
ATOM   6090  O   HIS B1821     -20.764 -61.261  67.874  1.00195.50           O
ATOM   6091  CB  HIS B1821     -19.188 -63.096  65.843  1.00196.53           C
ATOM   6092  CG  HIS B1821     -20.651 -63.162  65.552  1.00198.60           C
ATOM   6093  ND1 HIS B1821     -21.485 -64.087  66.145  1.00200.17           N
ATOM   6094  CD2 HIS B1821     -21.435 -62.406  64.746  1.00200.21           C
ATOM   6095  CE1 HIS B1821     -22.721 -63.902  65.714  1.00200.86           C
ATOM   6096  NE2 HIS B1821     -22.718 -62.888  64.864  1.00201.27           N
ATOM   6097  N   HIS B1822     -18.877 -61.776  69.025  1.00194.84           N
ATOM   6098  CA  HIS B1822     -19.244 -61.215  70.335  1.00193.93           C
ATOM   6099  C   HIS B1822     -19.878 -59.814  70.169  1.00193.06           C
ATOM   6100  O   HIS B1822     -21.079 -59.657  70.397  1.00192.63           O
ATOM   6101  CB  HIS B1822     -17.962 -61.155  71.194  1.00194.16           C
ATOM   6102  CG  HIS B1822     -18.178 -61.306  72.671  1.00194.78           C
ATOM   6103  ND1 HIS B1822     -19.332 -61.826  73.218  1.00195.61           N
ATOM   6104  CD2 HIS B1822     -17.355 -61.041  73.715  1.00195.28           C
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ATOM   6105  CE1 HIS B1822     -19.221 -61.849  74.537  1.00195.80           C
ATOM   6106  NE2 HIS B1822     -18.031 -61.376  74.864  1.00195.77           N
ATOM   6107  N   MET B1823     -19.072 -58.836  69.721  1.00192.13           N
ATOM   6108  CA  MET B1823     -19.487 -57.429  69.508  1.00191.43           C
ATOM   6109  C   MET B1823     -20.305 -57.147  68.222  1.00190.57           C
ATOM   6110  O   MET B1823     -20.755 -56.028  67.993  1.00190.10           O
ATOM   6111  CB  MET B1823     -18.258 -56.483  69.537  1.00191.49           C
ATOM   6112  CG  MET B1823     -17.713 -55.955  70.949  1.00192.23           C
ATOM   6113  SD  MET B1823     -18.126 -54.324  71.774  1.00191.97           S
ATOM   6114  CE  MET B1823     -16.525 -53.597  72.121  1.00190.96           C
ATOM   6115  N   ALA B1824     -20.504 -58.148  67.383  1.00190.08           N
ATOM   6116  CA  ALA B1824     -21.144 -57.913  66.091  1.00189.63           C
ATOM   6117  C   ALA B1824     -22.662 -57.920  66.163  1.00189.26           C
ATOM   6118  O   ALA B1824     -23.240 -58.674  66.953  1.00189.36           O
ATOM   6119  CB  ALA B1824     -20.668 -58.938  65.069  1.00189.81           C
ATOM   6120  N   PRO B1825     -23.310 -57.062  65.353  1.00188.73           N
ATOM   6121  CA  PRO B1825     -24.732 -57.130  65.012  1.00188.61           C
ATOM   6122  C   PRO B1825     -25.048 -58.314  64.097  1.00188.72           C
ATOM   6123  O   PRO B1825     -24.141 -58.851  63.470  1.00188.66           O
ATOM   6124  CB  PRO B1825     -24.974 -55.816  64.280  1.00188.37           C
ATOM   6125  CG  PRO B1825     -23.673 -55.455  63.747  1.00188.27           C
ATOM   6126  CD  PRO B1825     -22.673 -55.885  64.752  1.00188.44           C
ATOM   6127  N   THR B1826     -26.325 -58.698  64.017  1.00189.08           N
ATOM   6128  CA  THR B1826     -26.747 -59.966  63.392  1.00189.53           C
ATOM   6129  C   THR B1826     -27.646 -59.815  62.159  1.00190.06           C
ATOM   6130  O   THR B1826     -28.049 -58.709  61.812  1.00189.92           O
ATOM   6131  CB  THR B1826     -27.500 -60.868  64.403  1.00189.46           C
ATOM   6132  OG1 THR B1826     -28.646 -60.176  64.907  1.00189.10           O
ATOM   6133  CG2 THR B1826     -26.603 -61.283  65.562  1.00189.48           C
ATOM   6134  N   LYS B1827     -27.967 -60.947  61.523  1.00191.02           N
ATOM   6135  CA  LYS B1827     -28.852 -61.005  60.335  1.00192.08           C
ATOM   6136  C   LYS B1827     -30.244 -60.451  60.600  1.00192.81           C
ATOM   6137  O   LYS B1827     -30.920 -59.977  59.679  1.00192.88           O
ATOM   6138  CB  LYS B1827     -28.954 -62.441  59.746  1.00192.13           C
ATOM   6139  CG  LYS B1827     -29.965 -63.457  60.403  1.00191.92           C
ATOM   6140  CD  LYS B1827     -31.413 -63.388  59.845  1.00191.21           C
ATOM   6141  CE  LYS B1827     -31.549 -63.870  58.394  1.00190.86           C
ATOM   6142  NZ  LYS B1827     -31.738 -65.336  58.269  1.00190.46           N
ATOM   6143  N   ASP B1828     -30.667 -60.563  61.859  1.00193.73           N
ATOM   6144  CA  ASP B1828     -31.933 -60.024  62.321  1.00194.60           C
ATOM   6145  C   ASP B1828     -31.785 -58.500  62.475  1.00194.84           C
ATOM   6146  O   ASP B1828     -32.749 -57.752  62.263  1.00195.06           O
ATOM   6147  CB  ASP B1828     -32.353 -60.676  63.660  1.00194.87           C
ATOM   6148  CG  ASP B1828     -32.694 -62.191  63.538  1.00196.15           C
ATOM   6149  OD1 ASP B1828     -33.840 -62.571  63.889  1.00197.40           O
ATOM   6150  OD2 ASP B1828     -31.825 -63.007  63.130  1.00197.06           O
ATOM   6151  N   GLU B1829     -30.565 -58.050  62.790  1.00195.01           N
ATOM   6152  CA  GLU B1829     -30.318 -56.668  63.236  1.00195.36           C
ATOM   6153  C   GLU B1829     -30.159 -55.596  62.137  1.00195.11           C
ATOM   6154  O   GLU B1829     -30.805 -55.681  61.089  1.00194.92           O
ATOM   6155  CB  GLU B1829     -29.169 -56.628  64.267  1.00195.38           C
ATOM   6156  CG  GLU B1829     -29.632 -56.875  65.724  1.00196.05           C
ATOM   6157  CD  GLU B1829     -28.491 -56.913  66.745  1.00196.36           C
ATOM   6158  OE1 GLU B1829     -28.507 -56.090  67.689  1.00197.43           O
ATOM   6159  OE2 GLU B1829     -27.583 -57.769  66.614  1.00198.14           O
ATOM   6160  N   PHE B1830     -29.345 -54.571  62.422  1.00195.19           N
ATOM   6161  CA  PHE B1830     -29.056 -53.463  61.493  1.00195.28           C
ATOM   6162  C   PHE B1830     -27.667 -53.547  60.896  1.00195.66           C
ATOM   6163  O   PHE B1830     -26.855 -54.363  61.319  1.00196.05           O
ATOM   6164  CB  PHE B1830     -29.215 -52.104  62.171  1.00194.83           C
ATOM   6165  CG  PHE B1830     -30.611 -51.584  62.139  1.00194.63           C
ATOM   6166  CD1 PHE B1830     -31.617 -52.283  61.466  1.00194.64           C
ATOM   6167  CD2 PHE B1830     -30.930 -50.391  62.759  1.00194.41           C
ATOM   6168  CE1 PHE B1830     -32.921 -51.807  61.424  1.00194.13           C
ATOM   6169  CE2 PHE B1830     -32.236 -49.905  62.722  1.00194.49           C
ATOM   6170  CZ  PHE B1830     -33.231 -50.615  62.048  1.00194.26           C
ATOM   6171  N   ASP B1831     -27.385 -52.687  59.923  1.00195.93           N
ATOM   6172  CA  ASP B1831     -26.082 -52.695  59.262  1.00196.23           C
ATOM   6173  C   ASP B1831     -24.944 -52.403  60.230  1.00195.98           C
ATOM   6174  O   ASP B1831     -23.789 -52.684  59.915  1.00195.98           O
ATOM   6175  CB  ASP B1831     -26.053 -51.697  58.109  1.00196.57           C
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ATOM	6176	CG	ASP	B1831	-27.137	-51.963	57.084	1.00197.68	C
ATOM	6177	OD1	ASP	B1831	-28.118	-51.170	57.050	1.00198.39	O
ATOM	6178	OD2	ASP	B1831	-27.010	-52.971	56.335	1.00198.64	O
ATOM	6179	N	CYS	B1832	-25.277	-51.845	61.398	1.00195.83	N
ATOM	6180	CA	CYS	B1832	-24.295	-51.596	62.452	1.00195.42	C
ATOM	6181	C	CYS	B1832	-24.913	-51.409	63.846	1.00195.00	C
ATOM	6182	O	CYS	B1832	-25.928	-50.725	63.987	1.00195.13	O
ATOM	6183	CB	CYS	B1832	-23.436	-50.386	62.090	1.00195.49	C
ATOM	6184	SG	CYS	B1832	-21.662	-50.676	62.358	1.00196.71	S
ATOM	6185	N	LYS	B1833	-24.293	-52.023	64.859	1.00194.40	N
ATOM	6186	CA	LYS	B1833	-24.697	-51.879	66.266	1.00193.76	C
ATOM	6187	C	LYS	B1833	-23.869	-50.765	66.939	1.00193.43	C
ATOM	6188	O	LYS	B1833	-22.865	-50.308	66.384	1.00193.24	O
ATOM	6189	CB	LYS	B1833	-24.552	-53.223	67.008	1.00193.73	C
ATOM	6190	CG	LYS	B1833	-25.675	-53.560	68.016	1.00193.71	C
ATOM	6191	CD	LYS	B1833	-25.409	-53.014	69.438	1.00194.43	C
ATOM	6192	CE	LYS	B1833	-26.695	-52.808	70.278	1.00194.07	C
ATOM	6193	NZ	LYS	B1833	-26.462	-52.057	71.563	1.00193.00	N
ATOM	6194	N	ALA	B1834	-24.295	-50.327	68.122	1.00193.21	N
ATOM	6195	CA	ALA	B1834	-23.642	-49.214	68.827	1.00193.07	C
ATOM	6196	C	ALA	B1834	-23.219	-49.523	70.265	1.00192.86	C
ATOM	6197	O	ALA	B1834	-23.999	-50.059	71.060	1.00192.75	O
ATOM	6198	CB	ALA	B1834	-24.529	-47.992	68.809	1.00193.35	C
ATOM	6199	N	TRP	B1835	-21.984	-49.143	70.587	1.00192.52	N
ATOM	6200	CA	TRP	B1835	-21.340	-49.503	71.843	1.00192.27	C
ATOM	6201	C	TRP	B1835	-20.635	-48.318	72.452	1.00192.41	C
ATOM	6202	O	TRP	B1835	-20.220	-47.408	71.744	1.00192.55	O
ATOM	6203	CB	TRP	B1835	-20.313	-50.604	71.598	1.00191.96	C
ATOM	6204	CG	TRP	B1835	-20.936	-51.871	71.149	1.00191.52	C
ATOM	6205	CD1	TRP	B1835	-21.290	-52.204	69.878	1.00191.66	C
ATOM	6206	CD2	TRP	B1835	-21.306	-52.973	71.968	1.00190.64	C
ATOM	6207	NE1	TRP	B1835	-21.856	-53.455	69.852	1.00191.16	N
ATOM	6208	CE2	TRP	B1835	-21.876	-53.947	71.125	1.00190.40	C
ATOM	6209	CE3	TRP	B1835	-21.210	-53.235	73.333	1.00191.02	C
ATOM	6210	CZ2	TRP	B1835	-22.344	-55.154	71.599	1.00190.99	C
ATOM	6211	CZ3	TRP	B1835	-21.675	-54.436	73.804	1.00191.53	C
ATOM	6212	CH2	TRP	B1835	-22.236	-55.382	72.940	1.00191.59	C
ATOM	6213	N	ALA	B1836	-20.469	-48.347	73.765	1.00192.61	N
ATOM	6214	CA	ALA	B1836	-19.832	-47.248	74.464	1.00192.99	C
ATOM	6215	C	ALA	B1836	-18.403	-47.568	74.879	1.00193.29	C
ATOM	6216	O	ALA	B1836	-18.086	-48.713	75.193	1.00193.29	O
ATOM	6217	CB	ALA	B1836	-20.652	-46.865	75.672	1.00193.02	C
ATOM	6218	N	TYR	B1837	-17.547	-46.549	74.845	1.00193.72	N
ATOM	6219	CA	TYR	B1837	-16.269	-46.577	75.550	1.00194.27	C
ATOM	6220	C	TYR	B1837	-16.199	-45.390	76.485	1.00194.93	C
ATOM	6221	O	TYR	B1837	-16.749	-44.334	76.170	1.00195.07	O
ATOM	6222	CB	TYR	B1837	-15.060	-46.591	74.600	1.00194.05	C
ATOM	6223	CG	TYR	B1837	-14.774	-45.328	73.784	1.00193.92	C
ATOM	6224	CD1	TYR	B1837	-14.128	-44.222	74.345	1.00193.66	C
ATOM	6225	CD2	TYR	B1837	-15.087	-45.275	72.426	1.00193.98	C
ATOM	6226	CE1	TYR	B1837	-13.849	-43.082	73.577	1.00193.37	C
ATOM	6227	CE2	TYR	B1837	-14.808	-44.146	71.658	1.00193.52	C
ATOM	6228	CZ	TYR	B1837	-14.193	-43.059	72.233	1.00193.41	C
ATOM	6229	OH	TYR	B1837	-13.939	-41.959	71.450	1.00193.43	O
ATOM	6230	N	PHE	B1838	-15.537	-45.571	77.631	1.00195.79	N
ATOM	6231	CA	PHE	B1838	-15.315	-44.485	78.614	1.00196.54	C
ATOM	6232	C	PHE	B1838	-14.152	-44.763	79.570	1.00196.79	C
ATOM	6233	O	PHE	B1838	-13.535	-45.830	79.502	1.00197.03	O
ATOM	6234	CB	PHE	B1838	-16.597	-44.162	79.402	1.00196.74	C
ATOM	6235	CG	PHE	B1838	-17.172	-45.328	80.156	1.00197.01	C
ATOM	6236	CD1	PHE	B1838	-17.772	-46.393	79.477	1.00196.82	C
ATOM	6237	CD2	PHE	B1838	-17.149	-45.342	81.551	1.00197.57	C
ATOM	6238	CE1	PHE	B1838	-18.319	-47.464	80.169	1.00197.40	C
ATOM	6239	CE2	PHE	B1838	-17.698	-46.411	82.261	1.00198.00	C
ATOM	6240	CZ	PHE	B1838	-18.284	-47.476	81.569	1.00197.84	C
ATOM	6241	N	SER	B1839	-13.846	-43.811	80.450	1.00196.94	N
ATOM	6242	CA	SER	B1839	-12.820	-44.057	81.453	1.00197.14	C
ATOM	6243	C	SER	B1839	-13.358	-44.848	82.633	1.00197.43	C
ATOM	6244	O	SER	B1839	-14.350	-44.463	83.260	1.00197.21	O
ATOM	6245	CB	SER	B1839	-12.171	-42.771	81.930	1.00197.11	C
ATOM	6246	OG	SER	B1839	-11.044	-43.090	82.723	1.00196.96	O

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ATOM   6247  N   ASP B1840     -12.689 -45.961  82.918  1.00198.03           N
ATOM   6248  CA  ASP B1840     -13.097 -46.868  83.991  1.00198.84           C
ATOM   6249  C   ASP B1840     -12.295 -46.670  85.280  1.00199.10           C
ATOM   6250  O   ASP B1840     -12.492 -47.398  86.263  1.00199.19           O
ATOM   6251  CB  ASP B1840     -13.094 -48.347  83.525  1.00199.09           C
ATOM   6252  CG  ASP B1840     -11.708 -49.028  83.612  1.00199.98           C
ATOM   6253  OD1 ASP B1840     -11.678 -50.269  83.779  1.00200.88           O
ATOM   6254  OD2 ASP B1840     -10.657 -48.354  83.504  1.00201.07           O
ATOM   6255  N   VAL B1841     -11.394 -45.685  85.267  1.00199.40           N
ATOM   6256  CA  VAL B1841     -10.683 -45.268  86.475  1.00199.56           C
ATOM   6257  C   VAL B1841     -11.721 -44.902  87.531  1.00199.76           C
ATOM   6258  O   VAL B1841     -11.677 -45.419  88.644  1.00199.97           O
ATOM   6259  CB  VAL B1841      -9.665 -44.130  86.194  1.00199.52           C
ATOM   6260  CG1 VAL B1841      -9.545 -43.164  87.376  1.00199.47           C
ATOM   6261  CG2 VAL B1841      -8.310 -44.730  85.840  1.00199.51           C
ATOM   6262  N   ASP B1842     -12.674 -44.048  87.169  1.00199.91           N
ATOM   6263  CA  ASP B1842     -13.857 -43.864  87.998  1.00200.07           C
ATOM   6264  C   ASP B1842     -15.123 -43.694  87.166  1.00200.04           C
ATOM   6265  O   ASP B1842     -15.677 -42.597  87.067  1.00200.07           O
ATOM   6266  CB  ASP B1842     -13.686 -42.709  88.985  1.00200.20           C
ATOM   6267  CG  ASP B1842     -14.603 -42.841  90.186  1.00200.81           C
ATOM   6268  OD1 ASP B1842     -14.553 -41.954  91.068  1.00201.47           O
ATOM   6269  OD2 ASP B1842     -15.368 -43.837  90.250  1.00201.43           O
ATOM   6270  N   LEU B1843     -15.565 -44.806  86.581  1.00200.02           N
ATOM   6271  CA  LEU B1843     -16.815 -44.909  85.805  1.00199.82           C
ATOM   6272  C   LEU B1843     -17.961 -44.015  86.312  1.00199.49           C
ATOM   6273  O   LEU B1843     -18.795 -43.559  85.521  1.00199.50           O
ATOM   6274  CB  LEU B1843     -17.262 -46.386  85.709  1.00199.96           C
ATOM   6275  CG  LEU B1843     -16.644 -47.439  86.658  1.00200.07           C
ATOM   6276  CD1 LEU B1843     -17.189 -47.322  88.096  1.00199.54           C
ATOM   6277  CD2 LEU B1843     -16.762 -48.880  86.100  1.00199.58           C
ATOM   6278  N   GLU B1844     -17.978 -43.770  87.624  1.00198.95           N
ATOM   6279  CA  GLU B1844     -18.934 -42.867  88.267  1.00198.38           C
ATOM   6280  C   GLU B1844     -18.654 -41.398  87.920  1.00197.80           C
ATOM   6281  O   GLU B1844     -19.502 -40.720  87.339  1.00197.61           O
ATOM   6282  CB  GLU B1844     -18.917 -43.089  89.789  1.00198.50           C
ATOM   6283  CG  GLU B1844     -20.106 -42.494  90.561  1.00198.92           C
ATOM   6284  CD  GLU B1844     -19.734 -41.308  91.451  1.00199.77           C
ATOM   6285  OE1 GLU B1844     -18.596 -41.269  91.976  1.00200.13           O
ATOM   6286  OE2 GLU B1844     -20.593 -40.417  91.645  1.00200.06           O
ATOM   6287  N   LYS B1845     -17.465 -40.919  88.274  1.00197.24           N
ATOM   6288  CA  LYS B1845     -17.102 -39.520  88.054  1.00196.80           C
ATOM   6289  C   LYS B1845     -16.684 -39.248  86.609  1.00196.78           C
ATOM   6290  O   LYS B1845     -17.134 -38.264  86.016  1.00196.75           O
ATOM   6291  CB  LYS B1845     -16.009 -39.058  89.037  1.00196.69           C
ATOM   6292  CG  LYS B1845     -16.505 -38.831  90.456  1.00195.56           C
ATOM   6293  CD  LYS B1845     -15.509 -38.090  91.312  1.00193.69           C
ATOM   6294  CE  LYS B1845     -16.131 -37.817  92.663  1.00193.05           C
ATOM   6295  NZ  LYS B1845     -15.203 -37.146  93.600  1.00192.76           N
ATOM   6296  N   ASP B1846     -15.844 -40.128  86.050  1.00196.69           N
ATOM   6297  CA  ASP B1846     -15.230 -39.962  84.710  1.00196.50           C
ATOM   6298  C   ASP B1846     -16.237 -40.049  83.546  1.00196.20           C
ATOM   6299  O   ASP B1846     -15.862 -40.275  82.390  1.00196.10           O
ATOM   6300  CB  ASP B1846     -14.066 -40.956  84.508  1.00196.60           C
ATOM   6301  CG  ASP B1846     -12.930 -40.781  85.537  1.00197.02           C
ATOM   6302  OD1 ASP B1846     -12.927 -39.793  86.309  1.00197.69           O
ATOM   6303  OD2 ASP B1846     -12.026 -41.647  85.573  1.00197.34           O
ATOM   6304  N   VAL B1847     -17.514 -39.870  83.887  1.00195.90           N
ATOM   6305  CA  VAL B1847     -18.638 -39.846  82.945  1.00195.41           C
ATOM   6306  C   VAL B1847     -19.333 -38.455  83.004  1.00194.98           C
ATOM   6307  O   VAL B1847     -19.781 -37.922  81.984  1.00194.84           O
ATOM   6308  CB  VAL B1847     -19.615 -41.082  83.179  1.00195.44           C
ATOM   6309  CG1 VAL B1847     -20.757 -40.779  84.171  1.00195.43           C
ATOM   6310  CG2 VAL B1847     -20.174 -41.597  81.869  1.00195.41           C
ATOM   6311  N   HIS B1848     -19.396 -37.872  84.205  1.00194.42           N
ATOM   6312  CA  HIS B1848     -19.819 -36.484  84.386  1.00193.57           C
ATOM   6313  C   HIS B1848     -18.622 -35.594  84.053  1.00193.30           C
ATOM   6314  O   HIS B1848     -18.779 -34.447  83.634  1.00193.29           O
ATOM   6315  CB  HIS B1848     -20.282 -36.229  85.828  1.00193.34           C
ATOM   6316  CG  HIS B1848     -21.352 -37.161  86.308  1.00192.16           C
ATOM   6317  ND1 HIS B1848     -22.686 -36.976  86.019  1.00191.23           N
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ATOM   6318  CD2 HIS B1848     -21.284 -38.276  87.074  1.00191.17           C
ATOM   6319  CE1 HIS B1848     -23.393 -37.943  86.577  1.00190.93           C
ATOM   6320  NE2 HIS B1848     -22.566 -38.745  87.223  1.00190.66           N
ATOM   6321  N   SER B1849     -17.428 -36.149  84.246  1.00192.85           N
ATOM   6322  CA  SER B1849     -16.178 -35.483  83.934  1.00192.56           C
ATOM   6323  C   SER B1849     -16.091 -35.179  82.462  1.00192.43           C
ATOM   6324  O   SER B1849     -15.824 -34.047  82.078  1.00192.46           O
ATOM   6325  CB  SER B1849     -15.016 -36.380  84.308  1.00192.60           C
ATOM   6326  OG  SER B1849     -15.157 -36.834  85.638  1.00192.64           O
ATOM   6327  N   GLY B1850     -16.299 -36.199  81.637  1.00192.21           N
ATOM   6328  CA  GLY B1850     -16.371 -35.990  80.202  1.00192.15           C
ATOM   6329  C   GLY B1850     -15.552 -36.934  79.351  1.00192.08           C
ATOM   6330  O   GLY B1850     -14.810 -36.517  78.462  1.00192.08           O
ATOM   6331  N   LEU B1851     -15.692 -38.222  79.604  1.00192.08           N
ATOM   6332  CA  LEU B1851     -15.039 -39.194  78.754  1.00192.00           C
ATOM   6333  C   LEU B1851     -16.062 -40.192  78.205  1.00191.87           C
ATOM   6334  O   LEU B1851     -15.891 -41.401  78.342  1.00191.91           O
ATOM   6335  CB  LEU B1851     -13.868 -39.863  79.494  1.00192.09           C
ATOM   6336  CG  LEU B1851     -12.851 -38.875  80.093  1.00192.16           C
ATOM   6337  CD1 LEU B1851     -12.993 -38.813  81.607  1.00192.09           C
ATOM   6338  CD2 LEU B1851     -11.417 -39.211  79.712  1.00192.08           C
ATOM   6339  N   ILE B1852     -17.140 -39.660  77.618  1.00191.62           N
ATOM   6340  CA  ILE B1852     -18.123 -40.446  76.864  1.00191.35           C
ATOM   6341  C   ILE B1852     -17.483 -40.688  75.499  1.00191.52           C
ATOM   6342  O   ILE B1852     -16.800 -39.808  74.969  1.00191.54           O
ATOM   6343  CB  ILE B1852     -19.493 -39.681  76.664  1.00191.40           C
ATOM   6344  CG1 ILE B1852     -20.520 -39.936  77.789  1.00191.14           C
ATOM   6345  CG2 ILE B1852     -20.145 -40.086  75.362  1.00191.89           C
ATOM   6346  CD1 ILE B1852     -21.921 -39.200  77.611  1.00190.46           C
ATOM   6347  N   GLY B1853     -17.695 -41.879  74.939  1.00191.63           N
ATOM   6348  CA  GLY B1853     -17.190 -42.211  73.605  1.00191.81           C
ATOM   6349  C   GLY B1853     -17.989 -43.274  72.854  1.00191.95           C
ATOM   6350  O   GLY B1853     -18.436 -44.257  73.464  1.00191.98           O
ATOM   6351  N   PRO B1854     -18.161 -43.090  71.518  1.00191.93           N
ATOM   6352  CA  PRO B1854     -18.935 -43.975  70.638  1.00191.63           C
ATOM   6353  C   PRO B1854     -18.096 -45.019  69.888  1.00191.28           C
ATOM   6354  O   PRO B1854     -16.966 -44.752  69.476  1.00191.37           O
ATOM   6355  CB  PRO B1854     -19.547 -42.993  69.638  1.00191.67           C
ATOM   6356  CG  PRO B1854     -18.526 -41.856  69.542  1.00191.99           C
ATOM   6357  CD  PRO B1854     -17.604 -41.954  70.755  1.00192.08           C
ATOM   6358  N   LEU B1855     -18.664 -46.198  69.692  1.00190.80           N
ATOM   6359  CA  LEU B1855     -17.946 -47.264  69.047  1.00190.41           C
ATOM   6360  C   LEU B1855     -18.906 -48.041  68.169  1.00190.56           C
ATOM   6361  O   LEU B1855     -19.976 -48.454  68.624  1.00190.67           O
ATOM   6362  CB  LEU B1855     -17.352 -48.161  70.107  1.00190.17           C
ATOM   6363  CG  LEU B1855     -16.005 -48.760  69.779  1.00189.81           C
ATOM   6364  CD1 LEU B1855     -15.508 -49.428  71.018  1.00189.75           C
ATOM   6365  CD2 LEU B1855     -16.134 -49.771  68.676  1.00190.37           C
ATOM   6366  N   LEU B1856     -18.527 -48.234  66.909  1.00190.61           N
ATOM   6367  CA  LEU B1856     -19.423 -48.831  65.916  1.00190.53           C
ATOM   6368  C   LEU B1856     -18.871 -50.130  65.344  1.00190.54           C
ATOM   6369  O   LEU B1856     -17.719 -50.204  64.941  1.00190.38           O
ATOM   6370  CB  LEU B1856     -19.722 -47.824  64.797  1.00190.56           C
ATOM   6371  CG  LEU B1856     -20.912 -46.853  64.914  1.00190.28           C
ATOM   6372  CD1 LEU B1856     -21.036 -46.186  66.277  1.00189.62           C
ATOM   6373  CD2 LEU B1856     -20.844 -45.795  63.819  1.00190.30           C
ATOM   6374  N   VAL B1857     -19.714 -51.149  65.308  1.00190.80           N
ATOM   6375  CA  VAL B1857     -19.290 -52.479  64.915  1.00191.47           C
ATOM   6376  C   VAL B1857     -20.156 -52.954  63.765  1.00192.12           C
ATOM   6377  O   VAL B1857     -21.357 -53.126  63.940  1.00192.32           O
ATOM   6378  CB  VAL B1857     -19.415 -53.446  66.106  1.00191.43           C
ATOM   6379  CG1 VAL B1857     -19.262 -54.903  65.665  1.00191.30           C
ATOM   6380  CG2 VAL B1857     -18.399 -53.083  67.177  1.00191.12           C
ATOM   6381  N   CYS B1858     -19.552 -53.177  62.599  1.00192.94           N
ATOM   6382  CA  CYS B1858     -20.311 -53.361  61.353  1.00194.08           C
ATOM   6383  C   CYS B1858     -20.202 -54.729  60.674  1.00194.48           C
ATOM   6384  O   CYS B1858     -19.223 -55.437  60.870  1.00194.61           O
ATOM   6385  CB  CYS B1858     -19.911 -52.279  60.357  1.00194.18           C
ATOM   6386  SG  CYS B1858     -20.842 -50.715  60.475  1.00196.29           S
ATOM   6387  N   HIS B1859     -21.214 -55.083  59.873  1.00195.19           N
ATOM   6388  CA  HIS B1859     -21.179 -56.277  59.013  1.00196.03           C
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ATOM   6389  C   HIS B1859     -20.016 -56.147  58.057  1.00196.25           C
ATOM   6390  O   HIS B1859     -19.582 -55.031  57.768  1.00196.46           O
ATOM   6391  CB  HIS B1859     -22.424 -56.357  58.139  1.00196.41           C
ATOM   6392  CG  HIS B1859     -23.647 -56.863  58.835  1.00197.82           C
ATOM   6393  ND1 HIS B1859     -24.693 -56.036  59.193  1.00198.69           N
ATOM   6394  CD2 HIS B1859     -24.016 -58.117  59.191  1.00198.86           C
ATOM   6395  CE1 HIS B1859     -25.643 -56.756  59.762  1.00199.27           C
ATOM   6396  NE2 HIS B1859     -25.257 -58.021  59.776  1.00199.63           N
ATOM   6397  N   THR B1860     -19.528 -57.271  57.537  1.00196.53           N
ATOM   6398  CA  THR B1860     -18.438 -57.217  56.564  1.00196.65           C
ATOM   6399  C   THR B1860     -18.939 -56.624  55.252  1.00197.03           C
ATOM   6400  O   THR B1860     -20.100 -56.814  54.880  1.00196.81           O
ATOM   6401  CB  THR B1860     -17.706 -58.567  56.373  1.00196.52           C
ATOM   6402  OG1 THR B1860     -18.613 -59.648  56.614  1.00196.44           O
ATOM   6403  CG2 THR B1860     -16.525 -58.680  57.343  1.00195.99           C
ATOM   6404  N   ASN B1861     -18.056 -55.875  54.593  1.00197.70           N
ATOM   6405  CA  ASN B1861     -18.371 -55.134  53.375  1.00198.53           C
ATOM   6406  C   ASN B1861     -19.447 -54.067  53.600  1.00198.82           C
ATOM   6407  O   ASN B1861     -20.460 -54.040  52.903  1.00198.80           O
ATOM   6408  CB  ASN B1861     -18.761 -56.098  52.240  1.00198.83           C
ATOM   6409  CG  ASN B1861     -18.481 -55.530  50.846  1.00199.86           C
ATOM   6410  OD1 ASN B1861     -18.295 -56.284  49.882  1.00200.67           O
ATOM   6411  ND2 ASN B1861     -18.453 -54.203  50.732  1.00201.03           N
ATOM   6412  N   THR B1862     -19.220 -53.196  54.581  1.00199.44           N
ATOM   6413  CA  THR B1862     -20.140 -52.087  54.875  1.00200.21           C
ATOM   6414  C   THR B1862     -19.435 -50.736  54.981  1.00200.89           C
ATOM   6415  O   THR B1862     -20.070 -49.684  54.836  1.00200.92           O
ATOM   6416  CB  THR B1862     -20.933 -52.310  56.174  1.00200.08           C
ATOM   6417  OG1 THR B1862     -20.047 -52.755  57.204  1.00200.00           O
ATOM   6418  CG2 THR B1862     -22.037 -53.326  55.967  1.00200.22           C
ATOM   6419  N   LEU B1863     -18.131 -50.771  55.250  1.00201.78           N
ATOM   6420  CA  LEU B1863     -17.307 -49.561  55.284  1.00202.65           C
ATOM   6421  C   LEU B1863     -16.707 -49.258  53.896  1.00203.55           C
ATOM   6422  O   LEU B1863     -17.200 -49.758  52.883  1.00203.74           O
ATOM   6423  CB  LEU B1863     -16.232 -49.665  56.378  1.00202.43           C
ATOM   6424  CG  LEU B1863     -16.659 -50.009  57.817  1.00201.92           C
ATOM   6425  CD1 LEU B1863     -15.512 -49.748  58.775  1.00201.45           C
ATOM   6426  CD2 LEU B1863     -17.898 -49.246  58.277  1.00201.25           C
ATOM   6427  N   ASN B1864     -15.659 -48.443  53.836  1.00204.65           N
ATOM   6428  CA  ASN B1864     -15.175 -47.950  52.552  1.00205.82           C
ATOM   6429  C   ASN B1864     -13.691 -47.675  52.511  1.00206.64           C
ATOM   6430  O   ASN B1864     -13.007 -47.806  53.521  1.00206.78           O
ATOM   6431  CB  ASN B1864     -15.911 -46.656  52.195  1.00205.88           C
ATOM   6432  CG  ASN B1864     -17.098 -46.893  51.294  1.00206.60           C
ATOM   6433  OD1 ASN B1864     -18.209 -46.419  51.567  1.00207.04           O
ATOM   6434  ND2 ASN B1864     -16.876 -47.632  50.205  1.00207.17           N
ATOM   6435  N   PRO B1865     -13.177 -47.320  51.325  1.00207.52           N
ATOM   6436  CA  PRO B1865     -11.951 -46.528  51.307  1.00208.25           C
ATOM   6437  C   PRO B1865     -12.169 -45.116  51.884  1.00209.04           C
ATOM   6438  O   PRO B1865     -11.261 -44.574  52.518  1.00208.92           O
ATOM   6439  CB  PRO B1865     -11.593 -46.460  49.816  1.00208.24           C
ATOM   6440  CG  PRO B1865     -12.871 -46.742  49.092  1.00208.08           C
ATOM   6441  CD  PRO B1865     -13.638 -47.674  49.970  1.00207.57           C
ATOM   6442  N   ALA B1866     -13.365 -44.547  51.689  1.00210.01           N
ATOM   6443  CA  ALA B1866     -13.656 -43.154  52.072  1.00211.23           C
ATOM   6444  C   ALA B1866     -13.761 -42.908  53.585  1.00211.65           C
ATOM   6445  O   ALA B1866     -14.172 -41.817  53.985  1.00211.85           O
ATOM   6446  CB  ALA B1866     -14.915 -42.620  51.337  1.00210.55           C
ATOM   6447  N   HIS B1867     -13.357 -43.903  54.396  1.00212.73           N
ATOM   6448  CA  HIS B1867     -13.471 -43.935  55.896  1.00212.88           C
ATOM   6449  C   HIS B1867     -14.924 -43.933  56.411  1.00213.23           C
ATOM   6450  O   HIS B1867     -15.759 -43.144  55.964  1.00213.43           O
ATOM   6451  CB  HIS B1867     -12.611 -42.836  56.602  1.00213.59           C
ATOM   6452  CG  HIS B1867     -12.478 -42.987  58.111  1.00214.35           C
ATOM   6453  ND1 HIS B1867     -11.256 -42.964  58.759  1.00216.57           N
ATOM   6454  CD2 HIS B1867     -13.411 -43.123  59.093  1.00216.21           C
ATOM   6455  CE1 HIS B1867     -11.440 -43.094  60.065  1.00216.57           C
ATOM   6456  NE2 HIS B1867     -12.739 -43.194  60.294  1.00216.31           N
ATOM   6457  N   GLY B1868     -15.216 -44.807  57.369  1.00213.26           N
ATOM   6458  CA  GLY B1868     -16.575 -44.945  57.871  1.00213.58           C
ATOM   6459  C   GLY B1868     -17.410 -45.607  56.798  1.00213.89           C
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ATOM	6460	O	GLY	B1868	-16.868	-46.243	55.890	1.00214.01	O
ATOM	6461	N	ARG	B1869	-18.725	-45.463	56.889	1.00214.13	N
ATOM	6462	CA	ARG	B1869	-19.611	-45.990	55.853	1.00214.47	C
ATOM	6463	C	ARG	B1869	-20.432	-44.859	55.262	1.00214.41	C
ATOM	6464	O	ARG	B1869	-20.281	-43.704	55.683	1.00214.59	O
ATOM	6465	CB	ARG	B1869	-20.519	-47.080	56.410	1.00214.56	C
ATOM	6466	CG	ARG	B1869	-21.362	-46.657	57.597	1.00215.67	C
ATOM	6467	CD	ARG	B1869	-21.958	-47.872	58.280	1.00217.79	C
ATOM	6468	NE	ARG	B1869	-23.296	-48.224	57.794	1.00219.19	N
ATOM	6469	CZ	ARG	B1869	-23.567	-48.919	56.688	1.00219.89	C
ATOM	6470	NH1	ARG	B1869	-24.831	-49.171	56.377	1.00220.30	N
ATOM	6471	NH2	ARG	B1869	-22.599	-49.348	55.881	1.00219.85	N
ATOM	6472	N	GLN	B1870	-21.288	-45.184	54.290	1.00214.16	N
ATOM	6473	CA	GLN	B1870	-22.160	-44.178	53.689	1.00213.82	C
ATOM	6474	C	GLN	B1870	-23.171	-44.716	52.674	1.00213.48	C
ATOM	6475	O	GLN	B1870	-23.968	-43.945	52.152	1.00213.15	O
ATOM	6476	CB	GLN	B1870	-21.327	-43.038	53.107	1.00213.84	C
ATOM	6477	CG	GLN	B1870	-20.492	-43.410	51.914	1.00214.49	C
ATOM	6478	CD	GLN	B1870	-20.932	-42.648	50.689	1.00216.24	C
ATOM	6479	OE1	GLN	B1870	-22.099	-42.250	50.579	1.00217.13	O
ATOM	6480	NE2	GLN	B1870	-19.998	-42.411	49.764	1.00216.97	N
ATOM	6481	N	VAL	B1871	-23.149	-46.030	52.427	1.00213.43	N
ATOM	6482	CA	VAL	B1871	-24.083	-46.695	51.489	1.00213.41	C
ATOM	6483	C	VAL	B1871	-25.532	-46.385	51.871	1.00213.20	C
ATOM	6484	O	VAL	B1871	-26.199	-47.167	52.561	1.00213.02	O
ATOM	6485	CB	VAL	B1871	-23.816	-48.252	51.334	1.00213.61	C
ATOM	6486	CG1	VAL	B1871	-24.983	-48.976	50.619	1.00213.45	C
ATOM	6487	CG2	VAL	B1871	-22.481	-48.527	50.595	1.00213.79	C
ATOM	6488	N	THR	B1872	-25.991	-45.229	51.382	1.00213.18	N
ATOM	6489	CA	THR	B1872	-27.236	-44.544	51.821	1.00213.07	C
ATOM	6490	C	THR	B1872	-27.311	-44.449	53.374	1.00212.25	C
ATOM	6491	O	THR	B1872	-28.320	-44.817	54.000	1.00212.34	O
ATOM	6492	CB	THR	B1872	-28.571	-45.099	51.111	1.00213.43	C
ATOM	6493	OG1	THR	B1872	-28.325	-45.393	49.721	1.00214.05	O
ATOM	6494	CG2	THR	B1872	-29.743	-44.079	51.204	1.00213.28	C
ATOM	6495	N	VAL	B1873	-26.231	-43.951	53.983	1.00210.96	N
ATOM	6496	CA	VAL	B1873	-26.128	-43.965	55.443	1.00209.56	C
ATOM	6497	C	VAL	B1873	-26.357	-42.594	56.083	1.00208.46	C
ATOM	6498	O	VAL	B1873	-27.505	-42.181	56.241	1.00208.32	O
ATOM	6499	CB	VAL	B1873	-24.826	-44.658	55.948	1.00209.66	C
ATOM	6500	CG1	VAL	B1873	-24.952	-45.001	57.407	1.00209.80	C
ATOM	6501	CG2	VAL	B1873	-24.577	-45.941	55.198	1.00209.62	C
ATOM	6502	N	GLN	B1874	-25.277	-41.894	56.437	1.00207.04	N
ATOM	6503	CA	GLN	B1874	-25.358	-40.654	57.207	1.00205.63	C
ATOM	6504	C	GLN	B1874	-25.782	-40.977	58.628	1.00204.53	C
ATOM	6505	O	GLN	B1874	-26.970	-41.134	58.932	1.00204.17	O
ATOM	6506	CB	GLN	B1874	-26.334	-39.680	56.566	1.00205.81	C
ATOM	6507	CG	GLN	B1874	-26.023	-38.228	56.797	1.00206.39	C
ATOM	6508	CD	GLN	B1874	-26.459	-37.371	55.620	1.00207.76	C
ATOM	6509	OE1	GLN	B1874	-25.730	-36.471	55.197	1.00208.75	O
ATOM	6510	NE2	GLN	B1874	-27.644	-37.660	55.068	1.00207.73	N
ATOM	6511	N	GLU	B1875	-24.784	-41.091	59.490	1.00203.28	N
ATOM	6512	CA	GLU	B1875	-24.997	-41.491	60.865	1.00202.20	C
ATOM	6513	C	GLU	B1875	-24.836	-40.300	61.805	1.00201.43	C
ATOM	6514	O	GLU	B1875	-24.073	-39.376	61.519	1.00201.49	O
ATOM	6515	CB	GLU	B1875	-23.958	-42.535	61.260	1.00202.31	C
ATOM	6516	CG	GLU	B1875	-23.962	-43.817	60.472	1.00202.49	C
ATOM	6517	CD	GLU	B1875	-22.552	-44.346	60.220	1.00202.73	C
ATOM	6518	OE1	GLU	B1875	-21.843	-43.755	59.373	1.00202.62	O
ATOM	6519	OE2	GLU	B1875	-22.156	-45.351	60.859	1.00202.51	O
ATOM	6520	N	PHE	B1876	-25.538	-40.350	62.937	1.00200.37	N
ATOM	6521	CA	PHE	B1876	-25.314	-39.438	64.067	1.00199.21	C
ATOM	6522	C	PHE	B1876	-25.444	-40.136	65.439	1.00198.42	C
ATOM	6523	O	PHE	B1876	-26.336	-40.961	65.656	1.00198.26	O
ATOM	6524	CB	PHE	B1876	-26.277	-38.251	63.998	1.00199.34	C
ATOM	6525	CG	PHE	B1876	-26.330	-37.593	62.661	1.00199.11	C
ATOM	6526	CD1	PHE	B1876	-25.365	-36.675	62.287	1.00199.77	C
ATOM	6527	CD2	PHE	B1876	-27.347	-37.893	61.772	1.00199.30	C
ATOM	6528	CE1	PHE	B1876	-25.414	-36.066	61.030	1.00200.76	C
ATOM	6529	CE2	PHE	B1876	-27.407	-37.294	60.519	1.00199.86	C
ATOM	6530	CZ	PHE	B1876	-26.442	-36.380	60.146	1.00200.25	C

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ATOM   6531  N   ALA B1877     -24.556 -39.794  66.363  1.00197.33           N
ATOM   6532  CA  ALA B1877     -24.678 -40.258  67.734  1.00196.53           C
ATOM   6533  C   ALA B1877     -25.357 -39.212  68.662  1.00196.07           C
ATOM   6534  O   ALA B1877     -25.208 -38.009  68.474  1.00195.91           O
ATOM   6535  CB  ALA B1877     -23.313 -40.656  68.255  1.00196.42           C
ATOM   6536  N   LEU B1878     -26.120 -39.676  69.649  1.00195.54           N
ATOM   6537  CA  LEU B1878     -26.712 -38.791  70.659  1.00195.03           C
ATOM   6538  C   LEU B1878     -26.578 -39.338  72.125  1.00195.42           C
ATOM   6539  O   LEU B1878     -26.920 -40.497  72.411  1.00195.46           O
ATOM   6540  CB  LEU B1878     -28.146 -38.424  70.268  1.00194.75           C
ATOM   6541  CG  LEU B1878     -28.387 -37.103  69.534  1.00193.82           C
ATOM   6542  CD1 LEU B1878     -27.707 -37.040  68.212  1.00192.82           C
ATOM   6543  CD2 LEU B1878     -29.871 -36.895  69.337  1.00194.44           C
ATOM   6544  N   PHE B1879     -26.121 -38.468  73.039  1.00195.52           N
ATOM   6545  CA  PHE B1879     -25.316 -38.841  74.226  1.00195.32           C
ATOM   6546  C   PHE B1879     -25.919 -38.407  75.543  1.00194.83           C
ATOM   6547  O   PHE B1879     -25.196 -37.906  76.415  1.00194.65           O
ATOM   6548  CB  PHE B1879     -23.943 -38.157  74.119  1.00195.75           C
ATOM   6549  CG  PHE B1879     -23.617 -37.633  72.724  1.00196.46           C
ATOM   6550  CD1 PHE B1879     -24.364 -36.595  72.154  1.00197.02           C
ATOM   6551  CD2 PHE B1879     -22.567 -38.176  71.986  1.00196.87           C
ATOM   6552  CE1 PHE B1879     -24.083 -36.116  70.870  1.00197.27           C
ATOM   6553  CE2 PHE B1879     -22.271 -37.698  70.704  1.00197.41           C
ATOM   6554  CZ  PHE B1879     -23.025 -36.660  70.150  1.00197.24           C
ATOM   6555  N   LEU B1880     -27.219 -38.645  75.690  1.00194.41           N
ATOM   6556  CA  LEU B1880     -28.054 -37.981  76.703  1.00194.17           C
ATOM   6557  C   LEU B1880     -27.776 -38.317  78.207  1.00194.74           C
ATOM   6558  O   LEU B1880     -28.178 -39.380  78.731  1.00194.78           O
ATOM   6559  CB  LEU B1880     -29.546 -38.134  76.349  1.00193.57           C
ATOM   6560  CG  LEU B1880     -29.993 -38.216  74.890  1.00191.44           C
ATOM   6561  CD1 LEU B1880     -31.471 -38.001  74.789  1.00189.39           C
ATOM   6562  CD2 LEU B1880     -29.300 -37.194  74.073  1.00190.03           C
ATOM   6563  N   THR B1881     -27.084 -37.387  78.878  1.00194.96           N
ATOM   6564  CA  THR B1881     -26.757 -37.468  80.306  1.00194.91           C
ATOM   6565  C   THR B1881     -27.290 -36.181  80.924  1.00194.62           C
ATOM   6566  O   THR B1881     -27.791 -35.315  80.209  1.00194.31           O
ATOM   6567  CB  THR B1881     -25.206 -37.547  80.557  1.00195.10           C
ATOM   6568  OG1 THR B1881     -24.563 -38.360  79.558  1.00196.15           O
ATOM   6569  CG2 THR B1881     -24.879 -38.098  81.951  1.00194.76           C
ATOM   6570  N   ILE B1882     -27.214 -36.086  82.251  1.00194.68           N
ATOM   6571  CA  ILE B1882     -27.413 -34.831  82.986  1.00194.68           C
ATOM   6572  C   ILE B1882     -26.161 -34.599  83.829  1.00194.79           C
ATOM   6573  O   ILE B1882     -26.078 -35.047  84.970  1.00194.63           O
ATOM   6574  CB  ILE B1882     -28.667 -34.847  83.904  1.00194.57           C
ATOM   6575  CG1 ILE B1882     -29.770 -35.746  83.342  1.00194.63           C
ATOM   6576  CG2 ILE B1882     -29.194 -33.444  84.088  1.00194.27           C
ATOM   6577  CD1 ILE B1882     -30.923 -35.987  84.294  1.00194.60           C
ATOM   6578  N   PHE B1883     -25.185 -33.912  83.247  1.00195.09           N
ATOM   6579  CA  PHE B1883     -23.864 -33.759  83.843  1.00195.50           C
ATOM   6580  C   PHE B1883     -23.981 -33.083  85.194  1.00195.76           C
ATOM   6581  O   PHE B1883     -24.920 -32.317  85.407  1.00195.75           O
ATOM   6582  CB  PHE B1883     -22.980 -32.915  82.925  1.00195.61           C
ATOM   6583  CG  PHE B1883     -22.460 -33.648  81.722  1.00195.92           C
ATOM   6584  CD1 PHE B1883     -23.298 -34.454  80.948  1.00196.46           C
ATOM   6585  CD2 PHE B1883     -21.131 -33.508  81.342  1.00196.20           C
ATOM   6586  CE1 PHE B1883     -22.814 -35.130  79.823  1.00196.55           C
ATOM   6587  CE2 PHE B1883     -20.636 -34.174  80.218  1.00196.53           C
ATOM   6588  CZ  PHE B1883     -21.485 -34.988  79.456  1.00196.46           C
ATOM   6589  N   ASP B1884     -23.036 -33.375  86.096  1.00196.19           N
ATOM   6590  CA  ASP B1884     -22.970 -32.750  87.434  1.00196.61           C
ATOM   6591  C   ASP B1884     -21.542 -32.610  87.960  1.00196.93           C
ATOM   6592  O   ASP B1884     -20.729 -33.513  87.796  1.00197.11           O
ATOM   6593  CB  ASP B1884     -23.803 -33.540  88.450  1.00196.61           C
ATOM   6594  CG  ASP B1884     -24.016 -32.783  89.754  1.00196.41           C
ATOM   6595  OD1 ASP B1884     -25.188 -32.479  90.073  1.00196.00           O
ATOM   6596  OD2 ASP B1884     -23.020 -32.489  90.454  1.00196.15           O
ATOM   6597  N   GLU B1885     -21.247 -31.495  88.620  1.00197.28           N
ATOM   6598  CA  GLU B1885     -19.917 -31.297  89.188  1.00197.66           C
ATOM   6599  C   GLU B1885     -19.900 -31.307  90.712  1.00198.08           C
ATOM   6600  O   GLU B1885     -19.673 -30.285  91.357  1.00197.98           O
ATOM   6601  CB  GLU B1885     -19.253 -30.033  88.636  1.00197.60           C
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ATOM	6602	CG	GLU	B1885	-18.987	-30.077	87.143	1.00197.23	C
ATOM	6603	CD	GLU	B1885	-17.535	-30.225	86.785	1.00197.12	C
ATOM	6604	OE1	GLU	B1885	-16.813	-30.983	87.467	1.00197.02	O
ATOM	6605	OE2	GLU	B1885	-17.122	-29.579	85.799	1.00197.02	O
ATOM	6606	N	THR	B1886	-20.195	-32.473	91.272	1.00198.73	N
ATOM	6607	CA	THR	B1886	-19.631	-32.876	92.556	1.00199.53	C
ATOM	6608	C	THR	B1886	-18.588	-33.918	92.144	1.00199.94	C
ATOM	6609	O	THR	B1886	-17.983	-34.604	92.983	1.00200.17	O
ATOM	6610	CB	THR	B1886	-20.684	-33.488	93.529	1.00199.59	C
ATOM	6611	OG1	THR	B1886	-21.904	-32.743	93.456	1.00200.01	O
ATOM	6612	CG2	THR	B1886	-20.178	-33.479	94.989	1.00199.43	C
ATOM	6613	N	LYS	B1887	-18.378	-34.000	90.827	1.00200.25	N
ATOM	6614	CA	LYS	B1887	-17.590	-35.051	90.201	1.00200.51	C
ATOM	6615	C	LYS	B1887	-16.438	-34.459	89.369	1.00200.95	C
ATOM	6616	O	LYS	B1887	-16.590	-33.395	88.762	1.00200.81	O
ATOM	6617	CB	LYS	B1887	-18.504	-35.940	89.342	1.00200.22	C
ATOM	6618	CG	LYS	B1887	-19.711	-36.581	90.082	1.00199.91	C
ATOM	6619	CD	LYS	B1887	-20.951	-35.667	90.122	1.00198.93	C
ATOM	6620	CE	LYS	B1887	-22.243	-36.425	90.429	1.00198.69	C
ATOM	6621	NZ	LYS	B1887	-22.398	-36.785	91.860	1.00197.55	N
ATOM	6622	N	SER	B1888	-15.297	-35.157	89.373	1.00201.64	N
ATOM	6623	CA	SER	B1888	-14.056	-34.773	88.664	1.00202.28	C
ATOM	6624	C	SER	B1888	-13.517	-33.377	88.940	1.00202.76	C
ATOM	6625	O	SER	B1888	-14.094	-32.381	88.503	1.00202.68	O
ATOM	6626	CB	SER	B1888	-14.194	-34.952	87.161	1.00202.28	C
ATOM	6627	OG	SER	B1888	-15.005	-33.931	86.603	1.00202.55	O
ATOM	6628	N	TRP	B1889	-12.392	-33.342	89.650	1.00203.55	N
ATOM	6629	CA	TRP	B1889	-11.613	-32.128	89.980	1.00204.36	C
ATOM	6630	C	TRP	B1889	-12.308	-30.743	90.040	1.00204.68	C
ATOM	6631	O	TRP	B1889	-11.618	-29.722	90.081	1.00204.86	O
ATOM	6632	CB	TRP	B1889	-10.361	-32.042	89.082	1.00204.52	C
ATOM	6633	CG	TRP	B1889	-10.648	-31.755	87.618	1.00204.90	C
ATOM	6634	CD1	TRP	B1889	-11.672	-31.002	87.104	1.00204.97	C
ATOM	6635	CD2	TRP	B1889	-9.875	-32.190	86.492	1.00205.25	C
ATOM	6636	NE1	TRP	B1889	-11.593	-30.960	85.734	1.00204.94	N
ATOM	6637	CE2	TRP	B1889	-10.499	-31.679	85.332	1.00205.06	C
ATOM	6638	CE3	TRP	B1889	-8.720	-32.970	86.350	1.00205.47	C
ATOM	6639	CZ2	TRP	B1889	-10.005	-31.922	84.048	1.00204.91	C
ATOM	6640	CZ3	TRP	B1889	-8.231	-33.212	85.068	1.00205.03	C
ATOM	6641	CH2	TRP	B1889	-8.874	-32.689	83.936	1.00204.87	C
ATOM	6642	N	TYR	B1890	-13.641	-30.699	90.075	1.00204.94	N
ATOM	6643	CA	TYR	B1890	-14.386	-29.429	89.964	1.00205.11	C
ATOM	6644	C	TYR	B1890	-13.944	-28.318	90.928	1.00205.06	C
ATOM	6645	O	TYR	B1890	-14.204	-27.139	90.676	1.00205.03	O
ATOM	6646	CB	TYR	B1890	-15.898	-29.665	90.061	1.00205.38	C
ATOM	6647	CG	TYR	B1890	-16.413	-29.835	91.467	1.00205.82	C
ATOM	6648	CD1	TYR	B1890	-16.165	-31.007	92.181	1.00206.22	C
ATOM	6649	CD2	TYR	B1890	-17.151	-28.824	92.087	1.00205.84	C
ATOM	6650	CE1	TYR	B1890	-16.631	-31.170	93.477	1.00206.35	C
ATOM	6651	CE2	TYR	B1890	-17.627	-28.978	93.384	1.00205.97	C
ATOM	6652	CZ	TYR	B1890	-17.364	-30.156	94.073	1.00206.20	C
ATOM	6653	OH	TYR	B1890	-17.826	-30.330	95.361	1.00206.36	O
ATOM	6654	N	PHE	B1891	-13.289	-28.706	92.025	1.00204.98	N
ATOM	6655	CA	PHE	B1891	-12.623	-27.769	92.931	1.00204.93	C
ATOM	6656	C	PHE	B1891	-11.830	-26.710	92.148	1.00205.04	C
ATOM	6657	O	PHE	B1891	-11.966	-25.510	92.405	1.00205.01	O
ATOM	6658	CB	PHE	B1891	-11.726	-28.531	93.923	1.00204.78	C
ATOM	6659	CG	PHE	B1891	-12.316	-28.673	95.316	1.00204.72	C
ATOM	6660	CD1	PHE	B1891	-13.678	-28.911	95.507	1.00204.50	C
ATOM	6661	CD2	PHE	B1891	-11.492	-28.586	96.443	1.00204.73	C
ATOM	6662	CE1	PHE	B1891	-14.214	-29.041	96.803	1.00204.37	C
ATOM	6663	CE2	PHE	B1891	-12.017	-28.719	97.742	1.00204.47	C
ATOM	6664	CZ	PHE	B1891	-13.379	-28.947	97.919	1.00204.43	C
ATOM	6665	N	THR	B1892	-11.038	-27.156	91.170	1.00205.20	N
ATOM	6666	CA	THR	B1892	-10.340	-26.249	90.244	1.00205.34	C
ATOM	6667	C	THR	B1892	-11.304	-25.556	89.260	1.00205.47	C
ATOM	6668	O	THR	B1892	-10.996	-25.385	88.079	1.00205.46	O
ATOM	6669	CB	THR	B1892	-9.137	-26.947	89.498	1.00205.32	C
ATOM	6670	OG1	THR	B1892	-8.469	-26.003	88.653	1.00205.32	O
ATOM	6671	CG2	THR	B1892	-9.584	-28.132	88.643	1.00205.24	C
ATOM	6672	N	GLU	B1893	-12.472	-25.166	89.765	1.00205.62	N

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ATOM   6673  CA  GLU B1893     -13.450 -24.414  88.993  1.00205.86           C
ATOM   6674  C   GLU B1893     -14.211 -23.468  89.897  1.00206.05           C
ATOM   6675  O   GLU B1893     -14.434 -22.319  89.539  1.00206.08           O
ATOM   6676  CB  GLU B1893     -14.422 -25.347  88.287  1.00205.78           C
ATOM   6677  CG  GLU B1893     -13.874 -25.952  87.012  1.00206.42           C
ATOM   6678  CD  GLU B1893     -14.601 -27.220  86.604  1.00207.42           C
ATOM   6679  OE1 GLU B1893     -14.850 -28.065  87.488  1.00207.65           O
ATOM   6680  OE2 GLU B1893     -14.919 -27.379  85.402  1.00207.68           O
ATOM   6681  N   ASN B1894     -14.593 -23.954  91.073  1.00206.37           N
ATOM   6682  CA  ASN B1894     -15.357 -23.160  92.033  1.00206.79           C
ATOM   6683  C   ASN B1894     -14.601 -21.939  92.539  1.00207.17           C
ATOM   6684  O   ASN B1894     -15.162 -20.846  92.640  1.00207.21           O
ATOM   6685  CB  ASN B1894     -15.784 -24.024  93.216  1.00206.71           C
ATOM   6686  CG  ASN B1894     -16.581 -25.233  92.792  1.00206.65           C
ATOM   6687  OD1 ASN B1894     -16.531 -25.653  91.636  1.00206.67           O
ATOM   6688  ND2 ASN B1894     -17.322 -25.805  93.731  1.00206.50           N
ATOM   6689  N   MET B1895     -13.329 -22.131  92.866  1.00207.63           N
ATOM   6690  CA  MET B1895     -12.491 -21.023  93.295  1.00208.19           C
ATOM   6691  C   MET B1895     -11.391 -20.717  92.275  1.00208.48           C
ATOM   6692  O   MET B1895     -10.457 -19.963  92.560  1.00208.52           O
ATOM   6693  CB  MET B1895     -11.938 -21.264  94.708  1.00208.17           C
ATOM   6694  CG  MET B1895     -12.855 -20.726  95.822  1.00208.35           C
ATOM   6695  SD  MET B1895     -12.205 -20.882  97.508  1.00208.48           S
ATOM   6696  CE  MET B1895     -12.999 -19.511  98.366  1.00208.27           C
ATOM   6697  N   GLU B1896     -11.521 -21.303  91.085  1.00208.92           N
ATOM   6698  CA  GLU B1896     -10.684 -20.947  89.936  1.00209.37           C
ATOM   6699  C   GLU B1896     -11.329 -19.785  89.185  1.00209.45           C
ATOM   6700  O   GLU B1896     -10.660 -18.824  88.793  1.00209.51           O
ATOM   6701  CB  GLU B1896     -10.516 -22.143  88.992  1.00209.48           C
ATOM   6702  CG  GLU B1896      -9.695 -21.846  87.728  1.00210.02           C
ATOM   6703  CD  GLU B1896     -10.186 -22.597  86.493  1.00210.67           C
ATOM   6704  OE1 GLU B1896     -11.374 -22.993  86.444  1.00210.92           O
ATOM   6705  OE2 GLU B1896      -9.376 -22.778  85.558  1.00210.89           O
ATOM   6706  N   ARG B1897     -12.635 -19.899  88.983  1.00209.54           N
ATOM   6707  CA  ARG B1897     -13.422 -18.876  88.331  1.00209.70           C
ATOM   6708  C   ARG B1897     -14.684 -18.692  89.179  1.00209.98           C
ATOM   6709  O   ARG B1897     -14.997 -19.547  90.006  1.00209.97           O
ATOM   6710  CB  ARG B1897     -13.684 -19.297  86.875  1.00209.56           C
ATOM   6711  CG  ARG B1897     -14.827 -18.607  86.146  1.00209.35           C
ATOM   6712  CD  ARG B1897     -15.997 -19.560  85.887  1.00208.58           C
ATOM   6713  NE  ARG B1897     -16.637 -20.031  87.114  1.00207.95           N
ATOM   6714  CZ  ARG B1897     -16.335 -21.167  87.736  1.00207.54           C
ATOM   6715  NH1 ARG B1897     -15.389 -21.966  87.260  1.00207.31           N
ATOM   6716  NH2 ARG B1897     -16.970 -21.500  88.850  1.00207.40           N
ATOM   6717  N   ASN B1898     -15.372 -17.564  89.000  1.00210.39           N
ATOM   6718  CA  ASN B1898     -16.559 -17.192  89.794  1.00210.77           C
ATOM   6719  C   ASN B1898     -16.267 -16.593  91.170  1.00211.30           C
ATOM   6720  O   ASN B1898     -17.186 -16.147  91.863  1.00211.31           O
ATOM   6721  CB  ASN B1898     -17.547 -18.359  89.933  1.00210.55           C
ATOM   6722  CG  ASN B1898     -18.704 -18.269  88.963  1.00210.03           C
ATOM   6723  OD1 ASN B1898     -19.734 -18.908  89.160  1.00209.28           O
ATOM   6724  ND2 ASN B1898     -18.545 -17.471  87.913  1.00209.60           N
ATOM   6725  N   CYS B1899     -14.994 -16.567  91.556  1.00211.99           N
ATOM   6726  CA  CYS B1899     -14.625 -16.104  92.889  1.00212.77           C
ATOM   6727  C   CYS B1899     -13.257 -15.429  92.984  1.00212.93           C
ATOM   6728  O   CYS B1899     -12.270 -15.907  92.418  1.00212.92           O
ATOM   6729  CB  CYS B1899     -14.712 -17.263  93.885  1.00212.97           C
ATOM   6730  SG  CYS B1899     -16.282 -17.359  94.786  1.00214.24           S
ATOM   6731  N   ARG B1900     -13.229 -14.304  93.701  1.00213.25           N
ATOM   6732  CA  ARG B1900     -12.002 -13.571  94.029  1.00213.61           C
ATOM   6733  C   ARG B1900     -12.148 -12.993  95.447  1.00213.94           C
ATOM   6734  O   ARG B1900     -12.163 -13.745  96.429  1.00213.99           O
ATOM   6735  CB  ARG B1900     -11.723 -12.442  93.017  1.00213.55           C
ATOM   6736  CG  ARG B1900     -11.635 -12.852  91.550  1.00213.36           C
ATOM   6737  CD  ARG B1900     -12.997 -12.814  90.875  1.00213.00           C
ATOM   6738  NE  ARG B1900     -13.051 -13.706  89.721  1.00212.83           N
ATOM   6739  CZ  ARG B1900     -14.172 -14.191  89.196  1.00212.66           C
ATOM   6740  NH1 ARG B1900     -15.349 -13.879  89.724  1.00212.70           N
ATOM   6741  NH2 ARG B1900     -14.115 -14.994  88.141  1.00212.37           N
ATOM   6742  N   ALA B1901     -12.254 -11.662  95.535  1.00214.32           N
ATOM   6743  CA  ALA B1901     -12.630 -10.948  96.769  1.00214.63           C
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ATOM	6744	C	ALA	B1901	-14.160	-10.771	96.951	1.00214.90	C
ATOM	6745	O	ALA	B1901	-14.598	-10.434	98.060	1.00214.89	O
ATOM	6746	CB	ALA	B1901	-11.907	-9.595	96.864	1.00214.49	C
ATOM	6747	N	PRO	B1902	-14.967	-10.947	95.862	1.00215.15	N
ATOM	6748	CA	PRO	B1902	-16.414	-11.190	95.978	1.00215.26	C
ATOM	6749	C	PRO	B1902	-16.792	-12.686	95.930	1.00215.34	C
ATOM	6750	O	PRO	B1902	-17.277	-13.186	94.903	1.00215.33	O
ATOM	6751	CB	PRO	B1902	-16.981	-10.457	94.758	1.00215.26	C
ATOM	6752	CG	PRO	B1902	-15.885	-10.530	93.724	1.00215.22	C
ATOM	6753	CD	PRO	B1902	-14.579	-10.830	94.440	1.00215.20	C
ATOM	6754	N	CYS	B1903	-16.580	-13.377	97.048	1.00215.46	N
ATOM	6755	CA	CYS	B1903	-16.840	-14.812	97.145	1.00215.51	C
ATOM	6756	C	CYS	B1903	-17.688	-15.165	98.380	1.00215.58	C
ATOM	6757	O	CYS	B1903	-18.503	-14.350	98.825	1.00215.70	O
ATOM	6758	CB	CYS	B1903	-15.517	-15.582	97.138	1.00215.42	C
ATOM	6759	SG	CYS	B1903	-15.703	-17.331	96.747	1.00215.56	S
ATOM	6760	N	ASN	B1904	-17.492	-16.374	98.917	1.00215.57	N
ATOM	6761	CA	ASN	B1904	-18.255	-16.899	100.066	1.00215.51	C
ATOM	6762	C	ASN	B1904	-19.783	-16.740	99.927	1.00215.48	C
ATOM	6763	O	ASN	B1904	-20.460	-16.206	100.817	1.00215.51	O
ATOM	6764	CB	ASN	B1904	-17.735	-16.316	101.394	1.00215.47	C
ATOM	6765	CG	ASN	B1904	-16.276	-16.697	101.675	1.00215.35	C
ATOM	6766	OD1	ASN	B1904	-15.374	-17.019	100.588	1.00214.94	O
ATOM	6767	ND2	ASN	B1904	-16.045	-16.624	103.188	1.00215.37	N
ATOM	6768	N	ILE	B1905	-20.302	-17.211	98.793	1.00215.36	N
ATOM	6769	CA	ILE	B1905	-21.732	-17.171	98.485	1.00215.19	C
ATOM	6770	C	ILE	B1905	-22.207	-18.539	97.969	1.00215.17	C
ATOM	6771	O	ILE	B1905	-21.800	-18.979	96.888	1.00215.16	O
ATOM	6772	CB	ILE	B1905	-22.094	-16.013	97.488	1.00215.21	C
ATOM	6773	CG1	ILE	B1905	-20.995	-15.820	96.422	1.00215.15	C
ATOM	6774	CG2	ILE	B1905	-22.354	-14.715	98.255	1.00214.96	C
ATOM	6775	CD1	ILE	B1905	-21.372	-14.916	95.239	1.00215.05	C
ATOM	6776	N	GLN	B1906	-23.054	-19.200	98.767	1.00215.08	N
ATOM	6777	CA	GLN	B1906	-23.610	-20.550	98.483	1.00214.99	C
ATOM	6778	C	GLN	B1906	-22.563	-21.682	98.434	1.00214.75	C
ATOM	6779	O	GLN	B1906	-21.886	-21.868	97.419	1.00214.78	O
ATOM	6780	CB	GLN	B1906	-24.490	-20.568	97.210	1.00215.07	C
ATOM	6781	CG	GLN	B1906	-25.783	-19.731	97.270	1.00215.31	C
ATOM	6782	CD	GLN	B1906	-26.955	-20.442	97.951	1.00215.44	C
ATOM	6783	OE1	GLN	B1906	-26.943	-20.678	99.161	1.00215.66	O
ATOM	6784	NE2	GLN	B1906	-27.984	-20.761	97.170	1.00215.15	N
ATOM	6785	N	MET	B1907	-22.455	-22.439	99.529	1.00214.41	N
ATOM	6786	CA	MET	B1907	-21.515	-23.568	99.625	1.00214.06	C
ATOM	6787	C	MET	B1907	-21.990	-24.829	98.862	1.00213.90	C
ATOM	6788	O	MET	B1907	-21.308	-25.306	97.945	1.00213.82	O
ATOM	6789	CB	MET	B1907	-21.153	-23.879	101.095	1.00213.96	C
ATOM	6790	CG	MET	B1907	-22.334	-24.021	102.074	1.00213.88	C
ATOM	6791	SD	MET	B1907	-22.728	-22.543	103.038	1.00213.89	S
ATOM	6792	CE	MET	B1907	-24.202	-23.075	103.910	1.00213.65	C
ATOM	6793	N	GLU	B1908	-23.147	-25.363	99.258	1.00213.67	N
ATOM	6794	CA	GLU	B1908	-23.818	-26.463	98.546	1.00213.38	C
ATOM	6795	C	GLU	B1908	-25.350	-26.326	98.671	1.00213.09	C
ATOM	6796	O	GLU	B1908	-26.095	-27.197	98.211	1.00213.09	O
ATOM	6797	CB	GLU	B1908	-23.363	-27.854	99.037	1.00213.41	C
ATOM	6798	CG	GLU	B1908	-22.104	-27.902	99.919	1.00213.79	C
ATOM	6799	CD	GLU	B1908	-22.398	-27.685	101.413	1.00214.44	C
ATOM	6800	OE1	GLU	B1908	-23.473	-28.106	101.892	1.00214.65	O
ATOM	6801	OE2	GLU	B1908	-21.544	-27.104	102.121	1.00214.62	O
ATOM	6802	N	ASP	B1909	-25.795	-25.235	99.308	1.00212.66	N
ATOM	6803	CA	ASP	B1909	-27.217	-24.850	99.430	1.00212.21	C
ATOM	6804	C	ASP	B1909	-27.705	-24.176	98.140	1.00211.77	C
ATOM	6805	O	ASP	B1909	-26.925	-23.466	97.507	1.00211.87	O
ATOM	6806	CB	ASP	B1909	-27.406	-23.893	100.618	1.00212.33	C
ATOM	6807	CG	ASP	B1909	-27.788	-24.613	101.904	1.00212.59	C
ATOM	6808	OD1	ASP	B1909	-28.457	-25.669	101.817	1.00212.91	O
ATOM	6809	OD2	ASP	B1909	-27.435	-24.111	103.001	1.00212.52	O
ATOM	6810	N	PRO	B1910	-29.011	-24.315	97.795	1.00211.21	N
ATOM	6811	CA	PRO	B1910	-29.618	-24.210	96.455	1.00210.66	C
ATOM	6812	C	PRO	B1910	-28.742	-23.763	95.256	1.00210.09	C
ATOM	6813	O	PRO	B1910	-29.234	-23.090	94.340	1.00209.89	O
ATOM	6814	CB	PRO	B1910	-30.799	-23.263	96.708	1.00210.72	C

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ATOM   6815  CG  PRO B1910     -31.150 -23.498  98.225  1.00210.90           C
ATOM   6816  CD  PRO B1910     -30.087 -24.435  98.793  1.00211.14           C
ATOM   6817  N   THR B1911     -27.475 -24.181  95.255  1.00209.49           N
ATOM   6818  CA  THR B1911     -26.484 -23.739  94.269  1.00208.83           C
ATOM   6819  C   THR B1911     -26.454 -24.633  93.038  1.00208.39           C
ATOM   6820  O   THR B1911     -26.308 -24.129  91.928  1.00208.50           O
ATOM   6821  CB  THR B1911     -25.047 -23.592  94.887  1.00208.86           C
ATOM   6822  OG1 THR B1911     -24.246 -22.739  94.062  1.00208.74           O
ATOM   6823  CG2 THR B1911     -24.341 -24.949  95.063  1.00208.69           C
ATOM   6824  N   PHE B1912     -26.583 -25.947  93.254  1.00207.69           N
ATOM   6825  CA  PHE B1912     -26.641 -26.969  92.190  1.00206.96           C
ATOM   6826  C   PHE B1912     -26.225 -26.475  90.788  1.00206.29           C
ATOM   6827  O   PHE B1912     -27.078 -26.139  89.981  1.00206.12           O
ATOM   6828  CB  PHE B1912     -28.036 -27.644  92.159  1.00207.11           C
ATOM   6829  CG  PHE B1912     -29.190 -26.738  92.582  1.00207.58           C
ATOM   6830  CD1 PHE B1912     -29.670 -25.734  91.738  1.00208.00           C
ATOM   6831  CD2 PHE B1912     -29.810 -26.909  93.822  1.00207.92           C
ATOM   6832  CE1 PHE B1912     -30.737 -24.902  92.127  1.00207.97           C
ATOM   6833  CE2 PHE B1912     -30.883 -26.086  94.216  1.00207.79           C
ATOM   6834  CZ  PHE B1912     -31.342 -25.081  93.367  1.00207.62           C
ATOM   6835  N   LYS B1913     -24.922 -26.440  90.504  1.00205.44           N
ATOM   6836  CA  LYS B1913     -24.408 -25.748  89.310  1.00204.66           C
ATOM   6837  C   LYS B1913     -24.597 -26.451  87.966  1.00204.47           C
ATOM   6838  O   LYS B1913     -24.387 -25.835  86.920  1.00204.57           O
ATOM   6839  CB  LYS B1913     -22.946 -25.350  89.492  1.00204.46           C
ATOM   6840  CG  LYS B1913     -22.014 -26.508  89.715  1.00203.98           C
ATOM   6841  CD  LYS B1913     -20.849 -26.076  90.558  1.00204.15           C
ATOM   6842  CE  LYS B1913     -21.323 -25.635  91.934  1.00204.69           C
ATOM   6843  NZ  LYS B1913     -20.247 -24.984  92.726  1.00205.35           N
ATOM   6844  N   GLU B1914     -24.979 -27.730  87.998  1.00204.14           N
ATOM   6845  CA  GLU B1914     -25.311 -28.514  86.787  1.00203.66           C
ATOM   6846  C   GLU B1914     -26.772 -28.950  86.768  1.00203.31           C
ATOM   6847  O   GLU B1914     -27.342 -29.186  85.706  1.00203.00           O
ATOM   6848  CB  GLU B1914     -24.425 -29.743  86.670  1.00203.67           C
ATOM   6849  CG  GLU B1914     -23.216 -29.558  85.784  1.00203.83           C
ATOM   6850  CD  GLU B1914     -21.961 -29.194  86.535  1.00203.81           C
ATOM   6851  OE1 GLU B1914     -22.011 -29.078  87.777  1.00203.94           O
ATOM   6852  OE2 GLU B1914     -20.912 -29.035  85.875  1.00203.70           O
ATOM   6853  N   ASN B1915     -27.340 -29.108  87.964  1.00203.15           N
ATOM   6854  CA  ASN B1915     -28.783 -28.992  88.186  1.00202.96           C
ATOM   6855  C   ASN B1915     -29.129 -27.485  88.386  1.00203.37           C
ATOM   6856  O   ASN B1915     -30.098 -27.113  89.070  1.00203.41           O
ATOM   6857  CB  ASN B1915     -29.238 -29.875  89.364  1.00202.54           C
ATOM   6858  CG  ASN B1915     -29.359 -31.350  88.990  1.00200.79           C
ATOM   6859  OD1 ASN B1915     -28.452 -32.143  89.234  1.00198.56           O
ATOM   6860  ND2 ASN B1915     -30.489 -31.720  88.404  1.00198.89           N
ATOM   6861  N   TYR B1916     -28.268 -26.644  87.802  1.00203.63           N
ATOM   6862  CA  TYR B1916     -28.497 -25.223  87.519  1.00203.80           C
ATOM   6863  C   TYR B1916     -28.549 -25.111  85.996  1.00204.10           C
ATOM   6864  O   TYR B1916     -29.030 -24.111  85.442  1.00204.27           O
ATOM   6865  CB  TYR B1916     -27.299 -24.408  87.995  1.00203.59           C
ATOM   6866  CG  TYR B1916     -27.632 -23.112  88.666  1.00203.39           C
ATOM   6867  CD1 TYR B1916     -28.062 -23.096  89.990  1.00203.22           C
ATOM   6868  CD2 TYR B1916     -27.495 -21.902  87.995  1.00202.98           C
ATOM   6869  CE1 TYR B1916     -28.359 -21.922  90.631  1.00202.90           C
ATOM   6870  CE2 TYR B1916     -27.795 -20.713  88.624  1.00203.03           C
ATOM   6871  CZ  TYR B1916     -28.227 -20.734  89.946  1.00203.27           C
ATOM   6872  OH  TYR B1916     -28.532 -19.567  90.600  1.00203.74           O
ATOM   6873  N   ARG B1917     -28.028 -26.155  85.339  1.00204.21           N
ATOM   6874  CA  ARG B1917     -27.817 -26.201  83.899  1.00204.10           C
ATOM   6875  C   ARG B1917     -27.943 -27.619  83.366  1.00203.84           C
ATOM   6876  O   ARG B1917     -29.043 -28.077  83.044  1.00203.79           O
ATOM   6877  CB  ARG B1917     -26.412 -25.695  83.552  1.00204.24           C
ATOM   6878  CG  ARG B1917     -26.203 -24.200  83.667  1.00205.12           C
ATOM   6879  CD  ARG B1917     -25.031 -23.759  82.800  1.00206.71           C
ATOM   6880  NE  ARG B1917     -25.037 -22.313  82.573  1.00207.61           N
ATOM   6881  CZ  ARG B1917     -24.502 -21.701  81.516  1.00207.90           C
ATOM   6882  NH1 ARG B1917     -23.910 -22.397  80.548  1.00207.74           N
ATOM   6883  NH2 ARG B1917     -24.572 -20.378  81.423  1.00208.33           N
ATOM   6884  N   PHE B1918     -26.798 -28.308  83.367  1.00203.58           N
ATOM   6885  CA  PHE B1918     -26.451 -29.423  82.458  1.00203.37           C
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ATOM   6886  C   PHE B1918     -27.438 -30.577  82.240  1.00203.27           C
ATOM   6887  O   PHE B1918     -27.567 -31.471  83.080  1.00203.07           O
ATOM   6888  CB  PHE B1918     -25.066 -29.976  82.822  1.00203.12           C
ATOM   6889  CG  PHE B1918     -23.920 -29.033  82.510  1.00202.67           C
ATOM   6890  CD1 PHE B1918     -22.910 -29.419  81.632  1.00201.79           C
ATOM   6891  CD2 PHE B1918     -23.842 -27.773  83.107  1.00201.66           C
ATOM   6892  CE1 PHE B1918     -21.854 -28.571  81.354  1.00200.87           C
ATOM   6893  CE2 PHE B1918     -22.788 -26.923  82.828  1.00201.19           C
ATOM   6894  CZ  PHE B1918     -21.791 -27.327  81.947  1.00201.42           C
ATOM   6895  N   HIS B1919     -28.086 -30.549  81.073  1.00203.23           N
ATOM   6896  CA  HIS B1919     -28.990 -31.600  80.598  1.00203.18           C
ATOM   6897  C   HIS B1919     -28.566 -32.054  79.199  1.00203.30           C
ATOM   6898  O   HIS B1919     -29.290 -31.875  78.215  1.00202.93           O
ATOM   6899  CB  HIS B1919     -30.427 -31.096  80.552  1.00203.15           C
ATOM   6900  CG  HIS B1919     -31.126 -31.114  81.873  1.00202.48           C
ATOM   6901  ND1 HIS B1919     -31.168 -30.018  82.705  1.00202.06           N
ATOM   6902  CD2 HIS B1919     -31.839 -32.085  82.488  1.00201.92           C
ATOM   6903  CE1 HIS B1919     -31.866 -30.318  83.784  1.00202.25           C
ATOM   6904  NE2 HIS B1919     -32.284 -31.567  83.677  1.00201.93           N
ATOM   6905  N   ALA B1920     -27.394 -32.675  79.150  1.00203.68           N
ATOM   6906  CA  ALA B1920     -26.687 -32.999  77.914  1.00204.07           C
ATOM   6907  C   ALA B1920     -27.447 -33.760  76.812  1.00204.23           C
ATOM   6908  O   ALA B1920     -28.291 -34.624  77.092  1.00204.55           O
ATOM   6909  CB  ALA B1920     -25.381 -33.716  78.242  1.00204.12           C
ATOM   6910  N   ILE B1921     -27.132 -33.379  75.569  1.00204.01           N
ATOM   6911  CA  ILE B1921     -27.330 -34.148  74.339  1.00203.62           C
ATOM   6912  C   ILE B1921     -25.941 -34.106  73.707  1.00203.48           C
ATOM   6913  O   ILE B1921     -25.796 -34.099  72.489  1.00203.29           O
ATOM   6914  CB  ILE B1921     -28.364 -33.468  73.388  1.00203.52           C
ATOM   6915  CG1 ILE B1921     -29.763 -33.464  74.006  1.00203.54           C
ATOM   6916  CG2 ILE B1921     -28.391 -34.133  72.008  1.00203.42           C
ATOM   6917  CD1 ILE B1921     -30.812 -32.775  73.167  1.00203.54           C
ATOM   6918  N   ASN B1922     -24.926 -34.044  74.569  1.00203.54           N
ATOM   6919  CA  ASN B1922     -23.519 -33.941  74.190  1.00203.78           C
ATOM   6920  C   ASN B1922     -22.735 -33.066  75.145  1.00203.83           C
ATOM   6921  O   ASN B1922     -21.659 -33.437  75.617  1.00203.75           O
ATOM   6922  CB  ASN B1922     -23.358 -33.362  72.788  1.00203.96           C
ATOM   6923  CG  ASN B1922     -21.984 -33.637  72.187  1.00204.66           C
ATOM   6924  OD1 ASN B1922     -21.139 -34.322  72.782  1.00204.96           O
ATOM   6925  ND2 ASN B1922     -21.760 -33.107  70.988  1.00205.18           N
ATOM   6926  N   GLY B1923     -23.278 -31.890  75.414  1.00203.92           N
ATOM   6927  CA  GLY B1923     -22.540 -30.874  76.126  1.00204.40           C
ATOM   6928  C   GLY B1923     -22.382 -29.640  75.262  1.00204.78           C
ATOM   6929  O   GLY B1923     -21.615 -28.731  75.618  1.00205.10           O
ATOM   6930  N   TYR B1924     -23.063 -29.641  74.103  1.00204.84           N
ATOM   6931  CA  TYR B1924     -23.447 -28.407  73.363  1.00204.61           C
ATOM   6932  C   TYR B1924     -24.914 -28.123  73.670  1.00204.38           C
ATOM   6933  O   TYR B1924     -25.647 -27.518  72.868  1.00204.36           O
ATOM   6934  CB  TYR B1924     -23.254 -28.551  71.856  1.00204.49           C
ATOM   6935  CG  TYR B1924     -21.938 -28.037  71.397  1.00204.29           C
ATOM   6936  CD1 TYR B1924     -21.701 -26.673  71.319  1.00204.39           C
ATOM   6937  CD2 TYR B1924     -20.916 -28.913  71.059  1.00204.26           C
ATOM   6938  CE1 TYR B1924     -20.470 -26.185  70.901  1.00205.48           C
ATOM   6939  CE2 TYR B1924     -19.680 -28.447  70.634  1.00204.99           C
ATOM   6940  CZ  TYR B1924     -19.459 -27.079  70.555  1.00205.50           C
ATOM   6941  OH  TYR B1924     -18.230 -26.608  70.130  1.00205.54           O
ATOM   6942  N   ILE B1925     -25.306 -28.569  74.864  1.00203.87           N
ATOM   6943  CA  ILE B1925     -26.690 -28.754  75.227  1.00203.18           C
ATOM   6944  C   ILE B1925     -27.120 -27.679  76.181  1.00202.81           C
ATOM   6945  O   ILE B1925     -27.340 -27.841  77.387  1.00202.56           O
ATOM   6946  CB  ILE B1925     -26.954 -30.154  75.744  1.00203.24           C
ATOM   6947  CG1 ILE B1925     -25.974 -31.123  75.084  1.00202.37           C
ATOM   6948  CG2 ILE B1925     -28.413 -30.524  75.490  1.00203.36           C
ATOM   6949  CD1 ILE B1925     -25.990 -31.109  73.570  1.00202.14           C
ATOM   6950  N   MET B1926     -27.162 -26.531  75.565  1.00202.54           N
ATOM   6951  CA  MET B1926     -28.034 -25.504  75.956  1.00202.48           C
ATOM   6952  C   MET B1926     -29.389 -26.060  75.538  1.00201.81           C
ATOM   6953  O   MET B1926     -29.814 -27.127  75.982  1.00201.49           O
ATOM   6954  CB  MET B1926     -27.656 -24.238  75.158  1.00203.11           C
ATOM   6955  CG  MET B1926     -26.705 -24.458  73.918  1.00203.59           C
ATOM   6956  SD  MET B1926     -24.922 -24.099  74.134  1.00203.80           S
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ATOM	6957	CE	MET	B1926	-24.301	-24.559	72.516	1.00203.77	C
ATOM	6958	N	ASP	B1927	-30.045	-25.322	74.662	1.00201.23	N
ATOM	6959	CA	ASP	B1927	-31.257	-25.743	74.025	1.00200.56	C
ATOM	6960	C	ASP	B1927	-30.935	-25.587	72.538	1.00200.16	C
ATOM	6961	O	ASP	B1927	-31.741	-25.066	71.756	1.00199.97	O
ATOM	6962	CB	ASP	B1927	-32.413	-24.845	74.496	1.00200.55	C
ATOM	6963	CG	ASP	B1927	-32.521	-24.764	76.043	1.00200.07	C
ATOM	6964	OD1	ASP	B1927	-31.539	-24.377	76.718	1.00198.89	O
ATOM	6965	OD2	ASP	B1927	-33.603	-25.073	76.588	1.00199.65	O
ATOM	6966	N	THR	B1928	-29.716	-26.028	72.187	1.00199.68	N
ATOM	6967	CA	THR	B1928	-29.166	-25.979	70.815	1.00199.27	C
ATOM	6968	C	THR	B1928	-27.691	-26.462	70.630	1.00198.87	C
ATOM	6969	O	THR	B1928	-26.742	-25.793	71.055	1.00198.55	O
ATOM	6970	CB	THR	B1928	-29.348	-24.584	70.181	1.00199.35	C
ATOM	6971	OG1	THR	B1928	-28.621	-24.518	68.947	1.00199.81	O
ATOM	6972	CG2	THR	B1928	-28.868	-23.489	71.131	1.00199.29	C
ATOM	6973	N	LEU	B1929	-27.525	-27.615	69.972	1.00198.48	N
ATOM	6974	CA	LEU	B1929	-26.215	-28.154	69.569	1.00197.96	C
ATOM	6975	C	LEU	B1929	-26.150	-28.151	68.049	1.00197.97	C
ATOM	6976	O	LEU	B1929	-27.197	-28.205	67.398	1.00197.94	O
ATOM	6977	CB	LEU	B1929	-26.006	-29.586	70.084	1.00197.71	C
ATOM	6978	CG	LEU	B1929	-26.061	-30.777	69.112	1.00196.80	C
ATOM	6979	CD1	LEU	B1929	-25.175	-31.921	69.574	1.00195.79	C
ATOM	6980	CD2	LEU	B1929	-27.480	-31.252	68.865	1.00196.24	C
ATOM	6981	N	PRO	B1930	-24.928	-28.134	67.478	1.00197.94	N
ATOM	6982	CA	PRO	B1930	-24.724	-27.825	66.057	1.00197.99	C
ATOM	6983	C	PRO	B1930	-25.122	-28.877	65.001	1.00198.08	C
ATOM	6984	O	PRO	B1930	-26.257	-28.860	64.496	1.00198.19	O
ATOM	6985	CB	PRO	B1930	-23.217	-27.532	65.981	1.00197.89	C
ATOM	6986	CG	PRO	B1930	-22.631	-28.358	67.045	1.00197.88	C
ATOM	6987	CD	PRO	B1930	-23.646	-28.394	68.161	1.00198.00	C
ATOM	6988	N	GLY	B1931	-24.189	-29.778	64.688	1.00198.08	N
ATOM	6989	CA	GLY	B1931	-24.164	-30.494	63.410	1.00197.97	C
ATOM	6990	C	GLY	B1931	-25.210	-31.536	63.079	1.00197.81	C
ATOM	6991	O	GLY	B1931	-24.883	-32.703	62.925	1.00197.78	O
ATOM	6992	N	LEU	B1932	-26.460	-31.124	62.924	1.00197.79	N
ATOM	6993	CA	LEU	B1932	-27.478	-32.073	62.515	1.00198.06	C
ATOM	6994	C	LEU	B1932	-27.944	-31.833	61.080	1.00198.36	C
ATOM	6995	O	LEU	B1932	-29.107	-31.531	60.818	1.00198.54	O
ATOM	6996	CB	LEU	B1932	-28.620	-32.111	63.525	1.00197.95	C
ATOM	6997	CG	LEU	B1932	-28.183	-32.580	64.920	1.00198.18	C
ATOM	6998	CD1	LEU	B1932	-29.368	-32.739	65.858	1.00198.60	C
ATOM	6999	CD2	LEU	B1932	-27.363	-33.876	64.883	1.00197.63	C
ATOM	7000	N	VAL	B1933	-26.999	-31.976	60.157	1.00198.72	N
ATOM	7001	CA	VAL	B1933	-27.241	-31.774	58.731	1.00199.16	C
ATOM	7002	C	VAL	B1933	-27.653	-33.085	58.080	1.00199.35	C
ATOM	7003	O	VAL	B1933	-26.921	-34.070	58.197	1.00199.56	O
ATOM	7004	CB	VAL	B1933	-25.957	-31.238	57.993	1.00199.34	C
ATOM	7005	CG1	VAL	B1933	-25.625	-29.800	58.424	1.00199.66	C
ATOM	7006	CG2	VAL	B1933	-24.723	-32.187	58.158	1.00199.08	C
ATOM	7007	N	MET	B1934	-28.805	-33.118	57.404	1.00199.49	N
ATOM	7008	CA	MET	B1934	-29.131	-34.293	56.562	1.00199.70	C
ATOM	7009	C	MET	B1934	-30.133	-34.125	55.395	1.00199.81	C
ATOM	7010	O	MET	B1934	-31.105	-33.356	55.462	1.00199.80	O
ATOM	7011	CB	MET	B1934	-29.448	-35.552	57.402	1.00199.69	C
ATOM	7012	CG	MET	B1934	-30.905	-35.760	57.759	1.00199.69	C
ATOM	7013	SD	MET	B1934	-31.309	-35.147	59.385	1.00199.37	S
ATOM	7014	CE	MET	B1934	-30.631	-36.436	60.408	1.00198.79	C
ATOM	7015	N	ALA	B1935	-29.858	-34.893	54.339	1.00199.87	N
ATOM	7016	CA	ALA	B1935	-30.641	-34.924	53.109	1.00199.95	C
ATOM	7017	C	ALA	B1935	-31.975	-35.593	53.329	1.00200.00	C
ATOM	7018	O	ALA	B1935	-32.021	-36.755	53.729	1.00200.12	O
ATOM	7019	CB	ALA	B1935	-29.878	-35.672	52.043	1.00200.03	C
ATOM	7020	N	GLN	B1936	-33.050	-34.874	53.024	1.00200.03	N
ATOM	7021	CA	GLN	B1936	-34.402	-35.340	53.309	1.00200.42	C
ATOM	7022	C	GLN	B1936	-34.772	-36.716	52.718	1.00200.50	C
ATOM	7023	O	GLN	B1936	-35.922	-37.155	52.808	1.00200.39	O
ATOM	7024	CB	GLN	B1936	-35.418	-34.259	52.937	1.00200.53	C
ATOM	7025	CG	GLN	B1936	-35.738	-34.156	51.465	1.00201.49	C
ATOM	7026	CD	GLN	B1936	-36.901	-35.037	51.080	1.00202.98	C
ATOM	7027	OE1	GLN	B1936	-37.880	-35.158	51.822	1.00203.12	O

ATOM	7028	NE2	GLN	B1936	-36.798	-35.671	49.918	1.00204.15	N
ATOM	7029	N	ASP	B1937	-33.793	-37.396	52.131	1.00200.82	N
ATOM	7030	CA	ASP	B1937	-33.957	-38.803	51.777	1.00201.09	C
ATOM	7031	C	ASP	B1937	-32.886	-39.703	52.363	1.00200.91	C
ATOM	7032	O	ASP	B1937	-33.194	-40.436	53.300	1.00200.69	O
ATOM	7033	CB	ASP	B1937	-34.083	-38.993	50.274	1.00201.47	C
ATOM	7034	CG	ASP	B1937	-35.467	-38.669	49.778	1.00202.30	C
ATOM	7035	OD1	ASP	B1937	-35.564	-38.128	48.649	1.00203.91	O
ATOM	7036	OD2	ASP	B1937	-36.447	-38.940	50.524	1.00202.13	O
ATOM	7037	N	GLN	B1938	-31.657	-39.649	51.820	1.00200.75	N
ATOM	7038	CA	GLN	B1938	-30.534	-40.456	52.318	1.00200.53	C
ATOM	7039	C	GLN	B1938	-30.844	-40.778	53.761	1.00200.38	C
ATOM	7040	O	GLN	B1938	-30.566	-39.974	54.647	1.00200.34	O
ATOM	7041	CB	GLN	B1938	-29.201	-39.710	52.189	1.00200.46	C
ATOM	7042	CG	GLN	B1938	-28.298	-40.218	51.053	1.00201.21	C
ATOM	7043	CD	GLN	B1938	-27.683	-39.095	50.167	1.00202.25	C
ATOM	7044	OE1	GLN	B1938	-26.455	-38.890	50.140	1.00201.21	O
ATOM	7045	NE2	GLN	B1938	-28.546	-38.384	49.426	1.00202.42	N
ATOM	7046	N	ARG	B1939	-31.475	-41.942	53.961	1.00200.24	N
ATOM	7047	CA	ARG	B1939	-32.117	-42.354	55.228	1.00200.07	C
ATOM	7048	C	ARG	B1939	-31.124	-42.534	56.352	1.00199.28	C
ATOM	7049	O	ARG	B1939	-30.151	-43.281	56.224	1.00199.31	O
ATOM	7050	CB	ARG	B1939	-32.959	-43.634	55.043	1.00200.01	C
ATOM	7051	CG	ARG	B1939	-32.519	-44.440	53.752	1.00201.29	C
ATOM	7052	CD	ARG	B1939	-33.158	-45.831	53.736	1.00201.40	C
ATOM	7053	NE	ARG	B1939	-32.495	-46.755	54.665	1.00202.93	N
ATOM	7054	CZ	ARG	B1939	-33.058	-47.293	55.745	1.00202.33	C
ATOM	7055	NH1	ARG	B1939	-32.348	-48.123	56.503	1.00202.12	N
ATOM	7056	NH2	ARG	B1939	-34.323	-47.018	56.061	1.00202.00	N
ATOM	7057	N	ILE	B1940	-31.410	-41.859	57.461	1.00198.43	N
ATOM	7058	CA	ILE	B1940	-30.418	-41.554	58.477	1.00197.45	C
ATOM	7059	C	ILE	B1940	-30.502	-42.514	59.651	1.00196.75	C
ATOM	7060	O	ILE	B1940	-31.588	-42.795	60.166	1.00196.45	O
ATOM	7061	CB	ILE	B1940	-30.584	-40.097	58.965	1.00197.57	C
ATOM	7062	CG1	ILE	B1940	-31.099	-40.045	60.397	1.00198.18	C
ATOM	7063	CG2	ILE	B1940	-31.524	-39.308	58.052	1.00197.33	C
ATOM	7064	CD1	ILE	B1940	-29.998	-40.090	61.422	1.00199.67	C
ATOM	7065	N	ARG	B1941	-29.348	-43.017	60.072	1.00196.15	N
ATOM	7066	CA	ARG	B1941	-29.296	-43.904	61.223	1.00195.76	C
ATOM	7067	C	ARG	B1941	-28.843	-43.115	62.436	1.00195.63	C
ATOM	7068	O	ARG	B1941	-27.831	-42.412	62.370	1.00195.87	O
ATOM	7069	CB	ARG	B1941	-28.354	-45.080	60.983	1.00195.60	C
ATOM	7070	CG	ARG	B1941	-28.239	-46.001	62.173	1.00195.29	C
ATOM	7071	CD	ARG	B1941	-27.946	-47.400	61.749	1.00195.96	C
ATOM	7072	NE	ARG	B1941	-26.531	-47.635	61.456	1.00197.07	N
ATOM	7073	CZ	ARG	B1941	-25.985	-47.701	60.236	1.00196.99	C
ATOM	7074	NH1	ARG	B1941	-26.714	-47.525	59.134	1.00196.33	N
ATOM	7075	NH2	ARG	B1941	-24.685	-47.945	60.122	1.00196.49	N
ATOM	7076	N	TRP	B1942	-29.606	-43.246	63.526	1.00195.10	N
ATOM	7077	CA	TRP	B1942	-29.370	-42.577	64.803	1.00194.39	C
ATOM	7078	C	TRP	B1942	-28.778	-43.528	65.824	1.00194.23	C
ATOM	7079	O	TRP	B1942	-29.306	-44.621	66.019	1.00194.33	O
ATOM	7080	CB	TRP	B1942	-30.697	-42.142	65.370	1.00194.23	C
ATOM	7081	CG	TRP	B1942	-31.317	-41.008	64.684	1.00194.28	C
ATOM	7082	CD1	TRP	B1942	-32.431	-41.035	63.894	1.00194.44	C
ATOM	7083	CD2	TRP	B1942	-30.898	-39.647	64.748	1.00194.15	C
ATOM	7084	NE1	TRP	B1942	-32.729	-39.767	63.455	1.00194.30	N
ATOM	7085	CE2	TRP	B1942	-31.803	-38.896	63.966	1.00194.09	C
ATOM	7086	CE3	TRP	B1942	-29.845	-38.986	65.389	1.00194.03	C
ATOM	7087	CZ2	TRP	B1942	-31.682	-37.522	63.804	1.00194.07	C
ATOM	7088	CZ3	TRP	B1942	-29.730	-37.621	65.232	1.00194.27	C
ATOM	7089	CH2	TRP	B1942	-30.642	-36.903	64.443	1.00194.35	C
ATOM	7090	N	TYR	B1943	-27.720	-43.095	66.508	1.00194.00	N
ATOM	7091	CA	TYR	B1943	-27.087	-43.900	67.556	1.00193.88	C
ATOM	7092	C	TYR	B1943	-27.348	-43.341	68.958	1.00193.97	C
ATOM	7093	O	TYR	B1943	-26.537	-42.585	69.484	1.00194.11	O
ATOM	7094	CB	TYR	B1943	-25.586	-43.987	67.315	1.00193.69	C
ATOM	7095	CG	TYR	B1943	-25.203	-44.839	66.144	1.00193.51	C
ATOM	7096	CD1	TYR	B1943	-25.393	-44.393	64.843	1.00193.63	C
ATOM	7097	CD2	TYR	B1943	-24.632	-46.085	66.331	1.00193.59	C
ATOM	7098	CE1	TYR	B1943	-25.034	-45.172	63.752	1.00193.73	C

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ATOM   7099  CE2 TYR B1943     -24.269 -46.876  65.254  1.00194.09           C
ATOM   7100  CZ  TYR B1943     -24.469 -46.410  63.964  1.00194.05           C
ATOM   7101  OH  TYR B1943     -24.110 -47.182  62.884  1.00194.13           O
ATOM   7102  N   LEU B1944     -28.468 -43.723  69.567  1.00193.90           N
ATOM   7103  CA  LEU B1944     -28.842 -43.196  70.873  1.00194.01           C
ATOM   7104  C   LEU B1944     -28.267 -44.027  72.026  1.00194.62           C
ATOM   7105  O   LEU B1944     -28.614 -45.212  72.166  1.00194.86           O
ATOM   7106  CB  LEU B1944     -30.357 -43.140  70.983  1.00193.67           C
ATOM   7107  CG  LEU B1944     -31.078 -42.477  69.817  1.00193.45           C
ATOM   7108  CD1 LEU B1944     -32.526 -42.886  69.797  1.00193.92           C
ATOM   7109  CD2 LEU B1944     -30.962 -40.977  69.887  1.00193.60           C
ATOM   7110  N   LEU B1945     -27.381 -43.414  72.832  1.00195.07           N
ATOM   7111  CA  LEU B1945     -26.837 -44.034  74.079  1.00195.09           C
ATOM   7112  C   LEU B1945     -26.943 -43.076  75.304  1.00195.46           C
ATOM   7113  O   LEU B1945     -26.202 -42.090  75.418  1.00195.20           O
ATOM   7114  CB  LEU B1945     -25.392 -44.656  73.920  1.00194.75           C
ATOM   7115  CG  LEU B1945     -24.538 -45.087  72.675  1.00192.82           C
ATOM   7116  CD1 LEU B1945     -23.382 -45.980  73.068  1.00190.80           C
ATOM   7117  CD2 LEU B1945     -25.260 -45.739  71.528  1.00190.55           C
ATOM   7118  N   SER B1946     -27.903 -43.368  76.186  1.00196.14           N
ATOM   7119  CA  SER B1946     -28.053 -42.686  77.481  1.00197.01           C
ATOM   7120  C   SER B1946     -27.061 -43.235  78.504  1.00197.77           C
ATOM   7121  O   SER B1946     -26.735 -44.432  78.493  1.00197.95           O
ATOM   7122  CB  SER B1946     -29.474 -42.844  78.034  1.00196.85           C
ATOM   7123  OG  SER B1946     -29.553 -42.492  79.410  1.00196.44           O
ATOM   7124  N   MET B1947     -26.607 -42.354  79.397  1.00198.40           N
ATOM   7125  CA  MET B1947     -25.593 -42.705  80.386  1.00198.89           C
ATOM   7126  C   MET B1947     -25.950 -42.223  81.789  1.00199.14           C
ATOM   7127  O   MET B1947     -27.086 -42.409  82.226  1.00199.34           O
ATOM   7128  CB  MET B1947     -24.217 -42.197  79.940  1.00199.01           C
ATOM   7129  CG  MET B1947     -23.398 -43.270  79.249  1.00199.44           C
ATOM   7130  SD  MET B1947     -23.183 -44.701  80.342  1.00200.41           S
ATOM   7131  CE  MET B1947     -22.852 -46.026  79.172  1.00200.00           C
ATOM   7132  N   GLY B1948     -24.967 -41.653  82.494  1.00199.34           N
ATOM   7133  CA  GLY B1948     -25.174 -40.960  83.778  1.00199.34           C
ATOM   7134  C   GLY B1948     -25.436 -41.761  85.049  1.00199.28           C
ATOM   7135  O   GLY B1948     -24.673 -42.678  85.396  1.00199.23           O
ATOM   7136  N   SER B1949     -26.521 -41.383  85.738  1.00199.14           N
ATOM   7137  CA  SER B1949     -26.889 -41.905  87.067  1.00198.91           C
ATOM   7138  C   SER B1949     -28.140 -42.788  87.030  1.00198.50           C
ATOM   7139  O   SER B1949     -28.402 -43.468  86.035  1.00198.46           O
ATOM   7140  CB  SER B1949     -27.094 -40.751  88.065  1.00199.04           C
ATOM   7141  OG  SER B1949     -25.925 -39.955  88.209  1.00199.37           O
ATOM   7142  N   ASN B1950     -28.911 -42.772  88.115  1.00197.95           N
ATOM   7143  CA  ASN B1950     -30.076 -43.634  88.206  1.00197.58           C
ATOM   7144  C   ASN B1950     -31.417 -42.917  88.064  1.00197.32           C
ATOM   7145  O   ASN B1950     -32.483 -43.502  88.284  1.00197.28           O
ATOM   7146  CB  ASN B1950     -30.029 -44.471  89.476  1.00197.65           C
ATOM   7147  CG  ASN B1950     -30.552 -45.875  89.258  1.00197.88           C
ATOM   7148  OD1 ASN B1950     -31.152 -46.172  88.221  1.00197.92           O
ATOM   7149  ND2 ASN B1950     -30.321 -46.754  90.231  1.00198.04           N
ATOM   7150  N   GLU B1951     -31.357 -41.646  87.692  1.00196.98           N
ATOM   7151  CA  GLU B1951     -32.551 -40.931  87.271  1.00196.64           C
ATOM   7152  C   GLU B1951     -32.424 -40.666  85.779  1.00195.91           C
ATOM   7153  O   GLU B1951     -33.326 -40.130  85.147  1.00195.76           O
ATOM   7154  CB  GLU B1951     -32.728 -39.630  88.077  1.00196.97           C
ATOM   7155  CG  GLU B1951     -32.459 -38.298  87.335  1.00197.97           C
ATOM   7156  CD  GLU B1951     -30.986 -37.917  87.258  1.00199.33           C
ATOM   7157  OE1 GLU B1951     -30.654 -36.761  87.620  1.00199.24           O
ATOM   7158  OE2 GLU B1951     -30.165 -38.760  86.825  1.00200.30           O
ATOM   7159  N   ASN B1952     -31.292 -41.071  85.223  1.00195.22           N
ATOM   7160  CA  ASN B1952     -30.963 -40.763  83.845  1.00194.74           C
ATOM   7161  C   ASN B1952     -31.688 -41.575  82.763  1.00194.35           C
ATOM   7162  O   ASN B1952     -31.112 -41.888  81.707  1.00194.42           O
ATOM   7163  CB  ASN B1952     -29.453 -40.804  83.654  1.00194.86           C
ATOM   7164  CG  ASN B1952     -28.856 -39.429  83.511  1.00195.06           C
ATOM   7165  OD1 ASN B1952     -28.769 -38.891  82.405  1.00195.51           O
ATOM   7166  ND2 ASN B1952     -28.430 -38.850  84.626  1.00195.10           N
ATOM   7167  N   ILE B1953     -32.947 -41.921  83.030  1.00193.63           N
ATOM   7168  CA  ILE B1953     -33.851 -42.363  81.974  1.00192.83           C
ATOM   7169  C   ILE B1953     -34.114 -41.128  81.146  1.00192.50           C
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ATOM   7170  O   ILE B1953     -34.326 -40.045  81.686  1.00192.70           O
ATOM   7171  CB  ILE B1953     -35.214 -42.823  82.502  1.00192.66           C
ATOM   7172  CG1 ILE B1953     -35.058 -43.579  83.821  1.00192.83           C
ATOM   7173  CG2 ILE B1953     -35.937 -43.644  81.433  1.00192.34           C
ATOM   7174  CD1 ILE B1953     -36.246 -43.444  84.760  1.00193.36           C
ATOM   7175  N   HIS B1954     -34.078 -41.272  79.834  1.00191.90           N
ATOM   7176  CA  HIS B1954     -34.475 -40.178  78.976  1.00191.19           C
ATOM   7177  C   HIS B1954     -35.323 -40.739  77.853  1.00190.80           C
ATOM   7178  O   HIS B1954     -34.971 -41.736  77.220  1.00190.63           O
ATOM   7179  CB  HIS B1954     -33.260 -39.409  78.460  1.00191.22           C
ATOM   7180  CG  HIS B1954     -32.474 -38.719  79.536  1.00191.02           C
ATOM   7181  ND1 HIS B1954     -32.634 -37.382  79.834  1.00191.01           N
ATOM   7182  CD2 HIS B1954     -31.518 -39.179  80.376  1.00190.80           C
ATOM   7183  CE1 HIS B1954     -31.810 -37.049  80.810  1.00191.01           C
ATOM   7184  NE2 HIS B1954     -31.126 -38.123  81.162  1.00191.06           N
ATOM   7185  N   SER B1955     -36.470 -40.120  77.641  1.00190.37           N
ATOM   7186  CA  SER B1955     -37.387 -40.602  76.637  1.00190.05           C
ATOM   7187  C   SER B1955     -37.448 -39.568  75.511  1.00189.83           C
ATOM   7188  O   SER B1955     -38.136 -38.551  75.627  1.00189.64           O
ATOM   7189  CB  SER B1955     -38.750 -40.913  77.269  1.00190.13           C
ATOM   7190  OG  SER B1955     -38.660 -41.964  78.232  1.00189.62           O
ATOM   7191  N   ILE B1956     -36.683 -39.846  74.445  1.00189.67           N
ATOM   7192  CA  ILE B1956     -36.453 -38.933  73.310  1.00189.36           C
ATOM   7193  C   ILE B1956     -37.352 -39.273  72.150  1.00189.40           C
ATOM   7194  O   ILE B1956     -37.651 -40.454  71.906  1.00189.09           O
ATOM   7195  CB  ILE B1956     -35.027 -39.061  72.682  1.00189.20           C
ATOM   7196  CG1 ILE B1956     -34.125 -39.991  73.487  1.00189.00           C
ATOM   7197  CG2 ILE B1956     -34.411 -37.687  72.410  1.00188.90           C
ATOM   7198  CD1 ILE B1956     -33.391 -40.966  72.633  1.00187.97           C
ATOM   7199  N   HIS B1957     -37.748 -38.220  71.427  1.00189.55           N
ATOM   7200  CA  HIS B1957     -38.355 -38.350  70.101  1.00189.69           C
ATOM   7201  C   HIS B1957     -38.018 -37.182  69.186  1.00189.56           C
ATOM   7202  O   HIS B1957     -37.465 -36.162  69.623  1.00189.53           O
ATOM   7203  CB  HIS B1957     -39.872 -38.575  70.177  1.00189.77           C
ATOM   7204  CG  HIS B1957     -40.697 -37.353  69.921  1.00190.02           C
ATOM   7205  ND1 HIS B1957     -40.608 -36.215  70.695  1.00190.17           N
ATOM   7206  CD2 HIS B1957     -41.649 -37.106  68.991  1.00190.44           C
ATOM   7207  CE1 HIS B1957     -41.464 -35.315  70.244  1.00190.78           C
ATOM   7208  NE2 HIS B1957     -42.109 -35.831  69.212  1.00191.05           N
ATOM   7209  N   PHE B1958     -38.370 -37.362  67.916  1.00189.32           N
ATOM   7210  CA  PHE B1958     -38.111 -36.399  66.870  1.00189.09           C
ATOM   7211  C   PHE B1958     -39.453 -35.976  66.320  1.00189.35           C
ATOM   7212  O   PHE B1958     -40.154 -36.789  65.697  1.00189.42           O
ATOM   7213  CB  PHE B1958     -37.310 -37.079  65.772  1.00188.71           C
ATOM   7214  CG  PHE B1958     -36.236 -37.979  66.283  1.00187.50           C
ATOM   7215  CD1 PHE B1958     -34.919 -37.547  66.329  1.00186.57           C
ATOM   7216  CD2 PHE B1958     -36.537 -39.257  66.713  1.00186.18           C
ATOM   7217  CE1 PHE B1958     -33.916 -38.370  66.800  1.00186.19           C
ATOM   7218  CE2 PHE B1958     -35.539 -40.085  67.187  1.00186.37           C
ATOM   7219  CZ  PHE B1958     -34.224 -39.641  67.234  1.00186.59           C
ATOM   7220  N   SER B1959     -39.820 -34.717  66.553  1.00189.43           N
ATOM   7221  CA  SER B1959     -41.155 -34.261  66.192  1.00189.81           C
ATOM   7222  C   SER B1959     -41.455 -34.569  64.736  1.00190.39           C
ATOM   7223  O   SER B1959     -40.563 -34.502  63.886  1.00190.46           O
ATOM   7224  CB  SER B1959     -41.322 -32.773  66.461  1.00189.57           C
ATOM   7225  OG  SER B1959     -42.502 -32.267  65.862  1.00189.24           O
ATOM   7226  N   GLY B1960     -42.705 -34.940  64.464  1.00191.04           N
ATOM   7227  CA  GLY B1960     -43.187 -35.139  63.092  1.00191.81           C
ATOM   7228  C   GLY B1960     -42.317 -36.046  62.242  1.00192.18           C
ATOM   7229  O   GLY B1960     -42.146 -35.829  61.026  1.00192.54           O
ATOM   7230  N   HIS B1961     -41.762 -37.053  62.906  1.00192.14           N
ATOM   7231  CA  HIS B1961     -40.918 -38.042  62.287  1.00192.23           C
ATOM   7232  C   HIS B1961     -41.197 -39.330  63.033  1.00192.31           C
ATOM   7233  O   HIS B1961     -41.661 -39.290  64.178  1.00192.54           O
ATOM   7234  CB  HIS B1961     -39.441 -37.659  62.439  1.00192.20           C
ATOM   7235  CG  HIS B1961     -38.918 -36.759  61.357  1.00192.23           C
ATOM   7236  ND1 HIS B1961     -37.944 -35.810  61.586  1.00191.37           N
ATOM   7237  CD2 HIS B1961     -39.222 -36.672  60.037  1.00192.66           C
ATOM   7238  CE1 HIS B1961     -37.672 -35.179  60.458  1.00191.73           C
ATOM   7239  NE2 HIS B1961     -38.436 -35.679  59.503  1.00192.36           N
ATOM   7240  N   VAL B1962     -40.925 -40.461  62.383  1.00192.23           N
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ATOM   7241  CA  VAL B1962     -41.059 -41.785  62.992  1.00191.90           C
ATOM   7242  C   VAL B1962     -39.924 -42.651  62.524  1.00191.92           C
ATOM   7243  O   VAL B1962     -39.487 -42.550  61.369  1.00192.03           O
ATOM   7244  CB  VAL B1962     -42.379 -42.461  62.589  1.00191.88           C
ATOM   7245  CG1 VAL B1962     -42.286 -43.980  62.668  1.00191.30           C
ATOM   7246  CG2 VAL B1962     -43.503 -41.956  63.452  1.00192.29           C
ATOM   7247  N   PHE B1963     -39.471 -43.523  63.413  1.00191.99           N
ATOM   7248  CA  PHE B1963     -38.339 -44.397  63.124  1.00192.40           C
ATOM   7249  C   PHE B1963     -38.613 -45.869  63.402  1.00192.50           C
ATOM   7250  O   PHE B1963     -39.550 -46.224  64.116  1.00192.65           O
ATOM   7251  CB  PHE B1963     -37.133 -43.946  63.927  1.00192.50           C
ATOM   7252  CG  PHE B1963     -37.410 -43.796  65.382  1.00192.65           C
ATOM   7253  CD1 PHE B1963     -38.355 -42.885  65.829  1.00193.06           C
ATOM   7254  CD2 PHE B1963     -36.720 -44.564  66.311  1.00192.60           C
ATOM   7255  CE1 PHE B1963     -38.607 -42.753  67.179  1.00193.83           C
ATOM   7256  CE2 PHE B1963     -36.956 -44.442  67.662  1.00192.48           C
ATOM   7257  CZ  PHE B1963     -37.903 -43.537  68.103  1.00193.26           C
ATOM   7258  N   THR B1964     -37.781 -46.727  62.834  1.00192.54           N
ATOM   7259  CA  THR B1964     -37.996 -48.149  62.950  1.00192.82           C
ATOM   7260  C   THR B1964     -36.864 -48.725  63.797  1.00192.95           C
ATOM   7261  O   THR B1964     -35.727 -48.277  63.667  1.00192.80           O
ATOM   7262  CB  THR B1964     -38.150 -48.804  61.529  1.00192.96           C
ATOM   7263  OG1 THR B1964     -38.267 -50.223  61.645  1.00193.41           O
ATOM   7264  CG2 THR B1964     -36.991 -48.456  60.566  1.00193.14           C
ATOM   7265  N   VAL B1965     -37.177 -49.653  64.710  1.00193.35           N
ATOM   7266  CA  VAL B1965     -36.129 -50.373  65.461  1.00193.70           C
ATOM   7267  C   VAL B1965     -36.193 -51.860  65.221  1.00194.34           C
ATOM   7268  O   VAL B1965     -37.274 -52.439  65.121  1.00194.10           O
ATOM   7269  CB  VAL B1965     -36.165 -50.207  66.996  1.00193.44           C
ATOM   7270  CG1 VAL B1965     -34.748 -50.070  67.514  1.00193.05           C
ATOM   7271  CG2 VAL B1965     -37.005 -49.037  67.433  1.00193.70           C
ATOM   7272  N   ARG B1966     -35.007 -52.457  65.159  1.00195.42           N
ATOM   7273  CA  ARG B1966     -34.815 -53.886  64.978  1.00196.73           C
ATOM   7274  C   ARG B1966     -34.511 -54.545  66.324  1.00196.84           C
ATOM   7275  O   ARG B1966     -34.124 -53.879  67.283  1.00197.08           O
ATOM   7276  CB  ARG B1966     -33.657 -54.133  64.008  1.00197.19           C
ATOM   7277  CG  ARG B1966     -32.268 -54.246  64.681  1.00200.59           C
ATOM   7278  CD  ARG B1966     -31.659 -52.904  65.186  1.00205.80           C
ATOM   7279  NE  ARG B1966     -30.854 -53.067  66.410  1.00209.16           N
ATOM   7280  CZ  ARG B1966     -29.539 -53.314  66.463  1.00210.70           C
ATOM   7281  NH1 ARG B1966     -28.801 -53.433  65.354  1.00210.70           N
ATOM   7282  NH2 ARG B1966     -28.955 -53.439  67.653  1.00211.85           N
ATOM   7283  N   LYS B1967     -34.662 -55.857  66.384  1.00197.11           N
ATOM   7284  CA  LYS B1967     -34.533 -56.582  67.625  1.00197.67           C
ATOM   7285  C   LYS B1967     -34.696 -58.012  67.154  1.00197.79           C
ATOM   7286  O   LYS B1967     -33.866 -58.530  66.413  1.00197.67           O
ATOM   7287  CB  LYS B1967     -35.676 -56.173  68.589  1.00197.98           C
ATOM   7288  CG  LYS B1967     -35.413 -56.245  70.133  1.00198.93           C
ATOM   7289  CD  LYS B1967     -35.754 -57.640  70.787  1.00199.97           C
ATOM   7290  CE  LYS B1967     -37.268 -57.909  71.038  1.00199.70           C
ATOM   7291  NZ  LYS B1967     -37.709 -57.825  72.471  1.00199.05           N
ATOM   7292  N   LYS B1968     -35.786 -58.634  67.577  1.00198.27           N
ATOM   7293  CA  LYS B1968     -36.267 -59.855  66.976  1.00198.72           C
ATOM   7294  C   LYS B1968     -36.498 -59.522  65.499  1.00198.69           C
ATOM   7295  O   LYS B1968     -35.787 -60.037  64.630  1.00198.66           O
ATOM   7296  CB  LYS B1968     -37.567 -60.307  67.679  1.00199.07           C
ATOM   7297  CG  LYS B1968     -37.416 -61.380  68.787  1.00199.31           C
ATOM   7298  CD  LYS B1968     -37.569 -62.786  68.182  1.00200.00           C
ATOM   7299  CE  LYS B1968     -37.202 -63.893  69.150  1.00199.89           C
ATOM   7300  NZ  LYS B1968     -36.981 -65.193  68.452  1.00199.76           N
ATOM   7301  N   GLU B1969     -37.467 -58.634  65.244  1.00198.66           N
ATOM   7302  CA  GLU B1969     -37.752 -58.095  63.911  1.00198.67           C
ATOM   7303  C   GLU B1969     -37.485 -56.610  63.874  1.00198.61           C
ATOM   7304  O   GLU B1969     -36.592 -56.108  64.551  1.00198.56           O
ATOM   7305  CB  GLU B1969     -39.211 -58.323  63.519  1.00198.57           C
ATOM   7306  CG  GLU B1969     -39.455 -59.626  62.813  1.00199.12           C
ATOM   7307  CD  GLU B1969     -39.382 -60.803  63.758  1.00199.81           C
ATOM   7308  OE1 GLU B1969     -38.513 -61.678  63.545  1.00200.56           O
ATOM   7309  OE2 GLU B1969     -40.180 -60.843  64.725  1.00199.88           O
ATOM   7310  N   GLU B1970     -38.269 -55.918  63.058  1.00198.61           N
ATOM   7311  CA  GLU B1970     -38.268 -54.475  63.024  1.00198.85           C
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ATOM	7312	C	GLU	B1970	-39.693	-54.046	63.295	1.00198.63	C
ATOM	7313	O	GLU	B1970	-40.613	-54.439	62.574	1.00198.34	O
ATOM	7314	CB	GLU	B1970	-37.756	-53.943	61.670	1.00199.05	C
ATOM	7315	CG	GLU	B1970	-36.201	-54.013	61.499	1.00199.82	C
ATOM	7316	CD	GLU	B1970	-35.666	-53.624	60.097	1.00199.43	C
ATOM	7317	OE1	GLU	B1970	-34.502	-54.019	59.799	1.00198.77	O
ATOM	7318	OE2	GLU	B1970	-36.392	-52.937	59.318	1.00199.55	O
ATOM	7319	N	TYR	B1971	-39.882	-53.291	64.374	1.00198.73	N
ATOM	7320	CA	TYR	B1971	-41.182	-52.681	64.628	1.00198.88	C
ATOM	7321	C	TYR	B1971	-41.134	-51.182	64.899	1.00198.54	C
ATOM	7322	O	TYR	B1971	-40.158	-50.675	65.451	1.00198.31	O
ATOM	7323	CB	TYR	B1971	-42.112	-53.517	65.556	1.00199.49	C
ATOM	7324	CG	TYR	B1971	-41.797	-53.798	67.045	1.00200.26	C
ATOM	7325	CD1	TYR	B1971	-40.542	-54.248	67.491	1.00200.41	C
ATOM	7326	CD2	TYR	B1971	-42.826	-53.707	68.001	1.00201.48	C
ATOM	7327	CE1	TYR	B1971	-40.315	-54.542	68.875	1.00200.19	C
ATOM	7328	CE2	TYR	B1971	-42.611	-53.993	69.364	1.00201.28	C
ATOM	7329	CZ	TYR	B1971	-41.363	-54.406	69.798	1.00200.65	C
ATOM	7330	OH	TYR	B1971	-41.197	-54.666	71.147	1.00200.14	O
ATOM	7331	N	LYS	B1972	-42.186	-50.495	64.449	1.00198.30	N
ATOM	7332	CA	LYS	B1972	-42.182	-49.043	64.253	1.00198.08	C
ATOM	7333	C	LYS	B1972	-42.552	-48.298	65.511	1.00197.79	C
ATOM	7334	O	LYS	B1972	-43.523	-48.648	66.173	1.00197.73	O
ATOM	7335	CB	LYS	B1972	-43.172	-48.661	63.156	1.00198.20	C
ATOM	7336	CG	LYS	B1972	-42.724	-47.509	62.266	1.00198.56	C
ATOM	7337	CD	LYS	B1972	-41.786	-48.008	61.165	1.00199.57	C
ATOM	7338	CE	LYS	B1972	-41.951	-47.242	59.859	1.00200.42	C
ATOM	7339	NZ	LYS	B1972	-43.382	-47.152	59.421	1.00200.85	N
ATOM	7340	N	MET	B1973	-41.787	-47.251	65.813	1.00197.48	N
ATOM	7341	CA	MET	B1973	-41.893	-46.537	67.088	1.00197.37	C
ATOM	7342	C	MET	B1973	-41.704	-45.013	66.963	1.00197.00	C
ATOM	7343	O	MET	B1973	-41.020	-44.538	66.053	1.00197.04	O
ATOM	7344	CB	MET	B1973	-40.911	-47.145	68.103	1.00197.39	C
ATOM	7345	CG	MET	B1973	-41.393	-48.483	68.703	1.00197.80	C
ATOM	7346	SD	MET	B1973	-40.183	-49.394	69.696	1.00197.97	S
ATOM	7347	CE	MET	B1973	-41.273	-50.450	70.681	1.00197.62	C
ATOM	7348	N	ALA	B1974	-42.316	-44.257	67.876	1.00196.61	N
ATOM	7349	CA	ALA	B1974	-42.319	-42.792	67.805	1.00196.30	C
ATOM	7350	C	ALA	B1974	-41.372	-42.106	68.787	1.00196.30	C
ATOM	7351	O	ALA	B1974	-40.950	-40.973	68.535	1.00196.20	O
ATOM	7352	CB	ALA	B1974	-43.708	-42.270	67.987	1.00196.19	C
ATOM	7353	N	LEU	B1975	-41.064	-42.780	69.901	1.00196.35	N
ATOM	7354	CA	LEU	B1975	-40.070	-42.309	70.883	1.00196.49	C
ATOM	7355	C	LEU	B1975	-39.532	-43.430	71.764	1.00196.68	C
ATOM	7356	O	LEU	B1975	-40.232	-44.413	72.023	1.00196.53	O
ATOM	7357	CB	LEU	B1975	-40.635	-41.184	71.749	1.00196.53	C
ATOM	7358	CG	LEU	B1975	-41.508	-41.368	72.997	1.00196.84	C
ATOM	7359	CD1	LEU	B1975	-42.626	-42.391	72.795	1.00197.10	C
ATOM	7360	CD2	LEU	B1975	-40.647	-41.699	74.212	1.00197.20	C
ATOM	7361	N	TYR	B1976	-38.306	-43.262	72.255	1.00197.13	N
ATOM	7362	CA	TYR	B1976	-37.588	-44.373	72.892	1.00197.76	C
ATOM	7363	C	TYR	B1976	-36.975	-44.048	74.256	1.00198.08	C
ATOM	7364	O	TYR	B1976	-35.987	-43.308	74.356	1.00198.26	O
ATOM	7365	CB	TYR	B1976	-36.491	-44.889	71.954	1.00197.90	C
ATOM	7366	CG	TYR	B1976	-36.157	-46.367	72.073	1.00197.92	C
ATOM	7367	CD1	TYR	B1976	-35.281	-46.833	73.058	1.00197.73	C
ATOM	7368	CD2	TYR	B1976	-36.691	-47.292	71.169	1.00197.76	C
ATOM	7369	CE1	TYR	B1976	-34.971	-48.180	73.154	1.00197.87	C
ATOM	7370	CE2	TYR	B1976	-36.381	-48.639	71.252	1.00197.74	C
ATOM	7371	CZ	TYR	B1976	-35.521	-49.077	72.245	1.00197.97	C
ATOM	7372	OH	TYR	B1976	-35.222	-50.417	72.328	1.00198.49	O
ATOM	7373	N	ASN	B1977	-37.560	-44.632	75.299	1.00198.29	N
ATOM	7374	CA	ASN	B1977	-37.029	-44.546	76.645	1.00198.41	C
ATOM	7375	C	ASN	B1977	-35.638	-45.116	76.634	1.00198.45	C
ATOM	7376	O	ASN	B1977	-35.436	-46.316	76.827	1.00198.51	O
ATOM	7377	CB	ASN	B1977	-37.892	-45.345	77.609	1.00198.52	C
ATOM	7378	CG	ASN	B1977	-39.336	-45.392	77.179	1.00199.02	C
ATOM	7379	OD1	ASN	B1977	-39.717	-46.169	76.273	1.00199.10	O
ATOM	7380	ND2	ASN	B1977	-40.157	-44.552	77.824	1.00199.44	N
ATOM	7381	N	LEU	B1978	-34.680	-44.252	76.343	1.00198.54	N
ATOM	7382	CA	LEU	B1978	-33.296	-44.594	76.515	1.00198.80	C

ATOM	7383	C	LEU	B1978	-33.083	-44.960	77.971	1.00198.83	C
ATOM	7384	O	LEU	B1978	-33.609	-44.299	78.872	1.00198.99	O
ATOM	7385	CB	LEU	B1978	-32.420	-43.401	76.154	1.00198.90	C
ATOM	7386	CG	LEU	B1978	-31.551	-43.508	74.909	1.00199.46	C
ATOM	7387	CD1	LEU	B1978	-30.650	-42.277	74.752	1.00199.49	C
ATOM	7388	CD2	LEU	B1978	-30.718	-44.784	74.984	1.00200.59	C
ATOM	7389	N	TYR	B1979	-32.337	-46.025	78.211	1.00198.71	N
ATOM	7390	CA	TYR	B1979	-31.968	-46.339	79.571	1.00198.77	C
ATOM	7391	C	TYR	B1979	-30.484	-46.118	79.758	1.00199.09	C
ATOM	7392	O	TYR	B1979	-29.760	-46.024	78.774	1.00199.21	O
ATOM	7393	CB	TYR	B1979	-32.421	-47.749	79.933	1.00198.49	C
ATOM	7394	CG	TYR	B1979	-33.821	-47.723	80.493	1.00198.51	C
ATOM	7395	CD1	TYR	B1979	-34.928	-47.564	79.656	1.00198.79	C
ATOM	7396	CD2	TYR	B1979	-34.043	-47.802	81.867	1.00198.49	C
ATOM	7397	CE1	TYR	B1979	-36.221	-47.509	80.174	1.00198.26	C
ATOM	7398	CE2	TYR	B1979	-35.332	-47.746	82.392	1.00197.96	C
ATOM	7399	CZ	TYR	B1979	-36.408	-47.601	81.538	1.00197.85	C
ATOM	7400	OH	TYR	B1979	-37.668	-47.549	82.055	1.00197.40	O
ATOM	7401	N	PRO	B1980	-30.028	-45.960	81.012	1.00199.42	N
ATOM	7402	CA	PRO	B1980	-28.587	-45.939	81.188	1.00199.76	C
ATOM	7403	C	PRO	B1980	-28.013	-47.338	80.935	1.00200.19	C
ATOM	7404	O	PRO	B1980	-28.409	-48.311	81.605	1.00199.99	O
ATOM	7405	CB	PRO	B1980	-28.414	-45.508	82.646	1.00199.71	C
ATOM	7406	CG	PRO	B1980	-29.658	-45.924	83.310	1.00199.56	C
ATOM	7407	CD	PRO	B1980	-30.740	-45.773	82.286	1.00199.44	C
ATOM	7408	N	GLY	B1981	-27.126	-47.417	79.935	1.00200.69	N
ATOM	7409	CA	GLY	B1981	-26.434	-48.653	79.540	1.00201.18	C
ATOM	7410	C	GLY	B1981	-26.999	-49.377	78.326	1.00201.56	C
ATOM	7411	O	GLY	B1981	-26.499	-50.433	77.946	1.00201.38	O
ATOM	7412	N	VAL	B1982	-28.047	-48.813	77.728	1.00202.13	N
ATOM	7413	CA	VAL	B1982	-28.732	-49.419	76.585	1.00202.71	C
ATOM	7414	C	VAL	B1982	-28.459	-48.584	75.344	1.00203.05	C
ATOM	7415	O	VAL	B1982	-28.927	-47.455	75.195	1.00202.83	O
ATOM	7416	CB	VAL	B1982	-30.255	-49.619	76.847	1.00202.81	C
ATOM	7417	CG1	VAL	B1982	-31.049	-49.630	75.549	1.00203.18	C
ATOM	7418	CG2	VAL	B1982	-30.502	-50.910	77.642	1.00202.93	C
ATOM	7419	N	PHE	B1983	-27.679	-49.175	74.455	1.00203.86	N
ATOM	7420	CA	PHE	B1983	-27.047	-48.449	73.366	1.00204.55	C
ATOM	7421	C	PHE	B1983	-27.833	-48.701	72.094	1.00203.91	C
ATOM	7422	O	PHE	B1983	-27.634	-49.701	71.382	1.00203.90	O
ATOM	7423	CB	PHE	B1983	-25.568	-48.860	73.239	1.00205.59	C
ATOM	7424	CG	PHE	B1983	-24.908	-49.219	74.574	1.00208.09	C
ATOM	7425	CD1	PHE	B1983	-24.682	-48.232	75.567	1.00210.07	C
ATOM	7426	CD2	PHE	B1983	-24.525	-50.545	74.849	1.00209.26	C
ATOM	7427	CE1	PHE	B1983	-24.076	-48.564	76.815	1.00209.96	C
ATOM	7428	CE2	PHE	B1983	-23.920	-50.883	76.084	1.00209.42	C
ATOM	7429	CZ	PHE	B1983	-23.694	-49.888	77.069	1.00208.81	C
ATOM	7430	N	GLU	B1984	-28.752	-47.780	71.839	1.00203.02	N
ATOM	7431	CA	GLU	B1984	-29.709	-47.935	70.768	1.00202.23	C
ATOM	7432	C	GLU	B1984	-29.190	-47.595	69.383	1.00201.71	C
ATOM	7433	O	GLU	B1984	-28.488	-46.600	69.202	1.00201.78	O
ATOM	7434	CB	GLU	B1984	-30.975	-47.139	71.075	1.00202.13	C
ATOM	7435	CG	GLU	B1984	-31.917	-47.891	71.963	1.00202.01	C
ATOM	7436	CD	GLU	B1984	-32.030	-49.363	71.581	1.00202.79	C
ATOM	7437	OE1	GLU	B1984	-31.529	-49.784	70.509	1.00203.00	O
ATOM	7438	OE2	GLU	B1984	-32.618	-50.120	72.369	1.00203.78	O
ATOM	7439	N	THR	B1985	-29.529	-48.437	68.411	1.00200.88	N
ATOM	7440	CA	THR	B1985	-29.483	-48.023	67.013	1.00200.00	C
ATOM	7441	C	THR	B1985	-30.891	-48.056	66.426	1.00199.40	C
ATOM	7442	O	THR	B1985	-31.630	-49.044	66.572	1.00199.21	O
ATOM	7443	CB	THR	B1985	-28.535	-48.865	66.151	1.00199.96	C
ATOM	7444	OG1	THR	B1985	-28.857	-50.246	66.313	1.00200.30	O
ATOM	7445	CG2	THR	B1985	-27.101	-48.633	66.552	1.00199.50	C
ATOM	7446	N	VAL	B1986	-31.251	-46.951	65.780	1.00198.60	N
ATOM	7447	CA	VAL	B1986	-32.539	-46.807	65.132	1.00197.84	C
ATOM	7448	C	VAL	B1986	-32.423	-45.943	63.864	1.00197.76	C
ATOM	7449	O	VAL	B1986	-31.665	-44.972	63.847	1.00197.90	O
ATOM	7450	CB	VAL	B1986	-33.574	-46.246	66.109	1.00197.60	C
ATOM	7451	CG1	VAL	B1986	-33.186	-44.856	66.587	1.00196.93	C
ATOM	7452	CG2	VAL	B1986	-34.909	-46.239	65.463	1.00197.39	C
ATOM	7453	N	GLU	B1987	-33.165	-46.314	62.814	1.00197.37	N

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ATOM   7454  CA  GLU B1987     -33.122 -45.647  61.499  1.00196.84           C
ATOM   7455  C   GLU B1987     -34.479 -45.039  61.092  1.00196.42           C
ATOM   7456  O   GLU B1987     -35.545 -45.552  61.463  1.00196.26           O
ATOM   7457  CB  GLU B1987     -32.691 -46.638  60.411  1.00196.74           C
ATOM   7458  CG  GLU B1987     -31.255 -47.166  60.466  1.00196.78           C
ATOM   7459  CD  GLU B1987     -31.040 -48.371  59.526  1.00197.29           C
ATOM   7460  OE1 GLU B1987     -29.963 -48.509  58.893  1.00197.46           O
ATOM   7461  OE2 GLU B1987     -31.971 -49.194  59.410  1.00198.58           O
ATOM   7462  N   MET B1988     -34.424 -43.958  60.310  1.00196.03           N
ATOM   7463  CA  MET B1988     -35.627 -43.284  59.795  1.00195.63           C
ATOM   7464  C   MET B1988     -35.423 -42.574  58.455  1.00195.73           C
ATOM   7465  O   MET B1988     -34.298 -42.231  58.080  1.00195.78           O
ATOM   7466  CB  MET B1988     -36.133 -42.267  60.798  1.00195.67           C
ATOM   7467  CG  MET B1988     -35.060 -41.346  61.308  1.00195.03           C
ATOM   7468  SD  MET B1988     -35.794 -39.824  61.876  1.00195.04           S
ATOM   7469  CE  MET B1988     -36.762 -40.367  63.282  1.00195.19           C
ATOM   7470  N   LEU B1989     -36.535 -42.330  57.765  1.00195.62           N
ATOM   7471  CA  LEU B1989     -36.534 -41.776  56.415  1.00195.44           C
ATOM   7472  C   LEU B1989     -37.271 -40.433  56.442  1.00195.60           C
ATOM   7473  O   LEU B1989     -38.464 -40.382  56.144  1.00195.81           O
ATOM   7474  CB  LEU B1989     -37.227 -42.767  55.480  1.00195.11           C
ATOM   7475  CG  LEU B1989     -36.914 -42.789  53.995  1.00194.80           C
ATOM   7476  CD1 LEU B1989     -37.007 -44.219  53.483  1.00194.71           C
ATOM   7477  CD2 LEU B1989     -37.860 -41.884  53.242  1.00194.81           C
ATOM   7478  N   PRO B1990     -36.557 -39.338  56.785  1.00195.60           N
ATOM   7479  CA  PRO B1990     -37.148 -38.055  57.191  1.00195.69           C
ATOM   7480  C   PRO B1990     -37.870 -37.295  56.089  1.00196.01           C
ATOM   7481  O   PRO B1990     -37.654 -36.094  55.943  1.00195.91           O
ATOM   7482  CB  PRO B1990     -35.932 -37.250  57.648  1.00195.59           C
ATOM   7483  CG  PRO B1990     -34.808 -37.811  56.883  1.00195.37           C
ATOM   7484  CD  PRO B1990     -35.085 -39.271  56.774  1.00195.56           C
ATOM   7485  N   SER B1991     -38.754 -37.982  55.365  1.00196.66           N
ATOM   7486  CA  SER B1991     -39.416 -37.450  54.158  1.00197.36           C
ATOM   7487  C   SER B1991     -40.298 -36.182  54.337  1.00197.79           C
ATOM   7488  O   SER B1991     -41.139 -35.868  53.478  1.00198.13           O
ATOM   7489  CB  SER B1991     -40.189 -38.568  53.418  1.00197.37           C
ATOM   7490  OG  SER B1991     -39.502 -39.004  52.246  1.00197.23           O
ATOM   7491  N   LYS B1992     -40.102 -35.456  55.438  1.00197.97           N
ATOM   7492  CA  LYS B1992     -40.722 -34.141  55.606  1.00197.87           C
ATOM   7493  C   LYS B1992     -39.614 -33.090  55.654  1.00197.53           C
ATOM   7494  O   LYS B1992     -38.778 -33.079  56.559  1.00197.28           O
ATOM   7495  CB  LYS B1992     -41.652 -34.103  56.842  1.00198.17           C
ATOM   7496  CG  LYS B1992     -43.064 -34.727  56.620  1.00198.50           C
ATOM   7497  CD  LYS B1992     -44.029 -33.762  55.876  1.00198.58           C
ATOM   7498  CE  LYS B1992     -44.871 -34.458  54.784  1.00197.95           C
ATOM   7499  NZ  LYS B1992     -45.946 -35.367  55.279  1.00196.75           N
ATOM   7500  N   ALA B1993     -39.595 -32.238  54.638  1.00197.33           N
ATOM   7501  CA  ALA B1993     -38.548 -31.236  54.493  1.00197.21           C
ATOM   7502  C   ALA B1993     -38.786 -30.065  55.430  1.00197.09           C
ATOM   7503  O   ALA B1993     -39.894 -29.880  55.936  1.00197.03           O
ATOM   7504  CB  ALA B1993     -38.474 -30.761  53.054  1.00197.26           C
ATOM   7505  N   GLY B1994     -37.743 -29.273  55.649  1.00196.95           N
ATOM   7506  CA  GLY B1994     -37.812 -28.170  56.597  1.00196.99           C
ATOM   7507  C   GLY B1994     -36.920 -28.410  57.804  1.00196.94           C
ATOM   7508  O   GLY B1994     -35.980 -29.203  57.738  1.00197.07           O
ATOM   7509  N   ILE B1995     -37.237 -27.743  58.915  1.00196.71           N
ATOM   7510  CA  ILE B1995     -36.331 -27.615  60.068  1.00196.25           C
ATOM   7511  C   ILE B1995     -36.978 -28.078  61.375  1.00196.01           C
ATOM   7512  O   ILE B1995     -37.948 -27.473  61.832  1.00196.16           O
ATOM   7513  CB  ILE B1995     -35.793 -26.133  60.181  1.00196.26           C
ATOM   7514  CG1 ILE B1995     -35.248 -25.817  61.573  1.00196.06           C
ATOM   7515  CG2 ILE B1995     -36.847 -25.107  59.756  1.00196.06           C
ATOM   7516  CD1 ILE B1995     -33.806 -26.221  61.745  1.00196.58           C
ATOM   7517  N   TRP B1996     -36.447 -29.139  61.980  1.00195.56           N
ATOM   7518  CA  TRP B1996     -37.052 -29.676  63.208  1.00195.36           C
ATOM   7519  C   TRP B1996     -36.137 -29.690  64.468  1.00195.40           C
ATOM   7520  O   TRP B1996     -35.241 -28.848  64.596  1.00195.39           O
ATOM   7521  CB  TRP B1996     -37.610 -31.076  62.966  1.00195.23           C
ATOM   7522  CG  TRP B1996     -38.487 -31.296  61.770  1.00194.83           C
ATOM   7523  CD1 TRP B1996     -38.171 -32.018  60.673  1.00194.96           C
ATOM   7524  CD2 TRP B1996     -39.842 -30.866  61.587  1.00194.73           C
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ATOM   7525  NE1 TRP B1996     -39.223 -32.053  59.802  1.00195.04           N
ATOM   7526  CE2 TRP B1996     -40.266 -31.352  60.338  1.00194.58           C
ATOM   7527  CE3 TRP B1996     -40.730 -30.101  62.347  1.00195.50           C
ATOM   7528  CZ2 TRP B1996     -41.536 -31.102  59.825  1.00194.81           C
ATOM   7529  CZ3 TRP B1996     -41.997 -29.848  61.833  1.00195.37           C
ATOM   7530  CH2 TRP B1996     -42.384 -30.349  60.583  1.00195.06           C
ATOM   7531  N   ARG B1997     -36.391 -30.638  65.389  1.00195.36           N
ATOM   7532  CA  ARG B1997     -35.632 -30.812  66.667  1.00195.26           C
ATOM   7533  C   ARG B1997     -35.823 -32.170  67.419  1.00194.92           C
ATOM   7534  O   ARG B1997     -36.804 -32.902  67.195  1.00194.53           O
ATOM   7535  CB  ARG B1997     -35.835 -29.577  67.592  1.00195.48           C
ATOM   7536  CG  ARG B1997     -36.253 -29.797  69.080  1.00195.88           C
ATOM   7537  CD  ARG B1997     -37.772 -29.909  69.281  1.00196.37           C
ATOM   7538  NE  ARG B1997     -38.528 -29.539  68.080  1.00197.67           N
ATOM   7539  CZ  ARG B1997     -38.986 -30.397  67.161  1.00198.09           C
ATOM   7540  NH1 ARG B1997     -39.646 -29.935  66.104  1.00197.80           N
ATOM   7541  NH2 ARG B1997     -38.788 -31.712  67.280  1.00197.80           N
ATOM   7542  N   VAL B1998     -34.849 -32.501  68.276  1.00194.67           N
ATOM   7543  CA  VAL B1998     -34.936 -33.624  69.224  1.00194.54           C
ATOM   7544  C   VAL B1998     -35.127 -33.086  70.640  1.00194.64           C
ATOM   7545  O   VAL B1998     -34.502 -32.082  71.007  1.00194.70           O
ATOM   7546  CB  VAL B1998     -33.669 -34.513  69.229  1.00194.45           C
ATOM   7547  CG1 VAL B1998     -33.746 -35.537  68.154  1.00194.20           C
ATOM   7548  CG2 VAL B1998     -32.392 -33.677  69.095  1.00194.38           C
ATOM   7549  N   GLU B1999     -35.980 -33.760  71.425  1.00194.47           N
ATOM   7550  CA  GLU B1999     -36.300 -33.355  72.806  1.00194.07           C
ATOM   7551  C   GLU B1999     -36.596 -34.559  73.660  1.00193.55           C
ATOM   7552  O   GLU B1999     -37.360 -35.433  73.242  1.00193.42           O
ATOM   7553  CB  GLU B1999     -37.500 -32.387  72.851  1.00194.13           C
ATOM   7554  CG  GLU B1999     -38.884 -32.934  72.396  1.00194.39           C
ATOM   7555  CD  GLU B1999     -39.915 -31.818  72.059  1.00194.68           C
ATOM   7556  OE1 GLU B1999     -41.132 -32.120  71.969  1.00195.02           O
ATOM   7557  OE2 GLU B1999     -39.516 -30.639  71.871  1.00195.53           O
ATOM   7558  N   CYS B2000     -35.985 -34.609  74.844  1.00193.07           N
ATOM   7559  CA  CYS B2000     -36.352 -35.622  75.843  1.00192.81           C
ATOM   7560  C   CYS B2000     -37.702 -35.248  76.410  1.00192.39           C
ATOM   7561  O   CYS B2000     -37.815 -34.295  77.180  1.00192.56           O
ATOM   7562  CB  CYS B2000     -35.340 -35.720  76.986  1.00192.96           C
ATOM   7563  SG  CYS B2000     -35.952 -36.698  78.399  1.00192.72           S
ATOM   7564  N   LEU B2001     -38.723 -36.009  76.045  1.00191.67           N
ATOM   7565  CA  LEU B2001     -40.078 -35.574  76.281  1.00190.99           C
ATOM   7566  C   LEU B2001     -40.403 -35.437  77.764  1.00191.18           C
ATOM   7567  O   LEU B2001     -41.470 -34.946  78.117  1.00191.46           O
ATOM   7568  CB  LEU B2001     -41.066 -36.496  75.569  1.00190.59           C
ATOM   7569  CG  LEU B2001     -42.224 -35.777  74.877  1.00189.27           C
ATOM   7570  CD1 LEU B2001     -41.714 -34.619  74.064  1.00188.75           C
ATOM   7571  CD2 LEU B2001     -42.995 -36.723  73.992  1.00187.88           C
ATOM   7572  N   ILE B2002     -39.470 -35.820  78.631  1.00191.18           N
ATOM   7573  CA  ILE B2002     -39.735 -35.843  80.075  1.00191.25           C
ATOM   7574  C   ILE B2002     -39.860 -34.457  80.710  1.00190.99           C
ATOM   7575  O   ILE B2002     -38.880 -33.879  81.182  1.00190.64           O
ATOM   7576  CB  ILE B2002     -38.709 -36.718  80.824  1.00191.47           C
ATOM   7577  CG1 ILE B2002     -38.511 -38.049  80.080  1.00192.02           C
ATOM   7578  CG2 ILE B2002     -39.171 -36.965  82.263  1.00191.70           C
ATOM   7579  CD1 ILE B2002     -37.325 -38.870  80.560  1.00192.77           C
ATOM   7580  N   GLY B2003     -41.092 -33.952  80.717  1.00191.02           N
ATOM   7581  CA  GLY B2003     -41.428 -32.610  81.191  1.00191.41           C
ATOM   7582  C   GLY B2003     -40.304 -31.731  81.710  1.00191.76           C
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ATOM   7584  N   GLU B2004     -39.785 -32.087  82.882  1.00192.17           N
ATOM   7585  CA  GLU B2004     -38.827 -31.254  83.611  1.00192.75           C
ATOM   7586  C   GLU B2004     -37.453 -31.255  82.958  1.00192.60           C
ATOM   7587  O   GLU B2004     -36.657 -30.344  83.186  1.00192.71           O
ATOM   7588  CB  GLU B2004     -38.733 -31.684  85.089  1.00192.81           C
ATOM   7589  CG  GLU B2004     -39.880 -31.168  86.004  1.00193.46           C
ATOM   7590  CD  GLU B2004     -40.078 -31.977  87.315  1.00193.66           C
ATOM   7591  OE1 GLU B2004     -39.416 -33.026  87.517  1.00194.88           O
ATOM   7592  OE2 GLU B2004     -40.916 -31.559  88.153  1.00194.79           O
ATOM   7593  N   HIS B2005     -37.184 -32.273  82.146  1.00192.55           N
ATOM   7594  CA  HIS B2005     -35.937 -32.335  81.389  1.00192.65           C
ATOM   7595  C   HIS B2005     -35.936 -31.378  80.200  1.00192.23           C
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ATOM	7596	O	HIS	B2005	-34.953	-30.660	79.978	1.00192.12	O
ATOM	7597	CB	HIS	B2005	-35.635	-33.767	80.935	1.00193.01	C
ATOM	7598	CG	HIS	B2005	-35.221	-34.681	82.049	1.00194.26	C
ATOM	7599	ND1	HIS	B2005	-35.261	-36.056	81.939	1.00195.10	N
ATOM	7600	CD2	HIS	B2005	-34.766	-34.418	83.300	1.00195.13	C
ATOM	7601	CE1	HIS	B2005	-34.843	-36.599	83.069	1.00195.40	C
ATOM	7602	NE2	HIS	B2005	-34.537	-35.627	83.912	1.00195.58	N
ATOM	7603	N	LEU	B2006	-37.037	-31.369	79.447	1.00191.78	N
ATOM	7604	CA	LEU	B2006	-37.199	-30.454	78.322	1.00191.37	C
ATOM	7605	C	LEU	B2006	-37.024	-29.020	78.788	1.00191.39	C
ATOM	7606	O	LEU	B2006	-36.340	-28.238	78.128	1.00191.82	O
ATOM	7607	CB	LEU	B2006	-38.566	-30.622	77.640	1.00191.14	C
ATOM	7608	CG	LEU	B2006	-38.801	-30.044	76.232	1.00190.60	C
ATOM	7609	CD1	LEU	B2006	-39.494	-28.682	76.214	1.00190.49	C
ATOM	7610	CD2	LEU	B2006	-37.505	-29.999	75.449	1.00190.39	C
ATOM	7611	N	HIS	B2007	-37.612	-28.682	79.934	1.00191.01	N
ATOM	7612	CA	HIS	B2007	-37.627	-27.296	80.390	1.00190.64	C
ATOM	7613	C	HIS	B2007	-36.347	-26.770	81.018	1.00190.34	C
ATOM	7614	O	HIS	B2007	-36.329	-25.680	81.591	1.00190.51	O
ATOM	7615	CB	HIS	B2007	-38.846	-27.024	81.254	1.00190.74	C
ATOM	7616	CG	HIS	B2007	-40.014	-26.544	80.461	1.00191.17	C
ATOM	7617	ND1	HIS	B2007	-40.564	-27.283	79.435	1.00191.24	N
ATOM	7618	CD2	HIS	B2007	-40.710	-25.384	80.509	1.00191.52	C
ATOM	7619	CE1	HIS	B2007	-41.562	-26.606	78.896	1.00191.32	C
ATOM	7620	NE2	HIS	B2007	-41.672	-25.452	79.531	1.00191.69	N
ATOM	7621	N	ALA	B2008	-35.282	-27.555	80.895	1.00189.94	N
ATOM	7622	CA	ALA	B2008	-33.932	-27.100	81.184	1.00189.53	C
ATOM	7623	C	ALA	B2008	-32.969	-27.837	80.277	1.00189.19	C
ATOM	7624	O	ALA	B2008	-32.054	-28.497	80.747	1.00189.10	O
ATOM	7625	CB	ALA	B2008	-33.566	-27.306	82.663	1.00189.68	C
ATOM	7626	N	GLY	B2009	-33.212	-27.746	78.974	1.00188.90	N
ATOM	7627	CA	GLY	B2009	-32.215	-28.108	77.973	1.00188.66	C
ATOM	7628	C	GLY	B2009	-32.296	-29.458	77.288	1.00188.50	C
ATOM	7629	O	GLY	B2009	-31.499	-30.350	77.578	1.00188.50	O
ATOM	7630	N	MET	B2010	-33.255	-29.606	76.376	1.00188.34	N
ATOM	7631	CA	MET	B2010	-33.228	-30.681	75.364	1.00188.20	C
ATOM	7632	C	MET	B2010	-33.695	-30.201	73.961	1.00188.40	C
ATOM	7633	O	MET	B2010	-33.353	-30.842	72.964	1.00188.37	O
ATOM	7634	CB	MET	B2010	-33.950	-31.978	75.827	1.00187.53	C
ATOM	7635	CG	MET	B2010	-33.022	-33.211	76.115	1.00186.58	C
ATOM	7636	SD	MET	B2010	-32.344	-33.431	77.800	1.00183.97	S
ATOM	7637	CE	MET	B2010	-31.537	-35.022	77.741	1.00184.77	C
ATOM	7638	N	SER	B2011	-34.426	-29.069	73.892	1.00188.67	N
ATOM	7639	CA	SER	B2011	-35.036	-28.539	72.624	1.00188.56	C
ATOM	7640	C	SER	B2011	-33.975	-28.119	71.591	1.00188.74	C
ATOM	7641	O	SER	B2011	-33.803	-26.922	71.278	1.00188.65	O
ATOM	7642	CB	SER	B2011	-36.079	-27.420	72.887	1.00188.48	C
ATOM	7643	OG	SER	B2011	-36.963	-27.257	71.783	1.00187.50	O
ATOM	7644	N	THR	B2012	-33.312	-29.147	71.047	1.00188.84	N
ATOM	7645	CA	THR	B2012	-32.049	-29.034	70.305	1.00188.84	C
ATOM	7646	C	THR	B2012	-32.126	-29.412	68.803	1.00188.73	C
ATOM	7647	O	THR	B2012	-31.989	-30.584	68.425	1.00188.47	O
ATOM	7648	CB	THR	B2012	-30.953	-29.849	71.019	1.00188.86	C
ATOM	7649	OG1	THR	B2012	-30.779	-29.347	72.359	1.00188.37	O
ATOM	7650	CG2	THR	B2012	-29.651	-29.774	70.249	1.00188.86	C
ATOM	7651	N	LEU	B2013	-32.298	-28.377	67.978	1.00188.55	N
ATOM	7652	CA	LEU	B2013	-32.644	-28.467	66.555	1.00188.43	C
ATOM	7653	C	LEU	B2013	-31.863	-29.451	65.670	1.00187.91	C
ATOM	7654	O	LEU	B2013	-30.674	-29.731	65.906	1.00187.77	O
ATOM	7655	CB	LEU	B2013	-32.567	-27.070	65.926	1.00188.87	C
ATOM	7656	CG	LEU	B2013	-31.203	-26.378	65.618	1.00190.98	C
ATOM	7657	CD1	LEU	B2013	-30.225	-26.403	66.826	1.00192.54	C
ATOM	7658	CD2	LEU	B2013	-30.468	-26.818	64.275	1.00191.76	C
ATOM	7659	N	PHE	B2014	-32.573	-29.946	64.646	1.00187.27	N
ATOM	7660	CA	PHE	B2014	-31.999	-30.612	63.458	1.00186.43	C
ATOM	7661	C	PHE	B2014	-32.740	-30.215	62.167	1.00186.54	C
ATOM	7662	O	PHE	B2014	-33.964	-30.005	62.160	1.00186.44	O
ATOM	7663	CB	PHE	B2014	-31.908	-32.140	63.614	1.00185.59	C
ATOM	7664	CG	PHE	B2014	-33.169	-32.882	63.284	1.00184.05	C
ATOM	7665	CD1	PHE	B2014	-33.166	-33.869	62.321	1.00183.50	C
ATOM	7666	CD2	PHE	B2014	-34.347	-32.626	63.953	1.00182.79	C

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ATOM   7667  CE1 PHE B2014     -34.329 -34.583  62.020  1.00183.10           C
ATOM   7668  CE2 PHE B2014     -35.499 -33.330  63.658  1.00182.70           C
ATOM   7669  CZ  PHE B2014     -35.490 -34.308  62.690  1.00183.06           C
ATOM   7670  N   LEU B2015     -31.974 -30.127  61.083  1.00186.52           N
ATOM   7671  CA  LEU B2015     -32.453 -29.602  59.818  1.00186.32           C
ATOM   7672  C   LEU B2015     -32.442 -30.643  58.692  1.00186.56           C
ATOM   7673  O   LEU B2015     -31.464 -31.381  58.529  1.00186.51           O
ATOM   7674  CB  LEU B2015     -31.593 -28.409  59.438  1.00185.95           C
ATOM   7675  CG  LEU B2015     -31.298 -28.294  57.953  1.00185.57           C
ATOM   7676  CD1 LEU B2015     -32.322 -27.430  57.215  1.00184.72           C
ATOM   7677  CD2 LEU B2015     -29.891 -27.788  57.776  1.00185.83           C
ATOM   7678  N   VAL B2016     -33.541 -30.691  57.931  1.00186.95           N
ATOM   7679  CA  VAL B2016     -33.609 -31.455  56.677  1.00187.23           C
ATOM   7680  C   VAL B2016     -33.889 -30.562  55.466  1.00187.81           C
ATOM   7681  O   VAL B2016     -34.866 -29.801  55.421  1.00187.58           O
ATOM   7682  CB  VAL B2016     -34.597 -32.655  56.715  1.00187.07           C
ATOM   7683  CG1 VAL B2016     -34.037 -33.769  57.558  1.00186.55           C
ATOM   7684  CG2 VAL B2016     -35.985 -32.241  57.202  1.00186.87           C
ATOM   7685  N   TYR B2017     -32.987 -30.663  54.496  1.00188.66           N
ATOM   7686  CA  TYR B2017     -33.074 -29.938  53.237  1.00189.61           C
ATOM   7687  C   TYR B2017     -33.476 -30.914  52.158  1.00190.51           C
ATOM   7688  O   TYR B2017     -33.288 -32.127  52.319  1.00190.67           O
ATOM   7689  CB  TYR B2017     -31.720 -29.307  52.863  1.00189.27           C
ATOM   7690  CG  TYR B2017     -30.532 -30.269  52.751  1.00188.93           C
ATOM   7691  CD1 TYR B2017     -29.991 -30.615  51.508  1.00188.90           C
ATOM   7692  CD2 TYR B2017     -29.932 -30.811  53.893  1.00188.50           C
ATOM   7693  CE1 TYR B2017     -28.886 -31.494  51.412  1.00188.73           C
ATOM   7694  CE2 TYR B2017     -28.836 -31.679  53.808  1.00188.17           C
ATOM   7695  CZ  TYR B2017     -28.319 -32.019  52.574  1.00188.54           C
ATOM   7696  OH  TYR B2017     -27.238 -32.876  52.521  1.00188.38           O
ATOM   7697  N   SER B2018     -34.053 -30.384  51.080  1.00191.53           N
ATOM   7698  CA  SER B2018     -34.149 -31.119  49.825  1.00192.51           C
ATOM   7699  C   SER B2018     -32.878 -30.767  49.085  1.00193.26           C
ATOM   7700  O   SER B2018     -32.293 -29.711  49.328  1.00193.45           O
ATOM   7701  CB  SER B2018     -35.377 -30.700  49.012  1.00192.42           C
ATOM   7702  OG  SER B2018     -36.522 -31.453  49.381  1.00192.42           O
ATOM   7703  N   ASN B2019     -32.418 -31.668  48.230  1.00194.14           N
ATOM   7704  CA  ASN B2019     -31.286 -31.377  47.378  1.00195.15           C
ATOM   7705  C   ASN B2019     -31.814 -31.297  45.961  1.00195.83           C
ATOM   7706  O   ASN B2019     -31.044 -31.169  45.007  1.00196.11           O
ATOM   7707  CB  ASN B2019     -30.203 -32.437  47.525  1.00195.06           C
ATOM   7708  CG  ASN B2019     -30.767 -33.843  47.489  1.00196.25           C
ATOM   7709  OD1 ASN B2019     -31.981 -34.043  47.322  1.00197.19           O
ATOM   7710  ND2 ASN B2019     -29.893 -34.834  47.654  1.00197.57           N
ATOM   7711  N   LYS B2020     -33.141 -31.376  45.838  1.00196.65           N
ATOM   7712  CA  LYS B2020     -33.830 -30.995  44.606  1.00197.65           C
ATOM   7713  C   LYS B2020     -34.023 -29.472  44.569  1.00198.39           C
ATOM   7714  O   LYS B2020     -34.550 -28.915  43.606  1.00198.72           O
ATOM   7715  CB  LYS B2020     -35.158 -31.745  44.445  1.00197.47           C
ATOM   7716  CG  LYS B2020     -34.994 -33.194  43.991  1.00197.40           C
ATOM   7717  CD  LYS B2020     -36.199 -33.683  43.198  1.00197.14           C
ATOM   7718  CE  LYS B2020     -35.890 -34.993  42.477  1.00197.01           C
ATOM   7719  NZ  LYS B2020     -37.010 -35.453  41.597  1.00196.88           N
ATOM   7720  N   CYS B2021     -33.575 -28.815  45.634  1.00199.60           N
ATOM   7721  CA  CYS B2021     -33.498 -27.366  45.721  1.00199.69           C
ATOM   7722  C   CYS B2021     -32.071 -26.984  45.402  1.00199.31           C
ATOM   7723  O   CYS B2021     -31.141 -27.369  46.110  1.00198.93           O
ATOM   7724  CB  CYS B2021     -33.833 -26.920  47.158  1.00200.46           C
ATOM   7725  SG  CYS B2021     -34.040 -25.092  47.557  1.00202.26           S
ATOM   7726  N   GLN B2022     -31.888 -26.231  44.334  1.00199.21           N
ATOM   7727  CA  GLN B2022     -30.569 -25.708  44.038  1.00199.56           C
ATOM   7728  C   GLN B2022     -30.677 -24.671  42.925  1.00199.39           C
ATOM   7729  O   GLN B2022     -30.700 -25.020  41.744  1.00199.84           O
ATOM   7730  CB  GLN B2022     -29.605 -26.859  43.670  1.00199.63           C
ATOM   7731  CG  GLN B2022     -28.098 -26.530  43.792  1.00200.18           C
ATOM   7732  CD  GLN B2022     -27.174 -27.762  43.688  1.00200.06           C
ATOM   7733  OE1 GLN B2022     -27.459 -28.823  44.259  1.00200.43           O
ATOM   7734  NE2 GLN B2022     -26.051 -27.607  42.973  1.00200.19           N
ATOM   7735  N   THR B2023     -30.778 -23.397  43.292  1.00198.89           N
ATOM   7736  CA  THR B2023     -30.784 -22.349  42.282  1.00198.43           C
ATOM   7737  C   THR B2023     -29.524 -21.512  42.447  1.00198.00           C
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ATOM	7738	O	THR	B2023	-28.945	-21.473	43.528	1.00197.83	O
ATOM	7739	CB	THR	B2023	-32.113	-21.506	42.297	1.00198.48	C
ATOM	7740	OG1	THR	B2023	-32.392	-20.972	40.991	1.00198.52	O
ATOM	7741	CG2	THR	B2023	-32.059	-20.378	43.308	1.00198.56	C
ATOM	7742	N	PRO	B2024	-29.052	-20.896	41.359	1.00197.78	N
ATOM	7743	CA	PRO	B2024	-28.048	-19.865	41.514	1.00197.81	C
ATOM	7744	C	PRO	B2024	-28.460	-18.904	42.615	1.00197.87	C
ATOM	7745	O	PRO	B2024	-29.574	-18.383	42.591	1.00197.93	O
ATOM	7746	CB	PRO	B2024	-28.081	-19.150	40.162	1.00197.93	C
ATOM	7747	CG	PRO	B2024	-28.494	-20.184	39.199	1.00197.93	C
ATOM	7748	CD	PRO	B2024	-29.376	-21.147	39.944	1.00197.78	C
ATOM	7749	N	LEU	B2025	-27.568	-18.672	43.569	1.00197.99	N
ATOM	7750	CA	LEU	B2025	-27.853	-17.776	44.692	1.00198.39	C
ATOM	7751	C	LEU	B2025	-27.916	-16.284	44.356	1.00198.75	C
ATOM	7752	O	LEU	B2025	-28.045	-15.449	45.260	1.00198.83	O
ATOM	7753	CB	LEU	B2025	-26.840	-18.002	45.804	1.00198.30	C
ATOM	7754	CG	LEU	B2025	-27.114	-19.250	46.628	1.00198.67	C
ATOM	7755	CD1	LEU	B2025	-25.845	-19.692	47.293	1.00199.48	C
ATOM	7756	CD2	LEU	B2025	-28.200	-18.984	47.665	1.00199.22	C
ATOM	7757	N	GLY	B2026	-27.823	-15.961	43.064	1.00199.20	N
ATOM	7758	CA	GLY	B2026	-27.839	-14.578	42.570	1.00199.47	C
ATOM	7759	C	GLY	B2026	-26.479	-13.896	42.440	1.00199.64	C
ATOM	7760	O	GLY	B2026	-26.027	-13.214	43.371	1.00199.57	O
ATOM	7761	N	MET	B2027	-25.823	-14.084	41.293	1.00199.71	N
ATOM	7762	CA	MET	B2027	-24.625	-13.310	40.969	1.00199.75	C
ATOM	7763	C	MET	B2027	-24.832	-12.593	39.658	1.00200.07	C
ATOM	7764	O	MET	B2027	-24.165	-11.614	39.382	1.00200.02	O
ATOM	7765	CB	MET	B2027	-23.354	-14.162	40.949	1.00199.60	C
ATOM	7766	CG	MET	B2027	-22.897	-14.681	42.334	1.00198.77	C
ATOM	7767	SD	MET	B2027	-21.545	-13.798	43.158	1.00196.36	S
ATOM	7768	CE	MET	B2027	-22.430	-12.530	44.056	1.00196.41	C
ATOM	7769	N	ALA	B2028	-25.761	-13.078	38.849	1.00200.63	N
ATOM	7770	CA	ALA	B2028	-26.324	-12.224	37.829	1.00201.46	C
ATOM	7771	C	ALA	B2028	-27.496	-11.559	38.502	1.00202.15	C
ATOM	7772	O	ALA	B2028	-27.570	-10.342	38.573	1.00201.87	O
ATOM	7773	CB	ALA	B2028	-26.776	-13.019	36.648	1.00201.43	C
ATOM	7774	N	SER	B2029	-28.382	-12.387	39.043	1.00203.55	N
ATOM	7775	CA	SER	B2029	-29.619	-11.929	39.693	1.00205.11	C
ATOM	7776	C	SER	B2029	-29.481	-11.718	41.225	1.00205.89	C
ATOM	7777	O	SER	B2029	-30.229	-12.296	42.043	1.00206.14	O
ATOM	7778	CB	SER	B2029	-30.780	-12.894	39.368	1.00205.22	C
ATOM	7779	OG	SER	B2029	-31.434	-12.558	38.149	1.00205.45	O
ATOM	7780	N	GLY	B2030	-28.535	-10.874	41.615	1.00206.50	N
ATOM	7781	CA	GLY	B2030	-28.237	-10.752	43.021	1.00207.06	C
ATOM	7782	C	GLY	B2030	-28.361	-9.369	43.590	1.00207.53	C
ATOM	7783	O	GLY	B2030	-29.395	-9.016	44.157	1.00207.55	O
ATOM	7784	N	HIS	B2031	-27.297	-8.591	43.408	1.00207.99	N
ATOM	7785	CA	HIS	B2031	-26.960	-7.496	44.304	1.00208.59	C
ATOM	7786	C	HIS	B2031	-25.851	-6.662	43.695	1.00209.19	C
ATOM	7787	O	HIS	B2031	-24.678	-7.037	43.798	1.00209.04	O
ATOM	7788	CB	HIS	B2031	-26.467	-8.091	45.616	1.00208.47	C
ATOM	7789	CG	HIS	B2031	-26.127	-9.548	45.515	1.00208.37	C
ATOM	7790	ND1	HIS	B2031	-26.817	-10.522	46.206	1.00208.32	N
ATOM	7791	CD2	HIS	B2031	-25.212	-10.203	44.759	1.00207.95	C
ATOM	7792	CE1	HIS	B2031	-26.323	-11.709	45.904	1.00207.71	C
ATOM	7793	NE2	HIS	B2031	-25.350	-11.544	45.026	1.00207.37	N
ATOM	7794	N	ILE	B2032	-26.244	-5.520	43.106	1.00210.19	N
ATOM	7795	CA	ILE	B2032	-25.427	-4.665	42.177	1.00210.81	C
ATOM	7796	C	ILE	B2032	-23.914	-4.501	42.490	1.00211.28	C
ATOM	7797	O	ILE	B2032	-23.060	-4.660	41.597	1.00211.28	O
ATOM	7798	CB	ILE	B2032	-26.123	-3.271	41.874	1.00210.74	C
ATOM	7799	CG1	ILE	B2032	-27.504	-3.477	41.222	1.00210.69	C
ATOM	7800	CG2	ILE	B2032	-25.242	-2.387	40.981	1.00210.49	C
ATOM	7801	CD1	ILE	B2032	-28.175	-2.198	40.697	1.00210.79	C
ATOM	7802	N	ARG	B2033	-23.603	-4.150	43.738	1.00211.72	N
ATOM	7803	CA	ARG	B2033	-22.244	-4.229	44.276	1.00212.03	C
ATOM	7804	C	ARG	B2033	-22.384	-4.595	45.752	1.00212.20	C
ATOM	7805	O	ARG	B2033	-22.352	-3.739	46.638	1.00212.14	O
ATOM	7806	CB	ARG	B2033	-21.458	-2.929	44.033	1.00212.04	C
ATOM	7807	CG	ARG	B2033	-20.831	-2.847	42.624	1.00212.18	C
ATOM	7808	CD	ARG	B2033	-20.400	-1.430	42.187	1.00212.23	C

ATOM	7809	NE	ARG	B2033	-19.847	-1.420	40.821	1.00212.04	N
ATOM	7810	CZ	ARG	B2033	-19.316	-0.358	40.208	1.00211.67	C
ATOM	7811	NH1	ARG	B2033	-19.247	0.821	40.817	1.00211.61	N
ATOM	7812	NH2	ARG	B2033	-18.847	-0.477	38.973	1.00211.43	N
ATOM	7813	N	ASP	B2034	-22.587	-5.888	45.987	1.00212.52	N
ATOM	7814	CA	ASP	B2034	-22.935	-6.405	47.305	1.00213.01	C
ATOM	7815	C	ASP	B2034	-21.791	-6.201	48.305	1.00213.35	C
ATOM	7816	O	ASP	B2034	-21.716	-5.147	48.970	1.00213.23	O
ATOM	7817	CB	ASP	B2034	-23.341	-7.891	47.196	1.00212.96	C
ATOM	7818	CG	ASP	B2034	-23.956	-8.455	48.497	1.00212.72	C
ATOM	7819	OD1	ASP	B2034	-23.195	-8.832	49.417	1.00211.73	O
ATOM	7820	OD2	ASP	B2034	-25.201	-8.565	48.584	1.00212.22	O
ATOM	7821	N	PHE	B2035	-20.921	-7.216	48.388	1.00213.66	N
ATOM	7822	CA	PHE	B2035	-19.820	-7.310	49.354	1.00213.85	C
ATOM	7823	C	PHE	B2035	-18.588	-7.853	48.620	1.00213.36	C
ATOM	7824	O	PHE	B2035	-18.721	-8.516	47.584	1.00213.01	O
ATOM	7825	CB	PHE	B2035	-20.205	-8.226	50.547	1.00214.47	C
ATOM	7826	CG	PHE	B2035	-20.854	-7.493	51.752	1.00215.64	C
ATOM	7827	CD1	PHE	B2035	-21.955	-6.625	51.590	1.00216.36	C
ATOM	7828	CD2	PHE	B2035	-20.382	-7.714	53.064	1.00216.40	C
ATOM	7829	CE1	PHE	B2035	-22.551	-5.970	52.706	1.00215.68	C
ATOM	7830	CE2	PHE	B2035	-20.977	-7.063	54.190	1.00215.48	C
ATOM	7831	CZ	PHE	B2035	-22.060	-6.196	54.005	1.00215.32	C
ATOM	7832	N	GLN	B2036	-17.401	-7.578	49.163	1.00213.01	N
ATOM	7833	CA	GLN	B2036	-16.141	-7.863	48.464	1.00212.86	C
ATOM	7834	C	GLN	B2036	-14.983	-8.374	49.347	1.00212.47	C
ATOM	7835	O	GLN	B2036	-14.726	-9.571	49.402	1.00212.20	O
ATOM	7836	CB	GLN	B2036	-15.698	-6.640	47.626	1.00213.03	C
ATOM	7837	CG	GLN	B2036	-15.899	-5.241	48.289	1.00213.34	C
ATOM	7838	CD	GLN	B2036	-14.937	-4.149	47.766	1.00213.19	C
ATOM	7839	OE1	GLN	B2036	-14.479	-4.192	46.617	1.00213.41	O
ATOM	7840	NE2	GLN	B2036	-14.636	-3.167	48.622	1.00213.00	N
ATOM	7841	N	ILE	B2037	-14.270	-7.443	49.983	1.00212.38	N
ATOM	7842	CA	ILE	B2037	-13.158	-7.706	50.919	1.00212.16	C
ATOM	7843	C	ILE	B2037	-12.991	-6.523	51.926	1.00212.56	C
ATOM	7844	O	ILE	B2037	-13.991	-5.942	52.386	1.00212.68	O
ATOM	7845	CB	ILE	B2037	-11.793	-8.053	50.195	1.00211.76	C
ATOM	7846	CG1	ILE	B2037	-10.992	-6.798	49.773	1.00211.15	C
ATOM	7847	CG2	ILE	B2037	-12.003	-9.014	49.065	1.00210.96	C
ATOM	7848	CD1	ILE	B2037	-11.522	-5.985	48.598	1.00210.57	C
ATOM	7849	N	THR	B2038	-11.735	-6.192	52.267	1.00212.62	N
ATOM	7850	CA	THR	B2038	-11.368	-5.046	53.135	1.00212.45	C
ATOM	7851	C	THR	B2038	-9.871	-4.630	53.011	1.00212.43	C
ATOM	7852	O	THR	B2038	-9.428	-3.663	53.648	1.00212.55	O
ATOM	7853	CB	THR	B2038	-11.789	-5.260	54.632	1.00212.39	C
ATOM	7854	OG1	THR	B2038	-11.253	-4.208	55.444	1.00212.36	O
ATOM	7855	CG2	THR	B2038	-11.311	-6.607	55.172	1.00212.34	C
ATOM	7856	N	ALA	B2039	-9.114	-5.376	52.195	1.00212.21	N
ATOM	7857	CA	ALA	B2039	-7.726	-5.052	51.778	1.00211.80	C
ATOM	7858	C	ALA	B2039	-7.240	-6.086	50.745	1.00211.43	C
ATOM	7859	O	ALA	B2039	-6.542	-5.748	49.781	1.00211.52	O
ATOM	7860	CB	ALA	B2039	-6.750	-4.961	52.986	1.00211.69	C
ATOM	7861	N	SER	B2040	-7.626	-7.344	50.959	1.00210.80	N
ATOM	7862	CA	SER	B2040	-7.322	-8.429	50.053	1.00210.11	C
ATOM	7863	C	SER	B2040	-8.090	-8.148	48.797	1.00210.01	C
ATOM	7864	O	SER	B2040	-9.288	-8.389	48.756	1.00209.96	O
ATOM	7865	CB	SER	B2040	-7.832	-9.743	50.631	1.00210.05	C
ATOM	7866	OG	SER	B2040	-9.250	-9.723	50.725	1.00209.08	O
ATOM	7867	N	GLY	B2041	-7.418	-7.612	47.784	1.00209.84	N
ATOM	7868	CA	GLY	B2041	-8.074	-7.370	46.501	1.00209.48	C
ATOM	7869	C	GLY	B2041	-7.922	-5.965	45.970	1.00209.11	C
ATOM	7870	O	GLY	B2041	-8.475	-5.017	46.528	1.00209.12	O
ATOM	7871	N	GLN	B2042	-7.175	-5.849	44.879	1.00208.75	N
ATOM	7872	CA	GLN	B2042	-6.891	-4.574	44.251	1.00208.53	C
ATOM	7873	C	GLN	B2042	-6.161	-4.784	42.933	1.00208.33	C
ATOM	7874	O	GLN	B2042	-5.235	-5.601	42.839	1.00208.31	O
ATOM	7875	CB	GLN	B2042	-6.075	-3.671	45.197	1.00208.61	C
ATOM	7876	CG	GLN	B2042	-5.147	-2.622	44.532	1.00208.93	C
ATOM	7877	CD	GLN	B2042	-5.871	-1.401	43.963	1.00209.03	C
ATOM	7878	OE1	GLN	B2042	-6.791	-0.861	44.582	1.00209.08	O
ATOM	7879	NE2	GLN	B2042	-5.434	-0.950	42.785	1.00208.73	N

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ATOM   7880  N   TYR B2043      -6.608  -4.047  41.919  1.00208.01           N
ATOM   7881  CA  TYR B2043      -5.879  -3.883  40.675  1.00207.68           C
ATOM   7882  C   TYR B2043      -6.705  -2.984  39.773  1.00207.64           C
ATOM   7883  O   TYR B2043      -7.280  -3.470  38.814  1.00207.60           O
ATOM   7884  CB  TYR B2043      -5.645  -5.240  40.000  1.00207.48           C
ATOM   7885  CG  TYR B2043      -4.430  -5.312  39.098  1.00207.52           C
ATOM   7886  CD1 TYR B2043      -4.437  -4.720  37.828  1.00207.88           C
ATOM   7887  CD2 TYR B2043      -3.276  -5.993  39.498  1.00207.49           C
ATOM   7888  CE1 TYR B2043      -3.315  -4.784  36.977  1.00207.64           C
ATOM   7889  CE2 TYR B2043      -2.148  -6.071  38.652  1.00207.62           C
ATOM   7890  CZ  TYR B2043      -2.178  -5.461  37.393  1.00207.54           C
ATOM   7891  OH  TYR B2043      -1.085  -5.524  36.551  1.00207.29           O
ATOM   7892  N   GLY B2044      -6.774  -1.686  40.093  1.00207.69           N
ATOM   7893  CA  GLY B2044      -7.499  -0.685  39.283  1.00207.81           C
ATOM   7894  C   GLY B2044      -8.882  -1.133  38.838  1.00207.96           C
ATOM   7895  O   GLY B2044      -9.889  -0.657  39.356  1.00207.98           O
ATOM   7896  N   GLN B2045      -8.907  -2.020  37.837  1.00208.16           N
ATOM   7897  CA  GLN B2045     -10.043  -2.900  37.510  1.00208.19           C
ATOM   7898  C   GLN B2045     -10.260  -3.808  38.716  1.00208.46           C
ATOM   7899  O   GLN B2045      -9.653  -4.875  38.842  1.00208.33           O
ATOM   7900  CB  GLN B2045      -9.710  -3.731  36.254  1.00208.38           C
ATOM   7901  CG  GLN B2045     -10.372  -5.118  36.163  1.00208.01           C
ATOM   7902  CD  GLN B2045      -9.541  -6.134  35.387  1.00207.40           C
ATOM   7903  OE1 GLN B2045      -8.490  -6.596  35.844  1.00205.21           O
ATOM   7904  NE2 GLN B2045     -10.027  -6.501  34.214  1.00206.32           N
ATOM   7905  N   TRP B2046     -11.129  -3.371  39.611  1.00208.86           N
ATOM   7906  CA  TRP B2046     -11.058  -3.835  40.987  1.00209.18           C
ATOM   7907  C   TRP B2046     -11.566  -5.247  41.216  1.00208.72           C
ATOM   7908  O   TRP B2046     -11.755  -6.046  40.284  1.00208.26           O
ATOM   7909  CB  TRP B2046     -11.754  -2.832  41.940  1.00209.91           C
ATOM   7910  CG  TRP B2046     -11.062  -2.635  43.299  1.00210.84           C
ATOM   7911  CD1 TRP B2046      -9.733  -2.820  43.576  1.00211.30           C
ATOM   7912  CD2 TRP B2046     -11.667  -2.181  44.539  1.00212.11           C
ATOM   7913  NE1 TRP B2046      -9.477  -2.532  44.900  1.00212.06           N
ATOM   7914  CE2 TRP B2046     -10.639  -2.135  45.515  1.00212.29           C
ATOM   7915  CE3 TRP B2046     -12.975  -1.815  44.919  1.00212.15           C
ATOM   7916  CZ2 TRP B2046     -10.877  -1.736  46.854  1.00211.45           C
ATOM   7917  CZ3 TRP B2046     -13.207  -1.413  46.255  1.00211.35           C
ATOM   7918  CH2 TRP B2046     -12.161  -1.384  47.198  1.00211.00           C
ATOM   7919  N   ALA B2047     -11.744  -5.512  42.506  1.00208.37           N
ATOM   7920  CA  ALA B2047     -12.257  -6.735  43.076  1.00208.02           C
ATOM   7921  C   ALA B2047     -13.646  -7.064  42.543  1.00207.62           C
ATOM   7922  O   ALA B2047     -14.037  -6.582  41.481  1.00207.67           O
ATOM   7923  CB  ALA B2047     -12.294  -6.572  44.608  1.00208.01           C
ATOM   7924  N   PRO B2048     -14.384  -7.929  43.257  1.00207.15           N
ATOM   7925  CA  PRO B2048     -15.811  -7.841  43.160  1.00206.67           C
ATOM   7926  C   PRO B2048     -16.199  -6.403  43.355  1.00206.29           C
ATOM   7927  O   PRO B2048     -15.416  -5.599  43.882  1.00206.18           O
ATOM   7928  CB  PRO B2048     -16.284  -8.655  44.350  1.00206.83           C
ATOM   7929  CG  PRO B2048     -15.265  -9.694  44.488  1.00207.33           C
ATOM   7930  CD  PRO B2048     -13.970  -9.044  44.123  1.00207.27           C
ATOM   7931  N   LYS B2049     -17.442  -6.127  42.994  1.00205.91           N
ATOM   7932  CA  LYS B2049     -17.893  -4.848  42.478  1.00205.53           C
ATOM   7933  C   LYS B2049     -18.446  -5.381  41.168  1.00204.96           C
ATOM   7934  O   LYS B2049     -19.510  -4.952  40.695  1.00204.89           O
ATOM   7935  CB  LYS B2049     -16.711  -3.882  42.217  1.00205.66           C
ATOM   7936  CG  LYS B2049     -17.057  -2.392  42.044  1.00205.66           C
ATOM   7937  CD  LYS B2049     -15.818  -1.551  41.668  1.00205.84           C
ATOM   7938  CE  LYS B2049     -16.060  -0.011  41.713  1.00206.18           C
ATOM   7939  NZ  LYS B2049     -16.139   0.715  40.388  1.00205.55           N
ATOM   7940  N   LEU B2050     -17.725  -6.387  40.647  1.00204.16           N
ATOM   7941  CA  LEU B2050     -17.861  -6.884  39.278  1.00203.24           C
ATOM   7942  C   LEU B2050     -17.183  -8.245  39.048  1.00202.39           C
ATOM   7943  O   LEU B2050     -16.704  -8.510  37.947  1.00202.48           O
ATOM   7944  CB  LEU B2050     -17.360  -5.817  38.257  1.00203.34           C
ATOM   7945  CG  LEU B2050     -15.925  -5.447  37.792  1.00203.29           C
ATOM   7946  CD1 LEU B2050     -15.889  -4.003  37.254  1.00203.33           C
ATOM   7947  CD2 LEU B2050     -14.801  -5.647  38.814  1.00203.12           C
ATOM   7948  N   ALA B2051     -17.157  -9.112  40.059  1.00201.23           N
ATOM   7949  CA  ALA B2051     -16.478 -10.413  39.904  1.00200.41           C
ATOM   7950  C   ALA B2051     -17.399 -11.616  39.665  1.00199.75           C
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ATOM   7951  O   ALA B2051     -17.119 -12.729  40.109  1.00199.29           O
ATOM   7952  CB  ALA B2051     -15.550 -10.675  41.072  1.00200.49           C
ATOM   7953  N   ARG B2052     -18.481 -11.386  38.937  1.00199.25           N
ATOM   7954  CA  ARG B2052     -19.519 -12.389  38.757  1.00198.91           C
ATOM   7955  C   ARG B2052     -19.214 -13.284  37.589  1.00199.04           C
ATOM   7956  O   ARG B2052     -18.371 -12.966  36.753  1.00199.14           O
ATOM   7957  CB  ARG B2052     -20.868 -11.723  38.498  1.00198.73           C
ATOM   7958  CG  ARG B2052     -21.287 -10.709  39.537  1.00197.85           C
ATOM   7959  CD  ARG B2052     -20.540  -9.386  39.398  1.00195.69           C
ATOM   7960  NE  ARG B2052     -21.085  -8.304  40.220  1.00194.54           N
ATOM   7961  CZ  ARG B2052     -22.255  -8.320  40.861  1.00194.27           C
ATOM   7962  NH1 ARG B2052     -23.070  -9.371  40.819  1.00193.69           N
ATOM   7963  NH2 ARG B2052     -22.613  -7.258  41.559  1.00194.93           N
ATOM   7964  N   LEU B2053     -19.939 -14.394  37.524  1.00199.14           N
ATOM   7965  CA  LEU B2053     -19.839 -15.327  36.413  1.00199.31           C
ATOM   7966  C   LEU B2053     -20.364 -14.686  35.133  1.00199.46           C
ATOM   7967  O   LEU B2053     -21.335 -13.925  35.164  1.00199.47           O
ATOM   7968  CB  LEU B2053     -20.627 -16.603  36.736  1.00199.33           C
ATOM   7969  CG  LEU B2053     -20.452 -17.887  35.914  1.00199.32           C
ATOM   7970  CD1 LEU B2053     -19.058 -18.467  36.071  1.00199.34           C
ATOM   7971  CD2 LEU B2053     -21.513 -18.925  36.293  1.00199.26           C
ATOM   7972  N   HIS B2054     -19.688 -14.982  34.023  1.00199.70           N
ATOM   7973  CA  HIS B2054     -20.111 -14.600  32.661  1.00199.99           C
ATOM   7974  C   HIS B2054     -20.012 -13.121  32.319  1.00199.94           C
ATOM   7975  O   HIS B2054     -20.291 -12.731  31.176  1.00199.88           O
ATOM   7976  CB  HIS B2054     -21.531 -15.095  32.348  1.00200.21           C
ATOM   7977  CG  HIS B2054     -21.693 -16.578  32.448  1.00200.91           C
ATOM   7978  ND1 HIS B2054     -20.929 -17.463  31.716  1.00201.42           N
ATOM   7979  CD2 HIS B2054     -22.545 -17.332  33.182  1.00201.41           C
ATOM   7980  CE1 HIS B2054     -21.294 -18.699  32.008  1.00201.92           C
ATOM   7981  NE2 HIS B2054     -22.273 -18.647  32.895  1.00201.94           N
ATOM   7982  N   TYR B2055     -19.616 -12.306  33.298  1.00199.94           N
ATOM   7983  CA  TYR B2055     -19.545 -10.852  33.119  1.00199.93           C
ATOM   7984  C   TYR B2055     -18.630 -10.448  31.935  1.00199.99           C
ATOM   7985  O   TYR B2055     -17.400 -10.557  32.005  1.00200.07           O
ATOM   7986  CB  TYR B2055     -19.180 -10.149  34.448  1.00199.69           C
ATOM   7987  CG  TYR B2055     -19.228  -8.625  34.417  1.00199.36           C
ATOM   7988  CD1 TYR B2055     -20.260  -7.935  33.762  1.00198.89           C
ATOM   7989  CD2 TYR B2055     -18.246  -7.876  35.062  1.00198.80           C
ATOM   7990  CE1 TYR B2055     -20.290  -6.547  33.739  1.00198.74           C
ATOM   7991  CE2 TYR B2055     -18.270  -6.494  35.046  1.00198.58           C
ATOM   7992  CZ  TYR B2055     -19.287  -5.835  34.388  1.00199.05           C
ATOM   7993  OH  TYR B2055     -19.283  -4.459  34.389  1.00199.69           O
ATOM   7994  N   SER B2056     -19.266 -10.013  30.845  1.00199.87           N
ATOM   7995  CA  SER B2056     -18.576  -9.617  29.615  1.00199.66           C
ATOM   7996  C   SER B2056     -17.889  -8.262  29.746  1.00199.46           C
ATOM   7997  O   SER B2056     -18.274  -7.433  30.576  1.00199.48           O
ATOM   7998  CB  SER B2056     -19.564  -9.591  28.438  1.00199.79           C
ATOM   7999  OG  SER B2056     -19.077  -8.827  27.337  1.00199.82           O
ATOM   8000  N   GLY B2057     -16.876  -8.053  28.906  1.00199.19           N
ATOM   8001  CA  GLY B2057     -16.142  -6.791  28.836  1.00198.75           C
ATOM   8002  C   GLY B2057     -14.645  -6.982  28.973  1.00198.36           C
ATOM   8003  O   GLY B2057     -14.158  -8.109  29.067  1.00198.43           O
ATOM   8004  N   SER B2058     -13.915  -5.874  28.974  1.00197.90           N
ATOM   8005  CA  SER B2058     -12.486  -5.902  29.243  1.00197.47           C
ATOM   8006  C   SER B2058     -12.190  -5.654  30.737  1.00197.31           C
ATOM   8007  O   SER B2058     -11.281  -6.269  31.295  1.00197.40           O
ATOM   8008  CB  SER B2058     -11.772  -4.897  28.347  1.00197.41           C
ATOM   8009  OG  SER B2058     -12.631  -3.808  28.052  1.00197.29           O
ATOM   8010  N   ILE B2059     -12.975  -4.774  31.373  1.00196.89           N
ATOM   8011  CA  ILE B2059     -12.851  -4.432  32.806  1.00196.19           C
ATOM   8012  C   ILE B2059     -13.581  -5.443  33.708  1.00195.91           C
ATOM   8013  O   ILE B2059     -14.337  -5.032  34.587  1.00196.02           O
ATOM   8014  CB  ILE B2059     -13.424  -2.991  33.116  1.00196.16           C
ATOM   8015  CG1 ILE B2059     -14.946  -2.909  32.843  1.00195.80           C
ATOM   8016  CG2 ILE B2059     -12.657  -1.909  32.339  1.00195.88           C
ATOM   8017  CD1 ILE B2059     -15.764  -2.155  33.905  1.00194.55           C
ATOM   8018  N   ASN B2060     -13.349  -6.746  33.522  1.00195.46           N
ATOM   8019  CA  ASN B2060     -14.288  -7.761  34.055  1.00195.10           C
ATOM   8020  C   ASN B2060     -13.790  -8.879  34.994  1.00194.98           C
ATOM   8021  O   ASN B2060     -13.156  -9.831  34.548  1.00194.98           O
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ATOM   8022  CB  ASN B2060     -15.076  -8.385  32.896  1.00194.97           C
ATOM   8023  CG  ASN B2060     -14.208  -9.218  31.980  1.00194.37           C
ATOM   8024  OD1 ASN B2060     -13.051  -8.889  31.727  1.00193.91           O
ATOM   8025  ND2 ASN B2060     -14.764 -10.307  31.479  1.00193.94           N
ATOM   8026  N   ALA B2061     -14.130  -8.763  36.281  1.00194.85           N
ATOM   8027  CA  ALA B2061     -13.863  -9.782  37.326  1.00194.88           C
ATOM   8028  C   ALA B2061     -12.867  -9.346  38.427  1.00195.02           C
ATOM   8029  O   ALA B2061     -12.497  -8.158  38.512  1.00195.12           O
ATOM   8030  CB  ALA B2061     -13.480 -11.140  36.725  1.00194.67           C
ATOM   8031  N   TRP B2062     -12.467 -10.294  39.285  1.00194.92           N
ATOM   8032  CA  TRP B2062     -11.539  -9.991  40.385  1.00194.72           C
ATOM   8033  C   TRP B2062     -10.088 -10.245  39.976  1.00194.98           C
ATOM   8034  O   TRP B2062      -9.808 -11.079  39.111  1.00194.68           O
ATOM   8035  CB  TRP B2062     -11.918 -10.714  41.696  1.00194.24           C
ATOM   8036  CG  TRP B2062     -11.045 -10.324  42.878  1.00193.59           C
ATOM   8037  CD1 TRP B2062     -10.680  -9.064  43.250  1.00193.21           C
ATOM   8038  CD2 TRP B2062     -10.426 -11.204  43.814  1.00192.81           C
ATOM   8039  NE1 TRP B2062      -9.878  -9.099  44.358  1.00192.39           N
ATOM   8040  CE2 TRP B2062      -9.700 -10.404  44.724  1.00192.38           C
ATOM   8041  CE3 TRP B2062     -10.407 -12.592  43.970  1.00192.96           C
ATOM   8042  CZ2 TRP B2062      -8.969 -10.942  45.772  1.00192.98           C
ATOM   8043  CZ3 TRP B2062      -9.676 -13.129  45.011  1.00193.37           C
ATOM   8044  CH2 TRP B2062      -8.967 -12.304  45.903  1.00193.51           C
ATOM   8045  N   SER B2063      -9.178  -9.523  40.627  1.00195.57           N
ATOM   8046  CA  SER B2063      -7.856  -9.244  40.085  1.00196.26           C
ATOM   8047  C   SER B2063      -6.839  -8.767  41.141  1.00196.59           C
ATOM   8048  O   SER B2063      -6.792  -7.573  41.453  1.00196.79           O
ATOM   8049  CB  SER B2063      -8.020  -8.159  39.005  1.00196.49           C
ATOM   8050  OG  SER B2063      -9.094  -7.264  39.320  1.00196.56           O
ATOM   8051  N   THR B2064      -6.026  -9.674  41.689  1.00196.87           N
ATOM   8052  CA  THR B2064      -5.005  -9.263  42.670  1.00197.28           C
ATOM   8053  C   THR B2064      -3.755 -10.110  42.638  1.00197.33           C
ATOM   8054  O   THR B2064      -3.814 -11.311  42.908  1.00197.31           O
ATOM   8055  CB  THR B2064      -5.511  -9.310  44.134  1.00197.42           C
ATOM   8056  OG1 THR B2064      -6.935  -9.150  44.179  1.00197.78           O
ATOM   8057  CG2 THR B2064      -4.813  -8.225  44.981  1.00197.50           C
ATOM   8058  N   LYS B2065      -2.620  -9.481  42.344  1.00197.47           N
ATOM   8059  CA  LYS B2065      -1.345 -10.173  42.456  1.00197.70           C
ATOM   8060  C   LYS B2065      -0.945 -10.148  43.912  1.00197.93           C
ATOM   8061  O   LYS B2065      -0.123  -9.341  44.332  1.00198.02           O
ATOM   8062  CB  LYS B2065      -0.270  -9.559  41.561  1.00197.62           C
ATOM   8063  CG  LYS B2065      -0.283  -8.059  41.497  1.00197.64           C
ATOM   8064  CD  LYS B2065       0.737  -7.591  40.498  1.00198.05           C
ATOM   8065  CE  LYS B2065       0.966  -6.102  40.631  1.00198.47           C
ATOM   8066  NZ  LYS B2065       1.852  -5.583  39.554  1.00198.81           N
ATOM   8067  N   GLU B2066      -1.558 -11.037  44.682  1.00198.32           N
ATOM   8068  CA  GLU B2066      -1.396 -11.042  46.126  1.00198.77           C
ATOM   8069  C   GLU B2066      -1.276 -12.469  46.682  1.00198.87           C
ATOM   8070  O   GLU B2066      -2.255 -13.231  46.666  1.00199.06           O
ATOM   8071  CB  GLU B2066      -2.553 -10.274  46.781  1.00198.82           C
ATOM   8072  CG  GLU B2066      -2.241  -9.700  48.145  1.00199.72           C
ATOM   8073  CD  GLU B2066      -0.887  -9.007  48.191  1.00201.15           C
ATOM   8074  OE1 GLU B2066      -0.660  -8.064  47.400  1.00201.58           O
ATOM   8075  OE2 GLU B2066      -0.045  -9.409  49.021  1.00201.99           O
ATOM   8076  N   PRO B2067      -0.066 -12.842  47.159  1.00198.88           N
ATOM   8077  CA  PRO B2067       0.188 -14.171  47.739  1.00198.81           C
ATOM   8078  C   PRO B2067      -0.782 -14.518  48.863  1.00198.74           C
ATOM   8079  O   PRO B2067      -1.087 -15.689  49.076  1.00198.61           O
ATOM   8080  CB  PRO B2067       1.613 -14.046  48.283  1.00198.81           C
ATOM   8081  CG  PRO B2067       2.250 -13.005  47.416  1.00198.77           C
ATOM   8082  CD  PRO B2067       1.156 -12.011  47.149  1.00198.82           C
ATOM   8083  N   PHE B2068      -1.254 -13.485  49.557  1.00198.78           N
ATOM   8084  CA  PHE B2068      -2.239 -13.607  50.624  1.00198.93           C
ATOM   8085  C   PHE B2068      -3.528 -12.880  50.221  1.00198.71           C
ATOM   8086  O   PHE B2068      -3.630 -11.659  50.366  1.00198.80           O
ATOM   8087  CB  PHE B2068      -1.671 -13.004  51.916  1.00199.20           C
ATOM   8088  CG  PHE B2068      -0.813 -13.955  52.727  1.00199.82           C
ATOM   8089  CD1 PHE B2068       0.105 -14.814  52.111  1.00200.13           C
ATOM   8090  CD2 PHE B2068      -0.907 -13.967  54.124  1.00200.32           C
ATOM   8091  CE1 PHE B2068       0.896 -15.684  52.872  1.00200.34           C
ATOM   8092  CE2 PHE B2068      -0.118 -14.829  54.896  1.00200.37           C
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ATOM   8093  CZ  PHE B2068       0.786 -15.688  54.268  1.00200.23           C
ATOM   8094  N   SER B2069      -4.508 -13.622  49.716  1.00198.32           N
ATOM   8095  CA  SER B2069      -5.705 -12.997  49.159  1.00198.06           C
ATOM   8096  C   SER B2069      -6.982 -13.593  49.702  1.00197.78           C
ATOM   8097  O   SER B2069      -6.925 -14.572  50.438  1.00197.81           O
ATOM   8098  CB  SER B2069      -5.699 -13.133  47.644  1.00198.11           C
ATOM   8099  OG  SER B2069      -4.706 -12.310  47.073  1.00198.64           O
ATOM   8100  N   TRP B2070      -8.121 -12.980  49.344  1.00197.52           N
ATOM   8101  CA  TRP B2070      -9.477 -13.529  49.580  1.00197.24           C
ATOM   8102  C   TRP B2070     -10.641 -12.585  49.245  1.00196.96           C
ATOM   8103  O   TRP B2070     -10.517 -11.363  49.383  1.00196.87           O
ATOM   8104  CB  TRP B2070      -9.644 -13.999  51.023  1.00197.49           C
ATOM   8105  CG  TRP B2070      -9.427 -12.923  52.020  1.00197.62           C
ATOM   8106  CD1 TRP B2070      -8.263 -12.628  52.652  1.00197.82           C
ATOM   8107  CD2 TRP B2070     -10.399 -11.991  52.507  1.00197.76           C
ATOM   8108  NE1 TRP B2070      -8.445 -11.573  53.505  1.00198.12           N
ATOM   8109  CE2 TRP B2070      -9.749 -11.162  53.436  1.00197.96           C
ATOM   8110  CE3 TRP B2070     -11.758 -11.778  52.248  1.00198.14           C
ATOM   8111  CZ2 TRP B2070     -10.410 -10.133  54.112  1.00198.12           C
ATOM   8112  CZ3 TRP B2070     -12.413 -10.756  52.916  1.00198.00           C
ATOM   8113  CH2 TRP B2070     -11.740  -9.949  53.840  1.00198.02           C
ATOM   8114  N   ILE B2071     -11.777 -13.169  48.841  1.00196.63           N
ATOM   8115  CA  ILE B2071     -13.049 -12.424  48.686  1.00196.44           C
ATOM   8116  C   ILE B2071     -14.229 -12.969  49.510  1.00196.19           C
ATOM   8117  O   ILE B2071     -14.254 -14.132  49.914  1.00196.12           O
ATOM   8118  CB  ILE B2071     -13.475 -12.240  47.217  1.00196.37           C
ATOM   8119  CG1 ILE B2071     -13.480 -13.566  46.478  1.00196.48           C
ATOM   8120  CG2 ILE B2071     -12.536 -11.316  46.516  1.00196.86           C
ATOM   8121  CD1 ILE B2071     -14.758 -14.309  46.613  1.00197.19           C
ATOM   8122  N   LYS B2072     -15.215 -12.107  49.727  1.00195.92           N
ATOM   8123  CA  LYS B2072     -16.192 -12.295  50.790  1.00195.59           C
ATOM   8124  C   LYS B2072     -17.558 -11.861  50.280  1.00195.43           C
ATOM   8125  O   LYS B2072     -17.716 -10.766  49.725  1.00195.67           O
ATOM   8126  CB  LYS B2072     -15.771 -11.462  52.022  1.00195.78           C
ATOM   8127  CG  LYS B2072     -16.442 -11.795  53.359  1.00195.51           C
ATOM   8128  CD  LYS B2072     -15.576 -11.393  54.575  1.00195.20           C
ATOM   8129  CE  LYS B2072     -15.861  -9.987  55.092  1.00194.29           C
ATOM   8130  NZ  LYS B2072     -15.187  -8.927  54.295  1.00193.56           N
ATOM   8131  N   VAL B2073     -18.541 -12.731  50.460  1.00194.92           N
ATOM   8132  CA  VAL B2073     -19.905 -12.448  50.042  1.00194.46           C
ATOM   8133  C   VAL B2073     -20.856 -12.483  51.220  1.00194.41           C
ATOM   8134  O   VAL B2073     -21.097 -13.561  51.796  1.00194.68           O
ATOM   8135  CB  VAL B2073     -20.418 -13.488  49.028  1.00194.26           C
ATOM   8136  CG1 VAL B2073     -20.592 -12.870  47.659  1.00194.34           C
ATOM   8137  CG2 VAL B2073     -19.507 -14.695  48.994  1.00193.67           C
ATOM   8138  N   ASP B2074     -21.412 -11.324  51.574  1.00193.89           N
ATOM   8139  CA  ASP B2074     -22.492 -11.303  52.568  1.00193.35           C
ATOM   8140  C   ASP B2074     -23.808 -11.757  51.931  1.00192.84           C
ATOM   8141  O   ASP B2074     -24.447 -11.001  51.187  1.00192.88           O
ATOM   8142  CB  ASP B2074     -22.652  -9.917  53.194  1.00193.34           C
ATOM   8143  CG  ASP B2074     -23.265  -9.957  54.586  1.00192.93           C
ATOM   8144  OD1 ASP B2074     -24.052 -10.885  54.897  1.00192.07           O
ATOM   8145  OD2 ASP B2074     -22.953  -9.030  55.364  1.00192.59           O
ATOM   8146  N   LEU B2075     -24.197 -12.996  52.213  1.00191.95           N
ATOM   8147  CA  LEU B2075     -25.463 -13.511  51.736  1.00191.23           C
ATOM   8148  C   LEU B2075     -26.652 -12.897  52.479  1.00191.16           C
ATOM   8149  O   LEU B2075     -27.799 -13.271  52.226  1.00191.33           O
ATOM   8150  CB  LEU B2075     -25.489 -15.031  51.832  1.00190.96           C
ATOM   8151  CG  LEU B2075     -25.488 -15.773  50.506  1.00190.34           C
ATOM   8152  CD1 LEU B2075     -25.198 -17.240  50.727  1.00189.81           C
ATOM   8153  CD2 LEU B2075     -26.823 -15.591  49.798  1.00190.14           C
ATOM   8154  N   LEU B2076     -26.366 -11.960  53.389  1.00190.77           N
ATOM   8155  CA  LEU B2076     -27.381 -11.200  54.142  1.00190.47           C
ATOM   8156  C   LEU B2076     -28.425 -12.045  54.876  1.00190.39           C
ATOM   8157  O   LEU B2076     -29.517 -11.552  55.168  1.00190.50           O
ATOM   8158  CB  LEU B2076     -28.109 -10.184  53.246  1.00190.33           C
ATOM   8159  CG  LEU B2076     -27.387  -9.129  52.402  1.00190.51           C
ATOM   8160  CD1 LEU B2076     -26.189  -8.531  53.140  1.00190.74           C
ATOM   8161  CD2 LEU B2076     -26.989  -9.667  51.013  1.00190.36           C
ATOM   8162  N   ALA B2077     -28.090 -13.302  55.170  1.00190.17           N
ATOM   8163  CA  ALA B2077     -28.985 -14.237  55.860  1.00189.97           C
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ATOM	8164	C	ALA	B2077	-28.340	-15.621	55.915	1.00189.90	C
ATOM	8165	O	ALA	B2077	-27.655	-16.005	54.972	1.00189.89	O
ATOM	8166	CB	ALA	B2077	-30.337	-14.317	55.146	1.00189.90	C
ATOM	8167	N	PRO	B2078	-28.536	-16.369	57.024	1.00189.85	N
ATOM	8168	CA	PRO	B2078	-28.105	-17.771	57.037	1.00189.67	C
ATOM	8169	C	PRO	B2078	-28.733	-18.573	55.885	1.00189.65	C
ATOM	8170	O	PRO	B2078	-29.953	-18.669	55.792	1.00189.54	O
ATOM	8171	CB	PRO	B2078	-28.584	-18.283	58.404	1.00189.57	C
ATOM	8172	CG	PRO	B2078	-29.545	-17.257	58.920	1.00189.81	C
ATOM	8173	CD	PRO	B2078	-29.121	-15.959	58.317	1.00190.00	C
ATOM	8174	N	MET	B2079	-27.882	-19.134	55.025	1.00189.82	N
ATOM	8175	CA	MET	B2079	-28.279	-19.772	53.764	1.00189.89	C
ATOM	8176	C	MET	B2079	-27.636	-21.140	53.595	1.00189.95	C
ATOM	8177	O	MET	B2079	-26.559	-21.381	54.140	1.00189.75	O
ATOM	8178	CB	MET	B2079	-27.801	-18.906	52.609	1.00190.06	C
ATOM	8179	CG	MET	B2079	-28.675	-17.740	52.290	1.00190.33	C
ATOM	8180	SD	MET	B2079	-30.006	-18.318	51.249	1.00192.21	S
ATOM	8181	CE	MET	B2079	-30.382	-16.843	50.285	1.00191.88	C
ATOM	8182	N	ILE	B2080	-28.275	-22.026	52.825	1.00190.22	N
ATOM	8183	CA	ILE	B2080	-27.643	-23.302	52.441	1.00190.73	C
ATOM	8184	C	ILE	B2080	-26.856	-23.128	51.151	1.00190.98	C
ATOM	8185	O	ILE	B2080	-27.423	-22.737	50.129	1.00191.18	O
ATOM	8186	CB	ILE	B2080	-28.647	-24.474	52.189	1.00190.78	C
ATOM	8187	CG1	ILE	B2080	-29.691	-24.603	53.301	1.00191.07	C
ATOM	8188	CG2	ILE	B2080	-27.883	-25.805	51.985	1.00190.82	C
ATOM	8189	CD1	ILE	B2080	-30.599	-25.826	53.154	1.00190.75	C
ATOM	8190	N	ILE	B2081	-25.562	-23.436	51.183	1.00191.20	N
ATOM	8191	CA	ILE	B2081	-24.737	-23.325	49.979	1.00191.47	C
ATOM	8192	C	ILE	B2081	-24.213	-24.705	49.528	1.00191.59	C
ATOM	8193	O	ILE	B2081	-23.326	-25.281	50.171	1.00191.74	O
ATOM	8194	CB	ILE	B2081	-23.617	-22.222	50.108	1.00191.46	C
ATOM	8195	CG1	ILE	B2081	-22.567	-22.588	51.157	1.00191.66	C
ATOM	8196	CG2	ILE	B2081	-24.220	-20.844	50.448	1.00191.10	C
ATOM	8197	CD1	ILE	B2081	-21.318	-21.710	51.119	1.00191.77	C
ATOM	8198	N	HIS	B2082	-24.800	-25.226	48.439	1.00191.62	N
ATOM	8199	CA	HIS	B2082	-24.525	-26.589	47.909	1.00191.35	C
ATOM	8200	C	HIS	B2082	-23.285	-26.691	47.044	1.00191.13	C
ATOM	8201	O	HIS	B2082	-22.782	-27.802	46.822	1.00190.98	O
ATOM	8202	CB	HIS	B2082	-25.676	-27.080	47.039	1.00191.32	C
ATOM	8203	CG	HIS	B2082	-26.819	-27.648	47.805	1.00191.25	C
ATOM	8204	ND1	HIS	B2082	-27.807	-26.861	48.355	1.00191.05	N
ATOM	8205	CD2	HIS	B2082	-27.152	-28.927	48.085	1.00191.74	C
ATOM	8206	CE1	HIS	B2082	-28.695	-27.632	48.954	1.00191.41	C
ATOM	8207	NE2	HIS	B2082	-28.321	-28.890	48.805	1.00192.02	N
ATOM	8208	N	GLY	B2083	-22.839	-25.538	46.529	1.00190.82	N
ATOM	8209	CA	GLY	B2083	-21.717	-25.454	45.594	1.00190.37	C
ATOM	8210	C	GLY	B2083	-21.411	-24.065	45.054	1.00190.04	C
ATOM	8211	O	GLY	B2083	-22.092	-23.085	45.383	1.00189.95	O
ATOM	8212	N	ILE	B2084	-20.378	-23.994	44.211	1.00189.73	N
ATOM	8213	CA	ILE	B2084	-19.853	-22.729	43.674	1.00189.35	C
ATOM	8214	C	ILE	B2084	-19.250	-22.926	42.278	1.00189.36	C
ATOM	8215	O	ILE	B2084	-18.235	-23.620	42.113	1.00189.58	O
ATOM	8216	CB	ILE	B2084	-18.791	-22.106	44.627	1.00189.22	C
ATOM	8217	CG1	ILE	B2084	-18.287	-20.768	44.109	1.00188.26	C
ATOM	8218	CG2	ILE	B2084	-17.610	-23.057	44.854	1.00189.35	C
ATOM	8219	CD1	ILE	B2084	-17.344	-20.103	45.074	1.00186.93	C
ATOM	8220	N	LYS	B2085	-19.897	-22.335	41.276	1.00189.04	N
ATOM	8221	CA	LYS	B2085	-19.355	-22.311	39.927	1.00188.42	C
ATOM	8222	C	LYS	B2085	-18.297	-21.224	39.907	1.00188.44	C
ATOM	8223	O	LYS	B2085	-18.528	-20.061	40.267	1.00187.96	O
ATOM	8224	CB	LYS	B2085	-20.441	-22.061	38.884	1.00188.19	C
ATOM	8225	CG	LYS	B2085	-21.402	-23.201	38.711	1.00187.37	C
ATOM	8226	CD	LYS	B2085	-22.819	-22.690	38.706	1.00187.60	C
ATOM	8227	CE	LYS	B2085	-23.820	-23.774	38.323	1.00188.94	C
ATOM	8228	NZ	LYS	B2085	-24.442	-23.600	36.964	1.00190.31	N
ATOM	8229	N	THR	B2086	-17.112	-21.647	39.518	1.00188.64	N
ATOM	8230	CA	THR	B2086	-15.954	-20.794	39.530	1.00188.99	C
ATOM	8231	C	THR	B2086	-15.406	-20.748	38.106	1.00188.99	C
ATOM	8232	O	THR	B2086	-15.478	-21.737	37.375	1.00188.86	O
ATOM	8233	CB	THR	B2086	-14.909	-21.236	40.647	1.00189.17	C
ATOM	8234	OG1	THR	B2086	-13.570	-21.180	40.145	1.00189.75	O

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ATOM   8235  CG2 THR B2086     -15.174 -22.658  41.194  1.00189.24           C
ATOM   8236  N   GLN B2087     -14.903 -19.582  37.712  1.00189.20           N
ATOM   8237  CA  GLN B2087     -14.408 -19.350  36.363  1.00189.70           C
ATOM   8238  C   GLN B2087     -13.278 -18.317  36.377  1.00190.00           C
ATOM   8239  O   GLN B2087     -13.053 -17.661  37.396  1.00190.15           O
ATOM   8240  CB  GLN B2087     -15.552 -18.864  35.491  1.00189.72           C
ATOM   8241  CG  GLN B2087     -15.283 -18.914  34.019  1.00190.36           C
ATOM   8242  CD  GLN B2087     -16.340 -18.185  33.240  1.00191.47           C
ATOM   8243  OE1 GLN B2087     -16.390 -16.953  33.231  1.00191.27           O
ATOM   8244  NE2 GLN B2087     -17.204 -18.943  32.575  1.00192.32           N
ATOM   8245  N   GLY B2088     -12.570 -18.174  35.252  1.00190.39           N
ATOM   8246  CA  GLY B2088     -11.434 -17.234  35.143  1.00190.72           C
ATOM   8247  C   GLY B2088     -11.570 -16.144  34.087  1.00190.80           C
ATOM   8248  O   GLY B2088     -12.496 -16.158  33.271  1.00190.82           O
ATOM   8249  N   ALA B2089     -10.644 -15.193  34.096  1.00190.83           N
ATOM   8250  CA  ALA B2089     -10.709 -14.105  33.132  1.00191.22           C
ATOM   8251  C   ALA B2089      -9.639 -14.230  32.032  1.00191.55           C
ATOM   8252  O   ALA B2089      -8.882 -15.211  32.020  1.00191.77           O
ATOM   8253  CB  ALA B2089     -10.621 -12.779  33.840  1.00191.25           C
ATOM   8254  N   ARG B2090      -9.591 -13.239  31.124  1.00191.65           N
ATOM   8255  CA  ARG B2090      -8.697 -13.222  29.938  1.00191.52           C
ATOM   8256  C   ARG B2090      -8.086 -11.829  29.716  1.00191.27           C
ATOM   8257  O   ARG B2090      -8.824 -10.846  29.604  1.00191.25           O
ATOM   8258  CB  ARG B2090      -9.480 -13.669  28.692  1.00191.64           C
ATOM   8259  CG  ARG B2090      -8.651 -13.953  27.449  1.00192.08           C
ATOM   8260  CD  ARG B2090      -8.865 -12.885  26.392  1.00193.59           C
ATOM   8261  NE  ARG B2090      -7.799 -12.863  25.386  1.00195.54           N
ATOM   8262  CZ  ARG B2090      -7.908 -13.320  24.137  1.00196.42           C
ATOM   8263  NH1 ARG B2090      -9.050 -13.851  23.711  1.00197.24           N
ATOM   8264  NH2 ARG B2090      -6.871 -13.244  23.304  1.00196.28           N
ATOM   8265  N   GLN B2091      -6.752 -11.754  29.642  1.00190.99           N
ATOM   8266  CA  GLN B2091      -6.027 -10.465  29.593  1.00190.79           C
ATOM   8267  C   GLN B2091      -5.594 -10.027  28.210  1.00190.72           C
ATOM   8268  O   GLN B2091      -6.292 -10.261  27.230  1.00190.71           O
ATOM   8269  CB  GLN B2091      -4.795 -10.484  30.505  1.00190.83           C
ATOM   8270  CG  GLN B2091      -4.869  -9.561  31.740  1.00190.67           C
ATOM   8271  CD  GLN B2091      -4.374  -8.138  31.484  1.00189.97           C
ATOM   8272  OE1 GLN B2091      -4.992  -7.376  30.734  1.00189.40           O
ATOM   8273  NE2 GLN B2091      -3.264  -7.768  32.134  1.00189.72           N
ATOM   8274  N   LYS B2092      -4.436  -9.370  28.159  1.00190.79           N
ATOM   8275  CA  LYS B2092      -3.847  -8.855  26.923  1.00190.97           C
ATOM   8276  C   LYS B2092      -3.809  -9.988  25.886  1.00191.15           C
ATOM   8277  O   LYS B2092      -4.524  -9.945  24.878  1.00191.25           O
ATOM   8278  CB  LYS B2092      -2.457  -8.232  27.216  1.00190.84           C
ATOM   8279  CG  LYS B2092      -1.647  -7.688  26.027  1.00190.30           C
ATOM   8280  CD  LYS B2092      -2.307  -6.515  25.304  1.00189.68           C
ATOM   8281  CE  LYS B2092      -2.890  -6.954  23.964  1.00189.09           C
ATOM   8282  NZ  LYS B2092      -3.102  -5.830  23.014  1.00188.71           N
ATOM   8283  N   PHE B2093      -2.997 -11.005  26.164  1.00191.22           N
ATOM   8284  CA  PHE B2093      -3.006 -12.266  25.425  1.00191.17           C
ATOM   8285  C   PHE B2093      -2.742 -13.368  26.443  1.00191.05           C
ATOM   8286  O   PHE B2093      -2.315 -14.472  26.101  1.00190.90           O
ATOM   8287  CB  PHE B2093      -1.955 -12.267  24.298  1.00191.34           C
ATOM   8288  CG  PHE B2093      -2.406 -11.556  23.039  1.00191.51           C
ATOM   8289  CD1 PHE B2093      -1.927 -10.281  22.733  1.00191.52           C
ATOM   8290  CD2 PHE B2093      -3.315 -12.161  22.164  1.00191.52           C
ATOM   8291  CE1 PHE B2093      -2.348  -9.618  21.578  1.00191.44           C
ATOM   8292  CE2 PHE B2093      -3.743 -11.509  21.011  1.00191.37           C
ATOM   8293  CZ  PHE B2093      -3.257 -10.233  20.717  1.00191.49           C
ATOM   8294  N   SER B2094      -3.023 -13.043  27.703  1.00191.04           N
ATOM   8295  CA  SER B2094      -2.672 -13.885  28.837  1.00191.02           C
ATOM   8296  C   SER B2094      -3.868 -14.673  29.374  1.00191.12           C
ATOM   8297  O   SER B2094      -4.955 -14.118  29.575  1.00191.11           O
ATOM   8298  CB  SER B2094      -2.082 -13.023  29.952  1.00190.91           C
ATOM   8299  OG  SER B2094      -1.103 -12.129  29.464  1.00190.50           O
ATOM   8300  N   SER B2095      -3.658 -15.966  29.601  1.00191.13           N
ATOM   8301  CA  SER B2095      -4.662 -16.813  30.225  1.00191.28           C
ATOM   8302  C   SER B2095      -4.422 -16.729  31.731  1.00191.42           C
ATOM   8303  O   SER B2095      -3.388 -17.207  32.198  1.00191.69           O
ATOM   8304  CB  SER B2095      -4.501 -18.258  29.730  1.00191.27           C
ATOM   8305  OG  SER B2095      -5.717 -18.990  29.785  1.00191.27           O
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ATOM   8306  N   LEU B2096     -5.338 -16.107  32.487  1.00191.42           N
ATOM   8307  CA  LEU B2096     -5.189 -16.022  33.960  1.00191.32           C
ATOM   8308  C   LEU B2096     -6.445 -16.300  34.800  1.00191.69           C
ATOM   8309  O   LEU B2096     -7.538 -15.775  34.551  1.00191.66           O
ATOM   8310  CB  LEU B2096     -4.504 -14.723  34.399  1.00190.87           C
ATOM   8311  CG  LEU B2096     -5.321 -13.451  34.558  1.00190.02           C
ATOM   8312  CD1 LEU B2096     -4.441 -12.402  35.158  1.00189.81           C
ATOM   8313  CD2 LEU B2096     -5.880 -12.977  33.240  1.00189.03           C
ATOM   8314  N   TYR B2097     -6.237 -17.132  35.818  1.00192.15           N
ATOM   8315  CA  TYR B2097     -7.301 -17.775  36.597  1.00192.58           C
ATOM   8316  C   TYR B2097     -6.729 -18.210  37.970  1.00192.76           C
ATOM   8317  O   TYR B2097     -5.545 -17.969  38.244  1.00193.00           O
ATOM   8318  CB  TYR B2097     -7.880 -18.976  35.808  1.00192.64           C
ATOM   8319  CG  TYR B2097     -6.835 -19.928  35.222  1.00192.51           C
ATOM   8320  CD1 TYR B2097     -6.486 -21.105  35.883  1.00192.37           C
ATOM   8321  CD2 TYR B2097     -6.203 -19.650  34.012  1.00192.30           C
ATOM   8322  CE1 TYR B2097     -5.530 -21.973  35.361  1.00192.25           C
ATOM   8323  CE2 TYR B2097     -5.240 -20.511  33.487  1.00192.52           C
ATOM   8324  CZ  TYR B2097     -4.912 -21.669  34.168  1.00192.53           C
ATOM   8325  OH  TYR B2097     -3.966 -22.527  33.652  1.00192.96           O
ATOM   8326  N   ILE B2098     -7.555 -18.810  38.835  1.00192.64           N
ATOM   8327  CA  ILE B2098     -7.062 -19.423  40.083  1.00192.42           C
ATOM   8328  C   ILE B2098     -7.171 -20.920  39.950  1.00192.39           C
ATOM   8329  O   ILE B2098     -8.192 -21.436  39.494  1.00192.10           O
ATOM   8330  CB  ILE B2098     -7.816 -18.955  41.343  1.00192.37           C
ATOM   8331  CG1 ILE B2098     -9.178 -18.366  40.976  1.00192.84           C
ATOM   8332  CG2 ILE B2098     -7.024 -17.897  42.078  1.00192.01           C
ATOM   8333  CD1 ILE B2098    -10.244 -19.390  40.640  1.00193.31           C
ATOM   8334  N   SER B2099     -6.108 -21.614  40.333  1.00192.67           N
ATOM   8335  CA  SER B2099     -5.986 -23.048  40.051  1.00193.13           C
ATOM   8336  C   SER B2099     -6.392 -23.924  41.228  1.00193.28           C
ATOM   8337  O   SER B2099     -6.741 -25.106  41.060  1.00193.35           O
ATOM   8338  CB  SER B2099     -4.557 -23.394  39.610  1.00193.16           C
ATOM   8339  OG  SER B2099     -3.601 -22.910  40.530  1.00192.95           O
ATOM   8340  N   GLN B2100     -6.334 -23.332  42.415  1.00193.29           N
ATOM   8341  CA  GLN B2100     -6.612 -24.040  43.646  1.00193.21           C
ATOM   8342  C   GLN B2100     -7.131 -23.096  44.708  1.00192.89           C
ATOM   8343  O   GLN B2100     -6.712 -21.937  44.775  1.00192.79           O
ATOM   8344  CB  GLN B2100     -5.352 -24.716  44.147  1.00193.35           C
ATOM   8345  CG  GLN B2100     -5.139 -26.077  43.576  1.00194.48           C
ATOM   8346  CD  GLN B2100     -4.670 -27.044  44.627  1.00196.82           C
ATOM   8347  OE1 GLN B2100     -4.068 -26.651  45.637  1.00197.94           O
ATOM   8348  NE2 GLN B2100     -4.949 -28.324  44.410  1.00197.99           N
ATOM   8349  N   PHE B2101     -8.048 -23.597  45.535  1.00192.60           N
ATOM   8350  CA  PHE B2101     -8.644 -22.786  46.599  1.00192.27           C
ATOM   8351  C   PHE B2101     -9.256 -23.560  47.761  1.00192.12           C
ATOM   8352  O   PHE B2101     -9.758 -24.673  47.571  1.00192.29           O
ATOM   8353  CB  PHE B2101     -9.646 -21.753  46.038  1.00192.21           C
ATOM   8354  CG  PHE B2101    -10.886 -22.338  45.403  1.00191.55           C
ATOM   8355  CD1 PHE B2101    -12.126 -22.089  45.950  1.00190.68           C
ATOM   8356  CD2 PHE B2101    -10.819 -23.078  44.229  1.00191.88           C
ATOM   8357  CE1 PHE B2101    -13.273 -22.581  45.355  1.00191.29           C
ATOM   8358  CE2 PHE B2101    -11.971 -23.582  43.628  1.00191.93           C
ATOM   8359  CZ  PHE B2101    -13.196 -23.332  44.190  1.00191.74           C
ATOM   8360  N   ILE B2102     -9.183 -22.971  48.961  1.00191.57           N
ATOM   8361  CA  ILE B2102     -9.924 -23.461  50.121  1.00190.96           C
ATOM   8362  C   ILE B2102    -11.062 -22.525  50.482  1.00191.10           C
ATOM   8363  O   ILE B2102    -11.028 -21.325  50.193  1.00190.87           O
ATOM   8364  CB  ILE B2102     -9.051 -23.659  51.341  1.00190.57           C
ATOM   8365  CG1 ILE B2102     -8.269 -22.388  51.631  1.00190.15           C
ATOM   8366  CG2 ILE B2102     -8.144 -24.846  51.137  1.00190.42           C
ATOM   8367  CD1 ILE B2102     -7.992 -22.181  53.090  1.00190.79           C
ATOM   8368  N   ILE B2103    -12.074 -23.093  51.122  1.00191.36           N
ATOM   8369  CA  ILE B2103    -13.285 -22.362  51.398  1.00191.79           C
ATOM   8370  C   ILE B2103    -13.611 -22.329  52.878  1.00192.20           C
ATOM   8371  O   ILE B2103    -13.891 -23.367  53.471  1.00192.32           O
ATOM   8372  CB  ILE B2103    -14.434 -22.946  50.606  1.00191.68           C
ATOM   8373  CG1 ILE B2103    -14.361 -22.387  49.193  1.00192.33           C
ATOM   8374  CG2 ILE B2103    -15.772 -22.605  51.242  1.00191.76           C
ATOM   8375  CD1 ILE B2103    -15.500 -22.806  48.304  1.00193.80           C
ATOM   8376  N   MET B2104    -13.552 -21.125  53.454  1.00192.63           N
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ATOM	8377	CA	MET	B2104	-13.958	-20.855	54.835	1.00192.85	C
ATOM	8378	C	MET	B2104	-15.318	-20.168	54.861	1.00193.29	C
ATOM	8379	O	MET	B2104	-15.698	-19.489	53.899	1.00193.19	O
ATOM	8380	CB	MET	B2104	-12.963	-19.930	55.509	1.00192.69	C
ATOM	8381	CG	MET	B2104	-11.676	-20.550	55.904	1.00192.26	C
ATOM	8382	SD	MET	B2104	-10.627	-19.148	56.224	1.00192.87	S
ATOM	8383	CE	MET	B2104	-9.173	-19.944	56.905	1.00193.30	C
ATOM	8384	N	TYR	B2105	-16.039	-20.327	55.971	1.00193.90	N
ATOM	8385	CA	TYR	B2105	-17.335	-19.674	56.132	1.00194.39	C
ATOM	8386	C	TYR	B2105	-17.654	-19.280	57.565	1.00194.62	C
ATOM	8387	O	TYR	B2105	-17.175	-19.890	58.533	1.00194.25	O
ATOM	8388	CB	TYR	B2105	-18.461	-20.537	55.558	1.00194.57	C
ATOM	8389	CG	TYR	B2105	-18.567	-21.885	56.207	1.00194.87	C
ATOM	8390	CD1	TYR	B2105	-19.350	-22.064	57.338	1.00195.45	C
ATOM	8391	CD2	TYR	B2105	-17.878	-22.985	55.695	1.00194.73	C
ATOM	8392	CE1	TYR	B2105	-19.452	-23.296	57.945	1.00195.58	C
ATOM	8393	CE2	TYR	B2105	-17.970	-24.223	56.294	1.00194.78	C
ATOM	8394	CZ	TYR	B2105	-18.761	-24.366	57.418	1.00195.29	C
ATOM	8395	OH	TYR	B2105	-18.872	-25.577	58.038	1.00195.61	O
ATOM	8396	N	SER	B2106	-18.462	-18.232	57.661	1.00195.20	N
ATOM	8397	CA	SER	B2106	-19.011	-17.763	58.918	1.00196.00	C
ATOM	8398	C	SER	B2106	-20.527	-17.681	58.840	1.00196.29	C
ATOM	8399	O	SER	B2106	-21.091	-17.247	57.826	1.00196.31	O
ATOM	8400	CB	SER	B2106	-18.435	-16.398	59.305	1.00196.11	C
ATOM	8401	OG	SER	B2106	-17.471	-16.529	60.338	1.00196.58	O
ATOM	8402	N	LEU	B2107	-21.167	-18.117	59.924	1.00196.63	N
ATOM	8403	CA	LEU	B2107	-22.614	-18.077	60.065	1.00196.85	C
ATOM	8404	C	LEU	B2107	-23.009	-16.815	60.799	1.00197.28	C
ATOM	8405	O	LEU	B2107	-24.196	-16.544	60.967	1.00197.50	O
ATOM	8406	CB	LEU	B2107	-23.133	-19.317	60.815	1.00196.62	C
ATOM	8407	CG	LEU	B2107	-22.207	-20.190	61.680	1.00196.44	C
ATOM	8408	CD1	LEU	B2107	-21.770	-19.521	62.972	1.00195.90	C
ATOM	8409	CD2	LEU	B2107	-22.881	-21.525	61.986	1.00196.80	C
ATOM	8410	N	ASP	B2108	-22.007	-16.023	61.186	1.00197.73	N
ATOM	8411	CA	ASP	B2108	-22.174	-14.996	62.215	1.00198.22	C
ATOM	8412	C	ASP	B2108	-21.365	-13.725	62.005	1.00198.24	C
ATOM	8413	O	ASP	B2108	-21.811	-12.640	62.382	1.00198.09	O
ATOM	8414	CB	ASP	B2108	-21.791	-15.587	63.572	1.00198.51	C
ATOM	8415	CG	ASP	B2108	-20.490	-16.394	63.519	1.00199.27	C
ATOM	8416	OD1	ASP	B2108	-19.821	-16.476	64.572	1.00200.89	O
ATOM	8417	OD2	ASP	B2108	-20.141	-16.947	62.444	1.00198.94	O
ATOM	8418	N	GLY	B2109	-20.169	-13.875	61.440	1.00198.44	N
ATOM	8419	CA	GLY	B2109	-19.252	-12.754	61.244	1.00198.84	C
ATOM	8420	C	GLY	B2109	-18.033	-12.782	62.151	1.00199.11	C
ATOM	8421	O	GLY	B2109	-16.913	-12.500	61.705	1.00199.11	O
ATOM	8422	N	LYS	B2110	-18.259	-13.108	63.426	1.00199.40	N
ATOM	8423	CA	LYS	B2110	-17.183	-13.238	64.418	1.00199.61	C
ATOM	8424	C	LYS	B2110	-16.252	-14.438	64.097	1.00199.82	C
ATOM	8425	O	LYS	B2110	-15.402	-14.335	63.204	1.00199.89	O
ATOM	8426	CB	LYS	B2110	-17.748	-13.326	65.852	1.00199.60	C
ATOM	8427	CG	LYS	B2110	-18.570	-12.126	66.335	1.00199.47	C
ATOM	8428	CD	LYS	B2110	-18.982	-12.334	67.796	1.00199.45	C
ATOM	8429	CE	LYS	B2110	-20.272	-11.607	68.158	1.00198.95	C
ATOM	8430	NZ	LYS	B2110	-20.086	-10.152	68.377	1.00198.70	N
ATOM	8431	N	LYS	B2111	-16.421	-15.562	64.805	1.00199.93	N
ATOM	8432	CA	LYS	B2111	-15.515	-16.723	64.688	1.00199.89	C
ATOM	8433	C	LYS	B2111	-15.747	-17.547	63.425	1.00199.85	C
ATOM	8434	O	LYS	B2111	-16.835	-18.074	63.194	1.00199.70	O
ATOM	8435	CB	LYS	B2111	-15.535	-17.609	65.956	1.00199.92	C
ATOM	8436	CG	LYS	B2111	-16.826	-18.413	66.224	1.00200.09	C
ATOM	8437	CD	LYS	B2111	-17.873	-17.651	67.063	1.00199.96	C
ATOM	8438	CE	LYS	B2111	-17.781	-17.971	68.553	1.00199.64	C
ATOM	8439	NZ	LYS	B2111	-16.683	-17.233	69.234	1.00199.52	N
ATOM	8440	N	TRP	B2112	-14.706	-17.636	62.608	1.00200.05	N
ATOM	8441	CA	TRP	B2112	-14.756	-18.384	61.356	1.00200.34	C
ATOM	8442	C	TRP	B2112	-14.172	-19.773	61.576	1.00200.66	C
ATOM	8443	O	TRP	B2112	-13.818	-20.132	62.708	1.00200.80	O
ATOM	8444	CB	TRP	B2112	-13.920	-17.676	60.277	1.00200.08	C
ATOM	8445	CG	TRP	B2112	-14.399	-16.313	59.861	1.00199.79	C
ATOM	8446	CD1	TRP	B2112	-14.286	-15.146	60.568	1.00199.64	C
ATOM	8447	CD2	TRP	B2112	-15.031	-15.972	58.625	1.00199.03	C

ATOM	8448	NE1	TRP	B2112	-14.833	-14.106	59.855	1.00199.70	N
ATOM	8449	CE2	TRP	B2112	-15.297	-14.587	58.659	1.00199.42	C
ATOM	8450	CE3	TRP	B2112	-15.415	-16.703	57.501	1.00198.44	C
ATOM	8451	CZ2	TRP	B2112	-15.924	-13.923	57.607	1.00199.43	C
ATOM	8452	CZ3	TRP	B2112	-16.038	-16.046	56.467	1.00198.98	C
ATOM	8453	CH2	TRP	B2112	-16.283	-14.670	56.523	1.00199.18	C
ATOM	8454	N	GLN	B2113	-14.102	-20.550	60.491	1.00200.96	N
ATOM	8455	CA	GLN	B2113	-13.141	-21.663	60.351	1.00201.29	C
ATOM	8456	C	GLN	B2113	-13.094	-22.200	58.906	1.00201.21	C
ATOM	8457	O	GLN	B2113	-13.937	-21.845	58.072	1.00201.19	O
ATOM	8458	CB	GLN	B2113	-13.363	-22.793	61.393	1.00201.42	C
ATOM	8459	CG	GLN	B2113	-14.376	-23.871	61.019	1.00201.93	C
ATOM	8460	CD	GLN	B2113	-15.788	-23.337	60.925	1.00202.79	C
ATOM	8461	OE1	GLN	B2113	-16.098	-22.483	60.080	1.00202.86	O
ATOM	8462	NE2	GLN	B2113	-16.660	-23.840	61.795	1.00203.17	N
ATOM	8463	N	THR	B2114	-12.093	-23.042	58.637	1.00201.07	N
ATOM	8464	CA	THR	B2114	-11.923	-23.740	57.358	1.00200.76	C
ATOM	8465	C	THR	B2114	-13.051	-24.748	57.047	1.00200.51	C
ATOM	8466	O	THR	B2114	-14.095	-24.771	57.714	1.00200.40	O
ATOM	8467	CB	THR	B2114	-10.538	-24.458	57.287	1.00200.81	C
ATOM	8468	OG1	THR	B2114	-10.389	-25.350	58.404	1.00201.17	O
ATOM	8469	CG2	THR	B2114	-9.394	-23.452	57.290	1.00200.66	C
ATOM	8470	N	TYR	B2115	-12.822	-25.578	56.031	1.00200.22	N
ATOM	8471	CA	TYR	B2115	-13.814	-26.525	55.534	1.00199.96	C
ATOM	8472	C	TYR	B2115	-13.206	-27.892	55.285	1.00200.05	C
ATOM	8473	O	TYR	B2115	-12.021	-28.012	54.978	1.00199.93	O
ATOM	8474	CB	TYR	B2115	-14.443	-25.992	54.252	1.00199.79	C
ATOM	8475	CG	TYR	B2115	-15.438	-26.906	53.596	1.00199.48	C
ATOM	8476	CD1	TYR	B2115	-16.529	-27.399	54.293	1.00199.55	C
ATOM	8477	CD2	TYR	B2115	-15.307	-27.250	52.266	1.00199.48	C
ATOM	8478	CE1	TYR	B2115	-17.447	-28.236	53.685	1.00199.63	C
ATOM	8479	CE2	TYR	B2115	-16.226	-28.082	51.646	1.00199.39	C
ATOM	8480	CZ	TYR	B2115	-17.291	-28.569	52.358	1.00199.29	C
ATOM	8481	OH	TYR	B2115	-18.197	-29.397	51.742	1.00199.28	O
ATOM	8482	N	ARG	B2116	-14.032	-28.920	55.430	1.00200.38	N
ATOM	8483	CA	ARG	B2116	-13.598	-30.299	55.282	1.00200.91	C
ATOM	8484	C	ARG	B2116	-14.681	-31.150	54.638	1.00201.08	C
ATOM	8485	O	ARG	B2116	-15.211	-32.075	55.258	1.00200.90	O
ATOM	8486	CB	ARG	B2116	-13.167	-30.899	56.631	1.00201.06	C
ATOM	8487	CG	ARG	B2116	-11.694	-30.670	56.994	1.00201.59	C
ATOM	8488	CD	ARG	B2116	-11.166	-31.764	57.924	1.00202.35	C
ATOM	8489	NE	ARG	B2116	-11.257	-33.101	57.329	1.00202.37	N
ATOM	8490	CZ	ARG	B2116	-11.924	-34.129	57.852	1.00202.05	C
ATOM	8491	NH1	ARG	B2116	-12.568	-34.020	59.009	1.00201.60	N
ATOM	8492	NH2	ARG	B2116	-11.932	-35.285	57.215	1.00202.23	N
ATOM	8493	N	GLY	B2117	-14.998	-30.822	53.386	1.00201.49	N
ATOM	8494	CA	GLY	B2117	-15.830	-31.671	52.534	1.00202.08	C
ATOM	8495	C	GLY	B2117	-15.576	-33.135	52.830	1.00202.50	C
ATOM	8496	O	GLY	B2117	-14.457	-33.518	53.204	1.00202.46	O
ATOM	8497	N	ASN	B2118	-16.605	-33.959	52.653	1.00202.94	N
ATOM	8498	CA	ASN	B2118	-16.589	-35.301	53.231	1.00203.37	C
ATOM	8499	C	ASN	B2118	-15.202	-35.951	53.307	1.00203.53	C
ATOM	8500	O	ASN	B2118	-14.416	-35.923	52.343	1.00203.38	O
ATOM	8501	CB	ASN	B2118	-17.722	-36.250	52.723	1.00203.47	C
ATOM	8502	CG	ASN	B2118	-17.778	-36.402	51.198	1.00203.85	C
ATOM	8503	OD1	ASN	B2118	-16.752	-36.578	50.539	1.00204.01	O
ATOM	8504	ND2	ASN	B2118	-18.995	-36.314	50.634	1.00204.64	N
ATOM	8505	N	SER	B2119	-14.915	-36.436	54.520	1.00203.82	N
ATOM	8506	CA	SER	B2119	-13.762	-37.292	54.889	1.00203.88	C
ATOM	8507	C	SER	B2119	-12.427	-37.049	54.129	1.00203.95	C
ATOM	8508	O	SER	B2119	-11.621	-37.977	53.948	1.00204.08	O
ATOM	8509	CB	SER	B2119	-14.169	-38.797	54.884	1.00203.81	C
ATOM	8510	OG	SER	B2119	-15.169	-39.113	55.851	1.00202.70	O
ATOM	8511	N	THR	B2120	-12.185	-35.803	53.724	1.00203.68	N
ATOM	8512	CA	THR	B2120	-11.021	-35.491	52.903	1.00203.60	C
ATOM	8513	C	THR	B2120	-9.678	-35.783	53.638	1.00203.44	C
ATOM	8514	O	THR	B2120	-9.116	-36.878	53.513	1.00203.21	O
ATOM	8515	CB	THR	B2120	-11.148	-34.060	52.288	1.00203.64	C
ATOM	8516	OG1	THR	B2120	-10.020	-33.765	51.448	1.00203.91	O
ATOM	8517	CG2	THR	B2120	-11.298	-33.004	53.379	1.00203.75	C
ATOM	8518	N	GLY	B2121	-9.192	-34.821	54.415	1.00203.34	N

ATOM	8519	CA	GLY	B2121	-7.939	-34.965	55.143	1.00203.13	C
ATOM	8520	C	GLY	B2121	-7.969	-34.026	56.327	1.00203.05	C
ATOM	8521	O	GLY	B2121	-8.594	-34.332	57.341	1.00203.09	O
ATOM	8522	N	THR	B2122	-7.313	-32.875	56.184	1.00202.87	N
ATOM	8523	CA	THR	B2122	-7.241	-31.862	57.248	1.00202.63	C
ATOM	8524	C	THR	B2122	-8.002	-30.605	56.857	1.00202.48	C
ATOM	8525	O	THR	B2122	-8.453	-29.822	57.702	1.00202.15	O
ATOM	8526	CB	THR	B2122	-5.767	-31.468	57.564	1.00202.66	C
ATOM	8527	OG1	THR	B2122	-5.745	-30.257	58.331	1.00202.57	O
ATOM	8528	CG2	THR	B2122	-4.948	-31.262	56.279	1.00202.35	C
ATOM	8529	N	LEU	B2123	-8.146	-30.450	55.551	1.00202.54	N
ATOM	8530	CA	LEU	B2123	-8.451	-29.180	54.932	1.00202.70	C
ATOM	8531	C	LEU	B2123	-8.924	-29.508	53.533	1.00202.80	C
ATOM	8532	O	LEU	B2123	-8.302	-30.333	52.845	1.00202.93	O
ATOM	8533	CB	LEU	B2123	-7.167	-28.344	54.863	1.00202.84	C
ATOM	8534	CG	LEU	B2123	-7.058	-27.029	54.089	1.00202.59	C
ATOM	8535	CD1	LEU	B2123	-7.857	-25.934	54.779	1.00202.50	C
ATOM	8536	CD2	LEU	B2123	-5.586	-26.625	53.962	1.00202.55	C
ATOM	8537	N	MET	B2124	-10.019	-28.871	53.112	1.00202.70	N
ATOM	8538	CA	MET	B2124	-10.654	-29.208	51.831	1.00202.51	C
ATOM	8539	C	MET	B2124	-10.139	-28.372	50.669	1.00202.41	C
ATOM	8540	O	MET	B2124	-10.554	-27.223	50.468	1.00202.39	O
ATOM	8541	CB	MET	B2124	-12.184	-29.166	51.919	1.00202.40	C
ATOM	8542	CG	MET	B2124	-12.901	-29.604	50.643	1.00202.16	C
ATOM	8543	SD	MET	B2124	-12.408	-31.198	49.963	1.00201.40	S
ATOM	8544	CE	MET	B2124	-13.557	-31.317	48.583	1.00201.95	C
ATOM	8545	N	VAL	B2125	-9.232	-28.980	49.911	1.00202.25	N
ATOM	8546	CA	VAL	B2125	-8.575	-28.330	48.791	1.00202.00	C
ATOM	8547	C	VAL	B2125	-9.434	-28.446	47.530	1.00201.89	C
ATOM	8548	O	VAL	B2125	-9.816	-29.549	47.127	1.00201.95	O
ATOM	8549	CB	VAL	B2125	-7.140	-28.889	48.586	1.00201.95	C
ATOM	8550	CG1	VAL	B2125	-7.155	-30.380	48.191	1.00201.99	C
ATOM	8551	CG2	VAL	B2125	-6.375	-28.042	47.588	1.00201.86	C
ATOM	8552	N	PHE	B2126	-9.745	-27.301	46.928	1.00201.69	N
ATOM	8553	CA	PHE	B2126	-10.638	-27.250	45.775	1.00201.65	C
ATOM	8554	C	PHE	B2126	-9.908	-26.919	44.482	1.00201.82	C
ATOM	8555	O	PHE	B2126	-9.050	-26.037	44.462	1.00201.86	O
ATOM	8556	CB	PHE	B2126	-11.746	-26.230	46.010	1.00201.45	C
ATOM	8557	CG	PHE	B2126	-12.870	-26.737	46.862	1.00201.14	C
ATOM	8558	CD1	PHE	B2126	-13.746	-27.710	46.377	1.00201.36	C
ATOM	8559	CD2	PHE	B2126	-13.074	-26.226	48.134	1.00200.42	C
ATOM	8560	CE1	PHE	B2126	-14.799	-28.178	47.153	1.00201.04	C
ATOM	8561	CE2	PHE	B2126	-14.122	-26.679	48.911	1.00200.57	C
ATOM	8562	CZ	PHE	B2126	-14.990	-27.660	48.417	1.00200.94	C
ATOM	8563	N	PHE	B2127	-10.268	-27.621	43.406	1.00201.99	N
ATOM	8564	CA	PHE	B2127	-9.625	-27.438	42.103	1.00202.21	C
ATOM	8565	C	PHE	B2127	-10.264	-26.345	41.257	1.00202.39	C
ATOM	8566	O	PHE	B2127	-11.465	-26.403	40.970	1.00202.75	O
ATOM	8567	CB	PHE	B2127	-9.585	-28.753	41.339	1.00202.16	C
ATOM	8568	CG	PHE	B2127	-8.394	-29.580	41.665	1.00202.24	C
ATOM	8569	CD1	PHE	B2127	-7.204	-29.405	40.961	1.00202.35	C
ATOM	8570	CD2	PHE	B2127	-8.442	-30.512	42.698	1.00202.40	C
ATOM	8571	CE1	PHE	B2127	-6.078	-30.166	41.263	1.00202.65	C
ATOM	8572	CE2	PHE	B2127	-7.325	-31.280	43.016	1.00202.77	C
ATOM	8573	CZ	PHE	B2127	-6.137	-31.107	42.294	1.00202.86	C
ATOM	8574	N	GLY	B2128	-9.441	-25.378	40.840	1.00202.32	N
ATOM	8575	CA	GLY	B2128	-9.905	-24.128	40.212	1.00202.20	C
ATOM	8576	C	GLY	B2128	-10.467	-24.184	38.798	1.00202.13	C
ATOM	8577	O	GLY	B2128	-11.450	-24.889	38.529	1.00202.32	O
ATOM	8578	N	ASN	B2129	-9.872	-23.398	37.903	1.00201.82	N
ATOM	8579	CA	ASN	B2129	-10.201	-23.452	36.477	1.00201.50	C
ATOM	8580	C	ASN	B2129	-8.966	-23.897	35.730	1.00201.31	C
ATOM	8581	O	ASN	B2129	-7.961	-24.268	36.345	1.00201.29	O
ATOM	8582	CB	ASN	B2129	-10.634	-22.082	35.958	1.00201.44	C
ATOM	8583	CG	ASN	B2129	-11.346	-21.267	37.002	1.00201.22	C
ATOM	8584	OD1	ASN	B2129	-12.444	-21.617	37.425	1.00201.00	O
ATOM	8585	ND2	ASN	B2129	-10.719	-20.176	37.437	1.00200.78	N
ATOM	8586	N	VAL	B2130	-9.030	-23.870	34.406	1.00200.96	N
ATOM	8587	CA	VAL	B2130	-7.856	-24.202	33.617	1.00200.64	C
ATOM	8588	C	VAL	B2130	-7.624	-23.156	32.544	1.00200.27	C
ATOM	8589	O	VAL	B2130	-6.584	-23.157	31.881	1.00200.29	O

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ATOM   8590  CB  VAL B2130      -7.968 -25.593  32.970  1.00200.79           C
ATOM   8591  CG1 VAL B2130      -6.572 -26.243  32.871  1.00200.81           C
ATOM   8592  CG2 VAL B2130      -8.961 -26.491  33.750  1.00200.99           C
ATOM   8593  N   ASP B2131      -8.598 -22.262  32.384  1.00199.85           N
ATOM   8594  CA  ASP B2131      -8.535 -21.232  31.352  1.00199.46           C
ATOM   8595  C   ASP B2131      -9.386 -20.004  31.676  1.00198.91           C
ATOM   8596  O   ASP B2131      -9.687 -19.726  32.836  1.00198.77           O
ATOM   8597  CB  ASP B2131      -8.905 -21.818  29.972  1.00199.73           C
ATOM   8598  CG  ASP B2131     -10.322 -22.407  29.925  1.00200.23           C
ATOM   8599  OD1 ASP B2131     -11.269 -21.731  30.369  1.00200.87           O
ATOM   8600  OD2 ASP B2131     -10.494 -23.539  29.418  1.00200.66           O
ATOM   8601  N   SER B2132      -9.776 -19.291  30.626  1.00198.27           N
ATOM   8602  CA  SER B2132     -10.502 -18.048  30.739  1.00197.78           C
ATOM   8603  C   SER B2132     -11.993 -18.258  30.536  1.00197.66           C
ATOM   8604  O   SER B2132     -12.729 -17.301  30.321  1.00197.46           O
ATOM   8605  CB  SER B2132      -9.972 -17.088  29.691  1.00197.73           C
ATOM   8606  OG  SER B2132      -8.590 -17.318  29.475  1.00197.63           O
ATOM   8607  N   SER B2133     -12.425 -19.518  30.597  1.00197.76           N
ATOM   8608  CA  SER B2133     -13.841 -19.909  30.486  1.00197.98           C
ATOM   8609  C   SER B2133     -14.111 -21.257  31.157  1.00198.21           C
ATOM   8610  O   SER B2133     -15.085 -21.954  30.835  1.00198.13           O
ATOM   8611  CB  SER B2133     -14.260 -19.976  29.026  1.00197.85           C
ATOM   8612  OG  SER B2133     -14.189 -18.692  28.455  1.00197.88           O
ATOM   8613  N   GLY B2134     -13.226 -21.615  32.087  1.00198.56           N
ATOM   8614  CA  GLY B2134     -13.308 -22.872  32.817  1.00198.90           C
ATOM   8615  C   GLY B2134     -14.295 -22.763  33.961  1.00199.12           C
ATOM   8616  O   GLY B2134     -13.897 -22.580  35.118  1.00199.45           O
ATOM   8617  N   ILE B2135     -15.582 -22.846  33.615  1.00198.93           N
ATOM   8618  CA  ILE B2135     -16.703 -22.954  34.561  1.00198.51           C
ATOM   8619  C   ILE B2135     -16.674 -24.270  35.361  1.00198.51           C
ATOM   8620  O   ILE B2135     -17.383 -25.221  34.997  1.00198.80           O
ATOM   8621  CB  ILE B2135     -18.056 -22.901  33.799  1.00198.39           C
ATOM   8622  CG1 ILE B2135     -17.857 -23.113  32.274  1.00198.42           C
ATOM   8623  CG2 ILE B2135     -18.768 -21.593  34.083  1.00197.74           C
ATOM   8624  CD1 ILE B2135     -17.452 -24.548  31.790  1.00197.24           C
ATOM   8625  N   LYS B2136     -15.871 -24.347  36.431  1.00198.08           N
ATOM   8626  CA  LYS B2136     -15.709 -25.634  37.132  1.00197.68           C
ATOM   8627  C   LYS B2136     -16.574 -25.699  38.357  1.00197.39           C
ATOM   8628  O   LYS B2136     -16.101 -25.554  39.477  1.00197.53           O
ATOM   8629  CB  LYS B2136     -14.247 -25.977  37.447  1.00197.61           C
ATOM   8630  CG  LYS B2136     -13.857 -27.463  37.183  1.00197.91           C
ATOM   8631  CD  LYS B2136     -14.254 -28.052  35.751  1.00198.26           C
ATOM   8632  CE  LYS B2136     -13.836 -27.229  34.455  1.00196.85           C
ATOM   8633  NZ  LYS B2136     -12.412 -27.281  33.974  1.00194.58           N
ATOM   8634  N   HIS B2137     -17.861 -25.893  38.089  1.00197.16           N
ATOM   8635  CA  HIS B2137     -18.925 -26.065  39.072  1.00196.77           C
ATOM   8636  C   HIS B2137     -18.500 -27.043  40.163  1.00196.20           C
ATOM   8637  O   HIS B2137     -18.605 -28.261  39.996  1.00196.39           O
ATOM   8638  CB  HIS B2137     -20.199 -26.553  38.341  1.00197.05           C
ATOM   8639  CG  HIS B2137     -21.392 -26.766  39.227  1.00197.50           C
ATOM   8640  ND1 HIS B2137     -22.524 -27.422  38.789  1.00197.98           N
ATOM   8641  CD2 HIS B2137     -21.631 -26.422  40.517  1.00197.76           C
ATOM   8642  CE1 HIS B2137     -23.411 -27.466  39.769  1.00198.49           C
ATOM   8643  NE2 HIS B2137     -22.892 -26.871  40.831  1.00198.02           N
ATOM   8644  N   ASN B2138     -17.986 -26.496  41.262  1.00195.23           N
ATOM   8645  CA  ASN B2138     -17.653 -27.285  42.437  1.00194.17           C
ATOM   8646  C   ASN B2138     -18.897 -27.472  43.286  1.00194.13           C
ATOM   8647  O   ASN B2138     -19.655 -26.506  43.467  1.00194.09           O
ATOM   8648  CB  ASN B2138     -16.581 -26.574  43.253  1.00193.62           C
ATOM   8649  CG  ASN B2138     -15.256 -27.262  43.183  1.00192.13           C
ATOM   8650  OD1 ASN B2138     -15.164 -28.483  43.326  1.00190.24           O
ATOM   8651  ND2 ASN B2138     -14.208 -26.485  42.976  1.00190.85           N
ATOM   8652  N   ILE B2139     -19.130 -28.701  43.777  1.00193.76           N
ATOM   8653  CA  ILE B2139     -20.186 -28.938  44.801  1.00193.12           C
ATOM   8654  C   ILE B2139     -19.663 -29.325  46.182  1.00192.38           C
ATOM   8655  O   ILE B2139     -18.673 -30.047  46.323  1.00191.87           O
ATOM   8656  CB  ILE B2139     -21.414 -29.861  44.358  1.00193.30           C
ATOM   8657  CG1 ILE B2139     -20.974 -31.236  43.825  1.00193.28           C
ATOM   8658  CG2 ILE B2139     -22.374 -29.103  43.398  1.00193.33           C
ATOM   8659  CD1 ILE B2139     -22.122 -32.278  43.715  1.00193.05           C
ATOM   8660  N   PHE B2140     -20.350 -28.794  47.186  1.00192.00           N
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ATOM   8661  CA  PHE B2140     -20.010 -29.007  48.583  1.00191.90           C
ATOM   8662  C   PHE B2140     -20.635 -30.329  49.060  1.00191.67           C
ATOM   8663  O   PHE B2140     -21.858 -30.418  49.280  1.00191.67           O
ATOM   8664  CB  PHE B2140     -20.432 -27.799  49.464  1.00191.85           C
ATOM   8665  CG  PHE B2140     -19.813 -26.460  49.047  1.00191.46           C
ATOM   8666  CD1 PHE B2140     -18.491 -26.377  48.604  1.00190.76           C
ATOM   8667  CD2 PHE B2140     -20.555 -25.283  49.130  1.00190.43           C
ATOM   8668  CE1 PHE B2140     -17.943 -25.155  48.233  1.00189.85           C
ATOM   8669  CE2 PHE B2140     -20.006 -24.062  48.764  1.00189.76           C
ATOM   8670  CZ  PHE B2140     -18.702 -23.997  48.320  1.00189.91           C
ATOM   8671  N   ASN B2141     -19.759 -31.334  49.213  1.00191.16           N
ATOM   8672  CA  ASN B2141     -20.106 -32.761  49.392  1.00190.38           C
ATOM   8673  C   ASN B2141     -21.091 -33.028  50.536  1.00189.32           C
ATOM   8674  O   ASN B2141     -22.140 -33.661  50.328  1.00188.75           O
ATOM   8675  CB  ASN B2141     -18.815 -33.605  49.532  1.00190.78           C
ATOM   8676  CG  ASN B2141     -18.302 -34.178  48.187  1.00191.63           C
ATOM   8677  OD1 ASN B2141     -17.798 -35.313  48.133  1.00192.23           O
ATOM   8678  ND2 ASN B2141     -18.424 -33.396  47.110  1.00192.58           N
ATOM   8679  N   PRO B2142     -20.725 -32.587  51.751  1.00188.62           N
ATOM   8680  CA  PRO B2142     -21.730 -32.171  52.691  1.00188.21           C
ATOM   8681  C   PRO B2142     -21.937 -30.669  52.461  1.00187.64           C
ATOM   8682  O   PRO B2142     -20.997 -29.974  52.063  1.00187.24           O
ATOM   8683  CB  PRO B2142     -21.078 -32.451  54.054  1.00188.26           C
ATOM   8684  CG  PRO B2142     -19.651 -32.897  53.762  1.00188.28           C
ATOM   8685  CD  PRO B2142     -19.386 -32.499  52.355  1.00188.61           C
ATOM   8686  N   PRO B2143     -23.154 -30.161  52.719  1.00187.28           N
ATOM   8687  CA  PRO B2143     -23.470 -28.815  52.245  1.00187.10           C
ATOM   8688  C   PRO B2143     -22.815 -27.809  53.171  1.00187.06           C
ATOM   8689  O   PRO B2143     -22.056 -28.218  54.039  1.00187.22           O
ATOM   8690  CB  PRO B2143     -24.997 -28.750  52.356  1.00187.05           C
ATOM   8691  CG  PRO B2143     -25.441 -30.088  52.944  1.00186.97           C
ATOM   8692  CD  PRO B2143     -24.252 -30.753  53.506  1.00187.11           C
ATOM   8693  N   ILE B2144     -23.068 -26.516  52.996  1.00186.94           N
ATOM   8694  CA  ILE B2144     -22.625 -25.541  53.994  1.00186.89           C
ATOM   8695  C   ILE B2144     -23.757 -24.600  54.341  1.00186.89           C
ATOM   8696  O   ILE B2144     -24.450 -24.116  53.453  1.00186.86           O
ATOM   8697  CB  ILE B2144     -21.370 -24.729  53.550  1.00186.93           C
ATOM   8698  CG1 ILE B2144     -20.132 -25.632  53.447  1.00187.08           C
ATOM   8699  CG2 ILE B2144     -21.101 -23.575  54.521  1.00186.66           C
ATOM   8700  CD1 ILE B2144     -18.915 -24.987  52.802  1.00186.93           C
ATOM   8701  N   ILE B2145     -23.951 -24.366  55.635  1.00187.01           N
ATOM   8702  CA  ILE B2145     -24.850 -23.319  56.106  1.00187.29           C
ATOM   8703  C   ILE B2145     -24.011 -22.147  56.594  1.00187.42           C
ATOM   8704  O   ILE B2145     -23.263 -22.284  57.561  1.00187.38           O
ATOM   8705  CB  ILE B2145     -25.797 -23.813  57.229  1.00187.30           C
ATOM   8706  CG1 ILE B2145     -25.048 -24.697  58.234  1.00188.23           C
ATOM   8707  CG2 ILE B2145     -26.978 -24.582  56.655  1.00186.98           C
ATOM   8708  CD1 ILE B2145     -24.494 -23.950  59.474  1.00189.58           C
ATOM   8709  N   ALA B2146     -24.116 -21.010  55.908  1.00187.74           N
ATOM   8710  CA  ALA B2146     -23.351 -19.803  56.265  1.00188.12           C
ATOM   8711  C   ALA B2146     -24.108 -18.521  55.933  1.00188.40           C
ATOM   8712  O   ALA B2146     -25.202 -18.570  55.377  1.00188.51           O
ATOM   8713  CB  ALA B2146     -21.979 -19.805  55.576  1.00187.86           C
ATOM   8714  N   ARG B2147     -23.531 -17.381  56.305  1.00188.83           N
ATOM   8715  CA  ARG B2147     -23.965 -16.082  55.792  1.00189.30           C
ATOM   8716  C   ARG B2147     -22.829 -15.485  54.954  1.00189.48           C
ATOM   8717  O   ARG B2147     -23.053 -14.777  53.962  1.00189.53           O
ATOM   8718  CB  ARG B2147     -24.349 -15.141  56.935  1.00189.31           C
ATOM   8719  CG  ARG B2147     -24.859 -13.782  56.483  1.00189.91           C
ATOM   8720  CD  ARG B2147     -25.083 -12.901  57.679  1.00191.71           C
ATOM   8721  NE  ARG B2147     -25.321 -11.499  57.337  1.00193.35           N
ATOM   8722  CZ  ARG B2147     -26.410 -10.813  57.688  1.00194.49           C
ATOM   8723  NH1 ARG B2147     -27.382 -11.400  58.388  1.00195.26           N
ATOM   8724  NH2 ARG B2147     -26.531  -9.532  57.345  1.00194.64           N
ATOM   8725  N   TYR B2148     -21.606 -15.810  55.355  1.00189.63           N
ATOM   8726  CA  TYR B2148     -20.411 -15.312  54.707  1.00189.64           C
ATOM   8727  C   TYR B2148     -19.607 -16.474  54.150  1.00189.66           C
ATOM   8728  O   TYR B2148     -19.468 -17.507  54.821  1.00189.84           O
ATOM   8729  CB  TYR B2148     -19.556 -14.570  55.728  1.00189.75           C
ATOM   8730  CG  TYR B2148     -20.247 -13.417  56.402  1.00189.74           C
ATOM   8731  CD1 TYR B2148     -21.112 -13.627  57.472  1.00189.38           C
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ATOM   8732  CD2 TYR B2148     -20.019 -12.109  55.975  1.00190.08           C
ATOM   8733  CE1 TYR B2148     -21.740 -12.570  58.090  1.00189.97           C
ATOM   8734  CE2 TYR B2148     -20.639 -11.038  56.586  1.00190.37           C
ATOM   8735  CZ  TYR B2148     -21.503 -11.273  57.644  1.00190.38           C
ATOM   8736  OH  TYR B2148     -22.122 -10.204  58.260  1.00190.46           O
ATOM   8737  N   ILE B2149     -19.092 -16.309  52.928  1.00189.48           N
ATOM   8738  CA  ILE B2149     -18.071 -17.214  52.383  1.00189.28           C
ATOM   8739  C   ILE B2149     -16.829 -16.437  51.942  1.00189.70           C
ATOM   8740  O   ILE B2149     -16.912 -15.368  51.320  1.00189.54           O
ATOM   8741  CB  ILE B2149     -18.561 -18.103  51.208  1.00188.91           C
ATOM   8742  CG1 ILE B2149     -20.069 -18.308  51.234  1.00188.86           C
ATOM   8743  CG2 ILE B2149     -17.882 -19.456  51.248  1.00188.04           C
ATOM   8744  CD1 ILE B2149     -20.876 -17.093  50.835  1.00189.24           C
ATOM   8745  N   ARG B2150     -15.677 -16.983  52.312  1.00190.22           N
ATOM   8746  CA  ARG B2150     -14.398 -16.501  51.842  1.00190.73           C
ATOM   8747  C   ARG B2150     -13.876 -17.502  50.833  1.00191.03           C
ATOM   8748  O   ARG B2150     -14.030 -18.719  50.991  1.00191.04           O
ATOM   8749  CB  ARG B2150     -13.401 -16.409  52.988  1.00190.77           C
ATOM   8750  CG  ARG B2150     -13.421 -15.128  53.773  1.00191.40           C
ATOM   8751  CD  ARG B2150     -12.696 -15.357  55.090  1.00192.61           C
ATOM   8752  NE  ARG B2150     -12.397 -14.113  55.792  1.00193.62           N
ATOM   8753  CZ  ARG B2150     -12.037 -14.047  57.069  1.00194.23           C
ATOM   8754  NH1 ARG B2150     -11.941 -15.161  57.788  1.00194.30           N
ATOM   8755  NH2 ARG B2150     -11.780 -12.866  57.631  1.00194.56           N
ATOM   8756  N   LEU B2151     -13.261 -16.984  49.786  1.00191.39           N
ATOM   8757  CA  LEU B2151     -12.513 -17.822  48.892  1.00191.73           C
ATOM   8758  C   LEU B2151     -11.069 -17.372  48.984  1.00191.80           C
ATOM   8759  O   LEU B2151     -10.781 -16.180  48.874  1.00191.79           O
ATOM   8760  CB  LEU B2151     -13.032 -17.670  47.474  1.00191.84           C
ATOM   8761  CG  LEU B2151     -12.433 -18.663  46.479  1.00192.98           C
ATOM   8762  CD1 LEU B2151     -13.382 -18.846  45.310  1.00194.42           C
ATOM   8763  CD2 LEU B2151     -11.035 -18.247  45.983  1.00194.03           C
ATOM   8764  N   HIS B2152     -10.172 -18.333  49.192  1.00191.91           N
ATOM   8765  CA  HIS B2152      -8.741 -18.059  49.307  1.00191.99           C
ATOM   8766  C   HIS B2152      -7.966 -18.830  48.217  1.00192.05           C
ATOM   8767  O   HIS B2152      -8.054 -20.051  48.161  1.00192.14           O
ATOM   8768  CB  HIS B2152      -8.223 -18.478  50.699  1.00191.97           C
ATOM   8769  CG  HIS B2152      -8.921 -17.826  51.861  1.00191.65           C
ATOM   8770  ND1 HIS B2152      -8.249 -17.078  52.805  1.00191.37           N
ATOM   8771  CD2 HIS B2152     -10.216 -17.849  52.259  1.00191.60           C
ATOM   8772  CE1 HIS B2152      -9.101 -16.650  53.718  1.00191.38           C
ATOM   8773  NE2 HIS B2152     -10.302 -17.104  53.410  1.00191.44           N
ATOM   8774  N   PRO B2153      -7.210 -18.132  47.351  1.00192.08           N
ATOM   8775  CA  PRO B2153      -6.380 -18.831  46.360  1.00192.33           C
ATOM   8776  C   PRO B2153      -5.255 -19.716  46.954  1.00192.61           C
ATOM   8777  O   PRO B2153      -4.644 -19.329  47.950  1.00192.61           O
ATOM   8778  CB  PRO B2153      -5.765 -17.675  45.565  1.00192.40           C
ATOM   8779  CG  PRO B2153      -5.807 -16.514  46.491  1.00192.18           C
ATOM   8780  CD  PRO B2153      -7.094 -16.671  47.215  1.00191.98           C
ATOM   8781  N   THR B2154      -4.996 -20.881  46.340  1.00192.99           N
ATOM   8782  CA  THR B2154      -3.842 -21.771  46.677  1.00193.41           C
ATOM   8783  C   THR B2154      -2.870 -21.950  45.479  1.00193.56           C
ATOM   8784  O   THR B2154      -1.770 -22.509  45.606  1.00193.34           O
ATOM   8785  CB  THR B2154      -4.290 -23.174  47.217  1.00193.52           C
ATOM   8786  OG1 THR B2154      -5.624 -23.101  47.734  1.00193.59           O
ATOM   8787  CG2 THR B2154      -3.323 -23.716  48.311  1.00193.26           C
ATOM   8788  N   HIS B2155      -3.315 -21.509  44.308  1.00193.88           N
ATOM   8789  CA  HIS B2155      -2.414 -21.150  43.225  1.00194.33           C
ATOM   8790  C   HIS B2155      -3.127 -20.455  42.054  1.00194.22           C
ATOM   8791  O   HIS B2155      -4.296 -20.715  41.759  1.00194.01           O
ATOM   8792  CB  HIS B2155      -1.521 -22.312  42.778  1.00194.61           C
ATOM   8793  CG  HIS B2155      -0.193 -21.864  42.240  1.00196.38           C
ATOM   8794  ND1 HIS B2155       0.833 -21.428  43.054  1.00197.56           N
ATOM   8795  CD2 HIS B2155       0.270 -21.762  40.968  1.00197.74           C
ATOM   8796  CE1 HIS B2155       1.872 -21.088  42.311  1.00197.83           C
ATOM   8797  NE2 HIS B2155       1.558 -21.281  41.041  1.00198.12           N
ATOM   8798  N   TYR B2156      -2.388 -19.572  41.401  1.00194.32           N
ATOM   8799  CA  TYR B2156      -2.920 -18.646  40.421  1.00194.57           C
ATOM   8800  C   TYR B2156      -2.150 -18.777  39.116  1.00194.58           C
ATOM   8801  O   TYR B2156      -1.198 -19.558  39.022  1.00194.53           O
ATOM   8802  CB  TYR B2156      -2.781 -17.222  40.961  1.00194.85           C
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ATOM	8803	CG	TYR	B2156	-1.590	-17.073	41.875	1.00195.42	C
ATOM	8804	CD1	TYR	B2156	-0.288	-17.164	41.371	1.00195.90	C
ATOM	8805	CD2	TYR	B2156	-1.756	-16.877	43.250	1.00196.26	C
ATOM	8806	CE1	TYR	B2156	0.828	-17.052	42.204	1.00196.27	C
ATOM	8807	CE2	TYR	B2156	-0.644	-16.758	44.102	1.00196.91	C
ATOM	8808	CZ	TYR	B2156	0.652	-16.847	43.565	1.00196.36	C
ATOM	8809	OH	TYR	B2156	1.771	-16.735	44.371	1.00195.82	O
ATOM	8810	N	SER	B2157	-2.569	-18.005	38.115	1.00194.66	N
ATOM	8811	CA	SER	B2157	-1.920	-17.984	36.809	1.00194.64	C
ATOM	8812	C	SER	B2157	-0.957	-16.825	36.756	1.00194.69	C
ATOM	8813	O	SER	B2157	0.232	-16.972	37.017	1.00194.62	O
ATOM	8814	CB	SER	B2157	-2.951	-17.804	35.700	1.00194.57	C
ATOM	8815	OG	SER	B2157	-3.970	-18.775	35.775	1.00194.43	O
ATOM	8816	N	ILE	B2158	-1.489	-15.666	36.408	1.00194.90	N
ATOM	8817	CA	ILE	B2158	-0.704	-14.458	36.363	1.00195.43	C
ATOM	8818	C	ILE	B2158	-1.097	-13.614	37.568	1.00195.57	C
ATOM	8819	O	ILE	B2158	-0.249	-13.008	38.222	1.00195.78	O
ATOM	8820	CB	ILE	B2158	-0.918	-13.739	35.024	1.00195.56	C
ATOM	8821	CG1	ILE	B2158	-0.516	-14.690	33.891	1.00196.15	C
ATOM	8822	CG2	ILE	B2158	-0.109	-12.424	34.952	1.00195.96	C
ATOM	8823	CD1	ILE	B2158	-1.307	-14.555	32.619	1.00196.98	C
ATOM	8824	N	ARG	B2159	-2.390	-13.601	37.862	1.00195.70	N
ATOM	8825	CA	ARG	B2159	-2.910	-13.009	39.080	1.00195.70	C
ATOM	8826	C	ARG	B2159	-3.970	-13.943	39.619	1.00195.97	C
ATOM	8827	O	ARG	B2159	-4.643	-14.635	38.846	1.00196.02	O
ATOM	8828	CB	ARG	B2159	-3.520	-11.643	38.790	1.00195.44	C
ATOM	8829	CG	ARG	B2159	-2.500	-10.534	38.735	1.00195.40	C
ATOM	8830	CD	ARG	B2159	-2.636	-9.716	37.475	1.00195.49	C
ATOM	8831	NE	ARG	B2159	-3.975	-9.150	37.322	1.00195.83	N
ATOM	8832	CZ	ARG	B2159	-4.400	-8.511	36.234	1.00196.08	C
ATOM	8833	NH1	ARG	B2159	-3.585	-8.357	35.189	1.00196.37	N
ATOM	8834	NH2	ARG	B2159	-5.642	-8.026	36.186	1.00195.42	N
ATOM	8835	N	SER	B2160	-4.096	-13.982	40.945	1.00196.27	N
ATOM	8836	CA	SER	B2160	-5.269	-14.567	41.595	1.00196.44	C
ATOM	8837	C	SER	B2160	-6.506	-13.873	40.988	1.00196.52	C
ATOM	8838	O	SER	B2160	-6.804	-12.717	41.332	1.00196.85	O
ATOM	8839	CB	SER	B2160	-5.195	-14.367	43.120	1.00196.45	C
ATOM	8840	OG	SER	B2160	-3.931	-14.758	43.648	1.00196.09	O
ATOM	8841	N	THR	B2161	-7.187	-14.564	40.061	1.00196.20	N
ATOM	8842	CA	THR	B2161	-8.214	-13.949	39.188	1.00195.72	C
ATOM	8843	C	THR	B2161	-9.503	-14.781	39.047	1.00195.44	C
ATOM	8844	O	THR	B2161	-9.481	-15.936	38.606	1.00195.37	O
ATOM	8845	CB	THR	B2161	-7.625	-13.607	37.793	1.00195.71	C
ATOM	8846	OG1	THR	B2161	-6.584	-12.633	37.941	1.00195.39	O
ATOM	8847	CG2	THR	B2161	-8.694	-13.062	36.862	1.00195.62	C
ATOM	8848	N	LEU	B2162	-10.630	-14.169	39.395	1.00195.01	N
ATOM	8849	CA	LEU	B2162	-11.848	-14.927	39.579	1.00194.60	C
ATOM	8850	C	LEU	B2162	-13.126	-14.208	39.193	1.00194.78	C
ATOM	8851	O	LEU	B2162	-13.243	-12.988	39.270	1.00194.54	O
ATOM	8852	CB	LEU	B2162	-11.935	-15.384	41.030	1.00194.37	C
ATOM	8853	CG	LEU	B2162	-13.286	-15.833	41.570	1.00193.67	C
ATOM	8854	CD1	LEU	B2162	-13.484	-17.296	41.329	1.00193.10	C
ATOM	8855	CD2	LEU	B2162	-13.345	-15.547	43.037	1.00193.66	C
ATOM	8856	N	ARG	B2163	-14.073	-15.022	38.762	1.00195.27	N
ATOM	8857	CA	ARG	B2163	-15.454	-14.646	38.562	1.00196.12	C
ATOM	8858	C	ARG	B2163	-16.237	-15.925	38.896	1.00196.63	C
ATOM	8859	O	ARG	B2163	-15.807	-17.032	38.525	1.00196.88	O
ATOM	8860	CB	ARG	B2163	-15.685	-14.191	37.116	1.00196.23	C
ATOM	8861	CG	ARG	B2163	-15.780	-15.328	36.083	1.00196.60	C
ATOM	8862	CD	ARG	B2163	-14.915	-15.079	34.857	1.00196.84	C
ATOM	8863	NE	ARG	B2163	-15.694	-14.652	33.705	1.00196.72	N
ATOM	8864	CZ	ARG	B2163	-15.971	-13.388	33.408	1.00197.50	C
ATOM	8865	NH1	ARG	B2163	-15.537	-12.390	34.176	1.00197.49	N
ATOM	8866	NH2	ARG	B2163	-16.691	-13.124	32.331	1.00198.23	N
ATOM	8867	N	MET	B2164	-17.366	-15.787	39.601	1.00197.00	N
ATOM	8868	CA	MET	B2164	-18.036	-16.946	40.238	1.00196.84	C
ATOM	8869	C	MET	B2164	-19.522	-16.758	40.518	1.00196.85	C
ATOM	8870	O	MET	B2164	-20.005	-15.630	40.659	1.00196.91	O
ATOM	8871	CB	MET	B2164	-17.346	-17.287	41.568	1.00197.01	C
ATOM	8872	CG	MET	B2164	-16.970	-16.048	42.422	1.00197.01	C
ATOM	8873	SD	MET	B2164	-17.402	-16.126	44.176	1.00196.25	S

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ATOM   8874  CE  MET B2164     -19.151 -15.736  44.103  1.00195.76           C
ATOM   8875  N   GLU B2165     -20.225 -17.881  40.625  1.00196.77           N
ATOM   8876  CA  GLU B2165     -21.622 -17.909  41.060  1.00196.90           C
ATOM   8877  C   GLU B2165     -21.706 -18.839  42.279  1.00197.41           C
ATOM   8878  O   GLU B2165     -20.750 -19.575  42.572  1.00197.54           O
ATOM   8879  CB  GLU B2165     -22.524 -18.374  39.896  1.00196.71           C
ATOM   8880  CG  GLU B2165     -24.030 -18.514  40.164  1.00195.35           C
ATOM   8881  CD  GLU B2165     -24.728 -17.201  40.409  1.00193.88           C
ATOM   8882  OE1 GLU B2165     -25.214 -16.557  39.445  1.00193.39           O
ATOM   8883  OE2 GLU B2165     -24.806 -16.829  41.590  1.00193.05           O
ATOM   8884  N   LEU B2166     -22.825 -18.798  42.999  1.00197.78           N
ATOM   8885  CA  LEU B2166     -23.018 -19.672  44.160  1.00197.98           C
ATOM   8886  C   LEU B2166     -24.294 -20.505  44.089  1.00198.60           C
ATOM   8887  O   LEU B2166     -25.368 -20.014  43.714  1.00198.63           O
ATOM   8888  CB  LEU B2166     -22.984 -18.860  45.450  1.00197.55           C
ATOM   8889  CG  LEU B2166     -21.642 -18.833  46.159  1.00196.23           C
ATOM   8890  CD1 LEU B2166     -21.395 -17.461  46.690  1.00195.43           C
ATOM   8891  CD2 LEU B2166     -21.644 -19.834  47.273  1.00195.44           C
ATOM   8892  N   MET B2167     -24.159 -21.774  44.458  1.00199.26           N
ATOM   8893  CA  MET B2167     -25.275 -22.712  44.420  1.00200.00           C
ATOM   8894  C   MET B2167     -25.927 -22.887  45.782  1.00200.11           C
ATOM   8895  O   MET B2167     -25.244 -22.984  46.798  1.00199.94           O
ATOM   8896  CB  MET B2167     -24.823 -24.083  43.885  1.00200.29           C
ATOM   8897  CG  MET B2167     -24.553 -24.161  42.377  1.00200.98           C
ATOM   8898  SD  MET B2167     -25.910 -23.556  41.350  1.00202.25           S
ATOM   8899  CE  MET B2167     -25.342 -21.888  41.041  1.00201.96           C
ATOM   8900  N   GLY B2168     -27.253 -22.934  45.791  1.00200.45           N
ATOM   8901  CA  GLY B2168     -27.983 -23.235  47.004  1.00201.05           C
ATOM   8902  C   GLY B2168     -29.342 -22.583  47.068  1.00201.60           C
ATOM   8903  O   GLY B2168     -29.945 -22.277  46.035  1.00201.58           O
ATOM   8904  N   CYS B2169     -29.808 -22.381  48.301  1.00202.18           N
ATOM   8905  CA  CYS B2169     -31.130 -21.838  48.604  1.00202.86           C
ATOM   8906  C   CYS B2169     -31.380 -21.822  50.108  1.00203.21           C
ATOM   8907  O   CYS B2169     -30.560 -22.301  50.896  1.00203.07           O
ATOM   8908  CB  CYS B2169     -32.222 -22.666  47.934  1.00202.96           C
ATOM   8909  SG  CYS B2169     -32.247 -24.451  48.376  1.00203.87           S
ATOM   8910  N   ASP B2170     -32.536 -21.292  50.497  1.00203.74           N
ATOM   8911  CA  ASP B2170     -32.842 -21.095  51.902  1.00204.22           C
ATOM   8912  C   ASP B2170     -33.188 -22.390  52.592  1.00204.04           C
ATOM   8913  O   ASP B2170     -33.616 -23.336  51.943  1.00203.94           O
ATOM   8914  CB  ASP B2170     -33.978 -20.098  52.068  1.00204.60           C
ATOM   8915  CG  ASP B2170     -33.943 -19.402  53.425  1.00206.47           C
ATOM   8916  OD1 ASP B2170     -33.765 -18.157  53.437  1.00208.30           O
ATOM   8917  OD2 ASP B2170     -34.078 -20.094  54.474  1.00208.18           O
ATOM   8918  N   LEU B2171     -33.007 -22.400  53.913  1.00204.15           N
ATOM   8919  CA  LEU B2171     -33.176 -23.575  54.775  1.00204.36           C
ATOM   8920  C   LEU B2171     -34.253 -24.543  54.275  1.00204.93           C
ATOM   8921  O   LEU B2171     -34.003 -25.747  54.135  1.00205.30           O
ATOM   8922  CB  LEU B2171     -33.382 -23.140  56.223  1.00203.98           C
ATOM   8923  CG  LEU B2171     -32.204 -22.309  56.751  1.00202.99           C
ATOM   8924  CD1 LEU B2171     -32.483 -21.884  58.163  1.00203.20           C
ATOM   8925  CD2 LEU B2171     -30.865 -23.040  56.681  1.00201.26           C
ATOM   8926  N   ASN B2172     -35.450 -24.017  54.043  1.00205.28           N
ATOM   8927  CA  ASN B2172     -36.243 -24.394  52.863  1.00205.48           C
ATOM   8928  C   ASN B2172     -37.454 -23.492  52.733  1.00206.22           C
ATOM   8929  O   ASN B2172     -38.598 -23.877  53.030  1.00206.37           O
ATOM   8930  CB  ASN B2172     -36.550 -25.893  52.694  1.00205.00           C
ATOM   8931  CG  ASN B2172     -36.271 -26.384  51.266  1.00203.13           C
ATOM   8932  OD1 ASN B2172     -36.835 -25.882  50.291  1.00200.24           O
ATOM   8933  ND2 ASN B2172     -35.386 -27.364  51.147  1.00201.25           N
ATOM   8934  N   SER B2173     -37.128 -22.254  52.346  1.00206.87           N
ATOM   8935  CA  SER B2173     -38.055 -21.278  51.770  1.00207.25           C
ATOM   8936  C   SER B2173     -38.094 -21.598  50.276  1.00207.37           C
ATOM   8937  O   SER B2173     -38.328 -20.717  49.433  1.00207.50           O
ATOM   8938  CB  SER B2173     -37.568 -19.832  52.023  1.00207.30           C
ATOM   8939  OG  SER B2173     -38.556 -18.847  51.738  1.00207.06           O
ATOM   8940  N   CYS B2174     -37.833 -22.875  49.972  1.00207.33           N
ATOM   8941  CA  CYS B2174     -37.997 -23.449  48.640  1.00207.17           C
ATOM   8942  C   CYS B2174     -37.757 -22.420  47.520  1.00206.71           C
ATOM   8943  O   CYS B2174     -38.660 -22.078  46.743  1.00206.67           O
ATOM   8944  CB  CYS B2174     -39.365 -24.175  48.524  1.00207.46           C
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ATOM	8945	SG	CYS	B2174	-40.878	-23.258	49.108	1.00207.69	S
ATOM	8946	N	SER	B2175	-36.533	-21.905	47.470	1.00205.99	N
ATOM	8947	CA	SER	B2175	-36.148	-21.019	46.391	1.00205.50	C
ATOM	8948	C	SER	B2175	-36.000	-21.834	45.100	1.00205.18	C
ATOM	8949	O	SER	B2175	-34.914	-21.911	44.521	1.00205.44	O
ATOM	8950	CB	SER	B2175	-34.862	-20.261	46.742	1.00205.50	C
ATOM	8951	OG	SER	B2175	-35.147	-18.936	47.158	1.00205.66	O
ATOM	8952	N	MET	B2176	-37.096	-22.452	44.664	1.00204.47	N
ATOM	8953	CA	MET	B2176	-37.104	-23.236	43.436	1.00203.77	C
ATOM	8954	C	MET	B2176	-38.369	-22.896	42.649	1.00203.62	C
ATOM	8955	O	MET	B2176	-39.449	-22.856	43.226	1.00203.58	O
ATOM	8956	CB	MET	B2176	-37.004	-24.737	43.747	1.00203.42	C
ATOM	8957	CG	MET	B2176	-36.250	-25.550	42.685	1.00202.93	C
ATOM	8958	SD	MET	B2176	-34.450	-25.336	42.664	1.00201.17	S
ATOM	8959	CE	MET	B2176	-34.140	-25.152	40.902	1.00201.96	C
ATOM	8960	N	PRO	B2177	-38.223	-22.599	41.340	1.00203.61	N
ATOM	8961	CA	PRO	B2177	-39.279	-22.237	40.374	1.00203.61	C
ATOM	8962	C	PRO	B2177	-40.524	-23.108	40.443	1.00203.51	C
ATOM	8963	O	PRO	B2177	-40.446	-24.313	40.228	1.00203.55	O
ATOM	8964	CB	PRO	B2177	-38.600	-22.422	39.005	1.00203.58	C
ATOM	8965	CG	PRO	B2177	-37.204	-22.900	39.283	1.00203.95	C
ATOM	8966	CD	PRO	B2177	-36.897	-22.563	40.705	1.00203.79	C
ATOM	8967	N	LEU	B2178	-41.666	-22.481	40.699	1.00203.49	N
ATOM	8968	CA	LEU	B2178	-42.885	-23.196	41.052	1.00203.51	C
ATOM	8969	C	LEU	B2178	-43.528	-23.978	39.904	1.00203.59	C
ATOM	8970	O	LEU	B2178	-44.250	-24.949	40.141	1.00203.77	O
ATOM	8971	CB	LEU	B2178	-43.888	-22.227	41.664	1.00203.48	C
ATOM	8972	CG	LEU	B2178	-44.342	-22.564	43.084	1.00203.84	C
ATOM	8973	CD1	LEU	B2178	-44.992	-21.348	43.715	1.00204.53	C
ATOM	8974	CD2	LEU	B2178	-45.283	-23.767	43.133	1.00204.18	C
ATOM	8975	N	GLY	B2179	-43.269	-23.561	38.668	1.00203.70	N
ATOM	8976	CA	GLY	B2179	-43.777	-24.281	37.494	1.00203.74	C
ATOM	8977	C	GLY	B2179	-44.218	-23.423	36.318	1.00203.73	C
ATOM	8978	O	GLY	B2179	-44.890	-23.921	35.408	1.00203.76	O
ATOM	8979	N	MET	B2180	-43.849	-22.140	36.337	1.00203.60	N
ATOM	8980	CA	MET	B2180	-44.157	-21.224	35.244	1.00203.43	C
ATOM	8981	C	MET	B2180	-43.246	-21.529	34.073	1.00203.35	C
ATOM	8982	O	MET	B2180	-43.674	-21.500	32.922	1.00203.26	O
ATOM	8983	CB	MET	B2180	-43.986	-19.764	35.675	1.00203.39	C
ATOM	8984	CG	MET	B2180	-45.013	-19.265	36.689	1.00203.99	C
ATOM	8985	SD	MET	B2180	-46.700	-18.977	36.070	1.00205.39	S
ATOM	8986	CE	MET	B2180	-46.633	-17.248	35.621	1.00204.81	C
ATOM	8987	N	GLU	B2181	-41.989	-21.835	34.383	1.00203.45	N
ATOM	8988	CA	GLU	B2181	-40.992	-22.126	33.366	1.00203.68	C
ATOM	8989	C	GLU	B2181	-41.185	-23.507	32.804	1.00203.57	C
ATOM	8990	O	GLU	B2181	-41.487	-23.650	31.627	1.00203.62	O
ATOM	8991	CB	GLU	B2181	-39.569	-21.966	33.906	1.00203.89	C
ATOM	8992	CG	GLU	B2181	-38.931	-20.621	33.558	1.00204.89	C
ATOM	8993	CD	GLU	B2181	-38.586	-20.489	32.075	1.00206.07	C
ATOM	8994	OE1	GLU	B2181	-37.532	-21.030	31.667	1.00206.58	O
ATOM	8995	OE2	GLU	B2181	-39.357	-19.838	31.325	1.00206.41	O
ATOM	8996	N	SER	B2182	-41.027	-24.522	33.646	1.00203.58	N
ATOM	8997	CA	SER	B2182	-41.219	-25.901	33.210	1.00203.75	C
ATOM	8998	C	SER	B2182	-42.623	-26.138	32.634	1.00203.65	C
ATOM	8999	O	SER	B2182	-42.857	-27.147	31.967	1.00203.75	O
ATOM	9000	CB	SER	B2182	-40.904	-26.889	34.347	1.00203.94	C
ATOM	9001	OG	SER	B2182	-41.691	-26.649	35.505	1.00204.41	O
ATOM	9002	N	LYS	B2183	-43.529	-25.183	32.874	1.00203.53	N
ATOM	9003	CA	LYS	B2183	-44.948	-25.253	32.475	1.00203.40	C
ATOM	9004	C	LYS	B2183	-45.664	-26.411	33.164	1.00203.09	C
ATOM	9005	O	LYS	B2183	-46.464	-27.119	32.553	1.00203.15	O
ATOM	9006	CB	LYS	B2183	-45.128	-25.328	30.951	1.00203.53	C
ATOM	9007	CG	LYS	B2183	-44.445	-24.219	30.153	1.00204.49	C
ATOM	9008	CD	LYS	B2183	-44.225	-24.658	28.701	1.00206.02	C
ATOM	9009	CE	LYS	B2183	-42.987	-24.008	28.066	1.00206.58	C
ATOM	9010	NZ	LYS	B2183	-42.513	-24.792	26.863	1.00206.84	N
ATOM	9011	N	ALA	B2184	-45.354	-26.604	34.441	1.00202.81	N
ATOM	9012	CA	ALA	B2184	-46.068	-27.568	35.271	1.00202.50	C
ATOM	9013	C	ALA	B2184	-47.448	-26.991	35.566	1.00202.13	C
ATOM	9014	O	ALA	B2184	-48.375	-27.717	35.954	1.00202.16	O
ATOM	9015	CB	ALA	B2184	-45.302	-27.832	36.563	1.00202.68	C

ATOM	9016	N	ILE	B2185	-47.553	-25.675	35.377	1.00201.49	N
ATOM	9017	CA	ILE	B2185	-48.810	-24.947	35.445	1.00200.89	C
ATOM	9018	C	ILE	B2185	-49.333	-24.790	34.022	1.00200.69	C
ATOM	9019	O	ILE	B2185	-48.698	-24.140	33.185	1.00200.51	O
ATOM	9020	CB	ILE	B2185	-48.620	-23.576	36.115	1.00200.78	C
ATOM	9021	CG1	ILE	B2185	-47.955	-23.751	37.486	1.00200.31	C
ATOM	9022	CG2	ILE	B2185	-49.956	-22.850	36.228	1.00200.65	C
ATOM	9023	CD1	ILE	B2185	-47.320	-22.502	38.042	1.00199.32	C
ATOM	9024	N	SER	B2186	-50.485	-25.408	33.759	1.00200.52	N
ATOM	9025	CA	SER	B2186	-51.042	-25.523	32.409	1.00200.32	C
ATOM	9026	C	SER	B2186	-51.408	-24.153	31.858	1.00200.35	C
ATOM	9027	O	SER	B2186	-51.587	-23.202	32.625	1.00200.33	O
ATOM	9028	CB	SER	B2186	-52.263	-26.453	32.404	1.00200.19	C
ATOM	9029	OG	SER	B2186	-52.683	-26.733	31.083	1.00199.72	O
ATOM	9030	N	ASP	B2187	-51.497	-24.050	30.531	1.00200.39	N
ATOM	9031	CA	ASP	B2187	-51.962	-22.817	29.879	1.00200.33	C
ATOM	9032	C	ASP	B2187	-53.379	-22.458	30.366	1.00200.09	C
ATOM	9033	O	ASP	B2187	-53.708	-21.281	30.546	1.00200.10	O
ATOM	9034	CB	ASP	B2187	-51.899	-22.932	28.339	1.00200.48	C
ATOM	9035	CG	ASP	B2187	-50.611	-22.327	27.735	1.00200.59	C
ATOM	9036	OD1	ASP	B2187	-50.571	-22.119	26.501	1.00200.52	O
ATOM	9037	OD2	ASP	B2187	-49.642	-22.052	28.479	1.00200.62	O
ATOM	9038	N	ALA	B2188	-54.192	-23.489	30.603	1.00199.69	N
ATOM	9039	CA	ALA	B2188	-55.520	-23.347	31.200	1.00199.19	C
ATOM	9040	C	ALA	B2188	-55.492	-22.705	32.601	1.00198.77	C
ATOM	9041	O	ALA	B2188	-56.426	-21.999	32.992	1.00198.71	O
ATOM	9042	CB	ALA	B2188	-56.214	-24.719	31.255	1.00199.20	C
ATOM	9043	N	GLN	B2189	-54.405	-22.934	33.332	1.00198.23	N
ATOM	9044	CA	GLN	B2189	-54.343	-22.644	34.764	1.00197.77	C
ATOM	9045	C	GLN	B2189	-54.143	-21.170	35.116	1.00197.41	C
ATOM	9046	O	GLN	B2189	-54.122	-20.817	36.295	1.00197.46	O
ATOM	9047	CB	GLN	B2189	-53.249	-23.498	35.411	1.00197.73	C
ATOM	9048	CG	GLN	B2189	-53.597	-24.037	36.787	1.00197.83	C
ATOM	9049	CD	GLN	B2189	-52.648	-25.131	37.250	1.00197.95	C
ATOM	9050	OE1	GLN	B2189	-52.176	-25.938	36.451	1.00198.51	O
ATOM	9051	NE2	GLN	B2189	-52.375	-25.170	38.551	1.00198.38	N
ATOM	9052	N	ILE	B2190	-53.997	-20.313	34.105	1.00196.96	N
ATOM	9053	CA	ILE	B2190	-53.827	-18.870	34.320	1.00196.38	C
ATOM	9054	C	ILE	B2190	-54.814	-18.073	33.477	1.00196.46	C
ATOM	9055	O	ILE	B2190	-54.892	-18.263	32.263	1.00196.48	O
ATOM	9056	CB	ILE	B2190	-52.406	-18.388	33.934	1.00196.28	C
ATOM	9057	CG1	ILE	B2190	-51.322	-19.134	34.718	1.00195.98	C
ATOM	9058	CG2	ILE	B2190	-52.285	-16.895	34.148	1.00196.08	C
ATOM	9059	CD1	ILE	B2190	-49.932	-19.046	34.107	1.00195.85	C
ATOM	9060	N	THR	B2191	-55.576	-17.192	34.112	1.00196.47	N
ATOM	9061	CA	THR	B2191	-56.272	-16.157	33.356	1.00196.72	C
ATOM	9062	C	THR	B2191	-55.748	-14.800	33.769	1.00197.00	C
ATOM	9063	O	THR	B2191	-54.966	-14.680	34.715	1.00196.99	O
ATOM	9064	CB	THR	B2191	-57.815	-16.178	33.499	1.00196.62	C
ATOM	9065	OG1	THR	B2191	-58.176	-16.598	34.819	1.00196.57	O
ATOM	9066	CG2	THR	B2191	-58.450	-17.090	32.453	1.00196.47	C
ATOM	9067	N	ALA	B2192	-56.177	-13.784	33.030	1.00197.32	N
ATOM	9068	CA	ALA	B2192	-55.817	-12.410	33.307	1.00197.45	C
ATOM	9069	C	ALA	B2192	-57.079	-11.578	33.337	1.00197.53	C
ATOM	9070	O	ALA	B2192	-58.179	-12.086	33.103	1.00197.47	O
ATOM	9071	CB	ALA	B2192	-54.874	-11.889	32.244	1.00197.48	C
ATOM	9072	N	SER	B2193	-56.897	-10.296	33.627	1.00197.69	N
ATOM	9073	CA	SER	B2193	-57.972	-9.322	33.647	1.00197.93	C
ATOM	9074	C	SER	B2193	-58.549	-9.101	32.246	1.00198.02	C
ATOM	9075	O	SER	B2193	-59.737	-8.793	32.088	1.00197.96	O
ATOM	9076	CB	SER	B2193	-57.441	-8.018	34.229	1.00197.88	C
ATOM	9077	OG	SER	B2193	-58.370	-6.967	34.078	1.00198.44	O
ATOM	9078	N	SER	B2194	-57.688	-9.268	31.245	1.00198.24	N
ATOM	9079	CA	SER	B2194	-58.049	-9.179	29.835	1.00198.54	C
ATOM	9080	C	SER	B2194	-56.798	-9.412	28.997	1.00198.75	C
ATOM	9081	O	SER	B2194	-55.680	-9.208	29.474	1.00198.74	O
ATOM	9082	CB	SER	B2194	-58.648	-7.808	29.507	1.00198.58	C
ATOM	9083	OG	SER	B2194	-57.736	-6.764	29.808	1.00198.45	O
ATOM	9084	N	TYR	B2195	-56.985	-9.843	27.754	1.00199.01	N
ATOM	9085	CA	TYR	B2195	-55.856	-10.059	26.861	1.00199.22	C
ATOM	9086	C	TYR	B2195	-56.018	-9.352	25.531	1.00199.56	C

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ATOM   9087  O   TYR B2195     -57.101  -9.359  24.943  1.00199.71           O
ATOM   9088  CB  TYR B2195     -55.593 -11.548  26.649  1.00199.10           C
ATOM   9089  CG  TYR B2195     -56.738 -12.336  26.067  1.00198.82           C
ATOM   9090  CD1 TYR B2195     -56.733 -12.710  24.728  1.00198.69           C
ATOM   9091  CD2 TYR B2195     -57.812 -12.734  26.861  1.00198.83           C
ATOM   9092  CE1 TYR B2195     -57.775 -13.448  24.188  1.00198.97           C
ATOM   9093  CE2 TYR B2195     -58.860 -13.471  26.332  1.00198.97           C
ATOM   9094  CZ  TYR B2195     -58.835 -13.826  24.995  1.00199.03           C
ATOM   9095  OH  TYR B2195     -59.870 -14.557  24.463  1.00199.03           O
ATOM   9096  N   PHE B2196     -54.925  -8.744  25.077  1.00199.92           N
ATOM   9097  CA  PHE B2196     -54.851  -8.110  23.764  1.00200.36           C
ATOM   9098  C   PHE B2196     -54.903  -9.182  22.682  1.00200.83           C
ATOM   9099  O   PHE B2196     -54.212 -10.201  22.782  1.00200.96           O
ATOM   9100  CB  PHE B2196     -53.548  -7.315  23.656  1.00200.22           C
ATOM   9101  CG  PHE B2196     -53.421  -6.509  22.394  1.00199.93           C
ATOM   9102  CD1 PHE B2196     -53.973  -5.236  22.308  1.00199.81           C
ATOM   9103  CD2 PHE B2196     -52.727  -7.014  21.298  1.00199.65           C
ATOM   9104  CE1 PHE B2196     -53.853  -4.482  21.144  1.00199.82           C
ATOM   9105  CE2 PHE B2196     -52.598  -6.272  20.130  1.00199.59           C
ATOM   9106  CZ  PHE B2196     -53.162  -5.002  20.052  1.00199.81           C
ATOM   9107  N   THR B2197     -55.722  -8.955  21.655  1.00201.39           N
ATOM   9108  CA  THR B2197     -55.923  -9.953  20.595  1.00202.05           C
ATOM   9109  C   THR B2197     -56.484  -9.351  19.283  1.00202.45           C
ATOM   9110  O   THR B2197     -57.394  -8.512  19.319  1.00202.54           O
ATOM   9111  CB  THR B2197     -56.768 -11.179  21.118  1.00202.05           C
ATOM   9112  OG1 THR B2197     -56.686 -12.271  20.195  1.00202.19           O
ATOM   9113  CG2 THR B2197     -58.242 -10.812  21.383  1.00202.19           C
ATOM   9114  N   ASN B2198     -55.922  -9.773  18.141  1.00202.94           N
ATOM   9115  CA  ASN B2198     -56.322  -9.276  16.800  1.00203.35           C
ATOM   9116  C   ASN B2198     -56.307 -10.328  15.660  1.00203.60           C
ATOM   9117  O   ASN B2198     -57.312 -11.006  15.411  1.00203.54           O
ATOM   9118  CB  ASN B2198     -55.517  -8.013  16.410  1.00203.37           C
ATOM   9119  CG  ASN B2198     -53.996  -8.216  16.482  1.00203.44           C
ATOM   9120  OD1 ASN B2198     -53.508  -9.298  16.812  1.00203.41           O
ATOM   9121  ND2 ASN B2198     -53.246  -7.164  16.162  1.00203.49           N
ATOM   9122  N   MET B2199     -55.177 -10.424  14.958  1.00203.96           N
ATOM   9123  CA  MET B2199     -54.924 -11.467  13.965  1.00204.33           C
ATOM   9124  C   MET B2199     -53.433 -11.819  13.968  1.00204.59           C
ATOM   9125  O   MET B2199     -53.072 -12.995  14.035  1.00204.59           O
ATOM   9126  CB  MET B2199     -55.387 -11.050  12.556  1.00204.30           C
ATOM   9127  CG  MET B2199     -54.464 -10.052  11.830  1.00204.37           C
ATOM   9128  SD  MET B2199     -54.199 -10.350  10.057  1.00204.39           S
ATOM   9129  CE  MET B2199     -53.355 -11.937  10.038  1.00204.32           C
ATOM   9130  N   PHE B2200     -52.582 -10.791  13.904  1.00204.97           N
ATOM   9131  CA  PHE B2200     -51.125 -10.950  13.923  1.00205.41           C
ATOM   9132  C   PHE B2200     -50.588 -11.144  15.354  1.00205.59           C
ATOM   9133  O   PHE B2200     -49.365 -11.137  15.556  1.00205.85           O
ATOM   9134  CB  PHE B2200     -50.425  -9.746  13.246  1.00205.52           C
ATOM   9135  CG  PHE B2200     -49.976 -10.000  11.813  1.00206.01           C
ATOM   9136  CD1 PHE B2200     -50.758  -9.570  10.733  1.00206.35           C
ATOM   9137  CD2 PHE B2200     -48.755 -10.637  11.543  1.00206.39           C
ATOM   9138  CE1 PHE B2200     -50.346  -9.794   9.402  1.00206.28           C
ATOM   9139  CE2 PHE B2200     -48.334 -10.864  10.215  1.00206.50           C
ATOM   9140  CZ  PHE B2200     -49.133 -10.440   9.147  1.00206.17           C
ATOM   9141  N   ALA B2201     -51.492 -11.319  16.333  1.00205.60           N
ATOM   9142  CA  ALA B2201     -51.123 -11.484  17.760  1.00205.44           C
ATOM   9143  C   ALA B2201     -52.241 -12.042  18.660  1.00205.28           C
ATOM   9144  O   ALA B2201     -53.427 -11.859  18.382  1.00205.20           O
ATOM   9145  CB  ALA B2201     -50.609 -10.155  18.333  1.00205.43           C
ATOM   9146  N   THR B2202     -51.844 -12.728  19.732  1.00205.15           N
ATOM   9147  CA  THR B2202     -52.748 -13.109  20.822  1.00205.09           C
ATOM   9148  C   THR B2202     -51.942 -13.148  22.107  1.00205.12           C
ATOM   9149  O   THR B2202     -51.501 -14.214  22.543  1.00205.22           O
ATOM   9150  CB  THR B2202     -53.386 -14.493  20.621  1.00205.05           C
ATOM   9151  OG1 THR B2202     -53.821 -14.632  19.267  1.00205.22           O
ATOM   9152  CG2 THR B2202     -54.574 -14.680  21.566  1.00204.92           C
ATOM   9153  N   TRP B2203     -51.748 -11.983  22.711  1.00205.12           N
ATOM   9154  CA  TRP B2203     -50.916 -11.863  23.904  1.00205.08           C
ATOM   9155  C   TRP B2203     -51.657 -12.327  25.161  1.00204.82           C
ATOM   9156  O   TRP B2203     -51.754 -11.599  26.155  1.00204.75           O
ATOM   9157  CB  TRP B2203     -50.421 -10.429  24.060  1.00205.40           C
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ATOM   9158  CG  TRP B2203     -49.642  -9.921  22.882  1.00205.75           C
ATOM   9159  CD1 TRP B2203     -50.149  -9.359  21.744  1.00206.15           C
ATOM   9160  CD2 TRP B2203     -48.218  -9.911  22.733  1.00206.02           C
ATOM   9161  NE1 TRP B2203     -49.130  -9.001  20.895  1.00206.15           N
ATOM   9162  CE2 TRP B2203     -47.934  -9.328  21.476  1.00206.16           C
ATOM   9163  CE3 TRP B2203     -47.154 -10.338  23.538  1.00206.15           C
ATOM   9164  CZ2 TRP B2203     -46.627  -9.159  21.004  1.00206.11           C
ATOM   9165  CZ3 TRP B2203     -45.857 -10.173  23.071  1.00206.21           C
ATOM   9166  CH2 TRP B2203     -45.605  -9.587  21.812  1.00206.15           C
ATOM   9167  N   SER B2204     -52.157 -13.557  25.092  1.00204.47           N
ATOM   9168  CA  SER B2204     -52.942 -14.187  26.147  1.00204.22           C
ATOM   9169  C   SER B2204     -52.144 -14.422  27.436  1.00203.91           C
ATOM   9170  O   SER B2204     -50.933 -14.634  27.377  1.00203.81           O
ATOM   9171  CB  SER B2204     -53.527 -15.505  25.628  1.00204.37           C
ATOM   9172  OG  SER B2204     -52.620 -16.169  24.762  1.00204.70           O
ATOM   9173  N   PRO B2205     -52.827 -14.397  28.606  1.00203.68           N
ATOM   9174  CA  PRO B2205     -52.173 -14.526  29.914  1.00203.44           C
ATOM   9175  C   PRO B2205     -51.316 -15.769  29.978  1.00203.17           C
ATOM   9176  O   PRO B2205     -50.277 -15.795  30.642  1.00202.98           O
ATOM   9177  CB  PRO B2205     -53.353 -14.666  30.887  1.00203.44           C
ATOM   9178  CG  PRO B2205     -54.549 -14.964  30.039  1.00203.51           C
ATOM   9179  CD  PRO B2205     -54.288 -14.261  28.759  1.00203.69           C
ATOM   9180  N   SER B2206     -51.767 -16.778  29.249  1.00202.98           N
ATOM   9181  CA  SER B2206     -51.148 -18.080  29.208  1.00202.94           C
ATOM   9182  C   SER B2206     -49.753 -18.019  28.586  1.00202.86           C
ATOM   9183  O   SER B2206     -49.152 -19.057  28.292  1.00203.07           O
ATOM   9184  CB  SER B2206     -52.052 -19.021  28.413  1.00202.97           C
ATOM   9185  OG  SER B2206     -53.414 -18.641  28.558  1.00202.97           O
ATOM   9186  N   LYS B2207     -49.236 -16.808  28.395  1.00202.52           N
ATOM   9187  CA  LYS B2207     -47.918 -16.646  27.805  1.00202.31           C
ATOM   9188  C   LYS B2207     -46.883 -16.120  28.794  1.00202.29           C
ATOM   9189  O   LYS B2207     -45.692 -16.264  28.553  1.00202.45           O
ATOM   9190  CB  LYS B2207     -47.978 -15.760  26.553  1.00202.23           C
ATOM   9191  CG  LYS B2207     -48.819 -16.318  25.392  1.00202.23           C
ATOM   9192  CD  LYS B2207     -48.035 -17.280  24.493  1.00201.92           C
ATOM   9193  CE  LYS B2207     -48.895 -17.837  23.357  1.00201.59           C
ATOM   9194  NZ  LYS B2207     -49.160 -16.836  22.291  1.00200.97           N
ATOM   9195  N   ALA B2208     -47.330 -15.536  29.906  1.00202.26           N
ATOM   9196  CA  ALA B2208     -46.431 -14.892  30.883  1.00202.24           C
ATOM   9197  C   ALA B2208     -45.383 -15.834  31.477  1.00202.23           C
ATOM   9198  O   ALA B2208     -45.527 -16.311  32.595  1.00202.11           O
ATOM   9199  CB  ALA B2208     -47.244 -14.238  31.991  1.00202.24           C
ATOM   9200  N   ARG B2209     -44.319 -16.088  30.726  1.00202.47           N
ATOM   9201  CA  ARG B2209     -43.369 -17.130  31.089  1.00202.87           C
ATOM   9202  C   ARG B2209     -41.930 -16.674  30.971  1.00203.44           C
ATOM   9203  O   ARG B2209     -41.451 -16.371  29.878  1.00203.42           O
ATOM   9204  CB  ARG B2209     -43.580 -18.379  30.236  1.00202.82           C
ATOM   9205  CG  ARG B2209     -44.964 -18.974  30.345  1.00202.08           C
ATOM   9206  CD  ARG B2209     -44.943 -20.458  30.064  1.00200.69           C
ATOM   9207  NE  ARG B2209     -46.278 -21.031  30.163  1.00199.72           N
ATOM   9208  CZ  ARG B2209     -46.977 -21.117  31.289  1.00199.40           C
ATOM   9209  NH1 ARG B2209     -46.476 -20.656  32.428  1.00198.94           N
ATOM   9210  NH2 ARG B2209     -48.187 -21.659  31.274  1.00199.56           N
ATOM   9211  N   LEU B2210     -41.249 -16.695  32.114  1.00204.20           N
ATOM   9212  CA  LEU B2210     -39.926 -16.091  32.339  1.00205.06           C
ATOM   9213  C   LEU B2210     -38.968 -15.968  31.146  1.00205.32           C
ATOM   9214  O   LEU B2210     -38.219 -14.998  31.053  1.00205.53           O
ATOM   9215  CB  LEU B2210     -39.227 -16.780  33.519  1.00205.10           C
ATOM   9216  CG  LEU B2210     -38.181 -15.966  34.292  1.00205.62           C
ATOM   9217  CD1 LEU B2210     -38.759 -14.611  34.693  1.00205.82           C
ATOM   9218  CD2 LEU B2210     -37.637 -16.743  35.514  1.00205.47           C
ATOM   9219  N   HIS B2211     -38.966 -16.956  30.262  1.00205.60           N
ATOM   9220  CA  HIS B2211     -38.327 -16.799  28.970  1.00205.98           C
ATOM   9221  C   HIS B2211     -39.219 -17.527  27.998  1.00206.37           C
ATOM   9222  O   HIS B2211     -39.429 -18.733  28.115  1.00206.54           O
ATOM   9223  CB  HIS B2211     -36.913 -17.376  28.965  1.00205.96           C
ATOM   9224  CG  HIS B2211     -36.057 -16.887  30.091  1.00205.89           C
ATOM   9225  ND1 HIS B2211     -36.019 -17.508  31.320  1.00205.47           N
ATOM   9226  CD2 HIS B2211     -35.212 -15.832  30.177  1.00206.05           C
ATOM   9227  CE1 HIS B2211     -35.185 -16.863  32.115  1.00205.35           C
ATOM   9228  NE2 HIS B2211     -34.684 -15.841  31.446  1.00205.93           N
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ATOM   9229  N   LEU B2212     -39.787 -16.775  27.067  1.00206.81           N
ATOM   9230  CA  LEU B2212     -40.715 -17.329  26.101  1.00207.23           C
ATOM   9231  C   LEU B2212     -40.538 -16.603  24.785  1.00207.85           C
ATOM   9232  O   LEU B2212     -40.734 -15.393  24.711  1.00207.94           O
ATOM   9233  CB  LEU B2212     -42.155 -17.169  26.590  1.00206.89           C
ATOM   9234  CG  LEU B2212     -43.196 -18.006  25.856  1.00206.26           C
ATOM   9235  CD1 LEU B2212     -43.488 -19.251  26.651  1.00206.13           C
ATOM   9236  CD2 LEU B2212     -44.459 -17.223  25.656  1.00205.70           C
ATOM   9237  N   GLN B2213     -40.156 -17.339  23.748  1.00208.67           N
ATOM   9238  CA  GLN B2213     -40.046 -16.747  22.411  1.00209.49           C
ATOM   9239  C   GLN B2213     -41.350 -16.910  21.593  1.00209.67           C
ATOM   9240  O   GLN B2213     -42.234 -17.707  21.954  1.00209.82           O
ATOM   9241  CB  GLN B2213     -38.804 -17.275  21.651  1.00209.70           C
ATOM   9242  CG  GLN B2213     -37.450 -17.025  22.347  1.00210.30           C
ATOM   9243  CD  GLN B2213     -37.413 -15.712  23.128  1.00211.33           C
ATOM   9244  OE1 GLN B2213     -37.582 -14.624  22.566  1.00211.32           O
ATOM   9245  NE2 GLN B2213     -37.204 -15.817  24.437  1.00211.89           N
ATOM   9246  N   GLY B2214     -41.471 -16.134  20.514  1.00209.71           N
ATOM   9247  CA  GLY B2214     -42.635 -16.208  19.626  1.00209.49           C
ATOM   9248  C   GLY B2214     -42.928 -14.899  18.919  1.00209.33           C
ATOM   9249  O   GLY B2214     -42.103 -13.971  18.927  1.00209.36           O
ATOM   9250  N   ARG B2215     -44.098 -14.838  18.283  1.00209.10           N
ATOM   9251  CA  ARG B2215     -44.627 -13.577  17.753  1.00208.82           C
ATOM   9252  C   ARG B2215     -45.368 -12.848  18.875  1.00208.26           C
ATOM   9253  O   ARG B2215     -45.130 -11.654  19.103  1.00208.49           O
ATOM   9254  CB  ARG B2215     -45.559 -13.799  16.552  1.00208.97           C
ATOM   9255  CG  ARG B2215     -44.868 -14.158  15.240  1.00209.17           C
ATOM   9256  CD  ARG B2215     -45.837 -14.034  14.068  1.00209.17           C
ATOM   9257  NE  ARG B2215     -45.707 -12.751  13.381  1.00210.04           N
ATOM   9258  CZ  ARG B2215     -45.370 -12.611  12.100  1.00210.44           C
ATOM   9259  NH1 ARG B2215     -45.273 -11.395  11.568  1.00210.44           N
ATOM   9260  NH2 ARG B2215     -45.139 -13.682  11.345  1.00210.58           N
ATOM   9261  N   SER B2216     -46.264 -13.575  19.557  1.00207.24           N
ATOM   9262  CA  SER B2216     -46.913 -13.112  20.789  1.00206.05           C
ATOM   9263  C   SER B2216     -46.333 -13.913  21.941  1.00205.18           C
ATOM   9264  O   SER B2216     -46.814 -14.999  22.265  1.00205.01           O
ATOM   9265  CB  SER B2216     -48.435 -13.262  20.710  1.00206.08           C
ATOM   9266  OG  SER B2216     -48.797 -14.468  20.064  1.00206.11           O
ATOM   9267  N   ASN B2217     -45.278 -13.368  22.538  1.00204.17           N
ATOM   9268  CA  ASN B2217     -44.458 -14.115  23.475  1.00203.33           C
ATOM   9269  C   ASN B2217     -44.555 -13.646  24.915  1.00202.70           C
ATOM   9270  O   ASN B2217     -43.627 -13.832  25.696  1.00202.55           O
ATOM   9271  CB  ASN B2217     -42.996 -14.201  22.988  1.00203.36           C
ATOM   9272  CG  ASN B2217     -42.156 -12.962  23.328  1.00203.45           C
ATOM   9273  OD1 ASN B2217     -42.599 -12.049  24.033  1.00203.45           O
ATOM   9274  ND2 ASN B2217     -40.917 -12.945  22.827  1.00203.35           N
ATOM   9275  N   ALA B2218     -45.686 -13.044  25.262  1.00202.09           N
ATOM   9276  CA  ALA B2218     -45.933 -12.622  26.636  1.00201.74           C
ATOM   9277  C   ALA B2218     -47.383 -12.233  26.845  1.00201.52           C
ATOM   9278  O   ALA B2218     -48.149 -12.179  25.887  1.00201.68           O
ATOM   9279  CB  ALA B2218     -45.049 -11.475  26.985  1.00201.80           C
ATOM   9280  N   TRP B2219     -47.761 -11.963  28.094  1.00201.13           N
ATOM   9281  CA  TRP B2219     -49.108 -11.485  28.369  1.00200.79           C
ATOM   9282  C   TRP B2219     -49.186  -9.984  28.245  1.00200.80           C
ATOM   9283  O   TRP B2219     -48.298  -9.269  28.715  1.00200.65           O
ATOM   9284  CB  TRP B2219     -49.593 -11.880  29.760  1.00200.63           C
ATOM   9285  CG  TRP B2219     -50.843 -11.122  30.145  1.00200.39           C
ATOM   9286  CD1 TRP B2219     -52.085 -11.267  29.603  1.00200.30           C
ATOM   9287  CD2 TRP B2219     -50.955 -10.081  31.122  1.00200.11           C
ATOM   9288  NE1 TRP B2219     -52.967 -10.395  30.189  1.00200.07           N
ATOM   9289  CE2 TRP B2219     -52.300  -9.655  31.126  1.00199.96           C
ATOM   9290  CE3 TRP B2219     -50.052  -9.472  32.000  1.00200.10           C
ATOM   9291  CZ2 TRP B2219     -52.765  -8.650  31.972  1.00200.17           C
ATOM   9292  CZ3 TRP B2219     -50.516  -8.470  32.843  1.00200.16           C
ATOM   9293  CH2 TRP B2219     -51.860  -8.070  32.821  1.00200.27           C
ATOM   9294  N   ARG B2220     -50.266  -9.524  27.617  1.00200.95           N
ATOM   9295  CA  ARG B2220     -50.619  -8.109  27.582  1.00201.16           C
ATOM   9296  C   ARG B2220     -52.120  -7.896  27.801  1.00201.41           C
ATOM   9297  O   ARG B2220     -52.942  -8.639  27.245  1.00201.28           O
ATOM   9298  CB  ARG B2220     -50.186  -7.467  26.266  1.00201.09           C
ATOM   9299  CG  ARG B2220     -48.707  -7.140  26.191  1.00200.81           C
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ATOM   9300  CD  ARG B2220     -48.321  -6.638  24.813  1.00200.02           C
ATOM   9301  NE  ARG B2220     -49.086  -5.449  24.449  1.00199.29           N
ATOM   9302  CZ  ARG B2220     -49.063  -4.879  23.252  1.00198.56           C
ATOM   9303  NH1 ARG B2220     -48.309  -5.377  22.279  1.00197.99           N
ATOM   9304  NH2 ARG B2220     -49.801  -3.806  23.032  1.00198.41           N
ATOM   9305  N   PRO B2221     -52.478  -6.871  28.609  1.00201.67           N
ATOM   9306  CA  PRO B2221     -53.873  -6.498  28.880  1.00201.86           C
ATOM   9307  C   PRO B2221     -54.501  -5.860  27.645  1.00202.03           C
ATOM   9308  O   PRO B2221     -53.765  -5.355  26.795  1.00202.28           O
ATOM   9309  CB  PRO B2221     -53.738  -5.457  29.996  1.00201.84           C
ATOM   9310  CG  PRO B2221     -52.384  -4.861  29.800  1.00201.58           C
ATOM   9311  CD  PRO B2221     -51.526  -5.982  29.309  1.00201.60           C
ATOM   9312  N   GLN B2222     -55.828  -5.863  27.529  1.00202.01           N
ATOM   9313  CA  GLN B2222     -56.438  -5.268  26.338  1.00202.20           C
ATOM   9314  C   GLN B2222     -56.098  -3.776  26.201  1.00202.18           C
ATOM   9315  O   GLN B2222     -55.732  -3.319  25.117  1.00202.25           O
ATOM   9316  CB  GLN B2222     -57.942  -5.563  26.223  1.00202.22           C
ATOM   9317  CG  GLN B2222     -58.850  -4.866  27.227  1.00202.56           C
ATOM   9318  CD  GLN B2222     -60.323  -4.930  26.834  1.00202.47           C
ATOM   9319  OE1 GLN B2222     -61.169  -5.354  27.625  1.00202.58           O
ATOM   9320  NE2 GLN B2222     -60.634  -4.509  25.606  1.00202.62           N
ATOM   9321  N   VAL B2223     -56.188  -3.034  27.301  1.00202.22           N
ATOM   9322  CA  VAL B2223     -55.690  -1.654  27.352  1.00202.37           C
ATOM   9323  C   VAL B2223     -54.869  -1.426  28.602  1.00202.41           C
ATOM   9324  O   VAL B2223     -54.647  -2.352  29.379  1.00202.41           O
ATOM   9325  CB  VAL B2223     -56.806  -0.592  27.285  1.00202.41           C
ATOM   9326  CG1 VAL B2223     -56.803   0.105  25.921  1.00202.82           C
ATOM   9327  CG2 VAL B2223     -58.169  -1.192  27.631  1.00202.40           C
ATOM   9328  N   ASN B2224     -54.422  -0.194  28.805  1.00202.54           N
ATOM   9329  CA  ASN B2224     -53.502   0.062  29.896  1.00202.87           C
ATOM   9330  C   ASN B2224     -54.116   0.783  31.097  1.00203.11           C
ATOM   9331  O   ASN B2224     -54.378   1.996  31.041  1.00203.19           O
ATOM   9332  CB  ASN B2224     -52.227   0.735  29.383  1.00202.88           C
ATOM   9333  CG  ASN B2224     -51.410  -0.182  28.469  1.00203.04           C
ATOM   9334  OD1 ASN B2224     -50.263  -0.524  28.768  1.00202.86           O
ATOM   9335  ND2 ASN B2224     -52.005  -0.585  27.349  1.00203.31           N
ATOM   9336  N   ASN B2225     -54.348  -0.005  32.160  1.00203.26           N
ATOM   9337  CA  ASN B2225     -54.890   0.431  33.469  1.00203.30           C
ATOM   9338  C   ASN B2225     -54.060  -0.106  34.646  1.00203.10           C
ATOM   9339  O   ASN B2225     -53.593  -1.241  34.593  1.00203.24           O
ATOM   9340  CB  ASN B2225     -56.322  -0.082  33.665  1.00203.42           C
ATOM   9341  CG  ASN B2225     -57.318   0.557  32.722  1.00203.97           C
ATOM   9342  OD1 ASN B2225     -57.485   1.780  32.696  1.00204.39           O
ATOM   9343  ND2 ASN B2225     -58.013  -0.278  31.957  1.00204.78           N
ATOM   9344  N   PRO B2226     -53.879   0.699  35.716  1.00202.85           N
ATOM   9345  CA  PRO B2226     -53.224   0.211  36.941  1.00202.58           C
ATOM   9346  C   PRO B2226     -54.066  -0.812  37.706  1.00202.27           C
ATOM   9347  O   PRO B2226     -53.526  -1.781  38.249  1.00202.08           O
ATOM   9348  CB  PRO B2226     -53.040   1.484  37.775  1.00202.68           C
ATOM   9349  CG  PRO B2226     -53.208   2.627  36.800  1.00202.87           C
ATOM   9350  CD  PRO B2226     -54.222   2.128  35.825  1.00202.90           C
ATOM   9351  N   LYS B2227     -55.379  -0.598  37.736  1.00202.02           N
ATOM   9352  CA  LYS B2227     -56.300  -1.571  38.306  1.00201.86           C
ATOM   9353  C   LYS B2227     -56.432  -2.816  37.410  1.00201.87           C
ATOM   9354  O   LYS B2227     -57.397  -3.571  37.503  1.00201.82           O
ATOM   9355  CB  LYS B2227     -57.659  -0.922  38.594  1.00201.83           C
ATOM   9356  CG  LYS B2227     -57.731  -0.231  39.951  1.00201.64           C
ATOM   9357  CD  LYS B2227     -59.149   0.209  40.290  1.00201.58           C
ATOM   9358  CE  LYS B2227     -59.223   0.843  41.677  1.00201.20           C
ATOM   9359  NZ  LYS B2227     -60.481   1.625  41.898  1.00200.82           N
ATOM   9360  N   GLU B2228     -55.440  -3.024  36.551  1.00201.83           N
ATOM   9361  CA  GLU B2228     -55.352  -4.218  35.723  1.00201.86           C
ATOM   9362  C   GLU B2228     -54.510  -5.277  36.406  1.00201.64           C
ATOM   9363  O   GLU B2228     -53.621  -4.942  37.191  1.00201.66           O
ATOM   9364  CB  GLU B2228     -54.728  -3.871  34.383  1.00202.00           C
ATOM   9365  CG  GLU B2228     -55.730  -3.702  33.275  1.00203.14           C
ATOM   9366  CD  GLU B2228     -56.250  -5.035  32.777  1.00204.95           C
ATOM   9367  OE1 GLU B2228     -55.705  -6.084  33.201  1.00205.35           O
ATOM   9368  OE2 GLU B2228     -57.204  -5.034  31.962  1.00205.84           O
ATOM   9369  N   TRP B2229     -54.774  -6.548  36.102  1.00201.39           N
ATOM   9370  CA  TRP B2229     -54.100  -7.637  36.810  1.00201.26           C
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ATOM	9371	C	TRP	B2229	-53.866	-8.910	36.016	1.00200.94	C
ATOM	9372	O	TRP	B2229	-54.428	-9.096	34.938	1.00200.83	O
ATOM	9373	CB	TRP	B2229	-54.846	-7.986	38.103	1.00201.64	C
ATOM	9374	CG	TRP	B2229	-56.326	-8.286	37.940	1.00202.32	C
ATOM	9375	CD1	TRP	B2229	-57.370	-7.463	38.273	1.00202.57	C
ATOM	9376	CD2	TRP	B2229	-56.921	-9.498	37.434	1.00202.89	C
ATOM	9377	NE1	TRP	B2229	-58.570	-8.079	37.999	1.00202.64	N
ATOM	9378	CE2	TRP	B2229	-58.325	-9.325	37.483	1.00202.69	C
ATOM	9379	CE3	TRP	B2229	-56.404	-10.707	36.938	1.00202.89	C
ATOM	9380	CZ2	TRP	B2229	-59.218	-10.315	37.053	1.00202.25	C
ATOM	9381	CZ3	TRP	B2229	-57.294	-11.691	36.517	1.00202.36	C
ATOM	9382	CH2	TRP	B2229	-58.685	-11.486	36.576	1.00202.32	C
ATOM	9383	N	LEU	B2230	-53.032	-9.781	36.586	1.00200.69	N
ATOM	9384	CA	LEU	B2230	-52.801	-11.138	36.086	1.00200.58	C
ATOM	9385	C	LEU	B2230	-52.904	-12.161	37.219	1.00200.36	C
ATOM	9386	O	LEU	B2230	-52.361	-11.946	38.302	1.00200.33	O
ATOM	9387	CB	LEU	B2230	-51.425	-11.241	35.427	1.00200.63	C
ATOM	9388	CG	LEU	B2230	-50.929	-12.647	35.065	1.00200.81	C
ATOM	9389	CD1	LEU	B2230	-51.776	-13.260	33.959	1.00201.21	C
ATOM	9390	CD2	LEU	B2230	-49.463	-12.623	34.663	1.00200.72	C
ATOM	9391	N	GLN	B2231	-53.578	-13.280	36.957	1.00200.16	N
ATOM	9392	CA	GLN	B2231	-53.891	-14.256	38.010	1.00199.89	C
ATOM	9393	C	GLN	B2231	-53.405	-15.671	37.700	1.00199.77	C
ATOM	9394	O	GLN	B2231	-53.808	-16.291	36.705	1.00199.77	O
ATOM	9395	CB	GLN	B2231	-55.408	-14.259	38.313	1.00200.05	C
ATOM	9396	CG	GLN	B2231	-55.871	-15.159	39.478	1.00199.48	C
ATOM	9397	CD	GLN	B2231	-57.391	-15.191	39.662	1.00199.45	C
ATOM	9398	OE1	GLN	B2231	-57.890	-15.753	40.631	1.00199.17	O
ATOM	9399	NE2	GLN	B2231	-58.124	-14.595	38.733	1.00198.99	N
ATOM	9400	N	VAL	B2232	-52.534	-16.170	38.570	1.00199.41	N
ATOM	9401	CA	VAL	B2232	-52.204	-17.589	38.600	1.00199.27	C
ATOM	9402	C	VAL	B2232	-53.213	-18.299	39.502	1.00198.90	C
ATOM	9403	O	VAL	B2232	-53.649	-17.749	40.509	1.00199.04	O
ATOM	9404	CB	VAL	B2232	-50.732	-17.841	39.080	1.00199.40	C
ATOM	9405	CG1	VAL	B2232	-50.550	-19.238	39.698	1.00199.56	C
ATOM	9406	CG2	VAL	B2232	-49.742	-17.640	37.930	1.00199.59	C
ATOM	9407	N	ASP	B2233	-53.599	-19.507	39.114	1.00198.38	N
ATOM	9408	CA	ASP	B2233	-54.405	-20.369	39.954	1.00197.93	C
ATOM	9409	C	ASP	B2233	-53.559	-21.611	40.167	1.00197.58	C
ATOM	9410	O	ASP	B2233	-53.180	-22.269	39.204	1.00197.60	O
ATOM	9411	CB	ASP	B2233	-55.736	-20.686	39.239	1.00198.05	C
ATOM	9412	CG	ASP	B2233	-56.587	-21.752	39.948	1.00198.04	C
ATOM	9413	OD1	ASP	B2233	-57.444	-22.348	39.256	1.00197.76	O
ATOM	9414	OD2	ASP	B2233	-56.424	-21.995	41.166	1.00198.15	O
ATOM	9415	N	PHE	B2234	-53.206	-21.896	41.416	1.00197.13	N
ATOM	9416	CA	PHE	B2234	-52.647	-23.201	41.744	1.00196.73	C
ATOM	9417	C	PHE	B2234	-53.827	-24.118	42.021	1.00196.68	C
ATOM	9418	O	PHE	B2234	-54.755	-23.763	42.752	1.00196.50	O
ATOM	9419	CB	PHE	B2234	-51.746	-23.150	42.973	1.00196.50	C
ATOM	9420	CG	PHE	B2234	-50.700	-22.076	42.935	1.00196.02	C
ATOM	9421	CD1	PHE	B2234	-51.028	-20.750	43.173	1.00196.09	C
ATOM	9422	CD2	PHE	B2234	-49.376	-22.397	42.711	1.00195.66	C
ATOM	9423	CE1	PHE	B2234	-50.052	-19.758	43.161	1.00196.21	C
ATOM	9424	CE2	PHE	B2234	-48.394	-21.413	42.704	1.00195.68	C
ATOM	9425	CZ	PHE	B2234	-48.732	-20.093	42.922	1.00195.93	C
ATOM	9426	N	GLN	B2235	-53.807	-25.298	41.430	1.00196.69	N
ATOM	9427	CA	GLN	B2235	-54.884	-26.233	41.674	1.00196.92	C
ATOM	9428	C	GLN	B2235	-54.752	-26.844	43.085	1.00196.95	C
ATOM	9429	O	GLN	B2235	-55.501	-27.765	43.442	1.00197.23	O
ATOM	9430	CB	GLN	B2235	-54.944	-27.300	40.571	1.00196.98	C
ATOM	9431	CG	GLN	B2235	-55.271	-26.755	39.165	1.00197.15	C
ATOM	9432	CD	GLN	B2235	-55.268	-27.837	38.076	1.00197.23	C
ATOM	9433	OE1	GLN	B2235	-54.402	-27.848	37.194	1.00197.24	O
ATOM	9434	NE2	GLN	B2235	-56.240	-28.750	38.138	1.00197.72	N
ATOM	9435	N	LYS	B2236	-53.801	-26.324	43.876	1.00196.78	N
ATOM	9436	CA	LYS	B2236	-53.645	-26.681	45.309	1.00196.46	C
ATOM	9437	C	LYS	B2236	-53.035	-25.548	46.152	1.00196.36	C
ATOM	9438	O	LYS	B2236	-52.680	-24.495	45.617	1.00196.35	O
ATOM	9439	CB	LYS	B2236	-52.863	-27.996	45.500	1.00196.48	C
ATOM	9440	CG	LYS	B2236	-51.402	-27.968	45.070	1.00196.19	C
ATOM	9441	CD	LYS	B2236	-50.683	-29.213	45.547	1.00196.14	C

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ATOM   9442  CE  LYS B2236     -49.475 -29.520  44.684  1.00195.41           C
ATOM   9443  NZ  LYS B2236     -48.795 -30.757  45.149  1.00195.00           N
ATOM   9444  N   THR B2237     -52.917 -25.765  47.464  1.00196.05           N
ATOM   9445  CA  THR B2237     -52.445 -24.718  48.385  1.00195.71           C
ATOM   9446  C   THR B2237     -50.924 -24.633  48.481  1.00195.21           C
ATOM   9447  O   THR B2237     -50.263 -25.605  48.863  1.00195.08           O
ATOM   9448  CB  THR B2237     -53.077 -24.863  49.787  1.00195.83           C
ATOM   9449  OG1 THR B2237     -54.406 -24.326  49.757  1.00195.99           O
ATOM   9450  CG2 THR B2237     -52.262 -24.112  50.850  1.00196.04           C
ATOM   9451  N   MET B2238     -50.400 -23.449  48.158  1.00194.64           N
ATOM   9452  CA  MET B2238     -48.959 -23.230  47.997  1.00194.24           C
ATOM   9453  C   MET B2238     -48.352 -22.220  48.977  1.00193.37           C
ATOM   9454  O   MET B2238     -49.062 -21.436  49.605  1.00193.42           O
ATOM   9455  CB  MET B2238     -48.639 -22.799  46.557  1.00194.74           C
ATOM   9456  CG  MET B2238     -49.066 -23.797  45.468  1.00196.07           C
ATOM   9457  SD  MET B2238     -48.166 -25.380  45.321  1.00198.93           S
ATOM   9458  CE  MET B2238     -48.691 -25.950  43.686  1.00197.32           C
ATOM   9459  N   LYS B2239     -47.025 -22.272  49.093  1.00192.21           N
ATOM   9460  CA  LYS B2239     -46.227 -21.330  49.866  1.00191.08           C
ATOM   9461  C   LYS B2239     -45.355 -20.585  48.855  1.00190.84           C
ATOM   9462  O   LYS B2239     -44.839 -21.205  47.935  1.00190.98           O
ATOM   9463  CB  LYS B2239     -45.351 -22.097  50.861  1.00190.71           C
ATOM   9464  CG  LYS B2239     -44.823 -21.266  52.019  1.00189.32           C
ATOM   9465  CD  LYS B2239     -43.746 -22.003  52.797  1.00186.57           C
ATOM   9466  CE  LYS B2239     -43.099 -21.088  53.818  1.00184.89           C
ATOM   9467  NZ  LYS B2239     -41.791 -21.632  54.253  1.00183.80           N
ATOM   9468  N   VAL B2240     -45.182 -19.272  49.012  1.00190.40           N
ATOM   9469  CA  VAL B2240     -44.462 -18.457  48.011  1.00189.95           C
ATOM   9470  C   VAL B2240     -43.255 -17.699  48.588  1.00189.91           C
ATOM   9471  O   VAL B2240     -43.369 -17.058  49.626  1.00189.91           O
ATOM   9472  CB  VAL B2240     -45.426 -17.436  47.338  1.00189.84           C
ATOM   9473  CG1 VAL B2240     -44.696 -16.573  46.327  1.00189.51           C
ATOM   9474  CG2 VAL B2240     -46.597 -18.150  46.681  1.00189.55           C
ATOM   9475  N   THR B2241     -42.106 -17.769  47.918  1.00189.92           N
ATOM   9476  CA  THR B2241     -40.964 -16.902  48.258  1.00190.11           C
ATOM   9477  C   THR B2241     -41.103 -15.537  47.591  1.00190.26           C
ATOM   9478  O   THR B2241     -41.053 -14.500  48.260  1.00190.17           O
ATOM   9479  CB  THR B2241     -39.589 -17.549  47.898  1.00190.21           C
ATOM   9480  OG1 THR B2241     -39.257 -18.516  48.898  1.00190.25           O
ATOM   9481  CG2 THR B2241     -38.436 -16.498  47.792  1.00189.68           C
ATOM   9482  N   GLY B2242     -41.280 -15.550  46.271  1.00190.37           N
ATOM   9483  CA  GLY B2242     -41.391 -14.324  45.500  1.00190.40           C
ATOM   9484  C   GLY B2242     -41.566 -14.566  44.020  1.00190.43           C
ATOM   9485  O   GLY B2242     -41.292 -15.663  43.526  1.00190.21           O
ATOM   9486  N   VAL B2243     -42.018 -13.520  43.328  1.00190.71           N
ATOM   9487  CA  VAL B2243     -42.311 -13.558  41.893  1.00191.24           C
ATOM   9488  C   VAL B2243     -41.196 -12.924  41.059  1.00191.79           C
ATOM   9489  O   VAL B2243     -40.800 -11.779  41.320  1.00191.97           O
ATOM   9490  CB  VAL B2243     -43.636 -12.837  41.556  1.00191.10           C
ATOM   9491  CG1 VAL B2243     -44.842 -13.702  41.914  1.00191.09           C
ATOM   9492  CG2 VAL B2243     -43.702 -11.487  42.248  1.00190.95           C
ATOM   9493  N   THR B2244     -40.705 -13.674  40.062  1.00192.31           N
ATOM   9494  CA  THR B2244     -39.618 -13.240  39.166  1.00192.63           C
ATOM   9495  C   THR B2244     -40.232 -12.600  37.933  1.00192.95           C
ATOM   9496  O   THR B2244     -40.903 -13.280  37.151  1.00193.04           O
ATOM   9497  CB  THR B2244     -38.705 -14.428  38.736  1.00192.49           C
ATOM   9498  OG1 THR B2244     -37.936 -14.890  39.850  1.00192.44           O
ATOM   9499  CG2 THR B2244     -37.741 -13.993  37.686  1.00192.57           C
ATOM   9500  N   THR B2245     -40.018 -11.295  37.771  1.00193.29           N
ATOM   9501  CA  THR B2245     -40.672 -10.562  36.689  1.00193.81           C
ATOM   9502  C   THR B2245     -39.702 -10.178  35.594  1.00194.29           C
ATOM   9503  O   THR B2245     -38.485 -10.148  35.804  1.00194.22           O
ATOM   9504  CB  THR B2245     -41.456  -9.311  37.167  1.00193.76           C
ATOM   9505  OG1 THR B2245     -40.710  -8.615  38.172  1.00194.09           O
ATOM   9506  CG2 THR B2245     -42.829  -9.698  37.708  1.00193.41           C
ATOM   9507  N   GLN B2246     -40.280  -9.866  34.435  1.00194.97           N
ATOM   9508  CA  GLN B2246     -39.557  -9.640  33.197  1.00195.54           C
ATOM   9509  C   GLN B2246     -40.504  -9.015  32.161  1.00196.00           C
ATOM   9510  O   GLN B2246     -41.730  -9.117  32.274  1.00195.87           O
ATOM   9511  CB  GLN B2246     -39.022 -10.977  32.700  1.00195.48           C
ATOM   9512  CG  GLN B2246     -37.955 -10.896  31.657  1.00195.68           C
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ATOM	9513	CD	GLN	B2246	-38.166	-11.941	30.594	1.00196.17	C
ATOM	9514	OE1	GLN	B2246	-39.293	-12.372	30.356	1.00195.77	O
ATOM	9515	NE2	GLN	B2246	-37.085	-12.359	29.945	1.00197.14	N
ATOM	9516	N	GLY	B2247	-39.927	-8.356	31.161	1.00196.72	N
ATOM	9517	CA	GLY	B2247	-40.697	-7.772	30.059	1.00197.51	C
ATOM	9518	C	GLY	B2247	-40.574	-8.508	28.730	1.00197.97	C
ATOM	9519	O	GLY	B2247	-40.037	-9.617	28.666	1.00198.18	O
ATOM	9520	N	VAL	B2248	-41.077	-7.901	27.660	1.00198.26	N
ATOM	9521	CA	VAL	B2248	-41.067	-8.560	26.366	1.00198.59	C
ATOM	9522	C	VAL	B2248	-40.279	-7.783	25.347	1.00199.12	C
ATOM	9523	O	VAL	B2248	-40.240	-6.543	25.362	1.00199.12	O
ATOM	9524	CB	VAL	B2248	-42.478	-8.816	25.814	1.00198.42	C
ATOM	9525	CG1	VAL	B2248	-43.357	-9.330	26.894	1.00198.57	C
ATOM	9526	CG2	VAL	B2248	-43.080	-7.552	25.239	1.00198.38	C
ATOM	9527	N	LYS	B2249	-39.653	-8.548	24.463	1.00199.81	N
ATOM	9528	CA	LYS	B2249	-38.931	-8.032	23.302	1.00200.34	C
ATOM	9529	C	LYS	B2249	-39.867	-8.139	22.082	1.00200.37	C
ATOM	9530	O	LYS	B2249	-39.931	-9.192	21.423	1.00200.75	O
ATOM	9531	CB	LYS	B2249	-37.620	-8.835	23.101	1.00200.59	C
ATOM	9532	CG	LYS	B2249	-37.631	-10.303	23.654	1.00200.51	C
ATOM	9533	CD	LYS	B2249	-36.842	-11.273	22.775	1.00200.36	C
ATOM	9534	CE	LYS	B2249	-37.623	-11.621	21.503	1.00200.43	C
ATOM	9535	NZ	LYS	B2249	-36.797	-11.504	20.258	1.00200.36	N
ATOM	9536	N	SER	B2250	-40.608	-7.065	21.790	1.00200.00	N
ATOM	9537	CA	SER	B2250	-41.703	-7.156	20.806	1.00199.57	C
ATOM	9538	C	SER	B2250	-41.292	-6.934	19.346	1.00199.54	C
ATOM	9539	O	SER	B2250	-42.167	-6.745	18.485	1.00199.62	O
ATOM	9540	CB	SER	B2250	-42.854	-6.220	21.168	1.00199.43	C
ATOM	9541	OG	SER	B2250	-43.972	-6.464	20.333	1.00198.74	O
ATOM	9542	N	LEU	B2251	-39.977	-6.974	19.080	1.00199.21	N
ATOM	9543	CA	LEU	B2251	-39.364	-6.603	17.774	1.00198.56	C
ATOM	9544	C	LEU	B2251	-39.794	-5.181	17.290	1.00198.23	C
ATOM	9545	O	LEU	B2251	-39.048	-4.489	16.576	1.00198.30	O
ATOM	9546	CB	LEU	B2251	-39.533	-7.714	16.699	1.00198.41	C
ATOM	9547	CG	LEU	B2251	-38.890	-9.116	16.865	1.00197.57	C
ATOM	9548	CD1	LEU	B2251	-37.538	-9.075	17.592	1.00196.67	C
ATOM	9549	CD2	LEU	B2251	-39.817	-10.138	17.535	1.00196.33	C
ATOM	9550	N	LEU	B2252	-40.994	-4.770	17.712	1.00197.45	N
ATOM	9551	CA	LEU	B2252	-41.473	-3.394	17.649	1.00196.77	C
ATOM	9552	C	LEU	B2252	-40.558	-2.518	18.525	1.00196.34	C
ATOM	9553	O	LEU	B2252	-39.536	-1.995	18.037	1.00196.04	O
ATOM	9554	CB	LEU	B2252	-42.944	-3.360	18.121	1.00196.80	C
ATOM	9555	CG	LEU	B2252	-43.862	-2.123	18.128	1.00197.09	C
ATOM	9556	CD1	LEU	B2252	-44.182	-1.590	16.719	1.00196.32	C
ATOM	9557	CD2	LEU	B2252	-45.157	-2.406	18.918	1.00196.53	C
ATOM	9558	N	THR	B2253	-40.922	-2.397	19.809	1.00195.89	N
ATOM	9559	CA	THR	B2253	-40.164	-1.657	20.830	1.00195.58	C
ATOM	9560	C	THR	B2253	-39.970	-2.514	22.074	1.00195.50	C
ATOM	9561	O	THR	B2253	-40.418	-3.665	22.130	1.00195.62	O
ATOM	9562	CB	THR	B2253	-40.923	-0.416	21.330	1.00195.53	C
ATOM	9563	OG1	THR	B2253	-42.290	-0.771	21.565	1.00195.11	O
ATOM	9564	CG2	THR	B2253	-40.826	0.773	20.346	1.00195.77	C
ATOM	9565	N	SER	B2254	-39.313	-1.925	23.075	1.00195.26	N
ATOM	9566	CA	SER	B2254	-39.213	-2.501	24.417	1.00195.03	C
ATOM	9567	C	SER	B2254	-40.581	-2.510	25.099	1.00194.74	C
ATOM	9568	O	SER	B2254	-41.419	-1.670	24.791	1.00194.80	O
ATOM	9569	CB	SER	B2254	-38.231	-1.688	25.269	1.00195.00	C
ATOM	9570	OG	SER	B2254	-36.902	-2.165	25.144	1.00195.23	O
ATOM	9571	N	MET	B2255	-40.801	-3.460	26.010	1.00194.37	N
ATOM	9572	CA	MET	B2255	-41.992	-3.478	26.877	1.00194.00	C
ATOM	9573	C	MET	B2255	-41.738	-4.232	28.174	1.00194.00	C
ATOM	9574	O	MET	B2255	-41.300	-5.381	28.129	1.00194.18	O
ATOM	9575	CB	MET	B2255	-43.159	-4.122	26.162	1.00193.88	C
ATOM	9576	CG	MET	B2255	-44.235	-3.166	25.774	1.00193.75	C
ATOM	9577	SD	MET	B2255	-45.301	-3.935	24.552	1.00193.81	S
ATOM	9578	CE	MET	B2255	-44.291	-3.789	23.077	1.00194.50	C
ATOM	9579	N	TYR	B2256	-42.012	-3.586	29.314	1.00193.78	N
ATOM	9580	CA	TYR	B2256	-41.781	-4.161	30.661	1.00193.66	C
ATOM	9581	C	TYR	B2256	-42.553	-3.407	31.745	1.00193.63	C
ATOM	9582	O	TYR	B2256	-43.038	-2.303	31.490	1.00193.81	O
ATOM	9583	CB	TYR	B2256	-40.282	-4.213	31.023	1.00193.58	C

ATOM	9584	CG	TYR	B2256	-39.545	-2.885	30.979	1.00193.43	C
ATOM	9585	CD1	TYR	B2256	-39.605	-1.987	32.041	1.00193.22	C
ATOM	9586	CD2	TYR	B2256	-38.765	-2.541	29.881	1.00193.71	C
ATOM	9587	CE1	TYR	B2256	-38.921	-0.771	31.999	1.00193.41	C
ATOM	9588	CE2	TYR	B2256	-38.074	-1.328	29.827	1.00193.70	C
ATOM	9589	CZ	TYR	B2256	-38.153	-0.449	30.889	1.00193.59	C
ATOM	9590	OH	TYR	B2256	-37.472	0.753	30.830	1.00193.80	O
ATOM	9591	N	VAL	B2257	-42.658	-3.990	32.945	1.00193.40	N
ATOM	9592	CA	VAL	B2257	-43.367	-3.340	34.056	1.00193.13	C
ATOM	9593	C	VAL	B2257	-42.414	-2.891	35.160	1.00193.58	C
ATOM	9594	O	VAL	B2257	-41.648	-3.696	35.697	1.00193.51	O
ATOM	9595	CB	VAL	B2257	-44.456	-4.225	34.648	1.00192.76	C
ATOM	9596	CG1	VAL	B2257	-45.305	-3.422	35.580	1.00192.34	C
ATOM	9597	CG2	VAL	B2257	-45.318	-4.792	33.557	1.00192.53	C
ATOM	9598	N	LYS	B2258	-42.495	-1.601	35.493	1.00194.12	N
ATOM	9599	CA	LYS	B2258	-41.541	-0.910	36.374	1.00194.65	C
ATOM	9600	C	LYS	B2258	-41.806	-1.102	37.874	1.00194.88	C
ATOM	9601	O	LYS	B2258	-40.861	-1.286	38.642	1.00194.93	O
ATOM	9602	CB	LYS	B2258	-41.510	0.588	36.030	1.00194.66	C
ATOM	9603	CG	LYS	B2258	-40.444	1.415	36.748	1.00195.52	C
ATOM	9604	CD	LYS	B2258	-39.037	0.886	36.476	1.00196.92	C
ATOM	9605	CE	LYS	B2258	-37.986	1.997	36.525	1.00197.61	C
ATOM	9606	NZ	LYS	B2258	-37.565	2.330	37.913	1.00197.90	N
ATOM	9607	N	GLU	B2259	-43.082	-1.029	38.272	1.00195.15	N
ATOM	9608	CA	GLU	B2259	-43.532	-1.226	39.663	1.00195.23	C
ATOM	9609	C	GLU	B2259	-44.840	-1.991	39.719	1.00195.34	C
ATOM	9610	O	GLU	B2259	-45.714	-1.785	38.882	1.00195.46	O
ATOM	9611	CB	GLU	B2259	-43.784	0.107	40.345	1.00195.08	C
ATOM	9612	CG	GLU	B2259	-42.565	0.823	40.799	1.00195.57	C
ATOM	9613	CD	GLU	B2259	-42.818	2.299	40.892	1.00196.70	C
ATOM	9614	OE1	GLU	B2259	-43.581	2.716	41.792	1.00197.22	O
ATOM	9615	OE2	GLU	B2259	-42.264	3.044	40.052	1.00197.52	O
ATOM	9616	N	PHE	B2260	-45.002	-2.837	40.730	1.00195.55	N
ATOM	9617	CA	PHE	B2260	-46.262	-3.562	40.892	1.00195.79	C
ATOM	9618	C	PHE	B2260	-46.676	-3.894	42.337	1.00196.08	C
ATOM	9619	O	PHE	B2260	-45.928	-3.662	43.295	1.00196.01	O
ATOM	9620	CB	PHE	B2260	-46.265	-4.824	40.024	1.00195.65	C
ATOM	9621	CG	PHE	B2260	-45.308	-5.884	40.481	1.00195.68	C
ATOM	9622	CD1	PHE	B2260	-45.782	-7.082	40.991	1.00195.46	C
ATOM	9623	CD2	PHE	B2260	-43.930	-5.695	40.387	1.00195.90	C
ATOM	9624	CE1	PHE	B2260	-44.899	-8.073	41.404	1.00195.60	C
ATOM	9625	CE2	PHE	B2260	-43.040	-6.684	40.801	1.00195.79	C
ATOM	9626	CZ	PHE	B2260	-43.525	-7.872	41.310	1.00195.47	C
ATOM	9627	N	LEU	B2261	-47.896	-4.414	42.461	1.00196.41	N
ATOM	9628	CA	LEU	B2261	-48.459	-4.878	43.719	1.00196.73	C
ATOM	9629	C	LEU	B2261	-48.789	-6.352	43.579	1.00197.29	C
ATOM	9630	O	LEU	B2261	-48.794	-6.886	42.466	1.00197.30	O
ATOM	9631	CB	LEU	B2261	-49.746	-4.125	44.031	1.00196.43	C
ATOM	9632	CG	LEU	B2261	-49.729	-2.617	43.848	1.00195.96	C
ATOM	9633	CD1	LEU	B2261	-51.123	-2.059	44.003	1.00195.60	C
ATOM	9634	CD2	LEU	B2261	-48.771	-1.979	44.835	1.00195.91	C
ATOM	9635	N	ILE	B2262	-49.061	-7.009	44.705	1.00198.00	N
ATOM	9636	CA	ILE	B2262	-49.578	-8.379	44.673	1.00198.66	C
ATOM	9637	C	ILE	B2262	-50.794	-8.552	45.580	1.00199.37	C
ATOM	9638	O	ILE	B2262	-50.945	-7.840	46.577	1.00199.38	O
ATOM	9639	CB	ILE	B2262	-48.516	-9.435	45.055	1.00198.48	C
ATOM	9640	CG1	ILE	B2262	-47.110	-8.852	45.015	1.00198.00	C
ATOM	9641	CG2	ILE	B2262	-48.623	-10.654	44.140	1.00198.36	C
ATOM	9642	CD1	ILE	B2262	-46.040	-9.870	45.266	1.00197.46	C
ATOM	9643	N	SER	B2263	-51.655	-9.501	45.215	1.00200.32	N
ATOM	9644	CA	SER	B2263	-52.790	-9.891	46.053	1.00201.48	C
ATOM	9645	C	SER	B2263	-52.896	-11.417	46.265	1.00202.09	C
ATOM	9646	O	SER	B2263	-52.542	-12.209	45.381	1.00202.28	O
ATOM	9647	CB	SER	B2263	-54.107	-9.298	45.515	1.00201.56	C
ATOM	9648	OG	SER	B2263	-54.449	-9.787	44.226	1.00202.02	O
ATOM	9649	N	SER	B2264	-53.374	-11.818	47.444	1.00202.73	N
ATOM	9650	CA	SER	B2264	-53.528	-13.232	47.781	1.00203.30	C
ATOM	9651	C	SER	B2264	-54.980	-13.602	48.074	1.00203.68	C
ATOM	9652	O	SER	B2264	-55.792	-12.746	48.453	1.00203.89	O
ATOM	9653	CB	SER	B2264	-52.651	-13.593	48.981	1.00203.34	C
ATOM	9654	OG	SER	B2264	-52.918	-12.751	50.094	1.00203.67	O

ATOM	9655	N	SER	B2265	-55.293	-14.884	47.902	1.00204.01	N
ATOM	9656	CA	SER	B2265	-56.619	-15.411	48.213	1.00204.28	C
ATOM	9657	C	SER	B2265	-56.577	-16.894	48.589	1.00204.43	C
ATOM	9658	O	SER	B2265	-55.662	-17.624	48.195	1.00204.55	O
ATOM	9659	CB	SER	B2265	-57.563	-15.202	47.028	1.00204.21	C
ATOM	9660	OG	SER	B2265	-58.895	-15.531	47.368	1.00204.40	O
ATOM	9661	N	GLN	B2266	-57.569	-17.325	49.363	1.00204.51	N
ATOM	9662	CA	GLN	B2266	-57.776	-18.742	49.634	1.00204.49	C
ATOM	9663	C	GLN	B2266	-59.003	-19.219	48.885	1.00204.63	C
ATOM	9664	O	GLN	B2266	-59.031	-20.341	48.375	1.00204.64	O
ATOM	9665	CB	GLN	B2266	-57.920	-19.005	51.134	1.00204.41	C
ATOM	9666	CG	GLN	B2266	-56.673	-18.681	51.947	1.00204.16	C
ATOM	9667	CD	GLN	B2266	-55.377	-18.922	51.179	1.00203.81	C
ATOM	9668	OE1	GLN	B2266	-55.131	-20.018	50.659	1.00203.20	O
ATOM	9669	NE2	GLN	B2266	-54.542	-17.888	51.104	1.00203.78	N
ATOM	9670	N	ASP	B2267	-60.005	-18.344	48.816	1.00204.84	N
ATOM	9671	CA	ASP	B2267	-61.257	-18.609	48.103	1.00205.11	C
ATOM	9672	C	ASP	B2267	-61.130	-18.500	46.574	1.00205.18	C
ATOM	9673	O	ASP	B2267	-61.759	-19.264	45.835	1.00205.24	O
ATOM	9674	CB	ASP	B2267	-62.405	-17.725	48.639	1.00205.15	C
ATOM	9675	CG	ASP	B2267	-62.025	-16.244	48.760	1.00205.23	C
ATOM	9676	OD1	ASP	B2267	-62.885	-15.386	48.464	1.00205.07	O
ATOM	9677	OD2	ASP	B2267	-60.885	-15.932	49.165	1.00205.55	O
ATOM	9678	N	GLY	B2268	-60.318	-17.554	46.107	1.00205.26	N
ATOM	9679	CA	GLY	B2268	-60.093	-17.365	44.672	1.00205.35	C
ATOM	9680	C	GLY	B2268	-61.096	-16.453	43.990	1.00205.38	C
ATOM	9681	O	GLY	B2268	-61.135	-16.380	42.753	1.00205.41	O
ATOM	9682	N	HIS	B2269	-61.901	-15.764	44.806	1.00205.32	N
ATOM	9683	CA	HIS	B2269	-62.953	-14.853	44.332	1.00205.19	C
ATOM	9684	C	HIS	B2269	-62.987	-13.537	45.133	1.00204.75	C
ATOM	9685	O	HIS	B2269	-63.585	-12.555	44.692	1.00204.77	O
ATOM	9686	CB	HIS	B2269	-64.331	-15.545	44.348	1.00205.40	C
ATOM	9687	CG	HIS	B2269	-64.307	-16.977	43.886	1.00206.32	C
ATOM	9688	ND1	HIS	B2269	-64.590	-18.037	44.725	1.00206.98	N
ATOM	9689	CD2	HIS	B2269	-64.027	-17.523	42.677	1.00206.98	C
ATOM	9690	CE1	HIS	B2269	-64.489	-19.171	44.053	1.00206.95	C
ATOM	9691	NE2	HIS	B2269	-64.145	-18.887	42.809	1.00207.16	N
ATOM	9692	N	GLN	B2270	-62.344	-13.530	46.302	1.00204.23	N
ATOM	9693	CA	GLN	B2270	-62.176	-12.319	47.116	1.00203.80	C
ATOM	9694	C	GLN	B2270	-60.751	-12.239	47.673	1.00203.34	C
ATOM	9695	O	GLN	B2270	-60.174	-13.259	48.047	1.00203.42	O
ATOM	9696	CB	GLN	B2270	-63.209	-12.271	48.238	1.00203.92	C
ATOM	9697	CG	GLN	B2270	-63.412	-10.883	48.805	1.00204.37	C
ATOM	9698	CD	GLN	B2270	-64.866	-10.467	48.803	1.00204.78	C
ATOM	9699	OE1	GLN	B2270	-65.729	-11.173	49.330	1.00204.81	O
ATOM	9700	NE2	GLN	B2270	-65.149	-9.311	48.205	1.00204.84	N
ATOM	9701	N	TRP	B2271	-60.194	-11.032	47.749	1.00202.67	N
ATOM	9702	CA	TRP	B2271	-58.735	-10.889	47.773	1.00202.14	C
ATOM	9703	C	TRP	B2271	-58.127	-10.047	48.900	1.00201.93	C
ATOM	9704	O	TRP	B2271	-58.381	-8.851	48.995	1.00201.86	O
ATOM	9705	CB	TRP	B2271	-58.271	-10.363	46.407	1.00201.97	C
ATOM	9706	CG	TRP	B2271	-58.845	-11.151	45.262	1.00201.61	C
ATOM	9707	CD1	TRP	B2271	-60.068	-10.978	44.667	1.00201.39	C
ATOM	9708	CD2	TRP	B2271	-58.233	-12.254	44.600	1.00201.11	C
ATOM	9709	NE1	TRP	B2271	-60.247	-11.906	43.671	1.00201.02	N
ATOM	9710	CE2	TRP	B2271	-59.134	-12.700	43.608	1.00201.10	C
ATOM	9711	CE3	TRP	B2271	-57.004	-12.906	44.744	1.00200.79	C
ATOM	9712	CZ2	TRP	B2271	-58.844	-13.769	42.768	1.00201.27	C
ATOM	9713	CZ3	TRP	B2271	-56.717	-13.962	43.913	1.00201.18	C
ATOM	9714	CH2	TRP	B2271	-57.632	-14.386	42.937	1.00201.41	C
ATOM	9715	N	THR	B2272	-57.311	-10.678	49.739	0.50201.82	N
ATOM	9716	CA	THR	B2272	-56.538	-9.958	50.746	0.50201.78	C
ATOM	9717	C	THR	B2272	-55.158	-9.699	50.160	0.50201.79	C
ATOM	9718	O	THR	B2272	-54.384	-10.631	49.965	0.50201.67	O
ATOM	9719	CB	THR	B2272	-56.414	-10.760	52.063	0.50201.80	C
ATOM	9720	OG1	THR	B2272	-57.692	-11.295	52.428	0.50201.85	O
ATOM	9721	CG2	THR	B2272	-55.900	-9.876	53.196	0.50201.70	C
ATOM	9722	N	LEU	B2273	-54.853	-8.438	49.871	1.00201.95	N
ATOM	9723	CA	LEU	B2273	-53.607	-8.106	49.153	1.00202.29	C
ATOM	9724	C	LEU	B2273	-52.357	-8.026	50.052	1.00202.64	C
ATOM	9725	O	LEU	B2273	-52.455	-8.200	51.267	1.00202.67	O

ATOM	9726	CB	LEU	B2273	-53.786	-6.872	48.234	1.00202.17	C
ATOM	9727	CG	LEU	B2273	-53.412	-5.419	48.546	1.00201.45	C
ATOM	9728	CD1	LEU	B2273	-52.079	-5.068	47.921	1.00200.36	C
ATOM	9729	CD2	LEU	B2273	-54.482	-4.511	47.990	1.00200.62	C
ATOM	9730	N	PHE	B2274	-51.193	-7.783	49.441	1.00203.05	N
ATOM	9731	CA	PHE	B2274	-49.906	-7.789	50.146	1.00203.50	C
ATOM	9732	C	PHE	B2274	-49.551	-6.451	50.790	1.00204.00	C
ATOM	9733	O	PHE	B2274	-49.823	-5.385	50.222	1.00204.22	O
ATOM	9734	CB	PHE	B2274	-48.770	-8.211	49.207	1.00203.30	C
ATOM	9735	CG	PHE	B2274	-47.519	-8.656	49.927	1.00203.14	C
ATOM	9736	CD1	PHE	B2274	-46.500	-7.754	50.211	1.00203.20	C
ATOM	9737	CD2	PHE	B2274	-47.361	-9.981	50.323	1.00202.75	C
ATOM	9738	CE1	PHE	B2274	-45.345	-8.169	50.882	1.00203.11	C
ATOM	9739	CE2	PHE	B2274	-46.206	-10.400	50.988	1.00202.40	C
ATOM	9740	CZ	PHE	B2274	-45.200	-9.493	51.265	1.00202.54	C
ATOM	9741	N	PHE	B2275	-48.914	-6.531	51.962	1.00204.48	N
ATOM	9742	CA	PHE	B2275	-48.517	-5.359	52.751	1.00204.77	C
ATOM	9743	C	PHE	B2275	-47.077	-5.387	53.268	1.00204.70	C
ATOM	9744	O	PHE	B2275	-46.458	-6.445	53.408	1.00204.49	O
ATOM	9745	CB	PHE	B2275	-49.467	-5.169	53.934	1.00205.09	C
ATOM	9746	CG	PHE	B2275	-50.714	-4.405	53.596	1.00205.78	C
ATOM	9747	CD1	PHE	B2275	-51.818	-5.051	53.041	1.00206.42	C
ATOM	9748	CD2	PHE	B2275	-50.790	-3.036	53.841	1.00206.55	C
ATOM	9749	CE1	PHE	B2275	-52.982	-4.340	52.729	1.00206.83	C
ATOM	9750	CE2	PHE	B2275	-51.950	-2.310	53.537	1.00206.95	C
ATOM	9751	CZ	PHE	B2275	-53.048	-2.964	52.980	1.00206.63	C
ATOM	9752	N	GLN	B2276	-46.569	-4.195	53.559	1.00204.79	N
ATOM	9753	CA	GLN	B2276	-45.251	-4.013	54.141	1.00204.98	C
ATOM	9754	C	GLN	B2276	-45.309	-4.244	55.639	1.00204.79	C
ATOM	9755	O	GLN	B2276	-45.803	-5.269	56.115	1.00204.92	O
ATOM	9756	CB	GLN	B2276	-44.772	-2.576	53.892	1.00205.17	C
ATOM	9757	CG	GLN	B2276	-44.023	-2.354	52.589	1.00206.22	C
ATOM	9758	CD	GLN	B2276	-42.557	-2.762	52.664	1.00207.22	C
ATOM	9759	OE1	GLN	B2276	-42.159	-3.569	53.510	1.00207.55	O
ATOM	9760	NE2	GLN	B2276	-41.747	-2.208	51.765	1.00207.61	N
ATOM	9761	N	ASN	B2277	-44.771	-3.264	56.359	1.00204.50	N
ATOM	9762	CA	ASN	B2277	-44.916	-3.101	57.800	1.00204.12	C
ATOM	9763	C	ASN	B2277	-45.854	-1.917	58.041	1.00203.67	C
ATOM	9764	O	ASN	B2277	-46.213	-1.601	59.180	1.00203.57	O
ATOM	9765	CB	ASN	B2277	-43.542	-2.846	58.429	1.00204.26	C
ATOM	9766	CG	ASN	B2277	-42.515	-2.305	57.419	1.00204.51	C
ATOM	9767	OD1	ASN	B2277	-42.849	-1.535	56.508	1.00204.52	O
ATOM	9768	ND2	ASN	B2277	-41.260	-2.718	57.581	1.00204.71	N
ATOM	9769	N	GLY	B2278	-46.230	-1.274	56.933	1.00203.15	N
ATOM	9770	CA	GLY	B2278	-47.219	-0.199	56.898	1.00202.51	C
ATOM	9771	C	GLY	B2278	-48.188	-0.417	55.744	1.00201.98	C
ATOM	9772	O	GLY	B2278	-48.912	-1.414	55.729	1.00202.07	O
ATOM	9773	N	LYS	B2279	-48.193	0.501	54.771	1.00201.29	N
ATOM	9774	CA	LYS	B2279	-49.095	0.418	53.609	1.00200.38	C
ATOM	9775	C	LYS	B2279	-48.656	-0.677	52.632	1.00199.83	C
ATOM	9776	O	LYS	B2279	-47.785	-1.490	52.947	1.00199.59	O
ATOM	9777	CB	LYS	B2279	-49.225	1.773	52.883	1.00200.32	C
ATOM	9778	CG	LYS	B2279	-49.522	3.010	53.751	1.00199.96	C
ATOM	9779	CD	LYS	B2279	-50.852	2.947	54.498	1.00199.61	C
ATOM	9780	CE	LYS	B2279	-50.635	2.666	55.980	1.00199.56	C
ATOM	9781	NZ	LYS	B2279	-51.868	2.840	56.790	1.00199.52	N
ATOM	9782	N	VAL	B2280	-49.273	-0.694	51.453	1.00199.24	N
ATOM	9783	CA	VAL	B2280	-49.032	-1.735	50.454	1.00198.75	C
ATOM	9784	C	VAL	B2280	-47.591	-1.749	49.980	1.00198.58	C
ATOM	9785	O	VAL	B2280	-46.871	-0.757	50.128	1.00198.48	O
ATOM	9786	CB	VAL	B2280	-49.952	-1.587	49.231	1.00198.67	C
ATOM	9787	CG1	VAL	B2280	-51.340	-2.095	49.551	1.00198.52	C
ATOM	9788	CG2	VAL	B2280	-49.991	-0.140	48.758	1.00198.59	C
ATOM	9789	N	LYS	B2281	-47.179	-2.879	49.409	1.00198.36	N
ATOM	9790	CA	LYS	B2281	-45.812	-3.029	48.952	1.00198.21	C
ATOM	9791	C	LYS	B2281	-45.628	-2.534	47.522	1.00198.61	C
ATOM	9792	O	LYS	B2281	-46.111	-3.142	46.564	1.00198.67	O
ATOM	9793	CB	LYS	B2281	-45.340	-4.469	49.098	1.00197.81	C
ATOM	9794	CG	LYS	B2281	-43.912	-4.678	48.632	1.00196.92	C
ATOM	9795	CD	LYS	B2281	-42.884	-4.231	49.633	1.00195.40	C
ATOM	9796	CE	LYS	B2281	-41.505	-4.724	49.249	1.00194.69	C

ATOM	9797	NZ	LYS	B2281	-40.579	-4.744	50.410	1.00193.93	N
ATOM	9798	N	VAL	B2282	-44.929	-1.409	47.404	1.00199.06	N
ATOM	9799	CA	VAL	B2282	-44.531	-0.846	46.124	1.00199.38	C
ATOM	9800	C	VAL	B2282	-43.360	-1.682	45.645	1.00199.62	C
ATOM	9801	O	VAL	B2282	-42.247	-1.545	46.159	1.00199.65	O
ATOM	9802	CB	VAL	B2282	-44.072	0.632	46.280	1.00199.43	C
ATOM	9803	CG1	VAL	B2282	-43.699	1.228	44.929	1.00199.67	C
ATOM	9804	CG2	VAL	B2282	-45.141	1.485	46.979	1.00199.30	C
ATOM	9805	N	PHE	B2283	-43.608	-2.564	44.681	1.00199.97	N
ATOM	9806	CA	PHE	B2283	-42.585	-3.533	44.275	1.00200.49	C
ATOM	9807	C	PHE	B2283	-41.579	-3.033	43.241	1.00200.72	C
ATOM	9808	O	PHE	B2283	-41.952	-2.437	42.228	1.00200.77	O
ATOM	9809	CB	PHE	B2283	-43.209	-4.856	43.832	1.00200.51	C
ATOM	9810	CG	PHE	B2283	-43.465	-5.805	44.965	1.00200.95	C
ATOM	9811	CD1	PHE	B2283	-44.763	-6.102	45.361	1.00201.66	C
ATOM	9812	CD2	PHE	B2283	-42.404	-6.391	45.655	1.00201.13	C
ATOM	9813	CE1	PHE	B2283	-44.999	-6.979	46.427	1.00201.70	C
ATOM	9814	CE2	PHE	B2283	-42.631	-7.271	46.721	1.00200.90	C
ATOM	9815	CZ	PHE	B2283	-43.928	-7.568	47.102	1.00201.03	C
ATOM	9816	N	GLN	B2284	-40.301	-3.293	43.515	1.00200.99	N
ATOM	9817	CA	GLN	B2284	-39.223	-2.855	42.637	1.00201.27	C
ATOM	9818	C	GLN	B2284	-39.084	-3.780	41.450	1.00201.41	C
ATOM	9819	O	GLN	B2284	-38.492	-4.850	41.561	1.00201.53	O
ATOM	9820	CB	GLN	B2284	-37.896	-2.732	43.393	1.00201.29	C
ATOM	9821	CG	GLN	B2284	-37.770	-1.451	44.227	1.00201.48	C
ATOM	9822	CD	GLN	B2284	-38.111	-0.155	43.462	1.00201.14	C
ATOM	9823	OE1	GLN	B2284	-38.359	-0.161	42.252	1.00200.87	O
ATOM	9824	NE2	GLN	B2284	-38.121	0.962	44.183	1.00200.97	N
ATOM	9825	N	GLY	B2285	-39.631	-3.351	40.314	1.00201.62	N
ATOM	9826	CA	GLY	B2285	-39.721	-4.193	39.116	1.00201.80	C
ATOM	9827	C	GLY	B2285	-38.655	-4.006	38.044	1.00201.78	C
ATOM	9828	O	GLY	B2285	-37.544	-3.528	38.317	1.00202.10	O
ATOM	9829	N	ASN	B2286	-39.014	-4.387	36.819	1.00201.37	N
ATOM	9830	CA	ASN	B2286	-38.089	-4.445	35.694	1.00200.93	C
ATOM	9831	C	ASN	B2286	-37.491	-3.116	35.244	1.00200.67	C
ATOM	9832	O	ASN	B2286	-37.773	-2.052	35.812	1.00200.56	O
ATOM	9833	CB	ASN	B2286	-38.803	-5.051	34.492	1.00200.97	C
ATOM	9834	CG	ASN	B2286	-39.085	-6.502	34.661	1.00200.69	C
ATOM	9835	OD1	ASN	B2286	-38.169	-7.318	34.792	1.00200.52	O
ATOM	9836	ND2	ASN	B2286	-40.363	-6.849	34.632	1.00200.38	N
ATOM	9837	N	GLN	B2287	-36.668	-3.215	34.198	1.00200.27	N
ATOM	9838	CA	GLN	B2287	-36.191	-2.070	33.432	1.00199.79	C
ATOM	9839	C	GLN	B2287	-35.808	-2.407	31.975	1.00199.38	C
ATOM	9840	O	GLN	B2287	-35.260	-1.555	31.271	1.00199.41	O
ATOM	9841	CB	GLN	B2287	-35.030	-1.393	34.152	1.00199.84	C
ATOM	9842	CG	GLN	B2287	-33.823	-2.275	34.348	1.00200.46	C
ATOM	9843	CD	GLN	B2287	-32.889	-1.707	35.377	1.00201.40	C
ATOM	9844	OE1	GLN	B2287	-33.256	-1.573	36.547	1.00202.15	O
ATOM	9845	NE2	GLN	B2287	-31.673	-1.357	34.955	1.00201.43	N
ATOM	9846	N	ASP	B2288	-36.105	-3.629	31.521	1.00198.88	N
ATOM	9847	CA	ASP	B2288	-35.783	-4.045	30.141	1.00198.35	C
ATOM	9848	C	ASP	B2288	-36.647	-5.161	29.544	1.00197.93	C
ATOM	9849	O	ASP	B2288	-37.349	-5.880	30.253	1.00197.58	O
ATOM	9850	CB	ASP	B2288	-34.285	-4.373	29.979	1.00198.42	C
ATOM	9851	CG	ASP	B2288	-33.715	-5.154	31.153	1.00198.43	C
ATOM	9852	OD1	ASP	B2288	-32.480	-5.355	31.182	1.00198.10	O
ATOM	9853	OD2	ASP	B2288	-34.492	-5.560	32.047	1.00198.71	O
ATOM	9854	N	SER	B2289	-36.579	-5.270	28.218	1.00197.72	N
ATOM	9855	CA	SER	B2289	-37.192	-6.348	27.443	1.00197.47	C
ATOM	9856	C	SER	B2289	-36.835	-7.708	28.024	1.00197.04	C
ATOM	9857	O	SER	B2289	-37.661	-8.607	28.057	1.00196.86	O
ATOM	9858	CB	SER	B2289	-36.705	-6.299	25.980	1.00197.74	C
ATOM	9859	OG	SER	B2289	-37.165	-5.150	25.277	1.00198.12	O
ATOM	9860	N	PHE	B2290	-35.584	-7.842	28.455	1.00196.68	N
ATOM	9861	CA	PHE	B2290	-35.071	-9.066	29.066	1.00196.39	C
ATOM	9862	C	PHE	B2290	-34.855	-8.872	30.580	1.00196.17	C
ATOM	9863	O	PHE	B2290	-35.605	-8.114	31.216	1.00196.38	O
ATOM	9864	CB	PHE	B2290	-33.791	-9.533	28.353	1.00196.35	C
ATOM	9865	CG	PHE	B2290	-32.815	-8.419	28.036	1.00196.45	C
ATOM	9866	CD1	PHE	B2290	-31.662	-8.249	28.799	1.00196.27	C
ATOM	9867	CD2	PHE	B2290	-33.039	-7.553	26.960	1.00196.74	C

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ATOM   9868  CE1 PHE B2290     -30.750  -7.232  28.506  1.00196.21           C
ATOM   9869  CE2 PHE B2290     -32.134  -6.529  26.660  1.00196.63           C
ATOM   9870  CZ  PHE B2290     -30.986  -6.373  27.433  1.00196.46           C
ATOM   9871  N   THR B2291     -33.854  -9.562  31.142  1.00195.54           N
ATOM   9872  CA  THR B2291     -33.468  -9.478  32.568  1.00194.75           C
ATOM   9873  C   THR B2291     -34.614  -9.690  33.558  1.00194.20           C
ATOM   9874  O   THR B2291     -35.597  -8.951  33.575  1.00194.02           O
ATOM   9875  CB  THR B2291     -32.686  -8.173  32.909  1.00194.82           C
ATOM   9876  OG1 THR B2291     -31.636  -7.972  31.956  1.00194.92           O
ATOM   9877  CG2 THR B2291     -32.076  -8.235  34.306  1.00194.73           C
ATOM   9878  N   PRO B2292     -34.476 -10.712  34.394  1.00193.84           N
ATOM   9879  CA  PRO B2292     -35.478 -11.034  35.374  1.00193.88           C
ATOM   9880  C   PRO B2292     -35.226 -10.357  36.734  1.00193.96           C
ATOM   9881  O   PRO B2292     -34.175  -9.742  36.932  1.00193.79           O
ATOM   9882  CB  PRO B2292     -35.357 -12.553  35.473  1.00193.89           C
ATOM   9883  CG  PRO B2292     -33.947 -12.868  35.077  1.00193.82           C
ATOM   9884  CD  PRO B2292     -33.347 -11.651  34.445  1.00193.80           C
ATOM   9885  N   VAL B2293     -36.190 -10.473  37.655  1.00194.19           N
ATOM   9886  CA  VAL B2293     -36.117  -9.795  38.969  1.00194.34           C
ATOM   9887  C   VAL B2293     -36.291 -10.681  40.261  1.00194.43           C
ATOM   9888  O   VAL B2293     -37.407 -11.130  40.582  1.00194.09           O
ATOM   9889  CB  VAL B2293     -37.074  -8.552  38.995  1.00194.30           C
ATOM   9890  CG1 VAL B2293     -36.958  -7.802  40.307  1.00194.40           C
ATOM   9891  CG2 VAL B2293     -36.776  -7.602  37.827  1.00194.10           C
ATOM   9892  N   VAL B2294     -35.173 -10.926  40.975  1.00194.53           N
ATOM   9893  CA  VAL B2294     -35.169 -11.508  42.344  1.00194.33           C
ATOM   9894  C   VAL B2294     -36.044 -10.643  43.260  1.00194.40           C
ATOM   9895  O   VAL B2294     -35.534  -9.901  44.115  1.00194.65           O
ATOM   9896  CB  VAL B2294     -33.709 -11.637  43.018  1.00194.29           C
ATOM   9897  CG1 VAL B2294     -33.134 -13.041  42.903  1.00193.91           C
ATOM   9898  CG2 VAL B2294     -32.709 -10.560  42.538  1.00194.15           C
ATOM   9899  N   ASN B2295     -37.358 -10.723  43.075  1.00194.14           N
ATOM   9900  CA  ASN B2295     -38.278  -9.929  43.879  1.00194.09           C
ATOM   9901  C   ASN B2295     -39.060 -10.856  44.819  1.00194.05           C
ATOM   9902  O   ASN B2295     -40.006 -11.522  44.383  1.00194.12           O
ATOM   9903  CB  ASN B2295     -39.215  -9.127  42.962  1.00194.08           C
ATOM   9904  CG  ASN B2295     -39.390  -7.667  43.402  1.00194.26           C
ATOM   9905  OD1 ASN B2295     -38.567  -7.109  44.134  1.00194.63           O
ATOM   9906  ND2 ASN B2295     -40.466  -7.040  42.934  1.00194.40           N
ATOM   9907  N   SER B2296     -38.652 -10.918  46.093  1.00193.93           N
ATOM   9908  CA  SER B2296     -39.255 -11.862  47.060  1.00193.84           C
ATOM   9909  C   SER B2296     -40.011 -11.198  48.215  1.00193.73           C
ATOM   9910  O   SER B2296     -39.997  -9.972  48.356  1.00193.80           O
ATOM   9911  CB  SER B2296     -38.231 -12.899  47.574  1.00193.87           C
ATOM   9912  OG  SER B2296     -37.273 -12.328  48.448  1.00193.98           O
ATOM   9913  N   LEU B2297     -40.663 -12.013  49.041  1.00193.56           N
ATOM   9914  CA  LEU B2297     -41.625 -11.503  50.018  1.00193.51           C
ATOM   9915  C   LEU B2297     -41.179 -11.633  51.484  1.00193.52           C
ATOM   9916  O   LEU B2297     -40.655 -12.682  51.891  1.00193.47           O
ATOM   9917  CB  LEU B2297     -42.973 -12.194  49.800  1.00193.53           C
ATOM   9918  CG  LEU B2297     -43.399 -12.408  48.344  1.00193.05           C
ATOM   9919  CD1 LEU B2297     -44.582 -13.366  48.241  1.00192.85           C
ATOM   9920  CD2 LEU B2297     -43.715 -11.077  47.703  1.00192.84           C
ATOM   9921  N   ASP B2298     -41.399 -10.570  52.268  1.00193.42           N
ATOM   9922  CA  ASP B2298     -40.980 -10.534  53.684  1.00193.37           C
ATOM   9923  C   ASP B2298     -41.713 -11.589  54.516  1.00193.30           C
ATOM   9924  O   ASP B2298     -41.065 -12.468  55.093  1.00193.44           O
ATOM   9925  CB  ASP B2298     -41.111  -9.122  54.302  1.00193.36           C
ATOM   9926  CG  ASP B2298     -40.473  -9.014  55.703  1.00193.14           C
ATOM   9927  OD1 ASP B2298     -41.225  -8.939  56.697  1.00193.08           O
ATOM   9928  OD2 ASP B2298     -39.226  -8.998  55.818  1.00192.65           O
ATOM   9929  N   PRO B2299     -43.058 -11.516  54.589  1.00193.15           N
ATOM   9930  CA  PRO B2299     -43.697 -12.697  55.145  1.00192.98           C
ATOM   9931  C   PRO B2299     -43.992 -13.679  54.010  1.00192.64           C
ATOM   9932  O   PRO B2299     -44.800 -13.380  53.126  1.00192.65           O
ATOM   9933  CB  PRO B2299     -44.985 -12.147  55.778  1.00193.08           C
ATOM   9934  CG  PRO B2299     -45.253 -10.828  55.068  1.00193.26           C
ATOM   9935  CD  PRO B2299     -44.041 -10.476  54.229  1.00193.12           C
ATOM   9936  N   PRO B2300     -43.320 -14.840  54.014  1.00192.29           N
ATOM   9937  CA  PRO B2300     -43.610 -15.818  52.978  1.00191.99           C
ATOM   9938  C   PRO B2300     -45.125 -16.019  52.878  1.00191.68           C
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ATOM   9939  O   PRO B2300     -45.762 -16.406  53.853  1.00191.93           O
ATOM   9940  CB  PRO B2300     -42.924 -17.080  53.502  1.00192.14           C
ATOM   9941  CG  PRO B2300     -41.792 -16.571  54.344  1.00192.32           C
ATOM   9942  CD  PRO B2300     -42.301 -15.315  54.972  1.00192.34           C
ATOM   9943  N   LEU B2301     -45.703 -15.722  51.722  1.00191.21           N
ATOM   9944  CA  LEU B2301     -47.154 -15.729  51.578  1.00190.91           C
ATOM   9945  C   LEU B2301     -47.720 -17.136  51.360  1.00190.65           C
ATOM   9946  O   LEU B2301     -47.400 -17.790  50.367  1.00190.71           O
ATOM   9947  CB  LEU B2301     -47.546 -14.835  50.405  1.00190.97           C
ATOM   9948  CG  LEU B2301     -48.781 -13.940  50.501  1.00191.29           C
ATOM   9949  CD1 LEU B2301     -49.180 -13.548  49.086  1.00190.94           C
ATOM   9950  CD2 LEU B2301     -49.959 -14.581  51.262  1.00191.84           C
ATOM   9951  N   LEU B2302     -48.564 -17.601  52.277  1.00190.29           N
ATOM   9952  CA  LEU B2302     -49.234 -18.887  52.086  1.00190.03           C
ATOM   9953  C   LEU B2302     -50.596 -18.682  51.432  1.00189.97           C
ATOM   9954  O   LEU B2302     -51.508 -18.106  52.036  1.00190.03           O
ATOM   9955  CB  LEU B2302     -49.352 -19.670  53.397  1.00189.95           C
ATOM   9956  CG  LEU B2302     -48.137 -20.490  53.853  1.00189.87           C
ATOM   9957  CD1 LEU B2302     -47.171 -19.672  54.704  1.00189.53           C
ATOM   9958  CD2 LEU B2302     -48.583 -21.726  54.622  1.00189.83           C
ATOM   9959  N   THR B2303     -50.711 -19.150  50.187  1.00189.88           N
ATOM   9960  CA  THR B2303     -51.882 -18.891  49.333  1.00189.60           C
ATOM   9961  C   THR B2303     -52.086 -19.948  48.219  1.00189.59           C
ATOM   9962  O   THR B2303     -51.374 -20.955  48.152  1.00189.54           O
ATOM   9963  CB  THR B2303     -51.854 -17.431  48.761  1.00189.42           C
ATOM   9964  OG1 THR B2303     -52.984 -17.205  47.913  1.00189.06           O
ATOM   9965  CG2 THR B2303     -50.585 -17.174  47.980  1.00189.20           C
ATOM   9966  N   ARG B2304     -53.081 -19.713  47.368  1.00189.50           N
ATOM   9967  CA  ARG B2304     -53.427 -20.613  46.270  1.00189.44           C
ATOM   9968  C   ARG B2304     -53.867 -19.772  45.071  1.00189.11           C
ATOM   9969  O   ARG B2304     -53.906 -20.230  43.930  1.00189.05           O
ATOM   9970  CB  ARG B2304     -54.538 -21.581  46.704  1.00189.47           C
ATOM   9971  CG  ARG B2304     -55.036 -22.499  45.598  1.00189.68           C
ATOM   9972  CD  ARG B2304     -56.269 -23.271  45.990  1.00189.89           C
ATOM   9973  NE  ARG B2304     -57.070 -23.615  44.816  1.00191.10           N
ATOM   9974  CZ  ARG B2304     -58.108 -24.450  44.824  1.00192.09           C
ATOM   9975  NH1 ARG B2304     -58.489 -25.060  45.947  1.00192.33           N
ATOM   9976  NH2 ARG B2304     -58.768 -24.686  43.697  1.00192.48           N
ATOM   9977  N   TYR B2305     -54.208 -18.528  45.342  1.00188.87           N
ATOM   9978  CA  TYR B2305     -54.572 -17.635  44.280  1.00188.82           C
ATOM   9979  C   TYR B2305     -53.712 -16.388  44.371  1.00189.06           C
ATOM   9980  O   TYR B2305     -53.875 -15.548  45.270  1.00189.14           O
ATOM   9981  CB  TYR B2305     -56.061 -17.327  44.323  1.00188.61           C
ATOM   9982  CG  TYR B2305     -56.927 -18.529  44.061  1.00188.30           C
ATOM   9983  CD1 TYR B2305     -57.241 -19.417  45.085  1.00188.39           C
ATOM   9984  CD2 TYR B2305     -57.445 -18.777  42.794  1.00188.09           C
ATOM   9985  CE1 TYR B2305     -58.043 -20.517  44.856  1.00188.27           C
ATOM   9986  CE2 TYR B2305     -58.254 -19.878  42.555  1.00188.08           C
ATOM   9987  CZ  TYR B2305     -58.541 -20.745  43.593  1.00188.20           C
ATOM   9988  OH  TYR B2305     -59.332 -21.842  43.381  1.00188.27           O
ATOM   9989  N   LEU B2306     -52.779 -16.303  43.427  1.00189.18           N
ATOM   9990  CA  LEU B2306     -51.815 -15.223  43.339  1.00189.19           C
ATOM   9991  C   LEU B2306     -52.100 -14.301  42.143  1.00189.43           C
ATOM   9992  O   LEU B2306     -52.200 -14.753  40.999  1.00189.32           O
ATOM   9993  CB  LEU B2306     -50.417 -15.824  43.254  1.00188.93           C
ATOM   9994  CG  LEU B2306     -49.221 -14.941  43.589  1.00189.08           C
ATOM   9995  CD1 LEU B2306     -49.492 -14.052  44.785  1.00189.62           C
ATOM   9996  CD2 LEU B2306     -48.018 -15.824  43.850  1.00189.58           C
ATOM   9997  N   ARG B2307     -52.240 -13.008  42.424  1.00189.82           N
ATOM   9998  CA  ARG B2307     -52.549 -12.015  41.407  1.00190.30           C
ATOM   9999  C   ARG B2307     -51.484 -10.945  41.337  1.00190.67           C
ATOM  10000  O   ARG B2307     -51.123 -10.362  42.356  1.00190.61           O
ATOM  10001  CB  ARG B2307     -53.855 -11.325  41.731  1.00190.28           C
ATOM  10002  CG  ARG B2307     -55.073 -12.038  41.304  1.00191.06           C
ATOM  10003  CD  ARG B2307     -56.204 -11.058  41.331  1.00193.10           C
ATOM  10004  NE  ARG B2307     -57.415 -11.625  40.756  1.00195.24           N
ATOM  10005  CZ  ARG B2307     -58.509 -10.925  40.470  1.00196.15           C
ATOM  10006  NH1 ARG B2307     -58.545  -9.613  40.693  1.00196.26           N
ATOM  10007  NH2 ARG B2307     -59.568 -11.541  39.958  1.00196.81           N
ATOM  10008  N   ILE B2308     -51.007 -10.674  40.126  1.00191.35           N
ATOM  10009  CA  ILE B2308     -50.034  -9.610  39.879  1.00192.07           C
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ATOM  10010  C   ILE B2308     -50.768  -8.304  39.623  1.00192.51           C
ATOM  10011  O   ILE B2308     -51.711  -8.266  38.827  1.00192.45           O
ATOM  10012  CB  ILE B2308     -49.149  -9.914  38.642  1.00192.08           C
ATOM  10013  CG1 ILE B2308     -48.175 -11.072  38.903  1.00192.16           C
ATOM  10014  CG2 ILE B2308     -48.380  -8.676  38.214  1.00192.65           C
ATOM  10015  CD1 ILE B2308     -46.877 -10.693  39.611  1.00192.22           C
ATOM  10016  N   HIS B2309     -50.321  -7.236  40.279  1.00193.19           N
ATOM  10017  CA  HIS B2309     -50.939  -5.923  40.105  1.00194.02           C
ATOM  10018  C   HIS B2309     -49.962  -4.848  39.630  1.00194.12           C
ATOM  10019  O   HIS B2309     -49.349  -4.159  40.450  1.00194.36           O
ATOM  10020  CB  HIS B2309     -51.660  -5.501  41.380  1.00194.20           C
ATOM  10021  CG  HIS B2309     -52.798  -6.401  41.731  1.00196.00           C
ATOM  10022  ND1 HIS B2309     -54.101  -6.122  41.378  1.00197.84           N
ATOM  10023  CD2 HIS B2309     -52.827  -7.600  42.362  1.00197.60           C
ATOM  10024  CE1 HIS B2309     -54.888  -7.099  41.797  1.00198.63           C
ATOM  10025  NE2 HIS B2309     -54.139  -8.010  42.396  1.00198.49           N
ATOM  10026  N   PRO B2310     -49.823  -4.702  38.295  1.00194.08           N
ATOM  10027  CA  PRO B2310     -48.962  -3.696  37.683  1.00194.00           C
ATOM  10028  C   PRO B2310     -49.350  -2.267  38.056  1.00194.04           C
ATOM  10029  O   PRO B2310     -50.521  -1.892  37.989  1.00193.89           O
ATOM  10030  CB  PRO B2310     -49.164  -3.932  36.182  1.00193.98           C
ATOM  10031  CG  PRO B2310     -50.446  -4.673  36.068  1.00193.85           C
ATOM  10032  CD  PRO B2310     -50.495  -5.528  37.276  1.00194.01           C
ATOM  10033  N   GLN B2311     -48.359  -1.484  38.453  1.00194.21           N
ATOM  10034  CA  GLN B2311     -48.590  -0.103  38.793  1.00194.68           C
ATOM  10035  C   GLN B2311     -48.004   0.829  37.756  1.00194.84           C
ATOM  10036  O   GLN B2311     -48.732   1.552  37.088  1.00194.83           O
ATOM  10037  CB  GLN B2311     -48.015   0.200  40.168  1.00194.80           C
ATOM  10038  CG  GLN B2311     -48.885  -0.281  41.311  1.00195.96           C
ATOM  10039  CD  GLN B2311     -50.224   0.449  41.394  1.00197.55           C
ATOM  10040  OE1 GLN B2311     -50.442   1.292  42.277  1.00197.90           O
ATOM  10041  NE2 GLN B2311     -51.128   0.128  40.469  1.00198.37           N
ATOM  10042  N   SER B2312     -46.684   0.818  37.633  1.00195.21           N
ATOM  10043  CA  SER B2312     -46.009   1.652  36.659  1.00195.72           C
ATOM  10044  C   SER B2312     -45.241   0.802  35.693  1.00195.85           C
ATOM  10045  O   SER B2312     -44.713  -0.242  36.053  1.00195.85           O
ATOM  10046  CB  SER B2312     -45.064   2.634  37.339  1.00195.91           C
ATOM  10047  OG  SER B2312     -45.715   3.876  37.560  1.00196.95           O
ATOM  10048  N   TRP B2313     -45.172   1.267  34.457  1.00196.27           N
ATOM  10049  CA  TRP B2313     -44.576   0.484  33.390  1.00196.64           C
ATOM  10050  C   TRP B2313     -43.750   1.352  32.435  1.00196.66           C
ATOM  10051  O   TRP B2313     -43.503   2.537  32.722  1.00196.94           O
ATOM  10052  CB  TRP B2313     -45.674  -0.281  32.645  1.00196.92           C
ATOM  10053  CG  TRP B2313     -46.809   0.583  32.140  1.00197.21           C
ATOM  10054  CD1 TRP B2313     -46.856   1.248  30.955  1.00197.41           C
ATOM  10055  CD2 TRP B2313     -48.057   0.853  32.800  1.00197.49           C
ATOM  10056  NE1 TRP B2313     -48.046   1.919  30.832  1.00197.63           N
ATOM  10057  CE2 TRP B2313     -48.805   1.693  31.947  1.00197.37           C
ATOM  10058  CE3 TRP B2313     -48.617   0.463  34.023  1.00197.70           C
ATOM  10059  CZ2 TRP B2313     -50.081   2.154  32.275  1.00197.09           C
ATOM  10060  CZ3 TRP B2313     -49.890   0.919  34.346  1.00197.49           C
ATOM  10061  CH2 TRP B2313     -50.604   1.759  33.474  1.00197.28           C
ATOM  10062  N   VAL B2314     -43.330   0.764  31.309  1.00196.38           N
ATOM  10063  CA  VAL B2314     -42.490   1.469  30.335  1.00196.07           C
ATOM  10064  C   VAL B2314     -43.226   2.034  29.103  1.00195.94           C
ATOM  10065  O   VAL B2314     -43.413   3.249  29.010  1.00196.21           O
ATOM  10066  CB  VAL B2314     -41.278   0.638  29.907  1.00196.02           C
ATOM  10067  CG1 VAL B2314     -41.708  -0.533  29.030  1.00195.95           C
ATOM  10068  CG2 VAL B2314     -40.262   1.534  29.202  1.00195.88           C
ATOM  10069  N   HIS B2315     -43.623   1.169  28.168  1.00195.52           N
ATOM  10070  CA  HIS B2315     -44.302   1.613  26.953  1.00195.25           C
ATOM  10071  C   HIS B2315     -45.724   1.078  26.901  1.00195.20           C
ATOM  10072  O   HIS B2315     -46.665   1.810  26.578  1.00195.18           O
ATOM  10073  CB  HIS B2315     -43.528   1.182  25.714  1.00195.24           C
ATOM  10074  CG  HIS B2315     -42.193   1.849  25.566  1.00195.30           C
ATOM  10075  ND1 HIS B2315     -42.057   3.193  25.290  1.00195.16           N
ATOM  10076  CD2 HIS B2315     -40.935   1.349  25.627  1.00195.42           C
ATOM  10077  CE1 HIS B2315     -40.773   3.495  25.201  1.00195.21           C
ATOM  10078  NE2 HIS B2315     -40.071   2.393  25.400  1.00195.38           N
ATOM  10079  N   GLN B2316     -45.855  -0.212  27.198  1.00195.19           N
ATOM  10080  CA  GLN B2316     -47.137  -0.861  27.446  1.00195.26           C
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ATOM	10081	C	GLN	B2316	-46.901	-1.783	28.619	1.00195.04	C
ATOM	10082	O	GLN	B2316	-45.749	-2.073	28.964	1.00195.23	O
ATOM	10083	CB	GLN	B2316	-47.577	-1.719	26.259	1.00195.36	C
ATOM	10084	CG	GLN	B2316	-47.287	-1.136	24.889	1.00196.52	C
ATOM	10085	CD	GLN	B2316	-48.433	-0.313	24.342	1.00198.13	C
ATOM	10086	OE1	GLN	B2316	-49.605	-0.652	24.545	1.00198.65	O
ATOM	10087	NE2	GLN	B2316	-48.103	0.771	23.628	1.00198.43	N
ATOM	10088	N	ILE	B2317	-47.981	-2.268	29.218	1.00194.67	N
ATOM	10089	CA	ILE	B2317	-47.870	-3.275	30.263	1.00194.25	C
ATOM	10090	C	ILE	B2317	-47.612	-4.631	29.604	1.00194.11	C
ATOM	10091	O	ILE	B2317	-48.417	-5.095	28.786	1.00194.01	O
ATOM	10092	CB	ILE	B2317	-49.126	-3.308	31.144	1.00194.22	C
ATOM	10093	CG1	ILE	B2317	-49.536	-1.880	31.510	1.00194.20	C
ATOM	10094	CG2	ILE	B2317	-48.865	-4.111	32.400	1.00194.02	C
ATOM	10095	CD1	ILE	B2317	-50.993	-1.700	31.857	1.00194.25	C
ATOM	10096	N	ALA	B2318	-46.478	-5.241	29.956	1.00193.95	N
ATOM	10097	CA	ALA	B2318	-45.998	-6.473	29.316	1.00193.92	C
ATOM	10098	C	ALA	B2318	-45.330	-7.433	30.296	1.00193.91	C
ATOM	10099	O	ALA	B2318	-44.355	-7.076	30.957	1.00193.91	O
ATOM	10100	CB	ALA	B2318	-45.032	-6.125	28.213	1.00194.00	C
ATOM	10101	N	LEU	B2319	-45.823	-8.663	30.376	1.00193.92	N
ATOM	10102	CA	LEU	B2319	-45.307	-9.545	31.404	1.00194.14	C
ATOM	10103	C	LEU	B2319	-44.993	-10.973	30.993	1.00194.30	C
ATOM	10104	O	LEU	B2319	-45.865	-11.718	30.551	1.00194.18	O
ATOM	10105	CB	LEU	B2319	-46.222	-9.521	32.631	1.00194.16	C
ATOM	10106	CG	LEU	B2319	-45.591	-9.950	33.961	1.00194.51	C
ATOM	10107	CD1	LEU	B2319	-44.362	-9.119	34.292	1.00194.95	C
ATOM	10108	CD2	LEU	B2319	-46.597	-9.877	35.099	1.00194.24	C
ATOM	10109	N	ARG	B2320	-43.713	-11.310	31.126	1.00194.66	N
ATOM	10110	CA	ARG	B2320	-43.224	-12.677	31.199	1.00195.06	C
ATOM	10111	C	ARG	B2320	-42.781	-12.819	32.637	1.00195.56	C
ATOM	10112	O	ARG	B2320	-42.058	-11.958	33.140	1.00195.55	O
ATOM	10113	CB	ARG	B2320	-41.995	-12.858	30.314	1.00194.89	C
ATOM	10114	CG	ARG	B2320	-42.263	-13.216	28.877	1.00194.85	C
ATOM	10115	CD	ARG	B2320	-40.983	-13.647	28.180	1.00194.86	C
ATOM	10116	NE	ARG	B2320	-40.326	-12.546	27.482	1.00195.53	N
ATOM	10117	CZ	ARG	B2320	-39.084	-12.585	27.001	1.00196.37	C
ATOM	10118	NH1	ARG	B2320	-38.325	-13.672	27.153	1.00196.36	N
ATOM	10119	NH2	ARG	B2320	-38.592	-11.524	26.369	1.00196.70	N
ATOM	10120	N	MET	B2321	-43.197	-13.890	33.308	1.00196.24	N
ATOM	10121	CA	MET	B2321	-42.901	-14.032	34.747	1.00196.84	C
ATOM	10122	C	MET	B2321	-42.719	-15.464	35.268	1.00196.87	C
ATOM	10123	O	MET	B2321	-42.685	-16.420	34.493	1.00196.95	O
ATOM	10124	CB	MET	B2321	-43.960	-13.304	35.581	1.00196.84	C
ATOM	10125	CG	MET	B2321	-45.364	-13.876	35.422	1.00197.31	C
ATOM	10126	SD	MET	B2321	-46.377	-13.697	36.901	1.00197.43	S
ATOM	10127	CE	MET	B2321	-45.555	-14.812	38.041	1.00197.35	C
ATOM	10128	N	GLU	B2322	-42.609	-15.587	36.591	1.00196.99	N
ATOM	10129	CA	GLU	B2322	-42.380	-16.858	37.268	1.00197.25	C
ATOM	10130	C	GLU	B2322	-42.582	-16.661	38.771	1.00197.52	C
ATOM	10131	O	GLU	B2322	-42.312	-15.574	39.283	1.00197.40	O
ATOM	10132	CB	GLU	B2322	-40.957	-17.336	36.974	1.00197.29	C
ATOM	10133	CG	GLU	B2322	-40.380	-18.376	37.928	1.00197.20	C
ATOM	10134	CD	GLU	B2322	-40.190	-19.731	37.291	1.00196.46	C
ATOM	10135	OE1	GLU	B2322	-39.032	-20.047	36.902	1.00195.68	O
ATOM	10136	OE2	GLU	B2322	-41.199	-20.465	37.189	1.00195.91	O
ATOM	10137	N	VAL	B2323	-43.069	-17.703	39.459	1.00197.88	N
ATOM	10138	CA	VAL	B2323	-43.214	-17.725	40.935	1.00198.10	C
ATOM	10139	C	VAL	B2323	-42.182	-18.689	41.536	1.00198.54	C
ATOM	10140	O	VAL	B2323	-41.854	-19.706	40.931	1.00198.61	O
ATOM	10141	CB	VAL	B2323	-44.645	-18.176	41.412	1.00197.86	C
ATOM	10142	CG1	VAL	B2323	-44.871	-17.817	42.859	1.00197.48	C
ATOM	10143	CG2	VAL	B2323	-45.743	-17.555	40.582	1.00197.57	C
ATOM	10144	N	LEU	B2324	-41.670	-18.361	42.717	1.00199.09	N
ATOM	10145	CA	LEU	B2324	-40.798	-19.267	43.450	1.00199.76	C
ATOM	10146	C	LEU	B2324	-41.539	-19.883	44.630	1.00200.49	C
ATOM	10147	O	LEU	B2324	-42.282	-19.188	45.324	1.00200.57	O
ATOM	10148	CB	LEU	B2324	-39.584	-18.513	43.975	1.00199.61	C
ATOM	10149	CG	LEU	B2324	-38.425	-18.180	43.049	1.00199.24	C
ATOM	10150	CD1	LEU	B2324	-37.344	-17.491	43.865	1.00199.65	C
ATOM	10151	CD2	LEU	B2324	-37.879	-19.430	42.410	1.00198.42	C

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ATOM  10152  N   GLY B2325     -41.334 -21.178  44.869  1.00201.32           N
ATOM  10153  CA  GLY B2325     -41.910 -21.812  46.054  1.00202.52           C
ATOM  10154  C   GLY B2325     -42.211 -23.303  46.036  1.00203.50           C
ATOM  10155  O   GLY B2325     -41.620 -24.069  45.272  1.00203.51           O
ATOM  10156  N   CYS B2326     -43.142 -23.697  46.906  1.00204.58           N
ATOM  10157  CA  CYS B2326     -43.498 -25.093  47.173  1.00205.82           C
ATOM  10158  C   CYS B2326     -44.913 -25.135  47.769  1.00206.48           C
ATOM  10159  O   CYS B2326     -45.796 -24.452  47.259  1.00206.64           O
ATOM  10160  CB  CYS B2326     -42.481 -25.700  48.133  1.00205.90           C
ATOM  10161  SG  CYS B2326     -42.228 -24.696  49.627  1.00207.06           S
ATOM  10162  N   GLU B2327     -45.134 -25.922  48.831  1.00207.44           N
ATOM  10163  CA  GLU B2327     -46.451 -25.973  49.526  1.00208.34           C
ATOM  10164  C   GLU B2327     -46.433 -26.502  50.968  1.00208.90           C
ATOM  10165  O   GLU B2327     -45.736 -27.465  51.280  1.00208.92           O
ATOM  10166  CB  GLU B2327     -47.500 -26.763  48.712  1.00208.34           C
ATOM  10167  CG  GLU B2327     -47.212 -28.249  48.518  1.00208.19           C
ATOM  10168  CD  GLU B2327     -45.905 -28.491  47.788  1.00207.88           C
ATOM  10169  OE1 GLU B2327     -45.101 -29.307  48.271  1.00207.88           O
ATOM  10170  OE2 GLU B2327     -45.667 -27.843  46.748  1.00207.55           O
ATOM  10171  N   ALA B2328     -47.219 -25.870  51.837  1.00209.65           N
ATOM  10172  CA  ALA B2328     -47.504 -26.433  53.149  1.00210.38           C
ATOM  10173  C   ALA B2328     -48.683 -27.385  52.973  1.00210.95           C
ATOM  10174  O   ALA B2328     -48.877 -27.923  51.876  1.00210.91           O
ATOM  10175  CB  ALA B2328     -47.818 -25.338  54.152  1.00210.33           C
ATOM  10176  N   GLN B2329     -49.461 -27.587  54.041  1.00211.75           N
ATOM  10177  CA  GLN B2329     -50.684 -28.415  54.020  1.00212.52           C
ATOM  10178  C   GLN B2329     -51.576 -28.098  52.818  1.00213.09           C
ATOM  10179  O   GLN B2329     -51.414 -27.045  52.177  1.00213.13           O
ATOM  10180  CB  GLN B2329     -51.480 -28.237  55.320  1.00212.41           C
ATOM  10181  CG  GLN B2329     -51.632 -26.783  55.787  1.00212.85           C
ATOM  10182  CD  GLN B2329     -52.108 -25.834  54.684  1.00213.22           C
ATOM  10183  OE1 GLN B2329     -53.265 -25.882  54.261  1.00213.44           O
ATOM  10184  NE2 GLN B2329     -51.207 -24.977  54.206  1.00213.04           N
ATOM  10185  N   ASP B2330     -52.519 -28.991  52.510  1.00213.77           N
ATOM  10186  CA  ASP B2330     -53.374 -28.764  51.338  1.00214.46           C
ATOM  10187  C   ASP B2330     -54.762 -28.209  51.685  1.00214.55           C
ATOM  10188  O   ASP B2330     -55.674 -28.946  52.083  1.00214.49           O
ATOM  10189  CB  ASP B2330     -53.427 -29.981  50.390  1.00214.68           C
ATOM  10190  CG  ASP B2330     -53.166 -29.595  48.911  1.00215.35           C
ATOM  10191  OD1 ASP B2330     -52.219 -28.811  48.627  1.00215.51           O
ATOM  10192  OD2 ASP B2330     -53.906 -30.091  48.029  1.00216.05           O
ATOM  10193  N   LEU B2331     -54.865 -26.887  51.535  1.00214.74           N
ATOM  10194  CA  LEU B2331     -56.084 -26.083  51.719  1.00214.86           C
ATOM  10195  C   LEU B2331     -56.533 -25.862  53.174  1.00214.88           C
ATOM  10196  O   LEU B2331     -56.850 -24.734  53.546  1.00214.80           O
ATOM  10197  CB  LEU B2331     -57.238 -26.550  50.803  1.00214.91           C
ATOM  10198  CG  LEU B2331     -57.404 -26.092  49.333  1.00214.87           C
ATOM  10199  CD1 LEU B2331     -57.498 -24.564  49.181  1.00214.56           C
ATOM  10200  CD2 LEU B2331     -56.345 -26.693  48.388  1.00214.41           C
ATOM  10201  N   TYR B2332     -56.546 -26.919  53.985  1.00215.02           N
ATOM  10202  CA  TYR B2332     -57.030 -26.843  55.372  1.00215.21           C
ATOM  10203  C   TYR B2332     -56.430 -27.948  56.224  1.00215.15           C
ATOM  10204  O   TYR B2332     -56.786 -29.119  56.073  1.00215.13           O
ATOM  10205  CB  TYR B2332     -58.556 -26.941  55.415  1.00215.51           C
ATOM  10206  CG  TYR B2332     -59.113 -27.736  54.260  1.00216.02           C
ATOM  10207  CD1 TYR B2332     -59.230 -29.129  54.332  1.00216.47           C
ATOM  10208  CD2 TYR B2332     -59.497 -27.096  53.077  1.00216.16           C
ATOM  10209  CE1 TYR B2332     -59.727 -29.862  53.256  1.00216.92           C
ATOM  10210  CE2 TYR B2332     -59.991 -27.811  51.996  1.00216.48           C
ATOM  10211  CZ  TYR B2332     -60.104 -29.192  52.088  1.00216.82           C
ATOM  10212  OH  TYR B2332     -60.600 -29.896  51.012  1.00216.85           O
TER   10213      TYR B2332
HETATM10214  C1  NAG A 755     -55.568 -42.329 100.234  1.00210.57           C
HETATM10215  C2  NAG A 755     -54.707 -43.247 101.113  1.00215.64           C
HETATM10216  C3  NAG A 755     -54.463 -42.683 102.523  1.00216.97           C
HETATM10217  C4  NAG A 755     -54.245 -41.165 102.597  1.00218.43           C
HETATM10218  C5  NAG A 755     -55.186 -40.431 101.622  1.00216.42           C
HETATM10219  C6  NAG A 755     -54.844 -38.951 101.474  1.00216.54           C
HETATM10220  C7  NAG A 755     -54.671 -45.752 101.102  1.00217.94           C
HETATM10221  C8  NAG A 755     -54.744 -46.488  99.761  1.00217.82           C
HETATM10222  N2  NAG A 755     -55.338 -44.565 101.204  1.00216.83           N
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HETATM10223	O3	NAG A 755	-53.331	-43.328	103.072	1.00217.19	O
HETATM10224	O4	NAG A 755	-54.494	-40.718	103.931	1.00222.89	O
HETATM10225	O5	NAG A 755	-55.142	-40.986	100.319	1.00213.35	O
HETATM10226	O6	NAG A 755	-54.851	-38.312	102.731	1.00216.78	O
HETATM10227	O7	NAG A 755	-54.028	-46.273	102.055	1.00218.73	O
HETATM10228	C1	NAG A 756	-53.362	-40.511	104.851	1.00227.13	C
HETATM10229	C2	NAG A 756	-53.485	-41.394	106.130	1.00229.01	C
HETATM10230	C3	NAG A 756	-52.149	-41.848	106.798	1.00229.51	C
HETATM10231	C4	NAG A 756	-50.823	-41.255	106.275	1.00229.51	C
HETATM10232	C5	NAG A 756	-51.031	-40.130	105.248	1.00229.44	C
HETATM10233	C6	NAG A 756	-49.720	-39.827	104.509	1.00229.62	C
HETATM10234	C7	NAG A 756	-55.743	-40.701	107.080	1.00230.74	C
HETATM10235	C8	NAG A 756	-56.384	-39.656	107.705	1.00230.47	C
HETATM10236	N2	NAG A 756	-54.385	-40.779	107.142	1.00230.13	N
HETATM10237	O3	NAG A 756	-52.019	-43.265	106.771	1.00229.69	O
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HETATM10239	O5	NAG A 756	-52.037	-40.504	104.306	1.00228.64	O
HETATM10240	O6	NAG A 756	-49.079	-38.719	105.153	1.00230.03	O
HETATM10241	O7	NAG A 756	-56.499	-41.761	106.542	1.00231.39	O
HETATM10242	C1	NAG B2333	2.726	-34.155	80.541	1.00210.90	C
HETATM10243	C2	NAG B2333	3.257	-32.784	80.958	1.00213.08	C
HETATM10244	C3	NAG B2333	3.122	-32.649	82.482	1.00213.30	C
HETATM10245	C4	NAG B2333	1.774	-33.154	83.046	1.00213.28	C
HETATM10246	C5	NAG B2333	0.810	-33.910	82.081	1.00213.01	C
HETATM10247	C6	NAG B2333	-0.509	-33.116	81.857	1.00213.18	C
HETATM10248	C7	NAG B2333	5.189	-31.487	80.006	1.00214.04	C
HETATM10249	C8	NAG B2333	4.389	-30.615	79.063	1.00213.82	C
HETATM10250	N2	NAG B2333	4.634	-32.620	80.483	1.00213.60	N
HETATM10251	O3	NAG B2333	3.282	-31.292	82.858	1.00213.71	O
HETATM10252	O4	NAG B2333	2.025	-33.955	84.198	1.00212.99	O
HETATM10253	O5	NAG B2333	1.324	-34.237	80.773	1.00212.04	O
HETATM10254	O6	NAG B2333	-1.061	-32.660	83.111	1.00213.25	O
HETATM10255	O7	NAG B2333	6.341	-31.152	80.308	1.00214.50	O
HETATM10256	C1	NAG B2334	-19.386	-37.495	50.517	1.00191.44	C
HETATM10257	C2	NAG B2334	-19.663	-38.201	49.192	1.00193.94	C
HETATM10258	C3	NAG B2334	-21.135	-38.064	48.799	1.00194.11	C
HETATM10259	C4	NAG B2334	-22.064	-38.401	49.975	1.00194.11	C
HETATM10260	C5	NAG B2334	-21.661	-37.680	51.272	1.00193.74	C
HETATM10261	C6	NAG B2334	-22.422	-38.184	52.505	1.00194.37	C
HETATM10262	C7	NAG B2334	-18.246	-38.258	47.103	1.00196.59	C
HETATM10263	C8	NAG B2334	-17.331	-39.472	47.326	1.00196.47	C
HETATM10264	N2	NAG B2334	-18.762	-37.623	48.201	1.00195.42	N
HETATM10265	O3	NAG B2334	-21.401	-38.962	47.734	1.00194.69	O
HETATM10266	O4	NAG B2334	-23.417	-38.138	49.636	1.00194.38	O
HETATM10267	O5	NAG B2334	-20.283	-37.871	51.543	1.00192.21	O
HETATM10268	O6	NAG B2334	-23.685	-38.748	52.175	1.00195.26	O
HETATM10269	O7	NAG B2334	-18.487	-37.845	45.932	1.00197.38	O
HETATM10270	C1	NAG B2335	-24.483	-40.157	47.480	1.00257.33	C
HETATM10271	C2	NAG B2335	-23.770	-40.981	46.393	1.00257.64	C
HETATM10272	C3	NAG B2335	-24.236	-42.461	46.251	1.00257.77	C
HETATM10273	C4	NAG B2335	-24.954	-43.045	47.486	1.00257.77	C
HETATM10274	C5	NAG B2335	-25.732	-41.943	48.218	1.00257.46	C
HETATM10275	C6	NAG B2335	-26.483	-42.495	49.418	1.00257.44	C
HETATM10276	C7	NAG B2335	-24.877	-40.349	44.189	1.00257.76	C
HETATM10277	C8	NAG B2335	-24.502	-40.754	42.783	1.00257.62	C
HETATM10278	N2	NAG B2335	-23.865	-40.251	45.105	1.00257.86	N
HETATM10279	O3	NAG B2335	-23.095	-43.269	45.984	1.00257.68	O
HETATM10280	O4	NAG B2335	-25.791	-44.202	47.263	1.00258.43	O
HETATM10281	O5	NAG B2335	-24.824	-40.935	48.608	1.00257.05	O
HETATM10282	O6	NAG B2335	-27.755	-42.928	48.979	1.00257.18	O
HETATM10283	O7	NAG B2335	-26.067	-40.116	44.431	1.00257.55	O
HETATM10284	C1	MAN B2336	-26.450	-44.361	45.976	1.00259.29	C
HETATM10285	C2	MAN B2336	-25.922	-45.617	45.266	1.00259.88	C
HETATM10286	C3	MAN B2336	-26.495	-45.661	43.845	1.00260.42	C
HETATM10287	C4	MAN B2336	-28.039	-45.611	43.867	1.00260.08	C
HETATM10288	C5	MAN B2336	-28.640	-44.638	44.911	1.00259.37	C
HETATM10289	C6	MAN B2336	-30.013	-45.167	45.332	1.00258.41	C
HETATM10290	O2	MAN B2336	-26.247	-46.798	45.980	1.00259.57	O
HETATM10291	O3	MAN B2336	-25.966	-46.760	43.092	1.00261.16	O
HETATM10292	O4	MAN B2336	-28.544	-45.279	42.583	1.00260.25	O
HETATM10293	O5	MAN B2336	-27.865	-44.450	46.100	1.00259.24	O

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HETATM10294  O6  MAN B2336     -30.926 -44.124  45.613  1.00257.34           O
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HETATM10296  C2  MAN B2337     -25.795 -46.163  40.692  1.00261.59           C
HETATM10297  C3  MAN B2337     -25.949 -47.551  40.045  1.00261.51           C
HETATM10298  C4  MAN B2337     -24.625 -48.341  39.958  1.00261.09           C
HETATM10299  C5  MAN B2337     -23.737 -48.251  41.216  1.00260.60           C
HETATM10300  C6  MAN B2337     -22.271 -48.517  40.839  1.00259.52           C
HETATM10301  O2  MAN B2337     -25.147 -45.241  39.827  1.00261.32           O
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HETATM10303  O4  MAN B2337     -24.921 -49.706  39.705  1.00260.85           O
HETATM10304  O5  MAN B2337     -23.809 -46.999  41.909  1.00261.19           O
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HETATM10306  C1  MAN B2338     -31.613 -44.399  46.860  1.00256.65           C
HETATM10307  C2  MAN B2338     -32.496 -43.209  47.272  1.00256.41           C
HETATM10308  C3  MAN B2338     -33.655 -43.574  48.228  1.00256.15           C
HETATM10309  C4  MAN B2338     -33.645 -44.986  48.852  1.00255.98           C
HETATM10310  C5  MAN B2338     -32.722 -46.010  48.174  1.00255.84           C
HETATM10311  C6  MAN B2338     -33.380 -47.387  48.117  1.00255.28           C
HETATM10312  O2  MAN B2338     -32.990 -42.538  46.123  1.00256.25           O
HETATM10313  O3  MAN B2338     -34.898 -43.379  47.580  1.00256.10           O
HETATM10314  O4  MAN B2338     -33.316 -44.899  50.226  1.00255.61           O
HETATM10315  O5  MAN B2338     -32.372 -45.596  46.865  1.00256.21           O
HETATM10316  O6  MAN B2338     -32.847 -48.217  49.125  1.00254.72           O
HETATM10317 CU    CU B   1     -34.550 -36.792  79.967  1.00174.41          CU
HETATM10318 CU    CU A 757     -45.781 -46.777  90.870  1.00171.28          CU
HETATM10319 CA    CA A 758     -44.908 -24.759  63.651  1.00172.22          CA
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CONECT102701027110281
CONECT10271102701027210278
CONECT10272102711027310279
CONECT10273102721027410280
CONECT10274102731027510281
CONECT102751027410282
CONECT10276102771027810283
CONECT1027710276
CONECT102781027110276
CONECT1027910272
CONECT102801027310284
CONECT102811027010274
CONECT1028210275
CONECT1028310276
CONECT10284102801028510293
CONECT10285102841028610290
CONECT10286102851028710291
CONECT10287102861028810292
CONECT10288102871028910293
CONECT102891028810294
CONECT1029010285
CONECT102911028610295
CONECT1029210287
CONECT102931028410288
CONECT102941028910306
CONECT10295102911029610304
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CONECT10297102961029810302
CONECT10298102971029910303
CONECT10299102981030010304
CONECT103001029910305
CONECT1030110296
CONECT1030210297

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CONECT1030310298
CONECT103041029510299
CONECT1030510300
CONECT10306102941030710315
CONECT10307103061030810312
CONECT10308103071030910313
CONECT10309103081031010314
CONECT10310103091031110315
CONECT103111031010316
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CONECT1031410309
CONECT103151030610310
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CONECT10317 7181 7599
CONECT10318 1805
CONECT10319  647  764  794  802
CONECT10319  803
MASTER      926    0   11   15   72    0   11    610317    2  134  111
END
```

INCORPORATION OF REFERENCES

[0166] All publications and patent documents cited in this application are incorporated by reference in their entirety to the same extent as if the contents of each individual publication or patent document were incorporated herein.

[0167] We claim:

We claim:

1. A composition comprising a human Factor VIII, in a crystalline form, wherein the human Factor VIII lacks at least a portion of B-domain.

2. The composition of claim 1, wherein the crystalline human Factor VIII has a space group $P4_12_12$.

3. The composition of any one of the preceeding claims, wherein the crystalline human Factor VIII has unit cell dimensions a=b=134.11 Å, c=349.76 Å.

4. The composition of any one of the preceeding claims, wherein the crystalline human Factor VIII diffracts X-rays for a determination of structural coordinates to a resolution below 4.0 Angstroms.

5. The composition of any one of the preceeding claims, wherein the human Factor VIII comprises an amino acid sequence at least 95% identical to SEQ ID NO:1.

6. The composition of any one of the preceeding claims, wherein the human Factor VIII comprises an amino acid sequence at least 95% identical to SEQ ID NO:2.

7. The composition of any one of the preceeding claims, wherein the human Factor VIII comprises amino acid sequences of SEQ ID NO:1 and SEQ ID NO:2.

8. A computer-readable medium comprising computer-readable data defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

9. The computer-readable medium of claim 8, wherein the computer-readable data is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or at least 50% of the coordinates thereof.

10. The computer-readable medium of claim 8 or 9, wherein the computer-readable data is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or at least 80% of the coordinates thereof.

11. The computer-readable medium of any one of claims 8-10, wherein the computer-readable data is defined by structural coordinates of one or more atoms selected from the

group consisting of atoms of Lys 107, Glu 110, Asp 116, Glu 122, Asp 126, Asp 125, His 267, Cys 310, His 315, His 1954, Cys 2000, and His 2005.

12. The computer-readable medium of any one of claims 8-11, wherein the computer-readable data is defined by structural coordinates of one or more atoms selected from the group consisting of atoms of residues 558-565, 707-712 and 1811-1819 according to Table 2.

13. The computer-readable medium of any one of claims 8-12, wherein the computer-readable data is defined by three-dimensional structural coordinates of one or more Factor VIII domains selected from the group consisting of domain A1, A2, A3, C1 and C2.

14. A method for constructing a three-dimensional structural representation of a Factor VIIIa-Factor IXa complex, the method comprising the steps of:

(a) providing a three-dimensional structural representation of human Factor VIII, or a region thereof;

(b) providing a three-dimensional structural representation of Factor IXa, or a region thereof; and

(c) fitting the three-dimensional structural representation from step (a) to the three-dimensional structural representation from step (b).

15. The method of claim 14, wherein the three-dimensional structural representation of step (a) is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

16. The method of claim 14 or 15, wherein the three-dimensional structural representation of step (a) is defined at least by structural coordinates of one or more atoms selected from the group consisting of atoms of residues 558-565, 707-712 and 1811-1819 according to Table 2.

17. The method of any one of claims 14-16, wherein step (c) is based on one or more constraints selected from the group consisting of:

(1) residues 558-565 of Factor VIII interact with residues 330-339 of Factor IXa;

(2) residues 707-712 of Factor VIII interact with residues 301-303 of Factor IXa;

(3) residues 1811-1819 of Factor VIII interact with the light chain of Factor IXa;

(4) Phe 25 in the Gla domain of Factor IXa is juxtaposed with the light chain of Factor VIII; and

(5) the Gla domain of Factor IXa is situated within a phospholipid membrane.

18. A computer-readable medium comprising computer-readable data defined by a three-dimensional structural representation of a complex comprising at least a region of Factor VIII and a region of Factor IXa constructed according to the method of any one of claims 14-16.

19. A computer-readable medium comprising computer-readable data defined by a three-dimensional structural representation of a complex comprising at least a region of Factor VIII and a region of Factor IXa constructed according to the method of claim 17.

20. A method for modifying human Factor VIII to alter its interaction with Factor IXa, the method comprising the steps of:

(a) providing a structural representation of human Factor VIII, or a region thereof;

(b) fitting the structural representation of step (a) to a three-dimensional structural representation of Factor IXa, or a region thereof; and

(d) computationally modifying the structural representation of step (a) to increase or decrease its interaction with the three-dimensional structural representation of Factor IXa, or a region thereof.

21. The method of claim 20, wherein the structural representation of step (a) is defined by structural coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

22. The method of claim 20, wherein the structural representation of step (a) is defined by structural coordinates of one or more atoms selected from the group consisting of atoms of residues 558-565, 707-712 and 1811-1819 according to Table 2.

23. The method of claim 20, wherein the three-dimensional structural representation of Factor IXa, or a region thereof, is defined at least by the Gla domain of Factor IXa.

24. The method of claim 20, wherein the three-dimensional structural representation of Factor IXa, or a region thereof, is defined at least by the light chain of Factor IXa.

25. The method of claim 20, wherein the structural representation of step (a) is modified to increase its interaction with the three-dimensional structural representation of Factor IXa, or a region thereof.

26. A modified human Factor VIII with increased interaction with Factor IXa according to the method of claim 25.

27. A method for evaluating the activity of a modified human Factor VIII, the method comprising the steps of:

(a) providing a structural representation of human Factor VIII, or a region thereof;

(b) computationally modifying the structural representation of step (a) to introduce one or more amino acid modifications; and

(c) evaluating the activity of the modified human Factor VIII based on the modified structural representation from step (b).

28. The method of claim 27, wherein the structural representation of step (a) is defined by coordinates of atoms of human Factor VIII according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof.

29. The method of claim 27, wherein the evaluation of the activity of the modified human Factor VIII is based on an evaluation of its interaction with Factor IXa.

30. The method of claim 27, wherein the evaluation of the activity of the modified human Factor VIII is based on an evaluation of its interaction with a phospholipid membrane.

31. The method of claim 27, wherein the evaluation of the activity of the modified human Factor VIII is based on an evaluation of its interaction with von Willebrand Factor (vWF).

32. The method of claim 27, wherein the method further comprises a step of identifying a modified Factor VIII with an improved property.

33. The method of claim 32, wherein the improved property is increased plasma half-life.

34. A method of predicting a three dimensional structure of a human Factor VIII homologue or analogue of unknown structure, the method comprising the steps of:

(a) aligning an amino acid sequence of a target human Factor VIII homologue or analogue of unknown structure with the amino acid sequence of human Factor VIII defined by coordinates according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof, to match one or more homologous regions;

(b) modeling the structure of the matched one or more homologous regions of the target human Factor VIII homologue or analogue of unknown structure on the corresponding regions of the human Factor VIII as defined by coordinates according to Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms, or selected coordinates thereof; and

(c) determining a structural conformation for said target human Factor VIII homologue or analogue of unknown structure which substantially preserves the structure of said matched one or more homologous regions.

35. The method of claim 34, the method further comprises a step of evaluating the activity of the target human Factor VIII homologue or analogue of unknown structure based on the structural conformation determined at step (c).

36. A method for designing a mimetic compound of human Factor VIII, the method comprising the steps of:

(a) providing a selected human Factor VIII structure that is associated with a biological activity of human Factor VIII;

(b) superimposing a three-dimensional structure of a compound on the selected human Factor VIII structure;

(c) modifying the three-dimensional structure of the compound such that the modified three-dimensional structure comprises a structural confirmation substantially mimicking the selected human Factor VIII structure.

37. The method of claim 36, wherein the mimetic compound comprises an antibody structure.

38. The method of claim 36, wherein the method further comprises the steps of:

(d) synthesizing the modified compound from step (c); and

(e) evaluating the activity of the modified compound.

39. A mimetic antibody of human Factor VIII designed by the method of claim 37.

40. A method for rational drug design, the method comprising the steps of:

(a) providing selected coordinates of a human Factor VIII structure;

(b) providing a plurality of moieties;

(c) fitting the structure of each of the plurality of moieties to the selected coordinates;

(d) selecting one or more moieties that fit into the selected coordinates; and

(e) assembling the one or more moieties selected from step (d) into a single molecule to form a candidate modulator molecule.

41. The method of claim 40, wherein the selected coordinates of a human Factor VIII structure comprises one or more coordinates as defined in Table 2, +/- a root mean square deviation for alpha carbon atoms of less than 2 Angstroms.

42. The method of claim 40, wherein the moieties are selected from the group consisting of molecular fragments, small molecules, ligands designed de novo, and compounds known to bind Factor VIII or modified compounds thereof.

43. The method of claim 40, wherein the method further comprises the steps of:

(f) obtaining or synthesizing the candidate modulator molecule; and

(g) contacting the candidate modulator molecule with human Factor VIII to determine the ability of the candidate modulator molecule to interact with human Factor VIII.

44. A method for producing a computer readable database comprising a structural representation of at least one compound capable of binding human Factor VIII, the method comprising the steps of:

(a) introducing into a computer program selected coordinates of a human Factor VIII structure;

(b) fitting a three-dimensional model of at least one binding test compound into the selected coordinates;

(d) assessing whether said test compound model fits spatially into the selected coordinates; and

(e) storing a structural representation of a compound that fits into the selected coordinates.

45. A computer readable database produced by the method of claim 44.

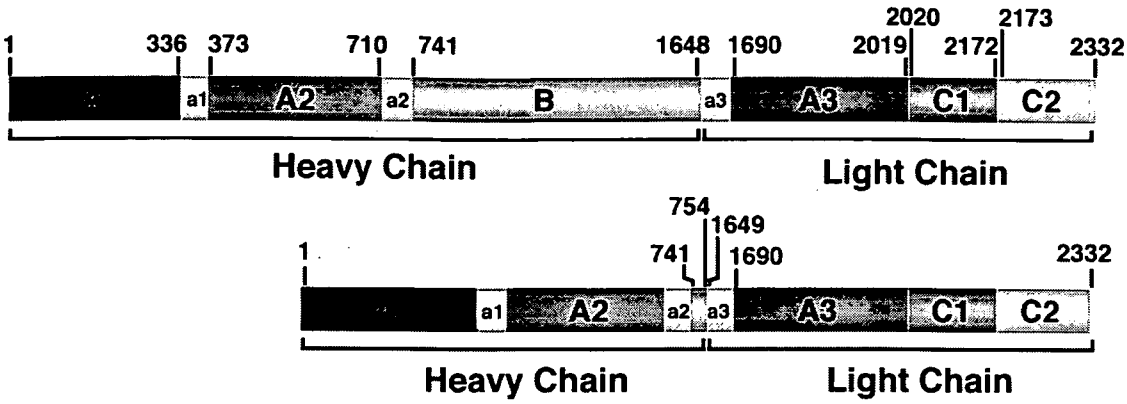

1
336
373
710
741
1648
1690
2019
2020
2172
2173
2332
a1
A2
a2
B
a3
A3
C1
C2
Heavy Chain
Light Chain
754
1649
741
1690
1
2332
a1
A2
a2
a3
A3
C1
C2
Heavy Chain
Light Chain

FIG. 1A

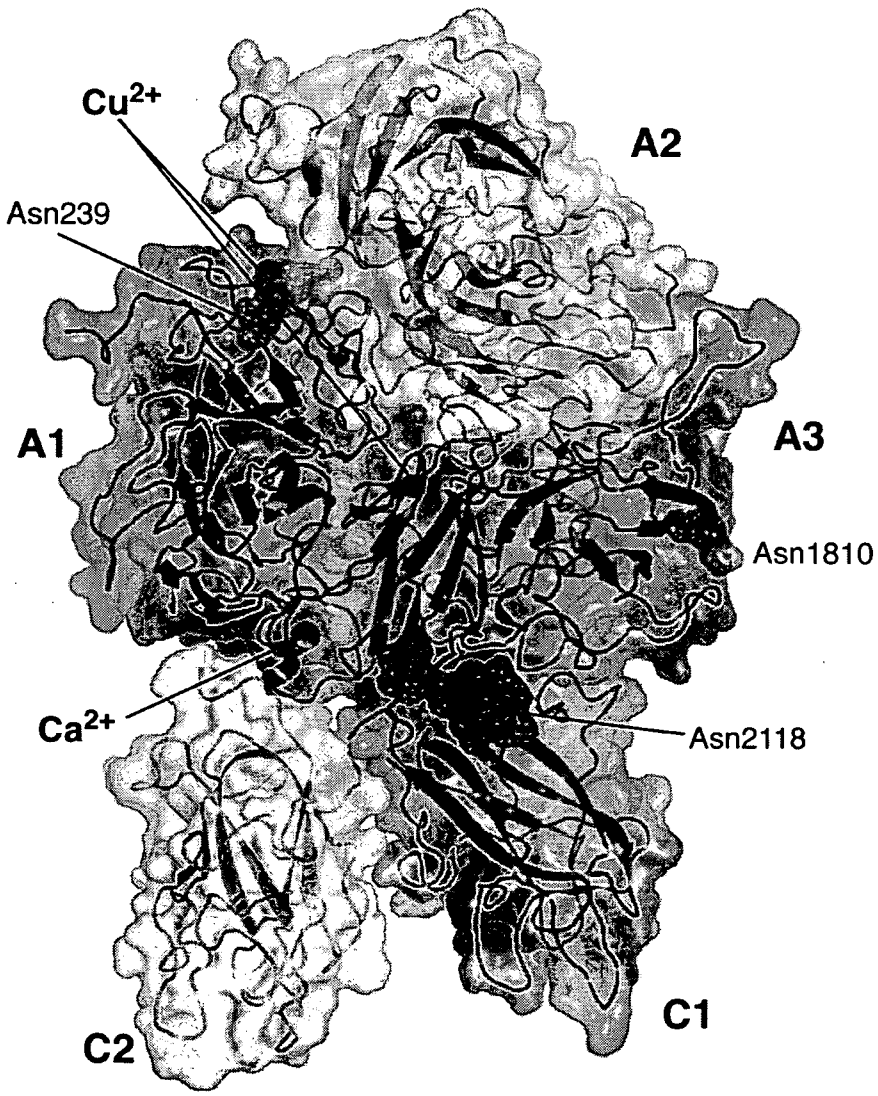

Cu2+
A2
Asn239
A1
A3
Asn1810
Ca2+
Asn2118
C2
C1

FIG. 1B

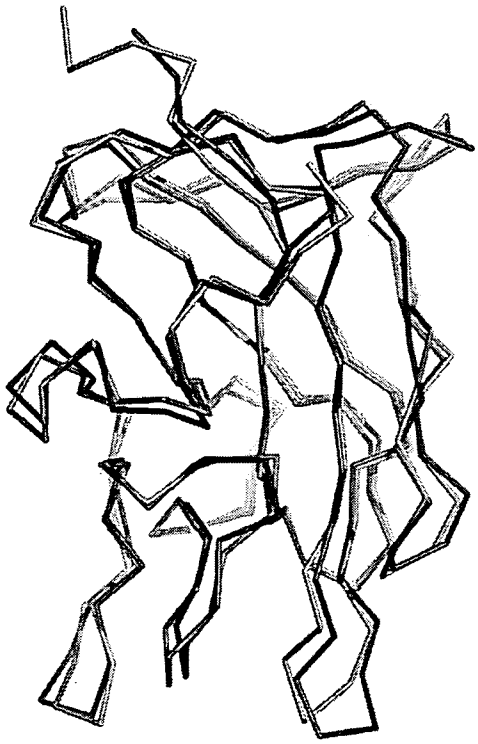


FIG. 1C

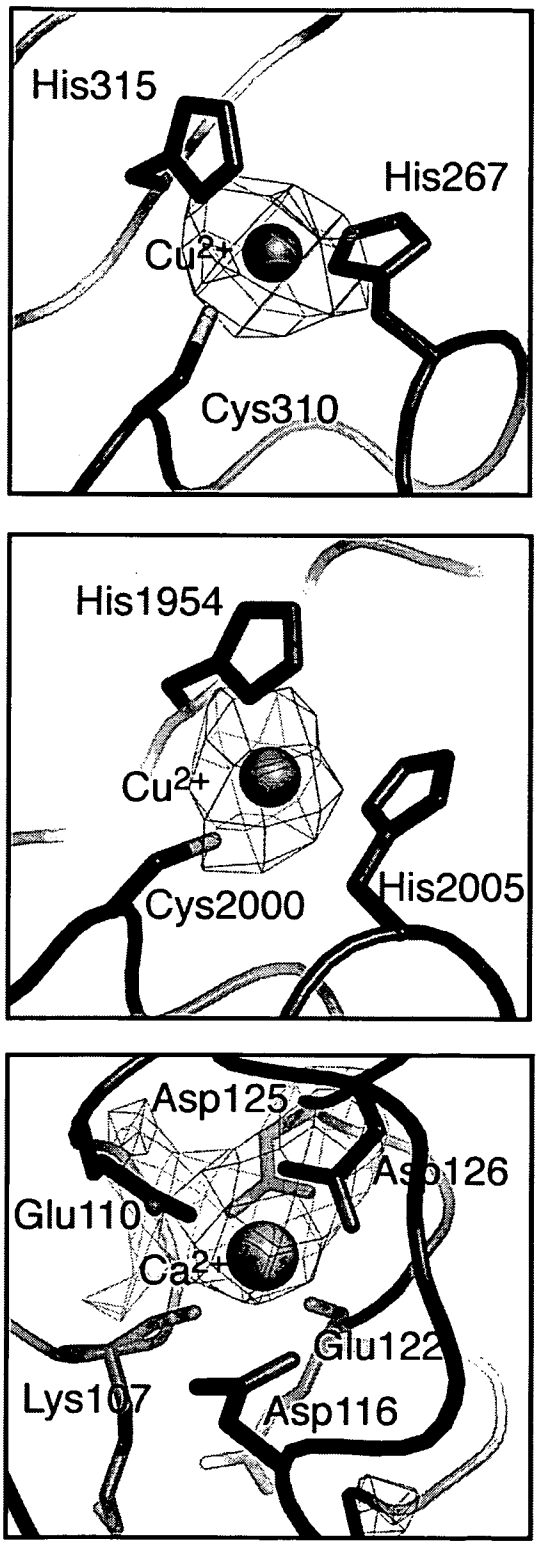

His315
His267
Cu2+
Cys310
His1954
Cu2+
Cys2000
His2005
Asp125
Asp126
Glu110
Ca2+
Glu122
Lys107
Asp116

FIG. 1D

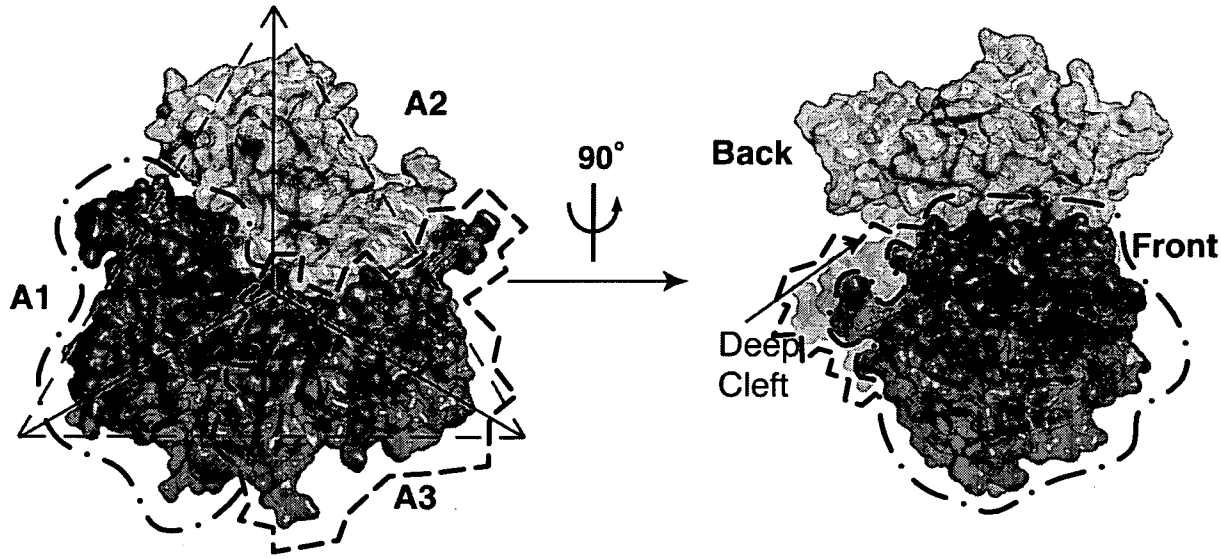

A2
90°
Back
Front
A1
Deep
Cleft
A3

FIG. 2A

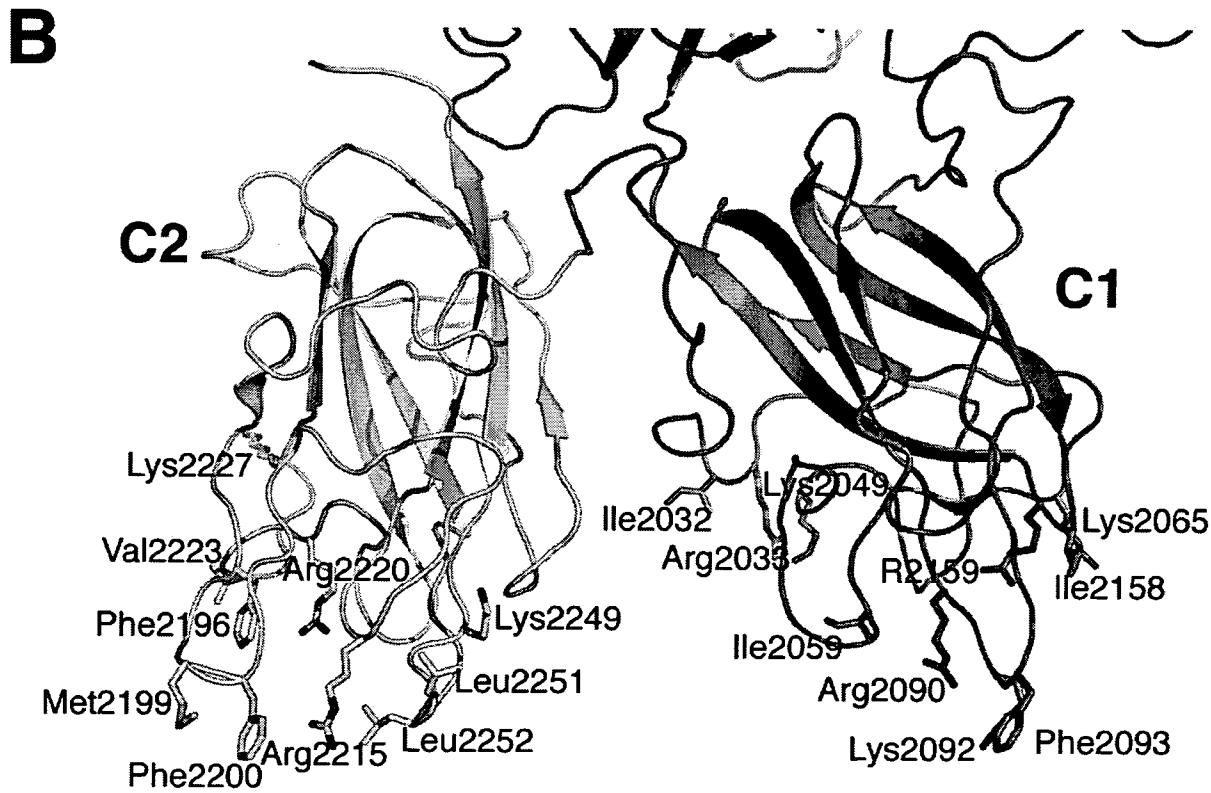

B
C2
C1
Lys2227
Val2223
Arg2220
Phe2196
Lys2249
Met2199
Leu2251
Arg2215
Leu2252
Phe2200
Ile2032
Lys2049
Lys2065
Arg2035
R2159
Ile2158
Ile2059
Arg2090
Lys2092
Phe2093

FIG. 2B

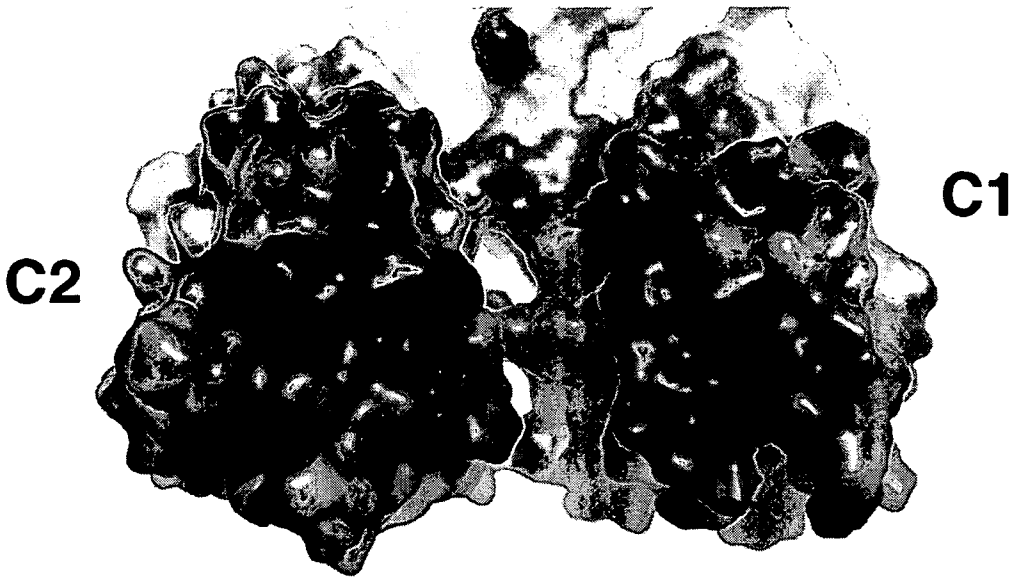

C2
C1

FIG. 2C

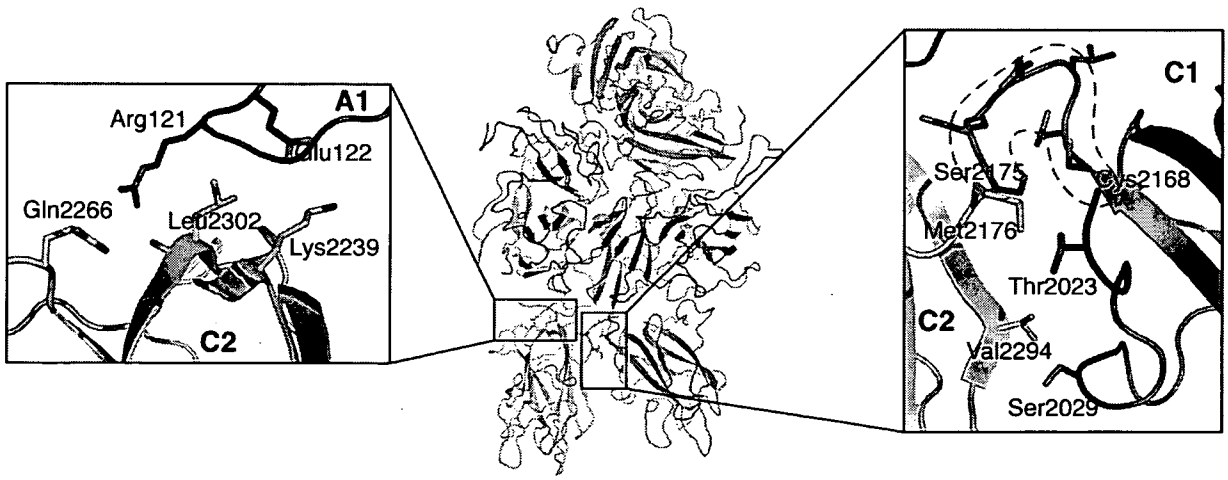

A1
Arg121
Glu122
Gln2266
Leu2302
Lys2239
C2
C1
Ser2175
Cys2168
Met2176
Thr2023
C2
Val2294
Ser2029

FIG. 2D

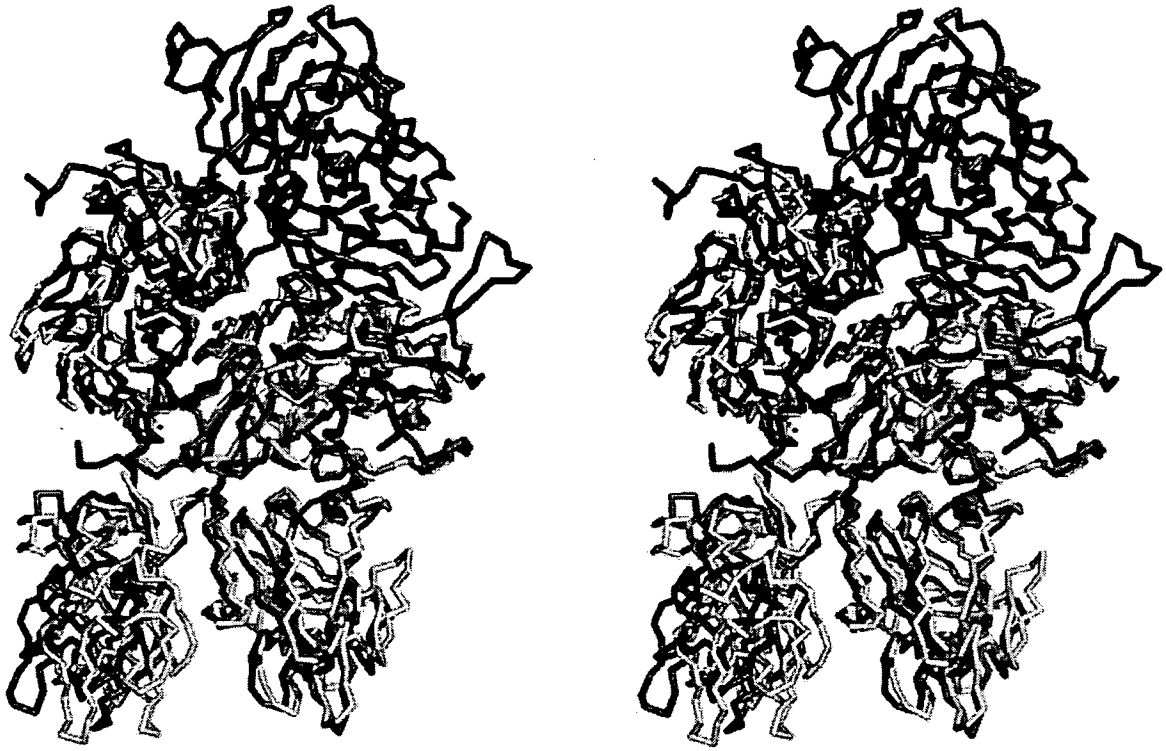


FIG. 3A

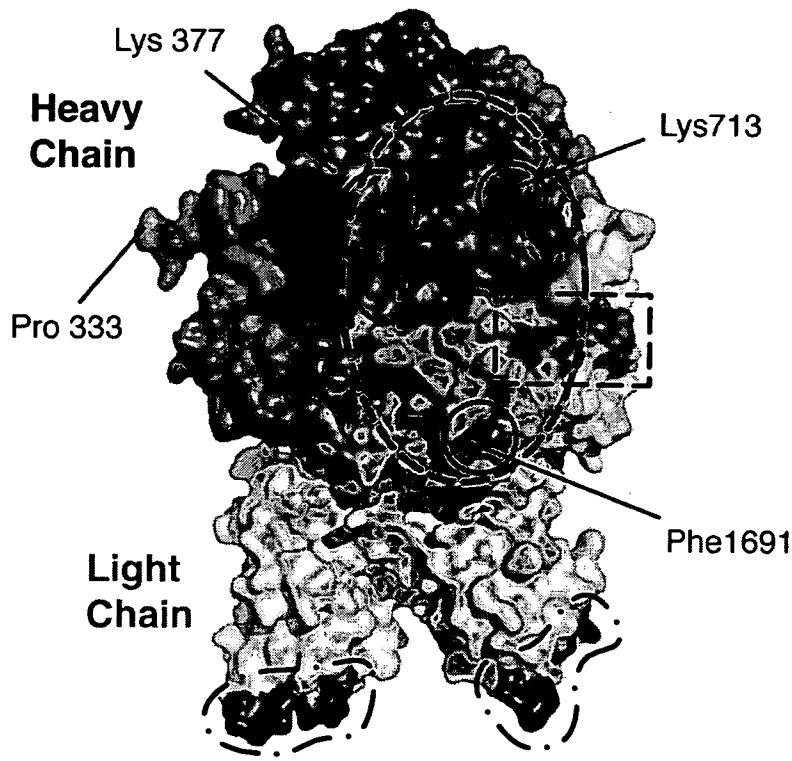


FIG. 3B

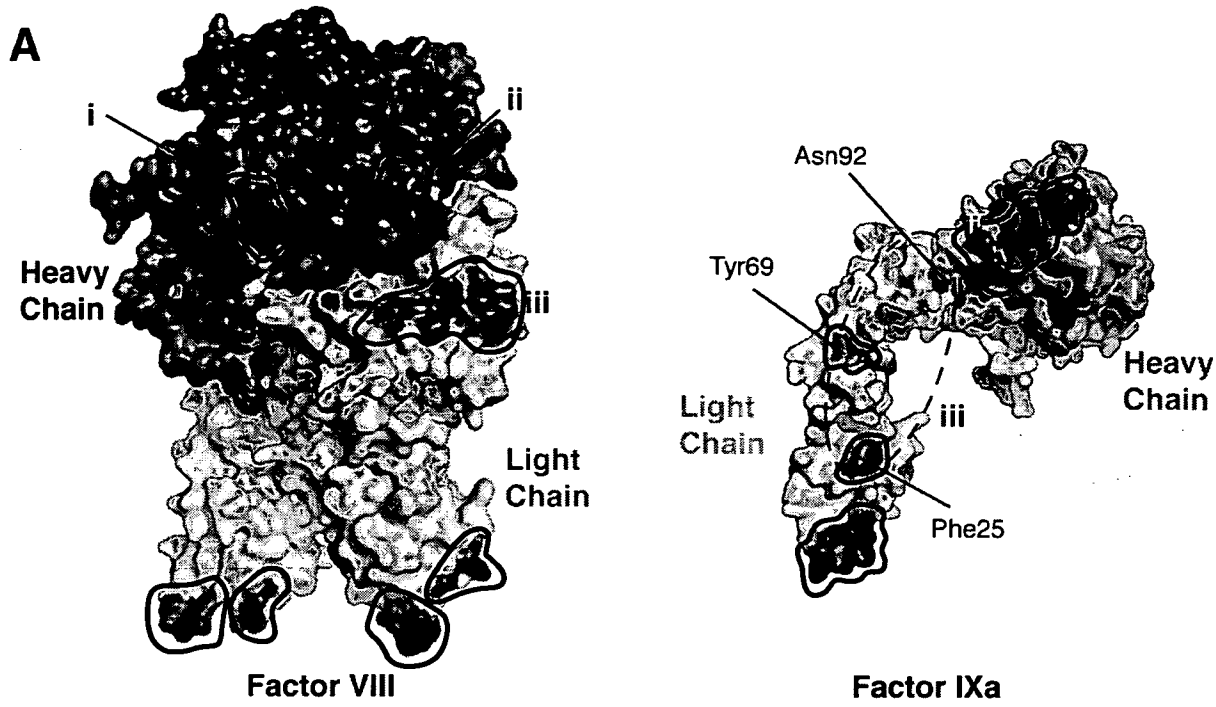

A
i
ii
iii
Heavy Chain
Light Chain
Factor VIII
Asn92
Tyr69
Heavy Chain
Light Chain
iii
Phe25
Factor IXa

FIG. 4A

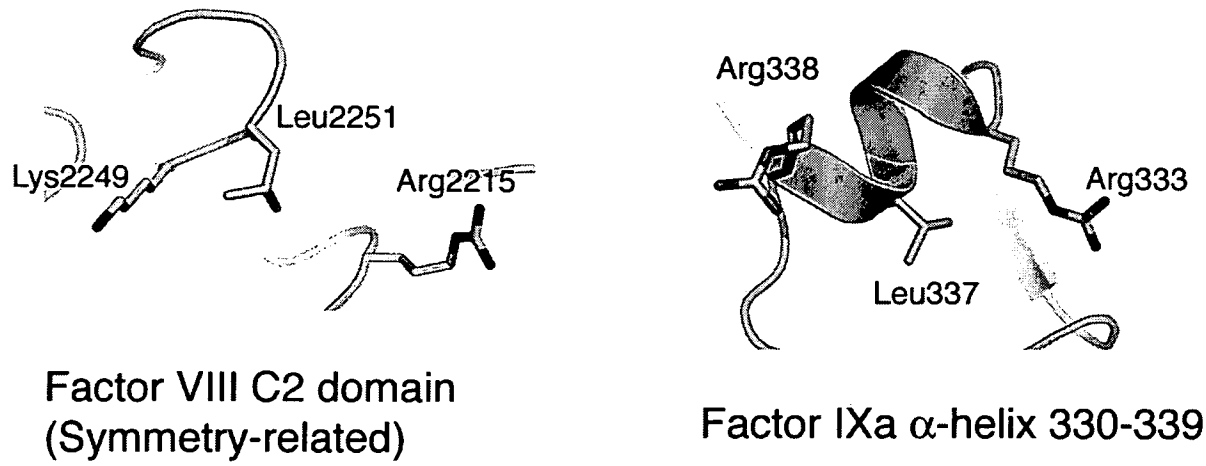

Leu2251
Lys2249
Arg2215
Factor VIII C2 domain
(Symmetry-related)
Arg338
Arg333
Leu337
Factor IXa α-helix 330-339

FIG. 4B

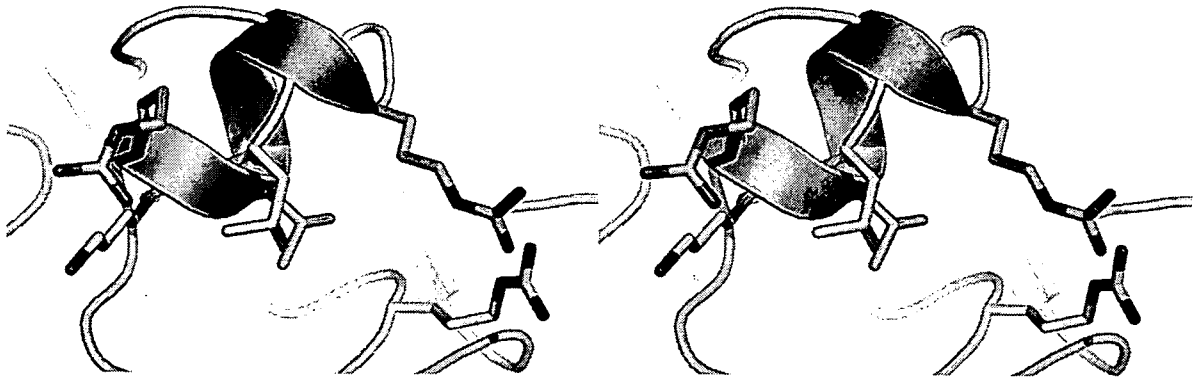


FIG. 4C

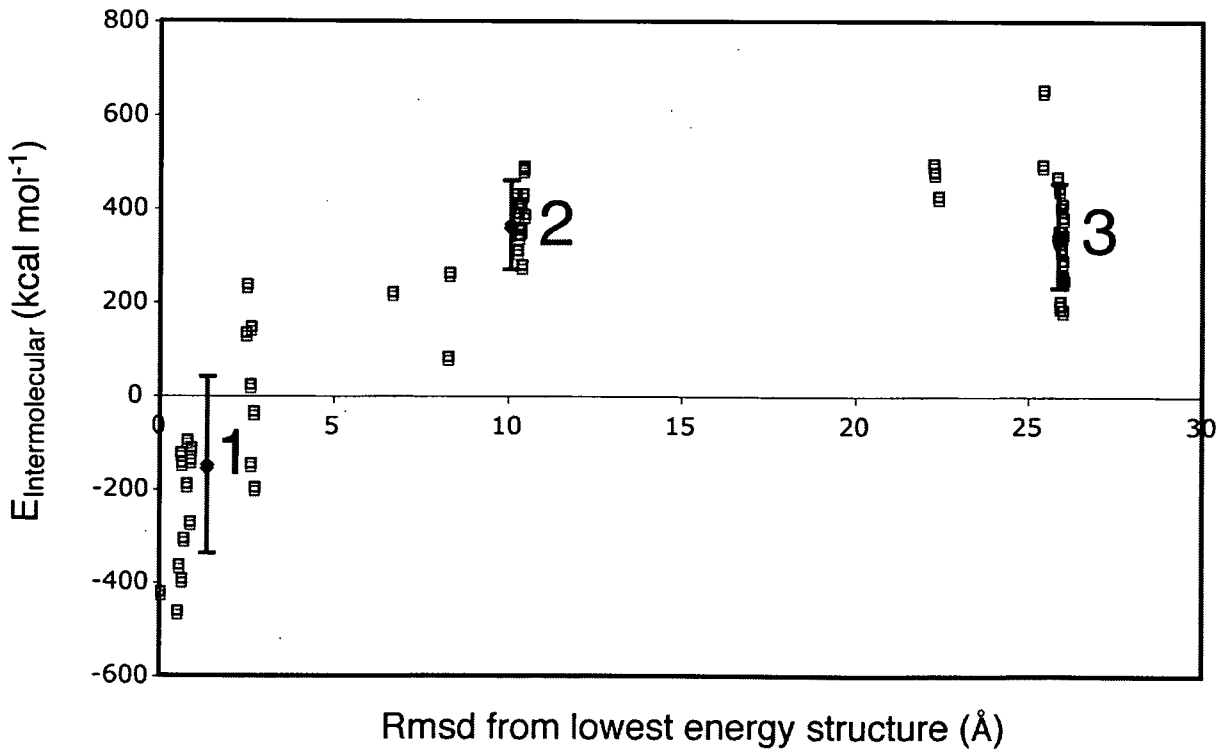

800
600
400
200
0
-200
-400
-600
0
5
10
15
20
25
30
1
2
3
E Intermolecular (kcal mol-1)
Rmsd from lowest energy structure (Å)

FIG. 5A

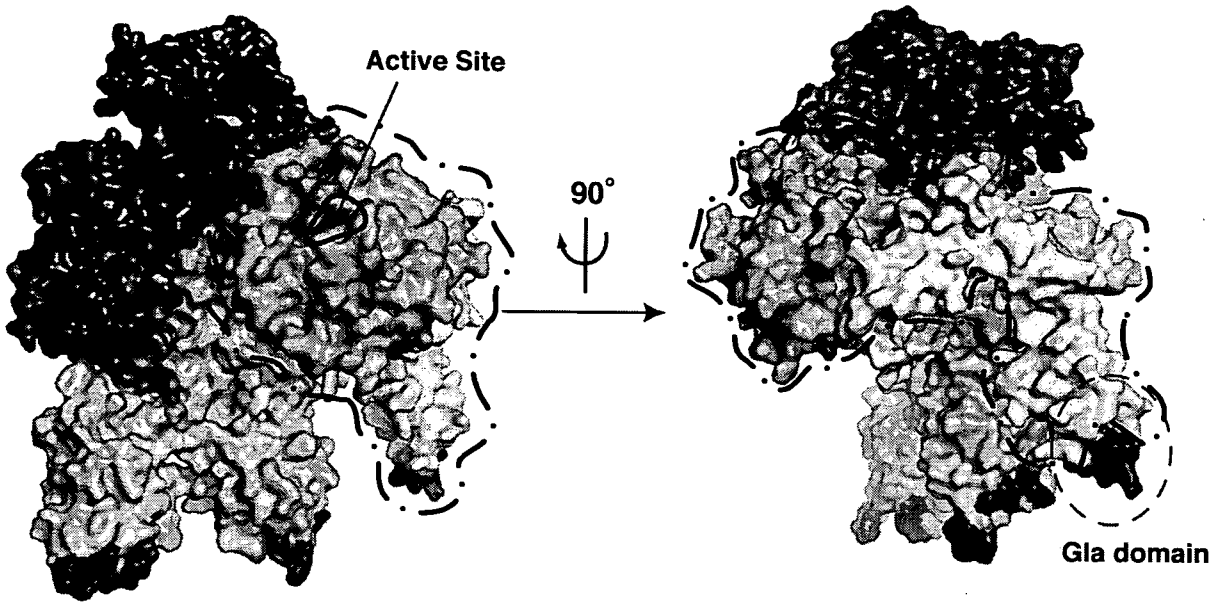


FIG. 5B

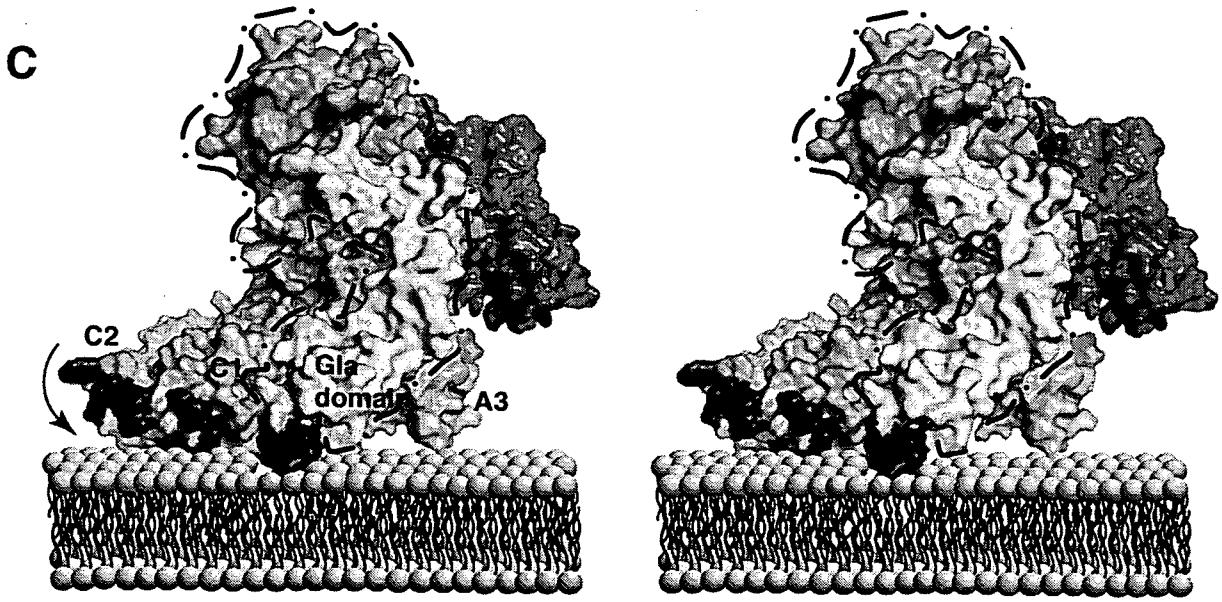


FIG. 5C

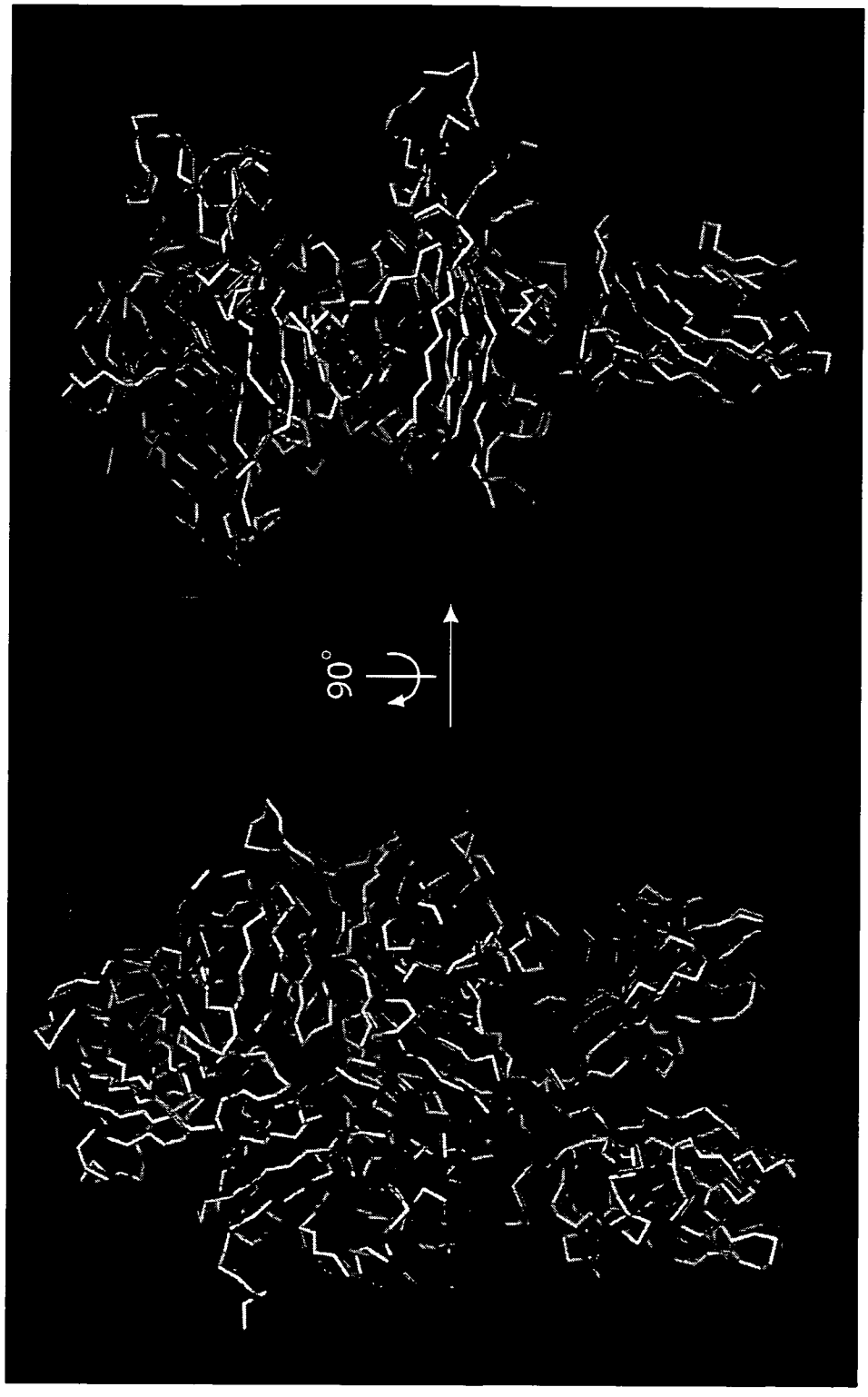

Comparison of Crystal Structures of Human Factor VIII
90°
R.m.s.d = 1.20 A for 970 core residues

FIG. 6

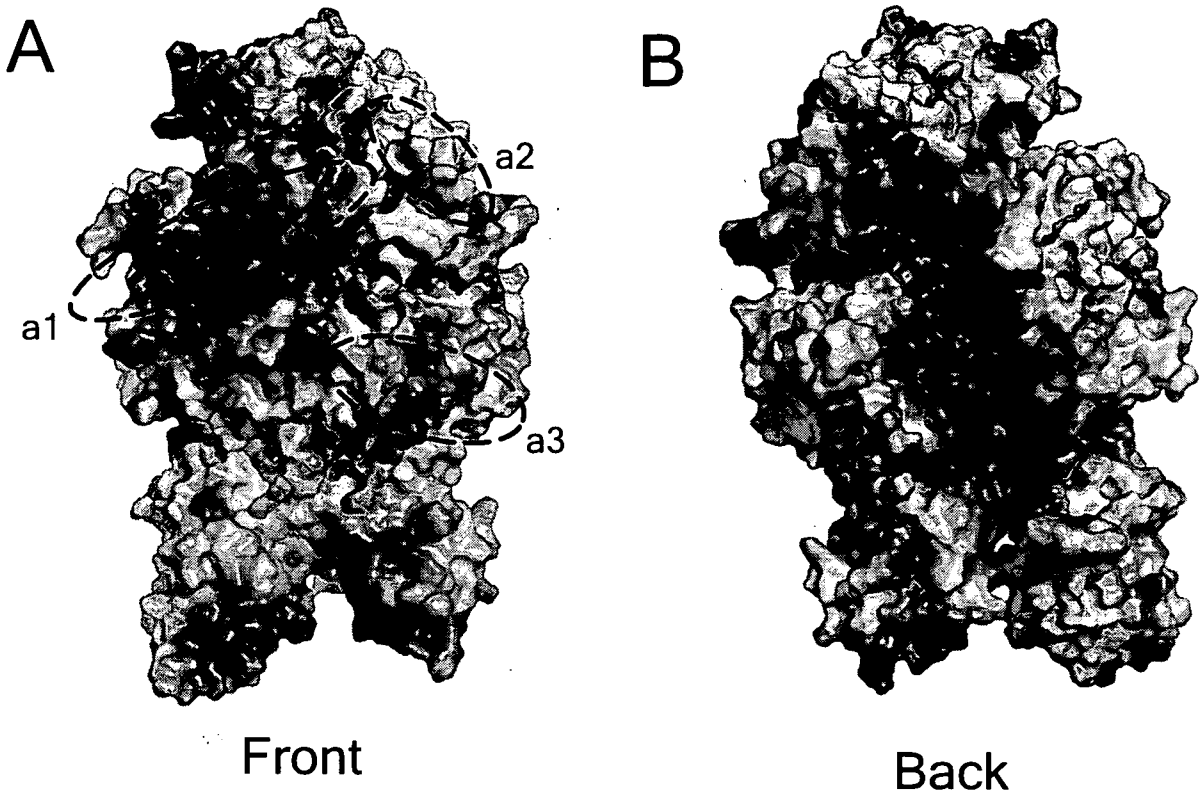


FIG. 7

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/013384

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K14/755 C30B7/00 G01N23/20 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C07K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, BIOSIS, EMBASE, Sequence Search, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SHEN BETTY W ET AL: "The tertiary structure and domain organization of coagulation factor VIII" BLOOD, vol. 111, no. 3, November 2007 (2007-11), pages 1240-1247, XP002522093 ISSN: 0006-4971 prepublished 1.11.2007 the whole document	1-45

-/--

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
1 April 2009	24/04/2009

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Offermann, Stefanie

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/013384

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	STOILOVA-MCPHIE S ET AL: "3-Dimensional structure of membrane-bound coagulation factor VIII: Modeling of the factor VIII heterodimer within a 3-dimensional density map derived by electron crystallography" BLOOD, AMERICAN SOCIETY OF HEMATOLOGY, US, vol. 99, no. 4, 15 February 2002 (2002-02-15), pages 1215-1223, XP002388006 ISSN: 0006-4971 page 1219, right-hand column - page 1220, left-hand column the whole document	1-45
X	WO 01/12836 A (HUTCHINSON FRED CANCER RES [US]; UNIV WASHINGTON [US]; STODDARD BARRY) 22 February 2001 (2001-02-22) claims 1,11; example 1	1-45
X	PRATT K P ET AL: "Structure of the C2 domain of human factor VIII at 1.5 A resolution." NATURE 25 NOV 1999, vol. 402, no. 6760, 25 November 1999 (1999-11-25), pages 439-442, XP002522094 ISSN: 0028-0836 the whole document	1-45
X	EP 1 693 448 A (CHUGAI PHARMACEUTICAL CO LTD [JP]) 23 August 2006 (2006-08-23) paragraph [0157]; figure 6	39
A	SANDBERG H ET AL: "STRUCTURAL AND FUNCTIONAL CHARACTERIZATION OF B-DOMAIN DELETED RECOMBINANT FACTOR VIII" SEMINARS IN HEMATOLOGY, PHILADELPHIA, PA, US, vol. 38, no. 2, SUPPL. 04, 1 April 2001 (2001-04-01), pages 4-12, XP001223580 ISSN: 0037-1963 cited in the application the whole document	
T	NGO J C K ET AL: "Crystal Structure of Human Factor VIII: Implications for the Formation of the Factor IXa-Factor VIIIa Complex" STRUCTURE, CURRENT BIOLOGY LTD., PHILADELPHIA, PA, US, vol. 16, no. 4, 8 April 2008 (2008-04-08), pages 597-606, XP022588339 ISSN: 0969-2126 [retrieved on 2008-04-08] the whole document	1-45

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2008/013384

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 0112836	A	22-02-2001	AU	6770200 A	13-03-2001
			US	2006293505 A1	28-12-2006
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			WO	2005035754 A1	21-04-2005
			US	2008075712 A1	27-03-2008