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[Continued on next page]

(54) Title: GLUR2 RECEPTOR MODULATORS

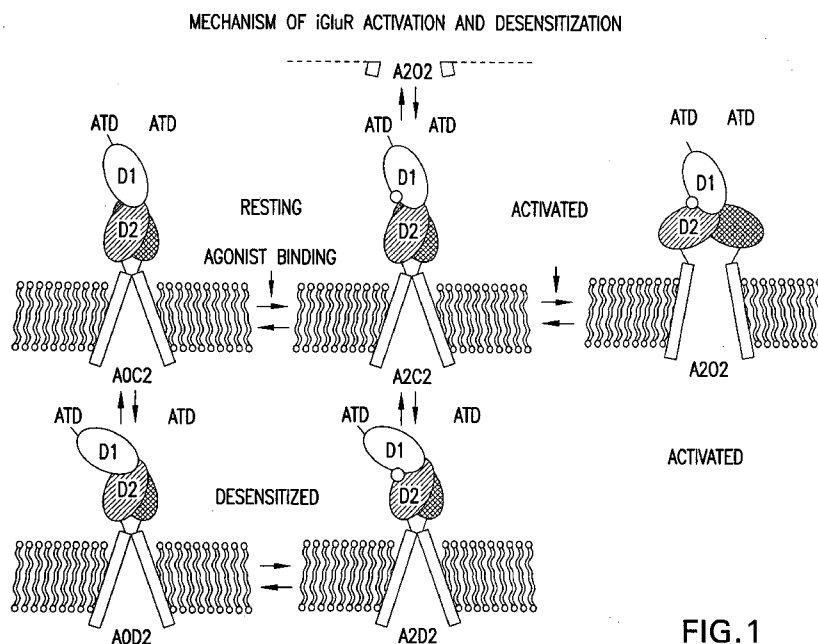


FIG. 1

(57) Abstract: The present invention provides for compositions and methods for modulating the GluR2 receptor. It is based, at least in part, on the discovery, by X-ray crystallography, that a known GluR2 agonist binds to the receptor in two different orientations, thereby diminishing its potency. The present invention provides for structural alternatives in which alternative binding possibilities are substantially eliminated.



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GLUR2 RECEPTOR MODULATORS

GRANT INFORMATION

[0001] This invention was made with government support under Grant No. 5 RO1NS38631-04 awarded by the National Institutes of Health. The government has certain rights in the invention.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0002] This application claims priority to United States Patent Application No. 12/322,274, filed January 30, 2009. The '274 application claims priority to United States Patent Application No. 11/678,396, filed February 23, 2007. The '396 application claimed priority to United States Provisional Application No. 60/776,708, filed February 24, 2006. The contents of all applications identified above are hereby incorporated by reference as if recited in full herein.

INTRODUCTION

[0003] The present invention provides for compositions and methods for modulating the GluR2 receptor. It is based, at least in part, on the discovery, by X-ray crystallography, that LY451646, a known GluR2 modulator, binds to the receptor in two different orientations, thereby diminishing its potency. The present invention provides for structural alternatives in which alternative binding possibilities are substantially eliminated.

BACKGROUND OF THE INVENTION

[0004] Communication between cells of the mammalian central nervous system (CNS) is controlled by the interactions between neurotransmitters, produced by a

sending (presynaptic) cell, and their receptors in the membrane of a receiving (postsynaptic) cell. These interactions can have excitatory or inhibitory effects on the postsynaptic cell. The major excitatory pathways in the mammalian CNS are mediated by the amino acid neurotransmitter glutamate (Watkins and Evans, 1981, *Annu Rev Pharmacol Toxicol.* 21: 165-204; Monaghan et al., 1989, *Annu Rev Pharmacol Toxicol.* 29: 365-402; Watkins et al., 1990, *Trends Pharmacol Sci.* 11: 25-33).

[0005] The excitatory amino acid receptors that bind glutamate are classified into two different receptor types, "ionotropic" and "metabotropic." Metabotropic glutamate receptors are slower acting than the ionotropic receptors, but are active for a longer time period upon neurotransmitter binding. The metabotropic glutamate receptors are coupled to G-protein second messenger pathways. Activation of these receptors results in changes in cytoplasmic cAMP levels, which in turn alters the functionality of membrane bound ion channels. The metabotropic glutamate receptors are composed of subunits encoded for by the genes mGlu1-8 (Schoepp and Conn, 1993, *Trends Pharmacol Sci.* 14: 13-20).

[0006] Ionotropic receptors are directly coupled to ion channels in the plasma membranes of postsynaptic cells. Ionotropic glutamate receptors are fast acting. Binding of a neurotransmitter to an inactive receptor induces the activation of the receptor and opening of the ion channel, allowing the passage of ions across the cell membrane. Three different types of ionotropic glutamate receptors have been identified which are defined by the excitatory actions of their major activators: N-methyl-D-aspartate (NMDA), α -amino-3-hydroxy-5-methylisoxazole-4-propionic acid (AMPA), and kainic acid (Kainate); although AMPA and Kainate can activate each others' receptor types (Bleakman et al., 1996, *Neuropharmacology* 35: 1689-702).

[0007] Functional AMPA receptors are composed of subunits encoded by the genes GluR1-4. Functional Kainate receptors may be composed of the high affinity subunits encoded by the genes KA1 and KA2, and the low affinity subunits encoded by the genes GluR5-7. Each Kainate and AMPA receptor is composed of a heteromeric or homomeric cluster of four receptor subunits. The subunits that compose functional NMDA receptors are encoded by the genes NR1 and NR2. All of the genes that encode the various subunits for the three ionotropic glutamate receptors can undergo alternative splicing, generating a large diversity of potential subunit compositions.

[0008] The biophysical and pharmacological properties of the ionotropic glutamate receptors are dependent on their subunit composition (Hollmann and Heinemann, 1994, *Annu Rev Neurosci* 17:31-108). The GluR2 subunit has been shown to play a major role in modulating ionic currents, susceptibility to excitotoxicity, and ion permeability. Specifically, the presence of the GluR2 subunit in AMPA receptors decreases receptor permeability to Ca^{2+} (Hume et al., 1991, *Science* 253:1028-1031; Burnashev et al., 1992, *Neuron* 8:189-198). Furthermore, the C-terminal cytoplasmic tail of GluR2 is important for mediating interactions with various cytoplasmic proteins that may influence membrane receptor turnover (Man et al., 2000, *Neuron* 25:649-662), synaptic transmission, efficacy, and plasticity (Jia et al., 1996, *Neuron* 17:945-956), and receptor clustering (Matsuda et al., 2000, *EMBO J* 19:2765-2774).

[0009] Current models propose that the ionotropic receptor subunits, including GluR2, consist of three transmembrane spanning domains and a reentrant loop (Paas, 1998, *Trends Neurosci.* 21: 117–125; Wo and Oswald, 1995, *Trends Neurosci.* 18: 161–168). The ligand binding domain is composed of a clamshell-like

dimer formed by the S1 region located before the first transmembrane domain, and the S2 region located between the second and third transmembrane domains (Armstrong and Gouaux, 2000, *Neuron* 28: 165-181; Armstrong et al., 1998, *Nature* 395: 913–917). The dimer is formed by two structural domains, one of which (“D1”) is composed mostly of amino acid residues from S1, and the other (“D2”), which is composed mostly of amino acid residues from S2 (as discussed in Valentine and Palmer, 2005, *Biochem.* 44:3410-3417). When the receptor is activated (see FIGURE 1) by binding of an activator, the cleft between the two domains closes (hence the term, “clamshell”) and the ion channel opens. If the receptor is desensitized, the “clamshell” is held in a closed position, the activator is bound tightly, yet the ion channel is closed (FIGURE 1).

[0010] While the ionotropic glutamate receptors are tetrameric complexes comprised of “dimers-of-dimers” (Sun et al., 2002, *Nature* 417:245-253), study of the conformational effects of binding of various modulators has been facilitated by the creation of a soluble ligand-binding core of GluR2, referred to as GluR2-S1S2J (Armstrong and Gouaux, 2000, *Neuron* 28: 165-181). GluR2-S1S2J comprises the two domains, S1 and S2, which, rather than being bound to transmembrane domains, are joined by a single linker (see FIGURE 2). GluR2-S1S2J can be crystallized, as can be complexes between it and various modulators. High resolution X-ray structures of GluR2-S1S2J with various activators and at least one inactivator have revealed different degrees of cleft closure between D1 and D2 (Lunn et al., 2003, *J. Med. Chem.* 2003, 46:872-875; Jin et al., 2005, *J. Neurosci.* 25(39):9027-9036; Valentine and Palmer III, 2005, *Biochemistry* 44:3410-3417; Kubo and Ito, 2004, *Proteins* 56:411-419; Jin and Gouaux, 2003, *Biochemistry* 42:5201-5213; Hogner et al., 2003, *J. Med. Chem.* 46:214-221; Armstrong et al., 2003, *Proc.*

Natl. Acad. Sci. U.S.A. 100(10):5736-5741; Carcache et al., 2003, Bioorganic & Med. Chem. 11:551-559; Jin et al., 2002, Biochem. 41:15635-15643; Hogner et al., 2002, J. Mol. Biol. 322: 93-109).

[0011] Inappropriate stimulation of the glutamate receptors can lead to neurological disorders and neurodegeneration. For example, excessive activation of the ionotropic receptors can result in a condition known as excitotoxicity in which overactivation results in the death of the glutaminergic cells. Additional conditions such as stroke, cerebral ischemia, Alzheimer's Disease, amyotrophic lateral sclerosis, Huntington's disease, AIDS-induced dementia, depression, and anxiety related disorders can result from the inappropriate activation of glutamate receptors (see U.S. Pat. Nos. 5,446,051 and 5,670,516).

[0012] The development of compounds that can modulate the activity of the glutamate receptors when they bind neurotransmitter is essential to alleviating these neurological conditions (Weiser, 2005, Curr Drug Targets CNS Neurol Disord. 4:153-9). Currently, many candidate anti-depressant and anti-anxiety drugs are tested for their ability to reduce "despair" in mice and rats during forced swim tests (FST) and tail suspension tests (TST). 87%-94% of the compounds that successfully reduce despair in mice and rats are clinically effective at reducing depression and anxiety in humans (Porsolt and Lenerge, 1992, Behavioral models of depression. In: Elliott, J.M., Heal, D.J., and Marsden, C.A. editors. Experimental approaches to anxiety and depression. London. pp. 73-85; Borsini and Meli, 1988, Psychopharmacology 94: 147-60).

[0013] LY451646, an active isomer of LY404187 (R,S-N-2-(4-(4-Cyanophenyl)phenyl)propyl 2-propanesulfonamide) and an allosteric AMPA receptor potentiator (Miu et al., 2001, Neuropharmacology 40: 976-83), has been observed to reduce

“despair” in the FST and TST (Bai et al., 2001, Pharmacology, Biochemistry, and Behavior 70: 187-192), and may therefore have potential as a candidate antidepressant or anti-anxiety drug. It has also been found to increase hippocampal cell proliferation in rats (Bai et al., 2003, Neuropharmacol. 44(8):1013-1021). Additionally, its isomer LY404187 increases glutamate dependent AMPA stimulation of the rat brain as evident by increased glucose utilization and c-fos expression in the hippocampus, neocortex, dorsal raphe nucleus, lateral habenula, and locus coeruleus; areas associated with memory processing and cognition (Fowler et al., 2004, J Cereb Blood Flow Metab. 24: 1098-109). LY404187 interacts functionally with GluR2's Flip/Flop splice domain which is adjacent to the S1S2 dimer. Interacting with the Flip splice variant, LY404187 can potentiate the receptor's response to glutamate by decreasing the receptor's desensitization to prolonged glutamate exposure (Quirk and Nisenbaum, 2003, Journal of Neuroscience. 23: 10953-10962). LY404187 has also been found to exhibit a neurotrophic effect in a rat model of Parkinson's disease (O'Neil et al., 2004, Eur. J. Pharmacol. 486(2):163-174). Understanding glutamate receptor structure and allosteric binding sites can facilitate the development of candidate compounds that may bind the receptor and modulate its response to the neurotransmitter glutamate.

SUMMARY OF THE INVENTION

[0014] The present invention provides for compounds, pharmaceutical compositions and for methods of modulating the activity of the GluR2 receptor. It is based, in part, on the discovery that the GluR2 agonist, LY451646, bound to GluR2-S1S2J, equally occupies two different orientations, thereby diminishing its potency.

[0015] The present invention provides for new compounds that are designed to bind the GluR2 receptor in essentially one structural orientation, and for methods of identifying further modulator compounds. In particular, non-limiting embodiments, the present invention provides for molecules which exhibit 2-fold molecular symmetry and which may comprise a naphthalene core or a bi-aryl core.

[0016] In various embodiments, the present invention encompasses agonists as well as antagonists of GluR2 activity, where an agonist may enhance, and an antagonist may inhibit, the effect of an endogenous activator of the GluR2 receptor, such as the effect of glutamate on the GluR2 receptor. Agonists may be used for the treatment of depression, anxiety, and cognitive disorders, and to facilitate learning. Antagonists may be used for the treatment of ischemic, infectious, and/or degenerative neurological diseases.

[0017] In further embodiments, the present invention provides for a crystal structure of GluR2-S1S2J bound to ligand LY451646, as set forth herein as atomic coordinates in Appendix A. In related embodiments, the present invention provides for a Fo-Fc electron density map of LY451646, as bound to GluR2(S1S2J), and for a virtual form of said map as embodied in a computer simulation of said map.

BRIEF DESCRIPTION OF THE FIGURES

[0018] FIGURE 1. Schematic drawing showing the mechanisms of ionotropic glutamine receptor activation and desensitization.

[0019] FIGURE 2. Schematic drawing showing the design of GluR2-S1S2J, wherein the connection between S1 and S2 and transmembrane domains 1 and 2 is severed and replaced by a linker molecule, and S2 is separated from transmembrane domain S3.

[0020] FIGURE 3. LY451646 potentiates glutamate currents from Delta ATD GluR2 as measured by TEVC in oocytes. The top tracing represents application of glutamate alone, the bottom tracing glutamate plus LY451646.

[0021] FIGURE 4A-B. LY451646 promotes dimerization of GluR2 S1S2. (A) GluR2 alone; (B) GluR2S1S2 in the presence of LY451646.

[0022] FIGURE 5. Data collection and refinement statistics for LY451646 bound to GluR2-S1S2J.

[0023] FIGURE 6. Schematic drawing, showing ribbon structures of GluR2-S1S2J, depicting one molecule of LY451646 binding to the dimer interface.

[0024] FIGURE 7. Schematic drawing, showing ribbon structures of GluR2-S1S2J, depicting LY451646 binding near the "hinge" of the GluR2-S1S2J "clamshell."

[0025] FIGURE 8. Schematic drawing, showing a close-up of the LY451646 at its binding site in GluR2-S1S2J.

[0026] FIGURE 9A-C. (A) Schematic drawing of LY451646 bound to GluR2-S1S2J in a first orientation. (B) Schematic drawing of LY451646 bound to GluR2-S1S2J bound to GluR2-S1S2J in a second orientation. (C) Schematic drawing of LY404187.

[0027] FIGURE 10A-B. Fo-Fc electron density for LY451646, as bound to GluR2-S1S2J. (A) View parallel to the 2-fold axis of symmetry. (B) View perpendicular to the 2-fold axis of symmetry.

[0028] FIGURE 11. Fo-Fc electron density resulting from the two binding orientations of LY451646, with their associated molecular structures superimposed.

[0029] FIGURE 12. Structure and Fo-Fc electron density of SYM1, having formula 3.

[0030] FIGURE 13. SYM1 fits within the Fo-Fc electron density of LY451646, in this view parallel to the 2-fold axis.

[0031] FIGURE 14A-C. Depiction of SYM1 in the binding cleft of GluR2-S1S2J. (A) Two-fold disordered molecules; (B) two-fold symmetric SYM1; (C) Schematic drawing of SYM1 bound to GluR2-S1S2J.

[0032] FIGURE 15. Depiction of LY404187 and its interactions with the GluR2 S1S2 binding site.

[0033] FIGURE 16A-E. Electrophysiologic studies comparing N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide) with LY451646. A. Microamperes of current over various periods of time in a GluR2 expressing oocyte (*Xenopus laevis* oocyte with microinjected rat GluR2 receptor-encoding mRNA), exposed to various concentrations (0.001 μ M, 0.01 μ M, 0.1 μ M and 1 μ M) of N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide). B. Microamperes of current over various periods of time in a GluR2 expressing oocyte exposed to various concentrations (0.001 μ M, 0.01 μ M, 0.1 μ M, 1 μ M and 10 μ M) of LY451646. C. In an oocyte expressing GluR2, ratio of current/maximal current (I/I_{max}) versus concentration of N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide). D. In an oocyte expressing GluR2, ratio of current/maximal current (I/I_{max}) versus concentration of LY451646. E. N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide).

[0034] FIGURE 17. Effect of N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide) on locomotor activity in the context of various doses of amphetamine.

[0035] FIGURE 18. (A) Potentiation of steady-state glutamate-induced currents for GluR2; receptors and (B) % current potentiation bar graph.

DETAILED DESCRIPTION OF THE INVENTION

[0036] For clarity, and not by way of limitation, the detailed description of the invention is divided into the following subsections:

- GluR2 Modulators;
- Methods For Characterizing GluR2 Modulators; and
- Uses Of GluR2 Modulators.

GluR2 Modulators And Other Ion Channel Receptor Modulators

[0037] The present invention provides modulators with binding properties similar to LY451646, but which bind essentially in one orientation to the receptor. In the case of GluR2, for example, the modulators of the invention bind essentially in one orientation to GluR2-S1S2J. As used herein, "bind essentially in one orientation" means that desirably the modulator binds in only one structural orientation, but in the event that more than one binding orientation is observed (e.g., by X-ray crystallography), there exists one structural orientation in which the modulator is found bound to the receptor, e.g., GluR2, in at least about 75 percent of occurrences.

[0038] In particular non-limiting embodiments, the modulator exhibits 2-fold (C_2) symmetry, which means that it looks the same after being rotated by 180 degrees. Because of this symmetry, even if a modulator at a particular position were labeled and it was found that the labeled molecule occurred sometimes at a first position, and sometimes at a second position in which the modulator is rotated 180 degrees, said modulator would still be said to bind in only one structural orientation, even where several *detectable* orientations exist.

[0039] It will be apparent that compounds of the invention may have one or more chiral atoms. When such compounds have 2-fold symmetry, the symmetric/opposing chiral atoms have the same absolute configuration relative to one another. In the simplest case where the compound has two-fold symmetry and two opposing chiral atoms, each chiral atom will be "R" or "S" and the compound will be designated "RR" or "SS." Compounds having identical chiral atoms but lacking two-fold symmetry yield meso compounds. In the case where such a compound lacks two-fold symmetry, the compound is designated "RS" or "SR."

[0040] In particular non-limiting embodiments, the modulator, which may or may not exhibit 2-fold symmetry, may exhibit, when bound to GluR2, a Fo-Fc electron density which conforms to the Fo-Fc electron density of LY451646 bound to GluR2(S1S2J). "Conforms" means that the Fo-Fc electron density determined for a modulator bound to GluR2(S1S2J) overlaps with the Fo-Fc electron density of LY451646, determined by the same methods (for example, at a resolution of approximately 1.0 Angstroms or less), by at least about 60 percent, at least about 70 percent, at least about 80 percent, at least about 90 percent, or at least about 95 percent. The electron density of LY451646 may be determined using the coordinates set forth in Appendix A.

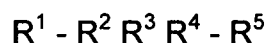
[0041] In particular non-limiting examples of species of any of the above embodiments, a modulator of the invention may be a molecule comprising a linear conformation, in which both ends of the linear conformation show increased electron density relative to the mid-portion of the linear conformation and optionally may exhibit a net negative charge. In further non-limiting examples, the areas of increased electron density may, when bound to GluR2, such as GluR2(S1S2J), form a polar or non-polar attracting interaction with one or more of the following residues

of GluR2: Ile 481, Lys 493, Pro 494, Phe 495, Met 496, Ser 497, Leu 498, Ser 729, Lys 730, Gly 731, Leu 751, Ser 754, Leu 759.

[0042] In particular non-limiting examples of species of any of the above embodiments, a modulator of the invention may, in GluR2, *e.g.* GluR2-S1S2J, form an attracting interaction, which may be polar or non-polar, with one or more of the following GluR2 amino acid residues: Ile 481, Lys 493, Pro 494, Phe 495, Met 496, Ser 497, Leu 498, Ser 729, Lys 730, Gly 731, Leu 751, Ser 754, Leu 759.

[0043] In particular non-limiting examples of species of any of the above embodiments, a modulator of the invention may, in GluR2, *e.g.* GluR2-S1S2J, form an attracting interaction, which may be polar or non-polar, with one or more of the following GluR2 amino acid residues, where subscripts A and B denote the different protomers (see Example 1, below, and Appendix A: Ile_B 481, Pro_A 494, Ser_B 497, Ser_A 729, Ser_B 729, Lys_A 730, Gly_B 731, Leu_A 751, and Ser_A 754.

[0044] In particular non-limiting embodiments of the invention, the modulator of the invention may be represented as formula 1:



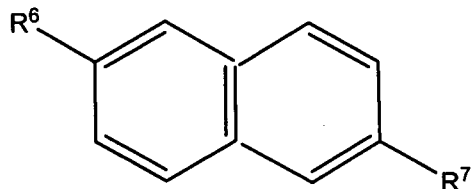
where R¹ and R⁵ are preferably, but not necessarily, the same, and may be alkylaminosulfonyl, alkylaminosulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, alkylaminocarbonyl, alkylaminocarbonylalkyl, alkylaminocarboxy, alkylaminocarboxyalkyl;

where R² and R⁴ are preferably, but not necessarily, the same, and are ring structures, optionally substituted, which may be aryl, cycloalkyl, or heterocyclyl; and where R³ may be a bond between R² and R⁴ which either is shared by or joins the two rings without being shared in the rings themselves.

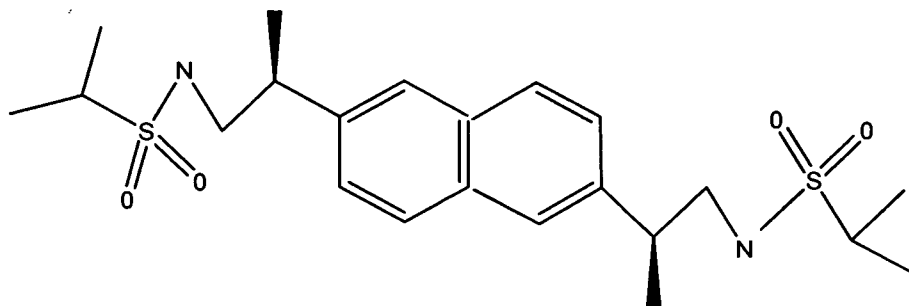
[0045] In non-limiting embodiments, R² R³ R⁴ may be a naphthyl group, a piperazine group, or a biaryl group.

[0046] In further non-limiting embodiments, R^2 R^3 R^4 may be a naphthyl group, a piperazine group, or a biaryl group, and R^1 and R^5 may be the same, and may each be an alkylaminosulfonyl or an alkylaminosulfonylalkyl group.

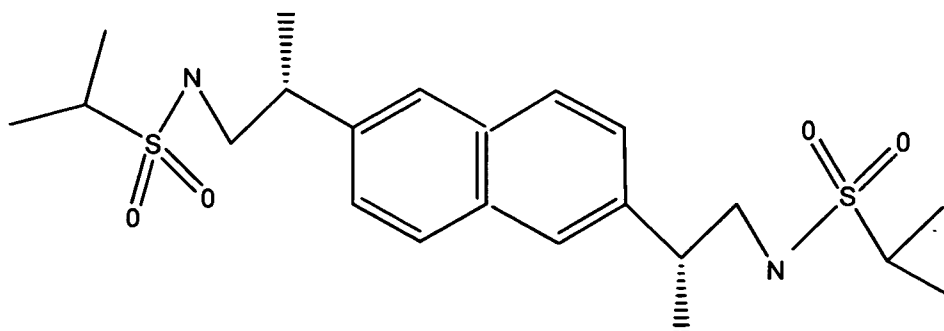
[0047] In a particular set of embodiments, the present invention provides for a compound having formula 2:



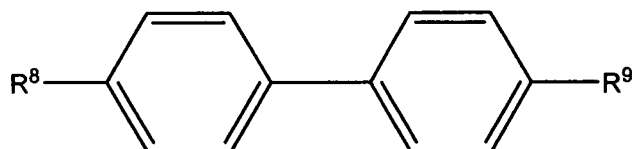
where R^6 and R^7 are preferably, but not necessarily, the same, and may be alkylaminosulfonyl, alkylaminosulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, alkylaminocarbonyl, alkylaminocarbonylalkyl, alkylaminocarboxy, alkylaminocarboxyalkyl. In one specific non-limiting embodiment, the present invention provides for a compound having formula 3A:



[0048] Another non-limiting embodiment, the present invention provides for a compound having formula 3B (also referred to as "SYM1"):

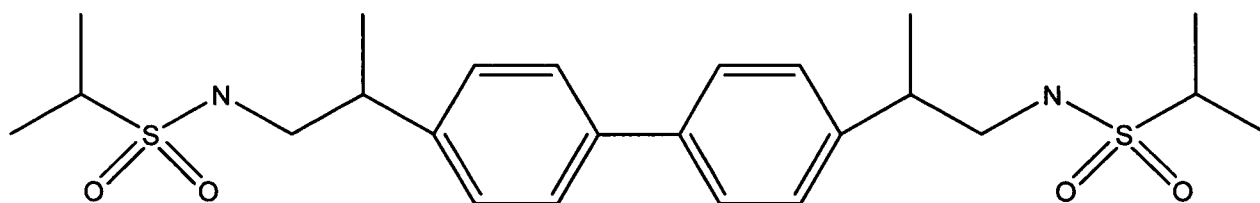


[0049] In another particular set of embodiments, the present invention provides for a compound having formula 4:



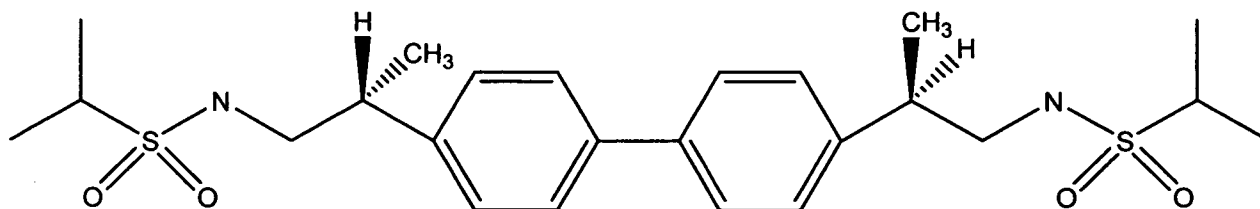
where R^8 and R^9 are preferably, but not necessarily, the same, and may be alkylaminosulfonyl, alkylaminosulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, alkylaminocarbonyl, alkylaminocarbonylalkyl, alkylaminocarboxy, alkylaminocarboxyalkyl.

[0050] In one specific non-limiting embodiment, the present invention provides for a compound having formula 5:

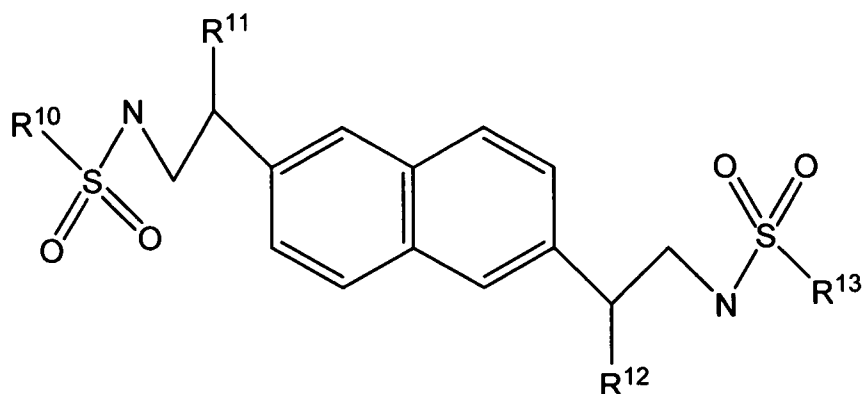


[0051] The compound above may exist in three absolute configurations, *viz.*, "R,R" or "R,S"; or S,S."

[0052] In a preferred embodiment, the present invention provides for N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide), a compound having 2-fold symmetry as shown in formula 6:

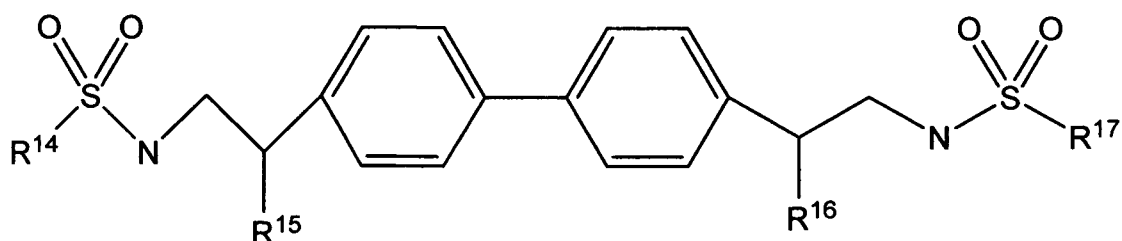


[0053] In another set of non-limiting embodiments, the present invention provides for a compound of formula 7:



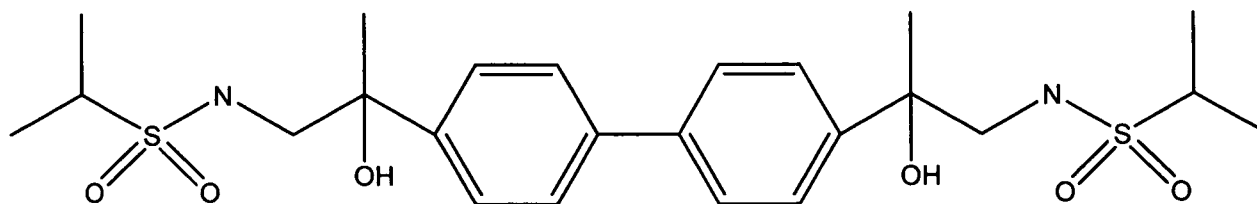
where R^{10} and R^{13} are the same and/or R^{11} and R^{12} are the same, and preferably R^{10} and R^{13} are the same and R^{11} and R^{12} are the same, and each of R^{10} , R^{11} , R^{12} , and R^{13} individually may be H or alkyl, including but not limited to methyl, ethyl, propyl, isopropyl or butyl, and preferably where R^{10} and/or R^{13} is propyl where the linkage to the sulfur is via the middle carbon.

[0054] In another set of non-limiting embodiments, the present invention provides for a compound of formula 8:

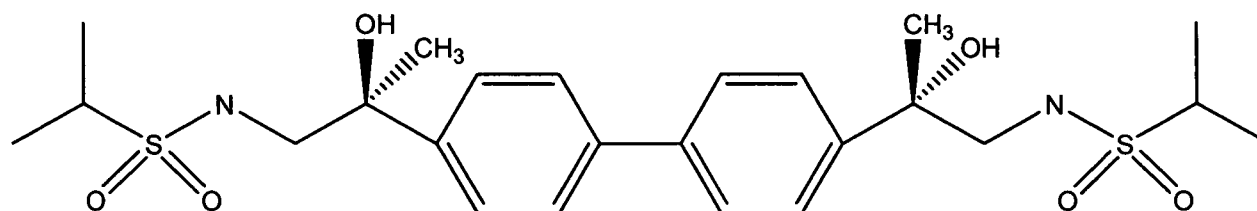


where R^{14} and R^{17} are the same, or, if they are not, then R^{15} and R^{16} are the same, and each of R^{14} , R^{15} , R^{16} , and R^{17} individually may be H or alkyl, including but not limited to methyl, ethyl, propyl, isopropyl or butyl, and preferably where R^{14} and/or R^{17} is propyl where the linkage to the sulfur is via the middle carbon.

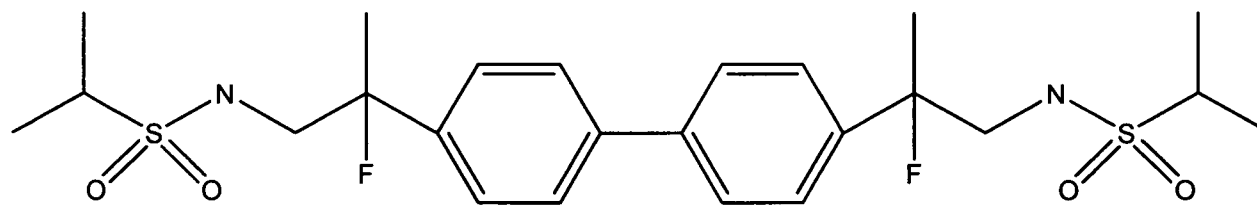
[0055] In another set of non limiting embodiments, the present invention provides for a compound of formula 9:



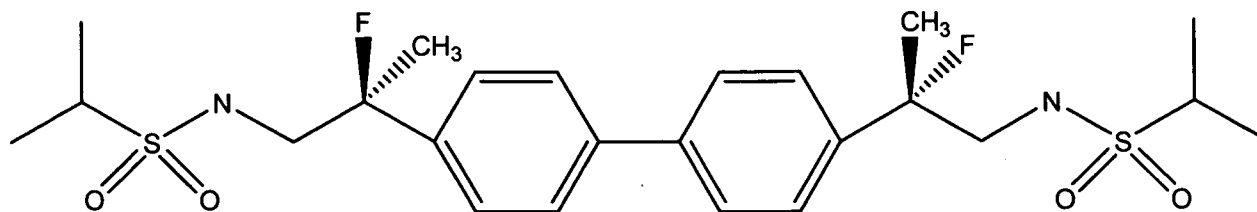
[0056] In a preferred embodiment, the present invention provides for N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-hydroxypropane-2,1-diyl)dipropylsulfonamide), a compound having a 2-fold symmetry of formula 10:



[0057] In another set of non limiting embodiments, the present invention provides for a compound of formula 11:



[0058] In a preferred embodiment, the present invention provides for N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropylsulfonamide), a compound having a 2-fold symmetry of formula 12:



[0059] The receptor-modulating compounds of the invention have structures, preferably with 2-fold symmetry, that closely conform to the dimensions of the three dimensional pockets forming their respective receptors. Receptor dimensions may be measured or estimated via any method familiar to those skilled in the art, including without limitation x-ray crystallography, (Ilari, A. and Savino, C. *Methods Mol. Biol.* 452, 63-87 (2008)); and nuclear magnetic resonance spectroscopy, (Altieri, A.S. and Byrd, R.A. *Curr. Opin. Struct. Biol.* 14, 547-553 (2004)).

[0060] Synthesis of the receptor-modulating compounds of the invention may be carried out as convenient, employing any methods familiar to those skilled in the art. General synthetic methods for compounds having a biaryl core are described in Magnus *et al.*, *Organic Process Research & Development*, 2005, 9, 621-628.

[0061] The compounds of the invention are preferably purified and isolated in crystalline form. For example, compounds of the invention are preferably at least 95% pure, more preferably at least 98% pure.

[0062] The foregoing compounds and classes of compounds, in non-limiting embodiments of the invention, (i) may exhibit, when bound to GluR2, a Fo-Fc electron density which conforms to the Fo-Fc electron density of LY451646 bound to GluR2(S1S2J); and/or (ii) may, in GluR2, e.g. GluR2(S1S2J), form an attracting interaction, which may be polar or non-polar, with one or more of the following GluR2 amino acid residues: Ile 481, Lys 493, Pro 494, Phe 495, Met 496, Ser 497, Leu 498, Ser 729, Lys 730, Gly 731, Leu 751, Ser 754, Leu 759; and/or (iii) may exhibit GluR2 agonist activity; and/or (iv) may exhibit GluR2 antagonist activity.

Methods For Characterizing GluR2 Modulators

[0063] The present invention further provides for methods of identifying agonists (including partial agonists) as well as antagonists of GluR2.

[0064] One skilled in the art may select and employ various modalities to identify and/or design compounds that modulate GluR2 in accordance with the invention. Such include, without limitation, rational drug design, molecular replacement, homology modeling and in silico screening. Identification of additional compounds that modulate receptors in accordance with the invention may also be achieved by performing binding assays which compare the relative binding of reference and test compounds to the receptor. In this manner, compounds having increasingly higher potency for modulating the receptor may be identified.

[0065] Methods of identifying GluR2 modulators include using the solved crystal structure of GluR2-S1S2 bound to LY451646 to identify additional compounds that bind substantially to the same site as LY451646 but which show advantageous properties, such as increased potency, less side effects, and/or slower deactivation of GluR2 (see below). For example, a virtual model of LY451646 as bound in GluR2 may be used to develop additional compounds which fit, with appropriate electrostatic interactions, into the binding site.

[0066] A modulator of the invention may be identified as an agonist by any method known in the art. For example, upon binding to GluR2(S1S2J), an agonist tends to result in a closure of the cleft between S1 and S2 by approximately 20°, as measured, for example, by determining the crystal structure. A partial agonist, in contrast, would result in closure of the cleft by approximately 10-18°. Binding of an antagonist is not associated with substantial cleft closure. An agonist of the present

invention stabilizes the receptor in a closed-cleft state, which resembles the conformation of the receptor when it is bound to an activator, such as glutamate. The modulators of the invention may be used in the presence or absence of an activator.

[0067] In particular embodiments, a modulator of the invention may be identified as an agonist (full or partial agonist) by determining that the modulator slows deactivation of GluR2. For example, a slowing of deactivation may be determined using studies as described in Jin et al., 2005, J. Neurosci. 25(39): 9027-9036, in which electrophysiological responses of GluR2(flop), expressed on outside-out patches of transiently transfected HEK 293 cells, were measured. A modulator of the invention may be considered an agonist if it slows deactivation more than 100 μ M cyclothiazide, and/or slows deactivation at least as much as 5 mM antiracetam, and/or slows deactivation at least as much as 100 μ M CX614. An antagonist, on the other hand, would promote deactivation (whereby the ion-conducting pore of the receptor closes).

Uses Of GluR2 Modulators

[0068] Therapeutic methods of the invention may be carried out by administering an effective amount of receptor-modulating compounds of the invention. Conditions to be treated may be selected based upon the receptor and the nature of the modulation desired.

[0069] By way of example, an agonist of the invention (either a full agonist or a partial agonist) may be used to treat (alleviate) depression, to improve cognition/learning, and to treat (alleviate) disorders such as mild cognitive

impairment, Parkinson's disease, Alzheimer's disease, or schizophrenia. An agonist of the invention may be used to promote neurotrophic effects.

[0070] An inhibitor of the invention may be used to treat conditions, diseases and disorders associated with glutamate toxicity, including, but not limited to, ischemia, amyotrophic lateral sclerosis, and, notwithstanding the cognitive benefits which may be associated with agonists, Alzheimer's disease, Parkinson's Disease, HIV-associated dementia, and Huntington's chorea.

[0071] The present invention provides for the use of any of the compounds set forth herein, in effective amounts, for treating a disorder which, in non-limiting embodiments, is selected from the group consisting of anxiety, depression, and a combination thereof. In specific, non-limiting embodiments, an effective amount, which may be administered daily as a single or divided dose, may be between about 1-25 mg, in a single or divided dose of between 0.01 and 100 mg/kg, or between about 0.1 and 10 mg/kg, or between about 0.1 and 5 mg/kg, or between about 0.5 and 5 mg/kg.

[0072] Compounds of the invention may be administered by any route known in the art, including, but not limited to, oral, nasal or pulmonary inhalation, subcutaneous, intravenous, transcutaneous, intrathecal, rectal, etc..

[0073] Compounds of the invention may be comprised in a pharmaceutical composition with a suitable pharmaceutical carrier, including, but not limited to, water, saline, etc..

[0074] Compounds of the invention may be administered in pharmaceutical compositions in solid (e.g., tablets, capsule, suppositories) or liquid form.

[0075] Compounds of the invention may be administered together with one or more bioactive agent, including other anti-depressant and/or anti-anxiety compounds.

[0076] Typically, in the present invention, an effective amount of a receptor modulating compound is about 1-25 mg per day or 0.02-0.50 mg/kg/day. In the present invention, the foregoing amounts may be provided to a patient for the desired treatment course.

[0077] In the present invention, when a range is stated for a particular parameter, *e.g.*, an effective amount, all values within that range, including the endpoints, are intended to be included. In addition to the foregoing, effective dosage forms, modes of administration, and dosage amounts of the compounds may be determined empirically, and making such determinations is within the skill of the art in view of the disclosure herein.

[0078] It is understood by those skilled in the art that the dosage amount will vary with the route of administration, the rate of excretion, the duration of the treatment, the identity of any other drugs being administered, the age, size, and species of mammal, and like factors well known in the arts of medicine and veterinary medicine. In general, a suitable dose of a compound according to the invention will be that amount of the VMAT2 antagonist, which is the lowest dose effective to produce the desired effect. The effective dose of a compound may be administered as one, two, three, four, five, six or more sub-doses, administered separately at appropriate intervals throughout the day.

[0079] A compound of the present invention may be administered in any desired and effective manner: as pharmaceutical compositions for oral ingestion, or for parenteral or other administration in any appropriate manner such as

intraperitoneal, subcutaneous, topical, intradermal, inhalation, intrapulmonary, rectal, vaginal, sublingual, intramuscular, intravenous, intraarterial, intrathecal, or intralymphatic. In the present invention, a preferred route of administration is intravenous. Further, a compound of the present invention may be administered in conjunction with other treatments. A compound or composition containing such an antagonist may be encapsulated or otherwise protected against gastric or other secretions, if desired.

[0080] While it is possible for a compound of the invention to be administered alone, it is preferable to administer the compound as a pharmaceutical formulation (composition). Pharmaceutically acceptable compositions of the invention comprise one receptor-modulating compounds as an active ingredient in admixture with one or more pharmaceutically-acceptable carriers and, optionally, one or more other compounds, drugs, ingredients and/or materials. Regardless of the route of administration selected, the compounds of the present invention are formulated into pharmaceutically-acceptable dosage forms by conventional methods known to those of skill in the art. See, *e.g.*, Remington 's Pharmaceutical Sciences (Mack Publishing Co., Easton, Pa.).

[0081] Pharmaceutically acceptable carriers are well known in the art (see, *e.g.*, Remington's Pharmaceutical Sciences (Mack Publishing Co., Easton, Pa.) and The National Formulary (American Pharmaceutical Association, Washington, D.C.)) and include sugars (*e.g.*, lactose, sucrose, mannitol, and sorbitol), starches, cellulose preparations, calcium phosphates (*e.g.*, dicalcium phosphate, tricalcium phosphate and calcium hydrogen phosphate), sodium citrate, water, aqueous solutions (*e.g.*, saline, sodium chloride injection, Ringer's injection, dextrose injection, dextrose and sodium chloride injection, lactated Ringer's injection),

alcohols (e.g., ethyl alcohol, propyl alcohol, and benzyl alcohol), polyols (e.g., glycerol, propylene glycol, and polyethylene glycol), organic esters (e.g., ethyl oleate and triglycerides), biodegradable polymers (e.g., polylactide-polyglycolide, poly(orthoesters), and poly(anhydrides)), elastomeric matrices, liposomes, microspheres, oils (e.g., corn, germ, olive, castor, sesame, cottonseed, and groundnut), cocoa butter, waxes (e.g., suppository waxes), paraffins, silicones, talc, silicylate, etc. Each pharmaceutically acceptable carrier used in a pharmaceutical composition of the invention must be "acceptable" in the sense of being compatible with the other ingredients of the formulation and not injurious to the subject. Carriers suitable for a selected dosage form and intended route of administration are well known in the art, and acceptable carriers for a chosen dosage form and method of administration can be determined using ordinary skill in the art.

[0082] The pharmaceutical compositions of the invention may, optionally, contain additional ingredients and/or materials commonly used in pharmaceutical compositions. These ingredients and materials are well known in the art and include (1) fillers or extenders, such as starches, lactose, sucrose, glucose, mannitol, and silicic acid; (2) binders, such as carboxymethylcellulose, alginates, gelatin, polyvinyl pyrrolidone, hydroxypropylmethyl cellulose, sucrose and acacia; (3) humectants, such as glycerol; (4) disintegrating agents, such as agar-agar, calcium carbonate, potato or tapioca starch, alginic acid, certain silicates, sodium starch glycolate, cross-linked sodium carboxymethyl cellulose and sodium carbonate; (5) solution retarding agents, such as paraffin; (6) absorption accelerators, such as quaternary ammonium compounds; (7) wetting agents, such as cetyl alcohol and glycerol monostearate; (8) absorbents, such as kaolin and bentonite clay; (9) lubricants, such as talc, calcium stearate, magnesium stearate, solid polyethylene glycols, and

sodium lauryl sulfate; (10) suspending agents, such as ethoxylated isostearyl alcohols, polyoxyethylene sorbitol and sorbitan esters, microcrystalline cellulose, aluminum metahydroxide, bentonite, agar-agar and tragacanth; (11) buffering agents; (12) excipients, such as lactose, milk sugars, polyethylene glycols, animal and vegetable fats, oils, waxes, paraffins, cocoa butter, starches, tragacanth, cellulose derivatives, polyethylene glycol, silicones, bentonites, silicic acid, talc, salicylate, zinc oxide, aluminum hydroxide, calcium silicates, and polyamide powder; (13) inert diluents, such as water or other solvents; (14) preservatives; (15) surface-active agents; (16) dispersing agents; (17) control-release or absorption-delaying agents, such as hydroxypropylmethyl cellulose, other polymer matrices, biodegradable polymers, liposomes, microspheres, aluminum monostearate, gelatin, and waxes; (18) opacifying agents; (19) adjuvants; (20) wetting agents; (21) emulsifying and suspending agents; (22), solubilizing agents and emulsifiers, such as ethyl alcohol, isopropyl alcohol, ethyl carbonate, ethyl acetate, benzyl alcohol, benzyl benzoate, propylene glycol, 1,3-butylene glycol, oils (in particular, cottonseed, groundnut, corn, germ, olive, castor and sesame oils), glycerol, tetrahydrofuryl alcohol, polyethylene glycols and fatty acid esters of sorbitan; (23) propellants, such as chlorofluorohydrocarbons and volatile unsubstituted hydrocarbons, such as butane and propane; (24) antioxidants; (25) agents which render the formulation isotonic with the blood of the intended recipient, such as sugars and sodium chloride; (26) thickening agents; (27) coating materials, such as lecithin; and (28) sweetening, flavoring, coloring, perfuming and preservative agents. Each such ingredient or material must be "acceptable" in the sense of being compatible with the other ingredients of the formulation and not injurious to the subject. Ingredients and materials suitable for a selected dosage form and intended route of administration

are well known in the art, and acceptable ingredients and materials for a chosen dosage form and method of administration may be determined using ordinary skill in the art.

[0083] Pharmaceutical compositions suitable for oral administration may be in the form of capsules, cachets, pills, tablets, powders, granules, a solution or a suspension in an aqueous or non-aqueous liquid, an oil-in-water or water-in-oil liquid emulsion, an elixir or syrup, a pastille, a bolus, an electuary or a paste. These formulations may be prepared by methods known in the art, e.g., by means of conventional pan-coating, mixing, granulation or lyophilization processes.

[0084] Solid dosage forms for oral administration (capsules, tablets, pills, dragees, powders, granules and the like) may be prepared by mixing the active ingredient(s) with one or more pharmaceutically-acceptable carriers and, optionally, one or more fillers, extenders, binders, humectants, disintegrating agents, solution retarding agents, absorption accelerators, wetting agents, absorbents, lubricants, and/or coloring agents. Solid compositions of a similar type may be employed as fillers in soft and hard-filled gelatin capsules using a suitable excipient. A tablet may be made by compression or molding, optionally with one or more accessory ingredients. Compressed tablets may be prepared using a suitable binder, lubricant, inert diluent, preservative, disintegrant, surface-active or dispersing agent. Molded tablets may be made by molding in a suitable machine. The tablets, and other solid dosage forms, such as dragees, capsules, pills and granules, may optionally be scored or prepared with coatings and shells, such as enteric coatings and other coatings well known in the pharmaceutical-formulating art. They may also be formulated so as to provide slow or controlled release of the active ingredient therein. They may be sterilized by, for example, filtration through a bacteria-retaining

filter. These compositions may also optionally contain opacifying agents and may be of a composition such that they release the active ingredient only, or preferentially, in a certain portion of the gastrointestinal tract, optionally, in a delayed manner. The active ingredient can also be in microencapsulated form.

[0085] Liquid dosage forms for oral administration include pharmaceutically-acceptable emulsions, microemulsions, solutions, suspensions, syrups, and elixirs. The liquid dosage forms may contain suitable inert diluents commonly used in the art. Besides inert diluents, the oral compositions may also include adjuvants, such as wetting agents, emulsifying and suspending agents, sweetening, flavoring, coloring, perfuming and preservative agents. Suspensions may contain suspending agents.

[0086] Pharmaceutical compositions for rectal or vaginal administration may be presented as a suppository, which maybe prepared by mixing one or more active ingredient(s) with one or more suitable nonirritating carriers which are solid at room temperature, but liquid at body temperature and, therefore, will melt in the rectum or vaginal cavity and release the active VMAT2 antagonist. Pharmaceutical compositions which are suitable for vaginal administration also include pessaries, tampons, creams, gels, pastes, foams or spray formulations containing such pharmaceutically-acceptable carriers as are known in the art to be appropriate.

[0087] Dosage forms for the topical or transdermal administration include powders, sprays, ointments, pastes, creams, lotions, gels, solutions, patches, drops and inhalants. The active compound may be mixed under sterile conditions with a suitable pharmaceutically-acceptable carrier. The ointments, pastes, creams and gels may contain excipients. Powders and sprays may contain excipients and propellants.

[0088] Pharmaceutical compositions suitable for parenteral administrations comprise one or more compound in combination with one or more pharmaceutically-acceptable sterile isotonic aqueous or non-aqueous solutions, dispersions, suspensions or emulsions, or sterile powders which may be reconstituted into sterile injectable solutions or dispersions just prior to use, which may contain suitable antioxidants, buffers, solutes which render the formulation isotonic with the blood of the intended recipient, or suspending or thickening agents. Proper fluidity can be maintained, for example, by the use of coating materials, by the maintenance of the required particle size in the case of dispersions, and by the use of surfactants. These compositions may also contain suitable adjuvants, such as wetting agents, emulsifying agents and dispersing agents. It may also be desirable to include isotonic agents. In addition, prolonged absorption of the injectable pharmaceutical form may be brought about by the inclusion of agents which delay absorption.

[0089] In some cases, in order to prolong the effect of a drug, it is desirable to slow its absorption from subcutaneous or intramuscular injection. This may be accomplished by the use of a liquid suspension of crystalline or amorphous material having poor water solubility.

[0090] The rate of absorption of the drug then depends upon its rate of dissolution which, in turn, may depend upon crystal size and crystalline form. Alternatively, delayed absorption of a parenterally-administered drug may be accomplished by dissolving or suspending the drug in an oil vehicle. Injectable depot forms may be made by forming microencapsule matrices of the active ingredient in biodegradable polymers. Depending on the ratio of the active ingredient to polymer, and the nature of the particular polymer employed, the rate of active ingredient release can be controlled. Depot injectable formulations are also prepared by

entrapping the drug in liposomes or microemulsions which are compatible with body tissue. The injectable materials can be sterilized for example, by filtration through a bacterial-retaining filter.

[0091] The formulations may be presented in unit-dose or multi-dose sealed containers, for example, ampules and vials, and may be stored in a lyophilized condition requiring only the addition of the sterile liquid carrier, for example water for injection, immediately prior to use. Extemporaneous injection solutions and suspensions may be prepared from sterile powders, granules and tablets of the type described above.

[0092] In a preferred embodiment of the invention, there is provided a pharmaceutical composition in a unit dosage form for oral administration comprising 1 to 25 mg of for N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide) or a pharmaceutically acceptable salt thereof and a pharmaceutical acceptable carrier.

[0093] In a preferred embodiment of the invention, there is provided a pharmaceutical composition in a unit dosage form for oral administration comprising 1 to 25 mg of for N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-hydroxypropane-2,1-diyl)dipropene-2-sulfonamide) or a pharmaceutically acceptable salt thereof and a pharmaceutical acceptable carrier.

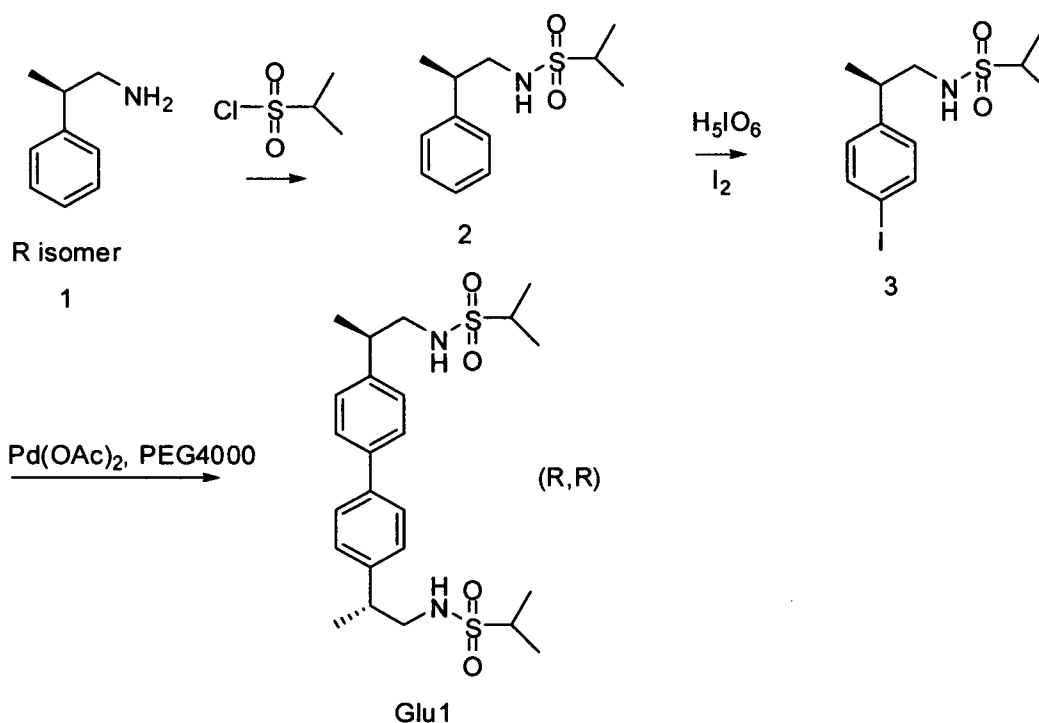
[0094] In a preferred embodiment of the invention, there is provided a pharmaceutical composition in a unit dosage form for oral administration comprising 1 to 25 mg of for N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropene-2-sulfonamide) or a pharmaceutically acceptable salt thereof and a pharmaceutical acceptable carrier.

EXAMPLES

[0095] The following examples are provided to further illustrate the compounds, pharmaceutical compositions and methods of the present invention. These examples are illustrative only and are not intended to limit the scope of the invention in any way.

Example 1

[0096] N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide) is synthesized as follows:



[0097] 1. Synthesis of (R)-N-(2-phenylpropyl) propane-2-sulfonamide (compound 2)

[0098] 1g of (R)-2-phenylpropan-1-amine, 1.2ml of triethylamine and a catalytic amount of DMAP were dissolved in 20ml of CH_2Cl_2 . The solution was cooled to 0 °C and to the solution, 1.1g of propane-2-sulfonyl chloride was added slowly. The reaction was stirred at 0 °C for 0.5h and then warmed to room

temperature for 3h. The solution was washed by 1NHCl, saturated NaHCO₃ and brine. After removing solvent, 1.5g of light yellow oil was obtained. The product was used for next step without purification.

[0099] 2. Synthesis of (R)-N-(2-(4-iodophenyl)propyl) propane-2-sulfonamide (compound 3)

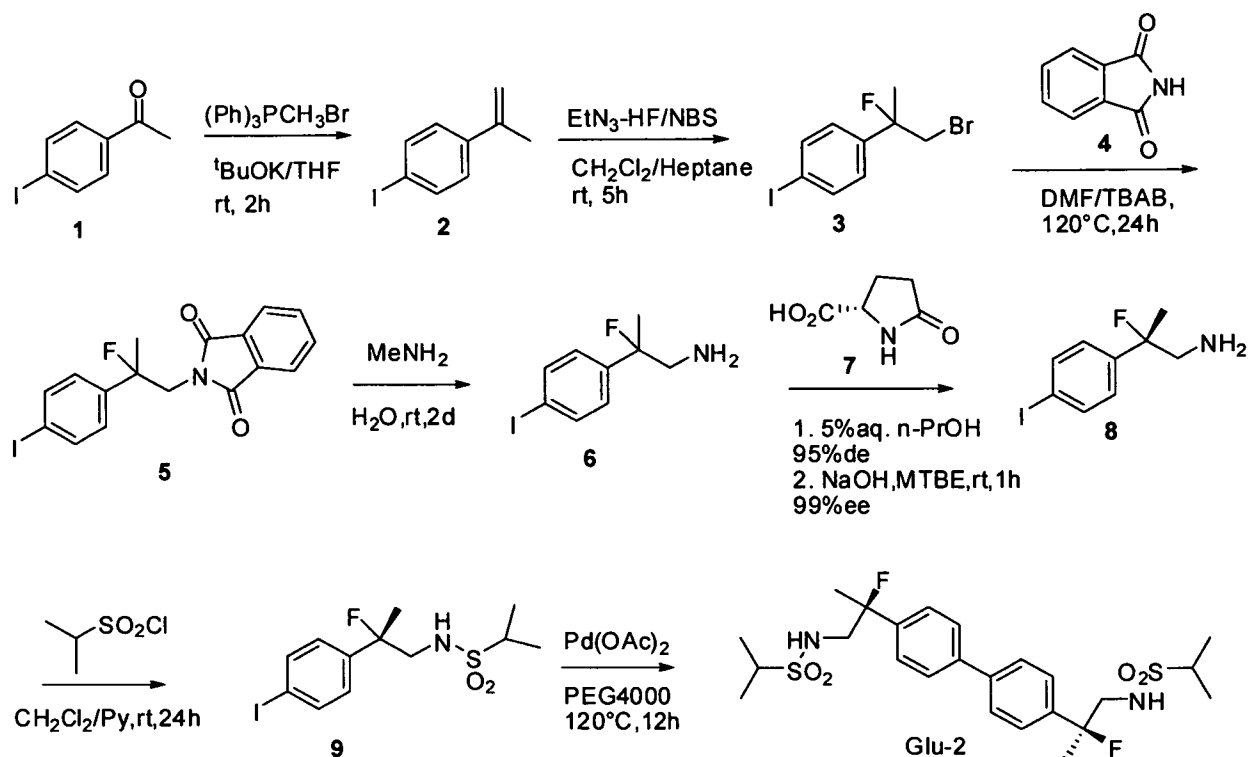
[0100] 0.9 g of compound 2 was dissolved in 4.5ml of HAc and 0.4 g of concentrated H₂SO₄ was added slowly, rinsed by 1ml of water. To this solution, 0.2 g of H₅IO₆ and 0.45g of I₂ was added. The reaction was heated at 60 0 °C for 3h. The reaction was quenched by saturated Na₂SO₃, extracted with CH₂Cl₂ three times. The product was obtained as brown solid and was used for next step without purification.

[0101] 3. Synthesis of N,N'-(2R, 2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane-2,1-diyl)diropane-2-sulfonamide

[0102] 190mg of compound 3 was mixed with 15mg of Pd(OAc)₂, 71mg of K₂CO₃, 0.5g of PEG4000. The mixture was heated at 120 °C for 5h. after cooled down, the black solid was extracted with ether 10 times. After removing solvent, the residue was purified by chromatography to give 75mg of pure product (Yield: 60.3%).
¹HNMR(CD₃Cl)δ: 1.27-1.36(18H,m,CH₃); 2.97-3.15(4H, m, CH₂); 3.21-3.31(2H,m, CH); 3.35-3.42(2H,m,CH); 3.95(2H,broad, NH); 7.29(4H,dd,Ph-H); 7.53(4H, dd, Ph-H). ¹³CNMR(CD₃Cl)δ: 17.04, 40.88, 50.67, 53.75, 127.71, 127.95, 139.74, 142.30.
MS (M⁺): 480.95

Example 2

[0103] N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropene-2, 1-diyl)dipropene-2-sulfonamide) is synthesized as follows:



(S)-N-(2-fluoro-2-(4-iodophenyl)propyl)propane-2-sulfonamide

***N,N'*-(2*S*,2'*S*)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropene-2-sulfonamide**

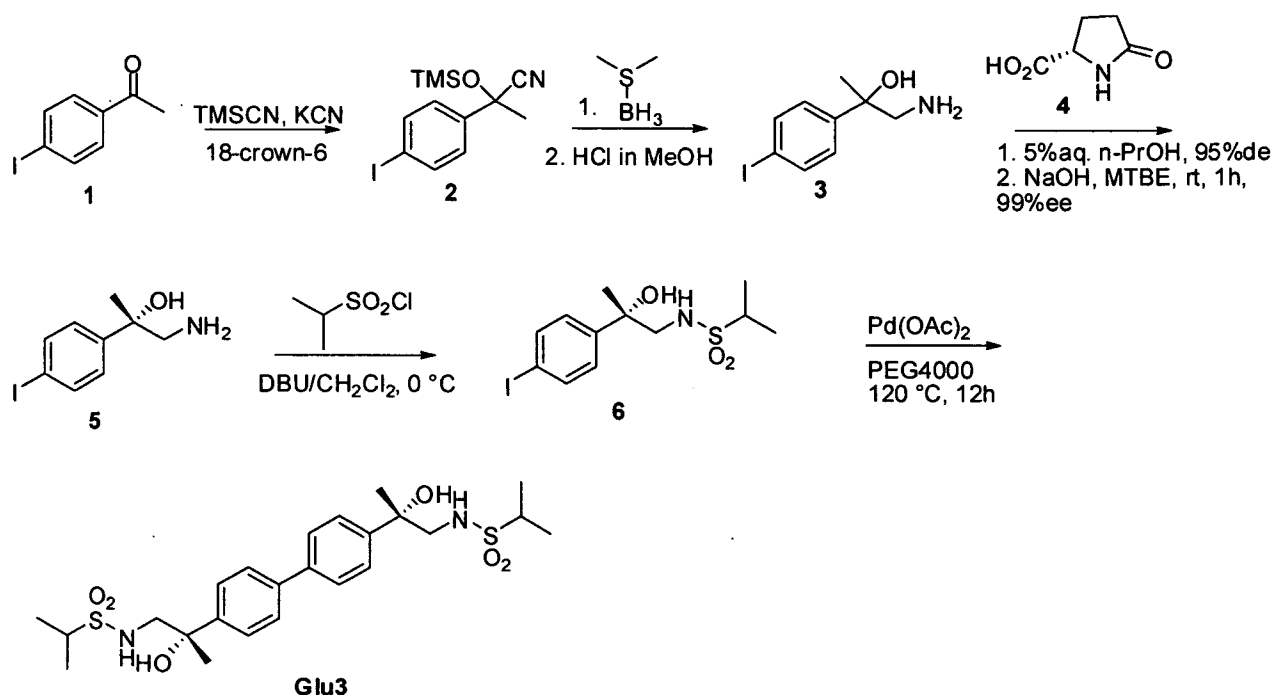
[0104] (S)-N-(2-fluoro-2-(4-iodophenyl)propyl)propane-2-

sulfonamide(compound 9) was synthesized according to similar procedure described in literature(Organic Process Research & Development 2005, 9, 621-628)

[0105] 385mg of compound 9 was mixed with 5mg of Pd(OAc)₂, 70mg of K₂CO₃, 0.5g of PEG4000. The mixture was heated at 120 °C for 12h. After cooled down, the black residue was loaded to a silicon gel packed column and the residue was purified by chromatography(elute:CH₂Cl₂) to give 333mg of the final product Glu-2 (Yield: 80%). ¹HNMR(CD₃Cl)δ: 1.25-1.31(12H,m,CH₃); 1.72-1.79(6H,d,CH₃);3.02-3.07(2H,m,CH);3.54-3.63(4H,m,CH₂);4.44(2H,t,NH);7.41-7.43(4H,d,Ph-H);7.58-7.61(4H, d, Ph-H). ¹³CNMR(CD₃Cl)δ: 16.88, 16.97, (24.99;25.31), (52.81;53.12), 54.25, (95.97;98.29), 124.99, 125.11, 127.50, 140.37, (140.79;141.09). ESI-MS (M⁺+H): 517; ESI-MS (M⁺+Na): 539.

Example 3

[0106] N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-hydroxypropane-2,1-diyl)dipropene-2-sulfonamide is synthesized as follows:



[0107] 1. 2-(4-iodophenyl)-2-(trimethylsilyloxy)propanenitrile (2) is prepared in situ following generally the method disclosed in *Tetrahedron Lett.*, 24(42), 4559 (1983).

[0108] 2. 1-amino-2-(4-iodophenyl)propan-2-ol (3)

[0109] A 10M solution of borane in dimethyl sulfide (5 mL, 0.05 mol) is added rapidly to the solution of 13.8 g of 2 (0.04 mol) in 25 mL of THF and the resulting mixture is heated at reflux for 16 h. The mixture is cooled to room temperature and anhydrous 10% HCl in methanol was added slowly. The solution is allowed to stir for an additional hour, and is concentrated under reduced pressure to give the crude product (3) as white solid and as hydrochloride salt.

[0110] 3. (S)-1-amino-2-(4-iodophenyl)propan-2-ol (5)

[0111] 5 is prepared according the similar method as the compound 8 in the synthesis of Glu2

[0112] 4. (S)-N-(2-hydroxy-2-(4-iodophenyl)propyl)propane-2-sulfonamide (6)

[0113] In a 100 mL-3 neck flask fitted with a stirrer and thermometer, 713 mg of propanesulfonyl chloride (5 mmol) in 5 mL of CH₂Cl₂ is added dropwise to 1.10 g of 5 (4 mmol) and 760 mg of DBU (5 mmol) in CH₂Cl₂ (50 mL) while stirring at 0 °C under argon. The reaction is allowed to warm to rt and stirred overnight. Then the reaction mixture is washed twice with water, dried over anhydrous Na₂SO₄, filtered and concentrated under reduced vacuum to yield a viscous oil which is purified via chromatography, eluting with a solvent of CH₂Cl₂/MeOH to yield the product 6 (461 mg, 30%) as a viscous oil.

[0114] 5. N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-hydroxypropane-2,1-diyl)dipropene-2-sulfonamide (Glu3) is prepared as the similar method of Glu2. ¹HNMR(CD₃Cl)δ 1.30-1.36 (m, 18H), 2.95-3.04 (m, 4H), 3.21 (m, 2H), 3.34 (m, 2H), 4.95 (broad, 2H), 5.50 (broad, 2H), 7.35 (dd, 4H), 7.47 (dd, 4H). ¹³CNMR(CD₃Cl)δ 16.1, 26.5, 50.4, 56.4, 73.9, 126.6, 127.9, 138.7, 146.8. ESI-MS (M⁺ +H): 513.

Example 4

[0115] LY451646 is an agonist of GluR2. For example, in experiments using two electrode voltage clamp ("TEVC") recording, LY451646 has been shown to potentiate glutamate currents from Delta ATD GluR2 in oocytes, as shown in Figure 3. By showing that the modulator acts on the Delta ATD GluR2 construct, we demonstrate that the binding site of the compound is not within the ATD but rather is within the S1S2 portion of the receptor, as determined by X-ray crystallography. The top tracing represents application of glutamate alone, the bottom tracing glutamate

plus LY451646. Further, as shown in FIGURE 4A-B, LY451646 promotes dimerization of GluR2 S1S2. In the absence of LY451646, the amount of dimerized GluR2 barely rises above baseline (FIGURE 4A). With the addition of LY451646, dimers overtake monomers (FIGURE 4B).

[0116] Crystals of LY451646 bound to GluR2-S1S2J were prepared in a manner analogous to the methods used in Jin et al., 2005, *J. Neurosci.* 25(39):9027-9036), LY451646 was used at a saturating concentration. Briefly, the crystals were grown at 4°C by vapor diffusion and each drop contained a 1:1 ratio of reservoir solution, which for LY451646, contained 10 mM kainate, 8%-15% PEG1450, and 0.1 M NaOAc at pH 5.0. The resulting crystals were soaked in the crystallization buffer, supplemented with LY451646, and 12-16% glycerol before flash cooling in liquid nitrogen. The data set was collected at 110 K at the NSLS X4A beam line, and was processed with the HKL suite of programs. The obtained coordinates for the LY451646/GluR2-S1S2J structure are attached hereto as Appendix A. The LY451646/GluR2-S1S2J crystals belonged to the P2₁ space group. Data collection and refinement statistics for the crystallographic study are presented in FIGURE 5.

[0117] The structural data indicated that LY451646 binds at the interface between domains 1 and 2 (FIGURE 6) near the “hinge” of the S1S2 “clamshell” (FIGURE 7). The ligand bridges both subunits, binding via polar as well as non-polar interactions (FIGURE 8). In particular, The nitrogen of the terminal nitrile group interacts with Phe_A106, Ser_A242, and Ser_B217, wherein the “A” designates protomer A, and “B” designates protomer B, and each residue corresponds to the identifiers and residue numbers provided in the X-ray structure provided in Appendix A. It is noted that the X-ray structure provided in Appendix A is a fragment of the full length receptor, and accordingly the residue numbers do not necessarily correspond to the

full length receptor. LY451646 also interacts with Pro_B105, Pro_A105, Gly_A219, Ile_A92, and Leu_B239.

[0118] For comparison, LY404187 also interacts at the interface between domains 1 and 2 near the “hinge” of the S1S2 “clamshell” (FIGURE 15). In particular, the nitrogen of the terminal nitrile group interacts with the O_δ atom of Ser_A754 and the carbonyl group of Phe495, the nitrogen in the sulfonamide bond interacts with the carbonyl group of Pro_A494, and the oxygen of the sulfonyl group interacts with the nitrogen of Gly_B731. The carbons of the isopropyl group adjacent to the sulfonyl group interact with the carbonyl of Ile_B481 and/or the C_δ2 of Leu_A751. The carbon atom adjacent to the nitrogen in the sulfonamide bond interacts with the carbonyl groups of Pro_A494 and/or Ser_B729. The carbon atoms in the phenyl group adjacent to the nitrile group interact with the carbonyl groups of Ser_A729 and Pro_A494, the C_α and/or C atom of Lys_A730, C_α and/or C atom of Ser_B497, or the nitrogen in Ser_B497 and the C atom of the Met_B. The carbon atoms of the remaining phenyl group interact with the carbonyl group of Lys_A730 or the C_B atom of Pro_A494. These interactions can be seen in the schematic depicted in FIGURE 15.

[0119] Interestingly, it has been found that the electron density of LY451646, as bound to GluR2(S1S2J), corresponds to a superposition of predicted electron densities for LY451646 bound in two overlapping orientations; the alternative orientations are depicted in FIGURE 9A-B. FIGURE 10A-B shows the electron densities of the ligand in a view parallel to the 2-fold axis (FIGURE 10A) or perpendicular to the 2-fold axis (FIGURE 10B). FIGURE 11 depicts the electron density observed with structural drawings of LY451646 in the alternative orientations.

Example 5

[0120] Electrophysiologic studies were performed comparing N,N'-(2R,2'R)-2,2'-(biphenyl-4,4'-diyl)bis(propane -2,1-diyl)dipropene-2-sulfonamide) (GR341) with LY451646 in cells expressing the GluR2 receptor, with results shown in FIGURE 16A-D. GR341 was observed to have an EC₅₀ of 12.7 ± 0.6 nM, and therefore was more potent than LY451646, which was observed to have an EC₅₀ of 129.5 ± 16.0 nM.

Example 6

[0121] Mice (male, 8 weeks of age; 129S6/SvEv from Taconic) were housed in groups of five for one week. Animals were injected (i.p.) with either vehicle (diluent:saline at a ratio of 3:50 v/v), or one of two doses of GR341 (1mg/kg and 3 mg/kg). After 15 minutes, animals were injected (i.p.) either with saline or Amphetamine at 3 mg/kg. Mice were held individually without food or water for an additional 15 minutes and then placed in Plexiglas activity chambers (model ENV-520; Med Associates, St. Albans, Vermont) (43.2 cm long × 43.2 cm wide × 30.5 cm high) to assess locomotor activity. Mice were placed into the center of the open field, and activity was recorded for 30minutes with subtotals for 5-minute increments. Testing was performed in darkness to minimize anxiety.

[0122] As shown in FIGURE 17, each dose of GR341 inhibited amphetamine-induced locomotor activity. There was no significant effect of either dose of GR341 alone on locomotor activity.

Example 7

[0123] Potentiation of steady-state glutamate-induced currents for GluR2i receptors by N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropene-2,1-diyl)dipropene-2-sulfonamide).

[0124] As shown in FIGURE 18, (a) the compound N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropyl-2-sulfonamide) is active on ionotropic glutamate receptors, (b) the compound N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropyl-2-sulfonamide) increases, *i.e.* potentiates glutamate receptor currents, as desired.

[0125] The recordings are in whole-cell mode (-60 mV) and show inward currents elicited by 1 mM glutamate in the presence of various concentrations of N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropyl-2-sulfonamide). The concentration of 200 nM is saturating and the concentration of 50 nM is approximately half saturating, thus demonstrating that the EC₅₀ value of N,N'-(2S,2'S)-2,2'-(biphenyl-4,4'-diyl)bis(2-fluoropropane-2,1-diyl)dipropyl-2-sulfonamide) modulator is about 50 nM (FIGURE 18B).

[0126] Various patents, patent applications, and other publications are cited herein, the contents of which are hereby incorporated by reference in their entireties.

APPENDIX A

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REMARK coordinates from minimization refinement
REMARK refinement resolution: 10.0 - 1.3 Å
REMARK starting r= 0.2169 free_r= 0.2298
REMARK final      r= 0.2141 free_r= 0.2277
REMARK rmsd bonds= 0.005543  rmsd angles=  1.38837
REMARK wa= 0.261266
REMARK target= mlf cycles= 1 steps= 100
REMARK sg= P2(1) a= 59.330 b= 95.018 c= 48.635 alpha= 90.0 beta= 90.004
gamma= 90.0
REMARK parameter file 1 : CNS_TOPPAR:protein_rep.param
REMARK parameter file 2 : kai.par
REMARK parameter file 3 : ly_1.par
REMARK parameter file 4 : CNS_TOPPAR:water_rep.param
REMARK molecular structure file: nsk1_ly12.mtf
REMARK input coordinates: nsk1_ly12.pdb
REMARK reflection file= nsk1_p21freeR.hkl
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 1.3
REMARK initial B-factor correction applied to fobs :
REMARK   B11=   2.006 B22=  -1.594 B33=  -0.413
REMARK   B12=   0.000 B13=   0.000 B23=   0.000
REMARK B-factor correction applied to coordinate array B:   0.032
REMARK bulk solvent: density level= 0.497227 e/Å3, B-factor= 61.6121 Å2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range:131701( 100.0 % )
REMARK number of unobserved reflections (no entry or |F|=0): 12652 (
9.6 % )
REMARK number of reflections rejected:                                0 (
0.0 % )
REMARK total number of reflections used:                             119049 (
90.4 % )
REMARK number of reflections in working set:                         107100 (
81.3 % )
REMARK number of reflections in test set:                             11949 (
9.1 % )
CRYST1   59.330   95.018   48.635   90.00   90.00   90.00 P 21
REMARK FILENAME="min_ly12.pdb"
REMARK DATE:01-Aug-02  13:52:05          created by user: lsong
REMARK VERSION:1.0
ATOM      1  C    GLY A   4          22.575  72.784  45.568  1.00 26.51    A
ATOM      2  O    GLY A   4          23.484  72.192  44.987  1.00 27.75    A
ATOM      3  N    GLY A   4          23.280  71.627  47.677  1.00 29.13    A
ATOM      4  CA   GLY A   4          22.412  72.676  47.072  1.00 27.67    A
ATOM      5  N    THR A   5          21.688  73.543  44.934  1.00 23.94    A
ATOM      6  CA   THR A   5          21.739  73.732  43.492  1.00 20.81    A
ATOM      7  CB   THR A   5          20.488  74.481  42.991  1.00 20.59    A
ATOM      8  OG1  THR A   5          19.325  73.683  43.246  1.00 21.84    A
ATOM      9  CG2  THR A   5          20.587  74.760  41.497  1.00 20.68    A
ATOM     10  C    THR A   5          22.989  74.515  43.098  1.00 18.01    A
ATOM     11  O    THR A   5          23.277  75.571  43.659  1.00 19.75    A
ATOM     12  N    VAL A   6          23.730  73.978  42.136  1.00 15.06    A
ATOM     13  CA   VAL A   6          24.950  74.610  41.655  1.00 14.03    A
ATOM     14  CB   VAL A   6          25.810  73.591  40.876  1.00 12.06    A
ATOM     15  CG1  VAL A   6          26.974  74.292  40.183  1.00 13.80    A
ATOM     16  CG2  VAL A   6          26.324  72.522  41.831  1.00 13.53    A
ATOM     17  C    VAL A   6          24.621  75.794  40.757  1.00 12.40    A
ATOM     18  O    VAL A   6          23.814  75.683  39.836  1.00 13.80    A
ATOM     19  N    VAL A   7          25.239  76.935  41.044  1.00 10.97    A

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ATOM	20	CA	VAL	A	7	25.020	78.131	40.248	1.00	11.86	A
ATOM	21	CB	VAL	A	7	25.117	79.406	41.104	1.00	12.22	A
ATOM	22	CG1	VAL	A	7	24.985	80.637	40.215	1.00	13.54	A
ATOM	23	CG2	VAL	A	7	24.022	79.395	42.163	1.00	14.32	A
ATOM	24	C	VAL	A	7	26.053	78.201	39.132	1.00	9.54	A
ATOM	25	O	VAL	A	7	27.246	78.376	39.379	1.00	10.52	A
ATOM	26	N	VAL	A	8	25.580	78.054	37.902	1.00	10.17	A
ATOM	27	CA	VAL	A	8	26.455	78.107	36.746	1.00	10.75	A
ATOM	28	CB	VAL	A	8	26.038	77.067	35.678	1.00	11.39	A
ATOM	29	CG1	VAL	A	8	26.953	77.164	34.452	1.00	12.01	A
ATOM	30	CG2	VAL	A	8	26.080	75.670	36.274	1.00	10.32	A
ATOM	31	C	VAL	A	8	26.357	79.482	36.120	1.00	10.46	A
ATOM	32	O	VAL	A	8	25.255	79.992	35.911	1.00	10.77	A
ATOM	33	N	THR	A	9	27.500	80.105	35.860	1.00	9.23	A
ATOM	34	CA	THR	A	9	27.478	81.390	35.189	1.00	8.97	A
ATOM	35	CB	THR	A	9	28.420	82.436	35.838	1.00	10.14	A
ATOM	36	OG1	THR	A	9	28.332	83.665	35.099	1.00	10.93	A
ATOM	37	CG2	THR	A	9	29.867	81.960	35.831	1.00	11.82	A
ATOM	38	C	THR	A	9	27.926	81.117	33.760	1.00	8.83	A
ATOM	39	O	THR	A	9	28.849	80.326	33.511	1.00	9.36	A
ATOM	40	N	THR	A	10	27.229	81.731	32.816	1.00	8.91	A
ATOM	41	CA	THR	A	10	27.562	81.572	31.417	1.00	8.91	A
ATOM	42	CB	THR	A	10	26.830	80.351	30.792	1.00	9.80	A
ATOM	43	OG1	THR	A	10	27.387	80.067	29.502	1.00	9.14	A
ATOM	44	CG2	THR	A	10	25.342	80.602	30.668	1.00	10.14	A
ATOM	45	C	THR	A	10	27.218	82.883	30.724	1.00	9.78	A
ATOM	46	O	THR	A	10	26.866	83.864	31.384	1.00	8.65	A
ATOM	47	N	ILE	A	11	27.309	82.912	29.404	1.00	9.26	A
ATOM	48	CA	ILE	A	11	27.068	84.147	28.675	1.00	9.83	A
ATOM	49	CB	ILE	A	11	28.415	84.918	28.539	1.00	9.13	A
ATOM	50	CG2	ILE	A	11	29.381	84.119	27.675	1.00	10.83	A
ATOM	51	CG1	ILE	A	11	28.196	86.325	27.985	1.00	10.63	A
ATOM	52	CD1	ILE	A	11	29.425	87.221	28.126	1.00	12.27	A
ATOM	53	C	ILE	A	11	26.476	83.819	27.312	1.00	9.66	A
ATOM	54	O	ILE	A	11	26.716	82.737	26.771	1.00	9.86	A
ATOM	55	N	LEU	A	12	25.690	84.741	26.762	1.00	10.35	A
ATOM	56	CA	LEU	A	12	25.083	84.521	25.460	1.00	12.08	A
ATOM	57	CB	LEU	A	12	23.825	85.391	25.334	1.00	11.83	A
ATOM	58	CG	LEU	A	12	22.744	85.141	26.394	1.00	11.57	A
ATOM	59	CD1	LEU	A	12	21.572	86.085	26.158	1.00	14.26	A
ATOM	60	CD2	LEU	A	12	22.279	83.691	26.351	1.00	13.48	A
ATOM	61	C	LEU	A	12	26.116	84.775	24.367	1.00	12.55	A
ATOM	62	O	LEU	A	12	26.608	85.894	24.206	1.00	15.65	A
ATOM	63	N	GLU	A	13	26.453	83.719	23.634	1.00	11.29	A
ATOM	64	CA	GLU	A	13	27.416	83.777	22.534	1.00	12.00	A
ATOM	65	CB	GLU	A	13	28.849	83.782	23.093	1.00	11.61	A
ATOM	66	CG	GLU	A	13	29.952	83.756	22.018	1.00	12.91	A
ATOM	67	CD	GLU	A	13	30.165	85.099	21.328	1.00	14.45	A
ATOM	68	OE1	GLU	A	13	30.740	85.111	20.218	1.00	14.76	A
ATOM	69	OE2	GLU	A	13	29.776	86.143	21.892	1.00	14.04	A
ATOM	70	C	GLU	A	13	27.114	82.557	21.668	1.00	11.99	A
ATOM	71	O	GLU	A	13	27.210	81.426	22.137	1.00	12.31	A
ATOM	72	N	SER	A	14	26.743	82.784	20.412	1.00	11.74	A
ATOM	73	CA	SER	A	14	26.419	81.690	19.499	1.00	10.92	A
ATOM	74	CB	SER	A	14	25.658	82.255	18.300	1.00	12.79	A
ATOM	75	OG	SER	A	14	24.496	82.939	18.710	1.00	15.59	A
ATOM	76	C	SER	A	14	27.682	80.950	19.082	1.00	11.02	A
ATOM	77	O	SER	A	14	28.713	81.570	18.832	1.00	13.24	A
ATOM	78	N	PRO	A	15	27.618	79.615	18.969	1.00	10.96	A
ATOM	79	CD	PRO	A	15	28.696	78.928	18.235	1.00	10.29	A
ATOM	80	CA	PRO	A	15	26.493	78.705	19.193	1.00	11.07	A

ATOM	81	CB	PRO	A	15	26.640	77.742	18.022	1.00	10.06	A
ATOM	82	CG	PRO	A	15	28.133	77.463	18.043	1.00	11.18	A
ATOM	83	C	PRO	A	15	26.597	78.055	20.571	1.00	10.83	A
ATOM	84	O	PRO	A	15	26.046	76.981	20.794	1.00	10.59	A
ATOM	85	N	TYR	A	16	27.305	78.709	21.489	1.00	10.45	A
ATOM	86	CA	TYR	A	16	27.517	78.184	22.840	1.00	9.96	A
ATOM	87	CB	TYR	A	16	28.710	78.909	23.464	1.00	11.23	A
ATOM	88	CG	TYR	A	16	29.952	78.896	22.606	1.00	9.43	A
ATOM	89	CD1	TYR	A	16	30.820	77.801	22.598	1.00	9.41	A
ATOM	90	CE1	TYR	A	16	31.967	77.799	21.787	1.00	8.96	A
ATOM	91	CD2	TYR	A	16	30.253	79.980	21.789	1.00	10.09	A
ATOM	92	CE2	TYR	A	16	31.387	79.986	20.980	1.00	10.47	A
ATOM	93	CZ	TYR	A	16	32.237	78.899	20.984	1.00	10.17	A
ATOM	94	OH	TYR	A	16	33.363	78.920	20.190	1.00	11.52	A
ATOM	95	C	TYR	A	16	26.275	78.266	23.712	1.00	10.43	A
ATOM	96	O	TYR	A	16	25.892	77.283	24.342	1.00	10.31	A
ATOM	97	N	VAL	A	17	25.674	79.450	23.773	1.00	10.32	A
ATOM	98	CA	VAL	A	17	24.465	79.671	24.557	1.00	10.55	A
ATOM	99	CB	VAL	A	17	24.780	80.166	25.990	1.00	9.76	A
ATOM	100	CG1	VAL	A	17	23.489	80.287	26.792	1.00	11.30	A
ATOM	101	CG2	VAL	A	17	25.739	79.210	26.680	1.00	11.77	A
ATOM	102	C	VAL	A	17	23.634	80.728	23.850	1.00	10.95	A
ATOM	103	O	VAL	A	17	24.127	81.814	23.543	1.00	11.05	A
ATOM	104	N	MET	A	18	22.377	80.390	23.586	1.00	10.77	A
ATOM	105	CA	MET	A	18	21.441	81.279	22.913	1.00	12.48	A
ATOM	106	CB	MET	A	18	21.409	80.927	21.417	1.00	15.54	A
ATOM	107	CG	MET	A	18	22.783	80.824	20.761	1.00	18.73	A
ATOM	108	SD	MET	A	18	22.773	79.981	19.154	1.00	22.12	A
ATOM	109	CE	MET	A	18	22.727	78.246	19.684	1.00	15.92	A
ATOM	110	C	MET	A	18	20.082	81.091	23.579	1.00	12.27	A
ATOM	111	O	MET	A	18	19.805	80.030	24.140	1.00	12.26	A
ATOM	112	N	MET	A	19	19.239	82.117	23.541	1.00	12.48	A
ATOM	113	CA	MET	A	19	17.904	81.974	24.101	1.00	12.14	A
ATOM	114	CB	MET	A	19	17.347	83.338	24.535	1.00	15.09	A
ATOM	115	CG	MET	A	19	17.994	83.934	25.770	1.00	13.78	A
ATOM	116	SD	MET	A	19	16.874	85.087	26.613	1.00	15.38	A
ATOM	117	CE	MET	A	19	16.000	83.961	27.704	1.00	16.72	A
ATOM	118	C	MET	A	19	17.069	81.322	23.006	1.00	13.23	A
ATOM	119	O	MET	A	19	17.135	81.735	21.848	1.00	14.65	A
ATOM	120	N	LYS	A	20	16.296	80.301	23.360	1.00	13.52	A
ATOM	121	CA	LYS	A	20	15.447	79.636	22.379	1.00	14.94	A
ATOM	122	CB	LYS	A	20	14.725	78.453	23.029	1.00	13.74	A
ATOM	123	CG	LYS	A	20	15.604	77.280	23.438	1.00	15.44	A
ATOM	124	CD	LYS	A	20	14.750	76.205	24.096	1.00	16.23	A
ATOM	125	CE	LYS	A	20	15.567	75.003	24.533	1.00	14.95	A
ATOM	126	NZ	LYS	A	20	14.725	74.058	25.322	1.00	16.86	A
ATOM	127	C	LYS	A	20	14.474	80.678	21.842	1.00	16.34	A
ATOM	128	O	LYS	A	20	14.138	81.639	22.535	1.00	15.24	A
ATOM	129	N	ALA	A	21	14.012	80.483	20.613	1.00	17.51	A
ATOM	130	CA	ALA	A	21	13.072	81.412	20.004	1.00	18.87	A
ATOM	131	CB	ALA	A	21	12.758	80.972	18.578	1.00	20.19	A
ATOM	132	C	ALA	A	21	11.790	81.484	20.832	1.00	18.60	A
ATOM	133	O	ALA	A	21	11.182	82.548	20.963	1.00	19.20	A
ATOM	134	N	ASN	A	22	11.401	80.350	21.405	1.00	17.71	A
ATOM	135	CA	ASN	A	22	10.187	80.263	22.213	1.00	18.07	A
ATOM	136	CB	ASN	A	22	9.431	78.992	21.812	1.00	18.69	A
ATOM	137	CG	ASN	A	22	10.150	77.726	22.242	1.00	20.55	A
ATOM	138	OD1	ASN	A	22	11.365	77.601	22.079	1.00	20.26	A
ATOM	139	ND2	ASN	A	22	9.397	76.773	22.786	1.00	22.20	A
ATOM	140	C	ASN	A	22	10.500	80.310	23.707	1.00	17.10	A
ATOM	141	O	ASN	A	22	9.757	79.753	24.518	1.00	19.00	A

ATOM	142	N	HIS	A	23	11.588	80.986	24.072	1.00	15.85	A
ATOM	143	CA	HIS	A	23	11.997	81.068	25.470	1.00	15.45	A
ATOM	144	CB	HIS	A	23	13.315	81.857	25.562	1.00	15.21	A
ATOM	145	CG	HIS	A	23	13.186	83.314	25.234	1.00	15.86	A
ATOM	146	CD2	HIS	A	23	13.486	84.002	24.107	1.00	16.43	A
ATOM	147	ND1	HIS	A	23	12.720	84.244	26.138	1.00	15.55	A
ATOM	148	CE1	HIS	A	23	12.742	85.443	25.584	1.00	18.33	A
ATOM	149	NE2	HIS	A	23	13.204	85.324	24.351	1.00	16.65	A
ATOM	150	C	HIS	A	23	10.897	81.598	26.391	1.00	15.46	A
ATOM	151	O	HIS	A	23	10.841	81.232	27.561	1.00	15.24	A
ATOM	152	N	ALA	A	24	10.014	82.441	25.863	1.00	16.95	A
ATOM	153	CA	ALA	A	24	8.932	83.001	26.670	1.00	17.83	A
ATOM	154	CB	ALA	A	24	8.183	84.064	25.872	1.00	19.08	A
ATOM	155	C	ALA	A	24	7.952	81.943	27.178	1.00	18.59	A
ATOM	156	O	ALA	A	24	7.300	82.136	28.202	1.00	18.94	A
ATOM	157	N	MET	A	25	7.848	80.826	26.465	1.00	18.33	A
ATOM	158	CA	MET	A	25	6.936	79.753	26.859	1.00	18.03	A
ATOM	159	CB	MET	A	25	6.331	79.113	25.608	1.00	20.26	A
ATOM	160	CG	MET	A	25	5.647	80.067	24.662	1.00	20.74	A
ATOM	161	SD	MET	A	25	4.819	79.150	23.355	1.00	24.57	A
ATOM	162	CE	MET	A	25	6.205	78.477	22.466	1.00	23.59	A
ATOM	163	C	MET	A	25	7.653	78.723	27.718	1.00	18.31	A
ATOM	164	O	MET	A	25	7.079	77.686	28.068	1.00	17.96	A
ATOM	165	N	LEU	A	26	8.906	79.009	28.053	1.00	17.37	A
ATOM	166	CA	LEU	A	26	9.717	78.091	28.834	1.00	16.23	A
ATOM	167	CB	LEU	A	26	10.892	77.641	27.966	1.00	15.94	A
ATOM	168	CG	LEU	A	26	10.507	77.102	26.585	1.00	18.54	A
ATOM	169	CD1	LEU	A	26	11.757	76.868	25.756	1.00	18.19	A
ATOM	170	CD2	LEU	A	26	9.719	75.812	26.738	1.00	17.91	A
ATOM	171	C	LEU	A	26	10.158	78.703	30.155	1.00	14.96	A
ATOM	172	O	LEU	A	26	9.945	79.889	30.414	1.00	15.22	A
ATOM	173	N	ALA	A	27	10.786	77.883	30.987	1.00	14.45	A
ATOM	174	CA	ALA	A	27	11.251	78.335	32.289	1.00	14.51	A
ATOM	175	CB	ALA	A	27	10.211	77.988	33.356	1.00	17.17	A
ATOM	176	C	ALA	A	27	12.588	77.705	32.644	1.00	14.03	A
ATOM	177	O	ALA	A	27	12.923	76.619	32.176	1.00	14.44	A
ATOM	178	N	GLY	A	28	13.357	78.404	33.469	1.00	12.71	A
ATOM	179	CA	GLY	A	28	14.641	77.885	33.907	1.00	12.56	A
ATOM	180	C	GLY	A	28	15.641	77.561	32.817	1.00	10.82	A
ATOM	181	O	GLY	A	28	15.749	78.276	31.818	1.00	10.69	A
ATOM	182	N	ASN	A	29	16.373	76.468	33.009	1.00	10.83	A
ATOM	183	CA	ASN	A	29	17.394	76.046	32.056	1.00	10.02	A
ATOM	184	CB	ASN	A	29	18.108	74.797	32.591	1.00	12.03	A
ATOM	185	CG	ASN	A	29	18.886	75.050	33.875	1.00	12.74	A
ATOM	186	OD1	ASN	A	29	19.350	74.104	34.519	1.00	14.94	A
ATOM	187	ND2	ASN	A	29	19.048	76.314	34.245	1.00	10.03	A
ATOM	188	C	ASN	A	29	16.823	75.817	30.659	1.00	10.58	A
ATOM	189	O	ASN	A	29	17.539	75.941	29.670	1.00	11.93	A
ATOM	190	N	GLU	A	30	15.540	75.468	30.585	1.00	10.30	A
ATOM	191	CA	GLU	A	30	14.872	75.199	29.310	1.00	11.21	A
ATOM	192	CB	GLU	A	30	13.458	74.677	29.598	1.00	13.90	A
ATOM	193	CG	GLU	A	30	13.410	73.267	30.163	1.00	18.50	A
ATOM	194	CD	GLU	A	30	13.463	72.200	29.086	1.00	21.23	A
ATOM	195	OE1	GLU	A	30	13.680	72.550	27.907	1.00	23.76	A
ATOM	196	OE2	GLU	A	30	13.290	71.007	29.420	1.00	22.98	A
ATOM	197	C	GLU	A	30	14.860	76.380	28.345	1.00	11.64	A
ATOM	198	O	GLU	A	30	14.645	76.200	27.148	1.00	12.13	A
ATOM	199	N	ARG	A	31	15.082	77.585	28.860	1.00	11.14	A
ATOM	200	CA	ARG	A	31	15.078	78.782	28.023	1.00	11.20	A
ATOM	201	CB	ARG	A	31	15.056	80.026	28.910	1.00	11.11	A
ATOM	202	CG	ARG	A	31	13.806	80.249	29.730	1.00	12.33	A

ATOM	203	CD	ARG	A	31	14.066	81.376	30.713	1.00	11.17	A
ATOM	204	NE	ARG	A	31	15.069	80.984	31.699	1.00	11.12	A
ATOM	205	CZ	ARG	A	31	15.636	81.817	32.564	1.00	9.72	A
ATOM	206	NH1	ARG	A	31	15.305	83.100	32.564	1.00	11.45	A
ATOM	207	NH2	ARG	A	31	16.520	81.367	33.447	1.00	9.95	A
ATOM	208	C	ARG	A	31	16.255	78.855	27.064	1.00	10.81	A
ATOM	209	O	ARG	A	31	16.183	79.557	26.060	1.00	11.62	A
ATOM	210	N	TYR	A	32	17.327	78.133	27.380	1.00	10.66	A
ATOM	211	CA	TYR	A	32	18.569	78.178	26.609	1.00	9.14	A
ATOM	212	CB	TYR	A	32	19.703	78.518	27.581	1.00	10.45	A
ATOM	213	CG	TYR	A	32	19.446	79.736	28.438	1.00	9.84	A
ATOM	214	CD1	TYR	A	32	19.592	81.020	27.918	1.00	10.05	A
ATOM	215	CE1	TYR	A	32	19.334	82.148	28.697	1.00	11.55	A
ATOM	216	CD2	TYR	A	32	19.032	79.604	29.764	1.00	11.10	A
ATOM	217	CE2	TYR	A	32	18.768	80.726	30.554	1.00	10.48	A
ATOM	218	CZ	TYR	A	32	18.922	81.994	30.012	1.00	10.66	A
ATOM	219	OH	TYR	A	32	18.653	83.107	30.779	1.00	12.60	A
ATOM	220	C	TYR	A	32	18.898	76.927	25.806	1.00	10.03	A
ATOM	221	O	TYR	A	32	18.448	75.831	26.123	1.00	10.26	A
ATOM	222	N	GLU	A	33	19.714	77.111	24.771	1.00	10.24	A
ATOM	223	CA	GLU	A	33	20.175	76.011	23.930	1.00	9.97	A
ATOM	224	CB	GLU	A	33	19.195	75.773	22.777	1.00	12.37	A
ATOM	225	CG	GLU	A	33	19.079	76.948	21.824	1.00	15.72	A
ATOM	226	CD	GLU	A	33	18.127	76.690	20.669	1.00	18.27	A
ATOM	227	OE1	GLU	A	33	17.767	77.664	19.973	1.00	20.76	A
ATOM	228	OE2	GLU	A	33	17.743	75.520	20.455	1.00	20.90	A
ATOM	229	C	GLU	A	33	21.572	76.360	23.444	1.00	10.37	A
ATOM	230	O	GLU	A	33	21.979	77.527	23.468	1.00	10.72	A
ATOM	231	N	GLY	A	34	22.311	75.349	23.002	1.00	9.68	A
ATOM	232	CA	GLY	A	34	23.652	75.600	22.508	1.00	9.45	A
ATOM	233	C	GLY	A	34	24.671	74.603	23.019	1.00	9.63	A
ATOM	234	O	GLY	A	34	24.384	73.791	23.902	1.00	10.51	A
ATOM	235	N	TYR	A	35	25.875	74.682	22.465	1.00	8.89	A
ATOM	236	CA	TYR	A	35	26.957	73.785	22.837	1.00	9.99	A
ATOM	237	CB	TYR	A	35	28.211	74.162	22.034	1.00	10.00	A
ATOM	238	CG	TYR	A	35	29.438	73.363	22.414	1.00	9.08	A
ATOM	239	CD1	TYR	A	35	30.141	73.643	23.587	1.00	8.42	A
ATOM	240	CE1	TYR	A	35	31.260	72.904	23.950	1.00	9.42	A
ATOM	241	CD2	TYR	A	35	29.889	72.315	21.611	1.00	10.27	A
ATOM	242	CE2	TYR	A	35	31.009	71.567	21.965	1.00	10.07	A
ATOM	243	CZ	TYR	A	35	31.688	71.870	23.137	1.00	9.20	A
ATOM	244	OH	TYR	A	35	32.794	71.145	23.506	1.00	13.71	A
ATOM	245	C	TYR	A	35	27.214	73.745	24.337	1.00	9.46	A
ATOM	246	O	TYR	A	35	27.307	72.665	24.922	1.00	9.83	A
ATOM	247	N	CYS	A	36	27.338	74.912	24.963	1.00	8.94	A
ATOM	248	CA	CYS	A	36	27.617	74.954	26.393	1.00	9.59	A
ATOM	249	CB	CYS	A	36	28.170	76.336	26.763	1.00	10.02	A
ATOM	250	SG	CYS	A	36	29.894	76.573	26.253	1.00	10.91	A
ATOM	251	C	CYS	A	36	26.428	74.527	27.236	1.00	9.87	A
ATOM	252	O	CYS	A	36	26.602	74.108	28.377	1.00	9.72	A
ATOM	253	N	VAL	A	37	25.224	74.649	26.688	1.00	9.91	A
ATOM	254	CA	VAL	A	37	24.034	74.223	27.413	1.00	10.54	A
ATOM	255	CB	VAL	A	37	22.749	74.708	26.710	1.00	10.90	A
ATOM	256	CG1	VAL	A	37	21.521	74.155	27.424	1.00	12.65	A
ATOM	257	CG2	VAL	A	37	22.709	76.232	26.715	1.00	12.51	A
ATOM	258	C	VAL	A	37	24.075	72.695	27.458	1.00	9.89	A
ATOM	259	O	VAL	A	37	23.850	72.086	28.502	1.00	11.28	A
ATOM	260	N	ASP	A	38	24.393	72.082	26.320	1.00	10.26	A
ATOM	261	CA	ASP	A	38	24.497	70.630	26.231	1.00	10.64	A
ATOM	262	CB	ASP	A	38	24.680	70.215	24.765	1.00	11.34	A
ATOM	263	CG	ASP	A	38	23.425	70.391	23.931	1.00	11.41	A

ATOM	264	OD1	ASP	A	38	23.522	70.223	22.699	1.00	13.04	A
ATOM	265	OD2	ASP	A	38	22.347	70.685	24.492	1.00	14.15	A
ATOM	266	C	ASP	A	38	25.652	70.157	27.108	1.00	10.10	A
ATOM	267	O	ASP	A	38	25.539	69.145	27.802	1.00	10.88	A
ATOM	268	N	LEU	A	39	26.770	70.880	27.065	1.00	10.24	A
ATOM	269	CA	LEU	A	39	27.931	70.512	27.860	1.00	10.57	A
ATOM	270	CB	LEU	A	39	29.109	71.423	27.496	1.00	10.29	A
ATOM	271	CG	LEU	A	39	30.386	71.177	28.307	1.00	10.48	A
ATOM	272	CD1	LEU	A	39	30.832	69.725	28.174	1.00	11.52	A
ATOM	273	CD2	LEU	A	39	31.474	72.133	27.830	1.00	11.16	A
ATOM	274	C	LEU	A	39	27.591	70.558	29.339	1.00	9.75	A
ATOM	275	O	LEU	A	39	27.937	69.646	30.094	1.00	10.20	A
ATOM	276	N	ALA	A	40	26.921	71.626	29.756	1.00	10.00	A
ATOM	277	CA	ALA	A	40	26.543	71.776	31.157	1.00	10.04	A
ATOM	278	CB	ALA	A	40	25.773	73.082	31.359	1.00	11.46	A
ATOM	279	C	ALA	A	40	25.707	70.584	31.625	1.00	11.75	A
ATOM	280	O	ALA	A	40	25.927	70.049	32.714	1.00	11.90	A
ATOM	281	N	ALA	A	41	24.759	70.160	30.795	1.00	11.48	A
ATOM	282	CA	ALA	A	41	23.904	69.030	31.139	1.00	11.88	A
ATOM	283	CB	ALA	A	41	22.835	68.837	30.068	1.00	13.22	A
ATOM	284	C	ALA	A	41	24.725	67.754	31.303	1.00	12.71	A
ATOM	285	O	ALA	A	41	24.481	66.969	32.219	1.00	13.49	A
ATOM	286	N	GLU	A	42	25.696	67.545	30.417	1.00	12.51	A
ATOM	287	CA	GLU	A	42	26.545	66.360	30.493	1.00	13.27	A
ATOM	288	CB	GLU	A	42	27.338	66.219	29.188	1.00	15.77	A
ATOM	289	CG	GLU	A	42	26.575	65.510	28.082	1.00	18.63	A
ATOM	290	CD	GLU	A	42	26.451	64.013	28.327	1.00	19.37	A
ATOM	291	OE1	GLU	A	42	26.787	63.556	29.440	1.00	18.40	A
ATOM	292	OE2	GLU	A	42	26.015	63.292	27.407	1.00	20.92	A
ATOM	293	C	GLU	A	42	27.435	66.389	31.728	1.00	13.94	A
ATOM	294	O	GLU	A	42	27.607	65.375	32.399	1.00	14.45	A
ATOM	295	N	ILE	A	43	28.018	67.545	32.023	1.00	12.51	A
ATOM	296	CA	ILE	A	43	28.878	67.665	33.193	1.00	13.29	A
ATOM	297	CB	ILE	A	43	29.491	69.085	33.300	1.00	13.12	A
ATOM	298	CG2	ILE	A	43	30.204	69.245	34.634	1.00	12.80	A
ATOM	299	CG1	ILE	A	43	30.456	69.333	32.137	1.00	14.92	A
ATOM	300	CD1	ILE	A	43	31.665	68.428	32.127	1.00	14.91	A
ATOM	301	C	ILE	A	43	28.059	67.376	34.452	1.00	13.51	A
ATOM	302	O	ILE	A	43	28.484	66.616	35.325	1.00	14.79	A
ATOM	303	N	ALA	A	44	26.875	67.977	34.532	1.00	12.91	A
ATOM	304	CA	ALA	A	44	25.996	67.792	35.681	1.00	13.94	A
ATOM	305	CB	ALA	A	44	24.763	68.661	35.534	1.00	13.58	A
ATOM	306	C	ALA	A	44	25.592	66.335	35.867	1.00	14.33	A
ATOM	307	O	ALA	A	44	25.549	65.840	36.993	1.00	15.33	A
ATOM	308	N	LYS	A	45	25.296	65.651	34.766	1.00	15.00	A
ATOM	309	CA	LYS	A	45	24.908	64.246	34.828	1.00	17.52	A
ATOM	310	CB	LYS	A	45	24.467	63.776	33.440	1.00	19.45	A
ATOM	311	CG	LYS	A	45	23.146	64.350	32.965	1.00	23.23	A
ATOM	312	CD	LYS	A	45	22.709	63.696	31.662	1.00	26.44	A
ATOM	313	CE	LYS	A	45	22.539	62.192	31.836	1.00	28.68	A
ATOM	314	NZ	LYS	A	45	22.151	61.510	30.575	1.00	29.68	A
ATOM	315	C	LYS	A	45	26.041	63.402	35.395	1.00	17.69	A
ATOM	316	O	LYS	A	45	25.828	62.585	36.289	1.00	18.84	A
ATOM	317	N	HIS	A	46	27.248	63.597	34.876	1.00	16.11	A
ATOM	318	CA	HIS	A	46	28.396	62.828	35.340	1.00	16.88	A
ATOM	319	CB	HIS	A	46	29.540	62.966	34.328	1.00	15.26	A
ATOM	320	CG	HIS	A	46	29.312	62.206	33.060	1.00	16.43	A
ATOM	321	CD2	HIS	A	46	29.739	60.982	32.668	1.00	18.25	A
ATOM	322	ND1	HIS	A	46	28.511	62.675	32.042	1.00	18.48	A
ATOM	323	CE1	HIS	A	46	28.454	61.774	31.078	1.00	18.78	A
ATOM	324	NE2	HIS	A	46	29.190	60.737	31.433	1.00	21.02	A

ATOM	325	C	HIS	A	46	28.823	63.157	36.766	1.00	17.40	A
ATOM	326	O	HIS	A	46	29.336	62.291	37.474	1.00	19.71	A
ATOM	327	N	CYS	A	47	28.609	64.397	37.193	1.00	17.64	A
ATOM	328	CA	CYS	A	47	28.990	64.817	38.538	1.00	17.02	A
ATOM	329	CB	CYS	A	47	29.478	66.265	38.489	1.00	16.75	A
ATOM	330	SG	CYS	A	47	31.003	66.476	37.551	1.00	16.17	A
ATOM	331	C	CYS	A	47	27.862	64.610	39.534	1.00	17.55	A
ATOM	332	O	CYS	A	47	28.084	64.628	40.743	1.00	19.42	A
ATOM	333	N	GLY	A	48	26.652	64.426	39.022	1.00	16.92	A
ATOM	334	CA	GLY	A	48	25.513	64.207	39.890	1.00	18.16	A
ATOM	335	C	GLY	A	48	25.034	65.421	40.664	1.00	17.73	A
ATOM	336	O	GLY	A	48	24.782	65.329	41.865	1.00	20.39	A
ATOM	337	N	PHE	A	49	24.916	66.565	39.996	1.00	16.58	A
ATOM	338	CA	PHE	A	49	24.429	67.758	40.673	1.00	14.80	A
ATOM	339	CB	PHE	A	49	25.606	68.696	41.026	1.00	15.66	A
ATOM	340	CG	PHE	A	49	26.337	69.285	39.832	1.00	14.59	A
ATOM	341	CD1	PHE	A	49	25.757	70.155	39.064	1.00	13.66	A
ATOM	342	CD2	PHE	A	49	27.572	68.955	39.615	1.00	13.77	A
ATOM	343	CE1	PHE	A	49	26.426	70.770	37.992	1.00	13.65	A
ATOM	344	CE2	PHE	A	49	28.327	69.513	38.571	1.00	14.71	A
ATOM	345	CZ	PHE	A	49	27.739	70.438	37.748	1.00	14.34	A
ATOM	346	C	PHE	A	49	23.333	68.436	39.868	1.00	14.31	A
ATOM	347	O	PHE	A	49	23.230	68.252	38.654	1.00	14.47	A
ATOM	348	N	ALA	A	50	22.486	69.184	40.569	1.00	13.89	A
ATOM	349	CA	ALA	A	50	21.418	69.937	39.928	1.00	12.51	A
ATOM	350	CB	ALA	A	50	20.184	69.989	40.824	1.00	15.91	A
ATOM	351	C	ALA	A	50	22.019	71.327	39.762	1.00	12.02	A
ATOM	352	O	ALA	A	50	22.841	71.750	40.578	1.00	12.80	A
ATOM	353	N	TYR	A	51	21.621	72.040	38.717	1.00	12.82	A
ATOM	354	CA	TYR	A	51	22.193	73.360	38.481	1.00	11.50	A
ATOM	355	CB	TYR	A	51	23.423	73.214	37.582	1.00	10.79	A
ATOM	356	CG	TYR	A	51	23.074	72.687	36.211	1.00	10.07	A
ATOM	357	CD1	TYR	A	51	22.770	71.340	36.023	1.00	11.63	A
ATOM	358	CE1	TYR	A	51	22.394	70.858	34.775	1.00	11.65	A
ATOM	359	CD2	TYR	A	51	22.996	73.544	35.111	1.00	11.90	A
ATOM	360	CE2	TYR	A	51	22.621	73.071	33.862	1.00	11.04	A
ATOM	361	CZ	TYR	A	51	22.321	71.728	33.701	1.00	11.39	A
ATOM	362	OH	TYR	A	51	21.941	71.251	32.475	1.00	13.99	A
ATOM	363	C	TYR	A	51	21.209	74.344	37.891	1.00	11.97	A
ATOM	364	O	TYR	A	51	20.161	73.973	37.366	1.00	11.86	A
ATOM	365	N	ALA	A	52	21.594	75.612	37.961	1.00	11.76	A
ATOM	366	CA	ALA	A	52	20.802	76.702	37.423	1.00	11.93	A
ATOM	367	CB	ALA	A	52	20.249	77.552	38.555	1.00	15.06	A
ATOM	368	C	ALA	A	52	21.706	77.543	36.532	1.00	11.65	A
ATOM	369	O	ALA	A	52	22.748	78.021	36.975	1.00	11.80	A
ATOM	370	N	LEU	A	53	21.314	77.702	35.273	1.00	10.72	A
ATOM	371	CA	LEU	A	53	22.081	78.517	34.336	1.00	10.99	A
ATOM	372	CB	LEU	A	53	21.746	78.108	32.898	1.00	11.40	A
ATOM	373	CG	LEU	A	53	22.095	76.694	32.431	1.00	11.91	A
ATOM	374	CD1	LEU	A	53	21.540	76.471	31.032	1.00	13.32	A
ATOM	375	CD2	LEU	A	53	23.601	76.503	32.442	1.00	14.04	A
ATOM	376	C	LEU	A	53	21.755	79.980	34.597	1.00	11.07	A
ATOM	377	O	LEU	A	53	20.587	80.366	34.589	1.00	11.97	A
ATOM	378	N	THR	A	54	22.784	80.786	34.839	1.00	10.70	A
ATOM	379	CA	THR	A	54	22.601	82.213	35.073	1.00	9.61	A
ATOM	380	CB	THR	A	54	22.956	82.625	36.522	1.00	11.92	A
ATOM	381	OG1	THR	A	54	24.356	82.428	36.757	1.00	13.30	A
ATOM	382	CG2	THR	A	54	22.150	81.806	37.519	1.00	12.21	A
ATOM	383	C	THR	A	54	23.518	82.940	34.097	1.00	10.63	A
ATOM	384	O	THR	A	54	24.583	82.433	33.742	1.00	10.64	A
ATOM	385	N	ILE	A	55	23.098	84.119	33.658	1.00	10.43	A

ATOM	386	CA	ILE	A	55	23.869	84.893	32.699	1.00	9.86	A
ATOM	387	CB	ILE	A	55	22.929	85.569	31.682	1.00	9.45	A
ATOM	388	CG2	ILE	A	55	23.743	86.278	30.612	1.00	10.05	A
ATOM	389	CG1	ILE	A	55	21.994	84.523	31.061	1.00	12.39	A
ATOM	390	CD1	ILE	A	55	22.700	83.370	30.354	1.00	14.56	A
ATOM	391	C	ILE	A	55	24.705	85.939	33.418	1.00	11.14	A
ATOM	392	O	ILE	A	55	24.183	86.741	34.191	1.00	11.26	A
ATOM	393	N	VAL	A	56	26.009	85.926	33.160	1.00	10.84	A
ATOM	394	CA	VAL	A	56	26.931	86.853	33.805	1.00	10.67	A
ATOM	395	CB	VAL	A	56	28.374	86.689	33.232	1.00	9.37	A
ATOM	396	CG1	VAL	A	56	28.408	86.996	31.748	1.00	8.67	A
ATOM	397	CG2	VAL	A	56	29.335	87.577	33.996	1.00	11.63	A
ATOM	398	C	VAL	A	56	26.454	88.304	33.705	1.00	11.20	A
ATOM	399	O	VAL	A	56	26.191	88.824	32.617	1.00	12.28	A
ATOM	400	N	GLY	A	57	26.354	88.944	34.866	1.00	12.47	A
ATOM	401	CA	GLY	A	57	25.864	90.309	34.948	1.00	13.12	A
ATOM	402	C	GLY	A	57	26.506	91.389	34.102	1.00	14.20	A
ATOM	403	O	GLY	A	57	25.799	92.153	33.442	1.00	15.02	A
ATOM	404	N	ASP	A	58	27.833	91.466	34.111	1.00	14.42	A
ATOM	405	CA	ASP	A	58	28.524	92.506	33.356	1.00	14.36	A
ATOM	406	CB	ASP	A	58	29.749	92.969	34.156	1.00	14.26	A
ATOM	407	CG	ASP	A	58	30.813	91.898	34.273	1.00	13.53	A
ATOM	408	OD1	ASP	A	58	31.796	92.125	35.008	1.00	15.20	A
ATOM	409	OD2	ASP	A	58	30.672	90.834	33.629	1.00	13.56	A
ATOM	410	C	ASP	A	58	28.858	92.131	31.918	1.00	14.32	A
ATOM	411	O	ASP	A	58	29.520	92.898	31.218	1.00	15.28	A
ATOM	412	N	GLY	A	59	28.414	90.956	31.481	1.00	14.37	A
ATOM	413	CA	GLY	A	59	28.666	90.525	30.116	1.00	12.51	A
ATOM	414	C	GLY	A	59	30.126	90.394	29.717	1.00	12.13	A
ATOM	415	O	GLY	A	59	30.459	90.527	28.539	1.00	13.27	A
ATOM	416	N	LYS	A	60	30.994	90.123	30.688	1.00	10.36	A
ATOM	417	CA	LYS	A	60	32.429	89.986	30.435	1.00	11.62	A
ATOM	418	CB	LYS	A	60	33.190	91.006	31.291	1.00	12.17	A
ATOM	419	CG	LYS	A	60	32.771	92.459	31.118	1.00	15.61	A
ATOM	420	CD	LYS	A	60	33.202	93.020	29.780	1.00	19.19	A
ATOM	421	CE	LYS	A	60	32.861	94.502	29.692	1.00	19.93	A
ATOM	422	NZ	LYS	A	60	33.267	95.095	28.390	1.00	22.12	A
ATOM	423	C	LYS	A	60	32.891	88.562	30.710	1.00	10.40	A
ATOM	424	O	LYS	A	60	32.187	87.781	31.354	1.00	10.69	A
ATOM	425	N	TYR	A	61	34.086	88.231	30.227	1.00	9.97	A
ATOM	426	CA	TYR	A	61	34.647	86.904	30.440	1.00	9.43	A
ATOM	427	CB	TYR	A	61	35.378	86.445	29.173	1.00	9.37	A
ATOM	428	CG	TYR	A	61	34.427	85.969	28.109	1.00	9.04	A
ATOM	429	CD1	TYR	A	61	33.629	86.872	27.405	1.00	9.32	A
ATOM	430	CE1	TYR	A	61	32.698	86.432	26.471	1.00	10.34	A
ATOM	431	CD2	TYR	A	61	34.272	84.609	27.846	1.00	10.11	A
ATOM	432	CE2	TYR	A	61	33.343	84.158	26.911	1.00	9.38	A
ATOM	433	CZ	TYR	A	61	32.560	85.075	26.230	1.00	11.16	A
ATOM	434	OH	TYR	A	61	31.646	84.628	25.306	1.00	11.81	A
ATOM	435	C	TYR	A	61	35.512	86.878	31.689	1.00	9.35	A
ATOM	436	O	TYR	A	61	35.276	86.075	32.588	1.00	10.72	A
ATOM	437	N	GLY	A	62	36.514	87.750	31.753	1.00	9.91	A
ATOM	438	CA	GLY	A	62	37.359	87.782	32.931	1.00	10.68	A
ATOM	439	C	GLY	A	62	38.661	88.539	32.767	1.00	10.33	A
ATOM	440	O	GLY	A	62	39.585	88.061	32.106	1.00	10.43	A
ATOM	441	N	ALA	A	63	38.735	89.718	33.380	1.00	11.66	A
ATOM	442	CA	ALA	A	63	39.930	90.554	33.334	1.00	11.95	A
ATOM	443	CB	ALA	A	63	39.865	91.513	32.152	1.00	13.77	A
ATOM	444	C	ALA	A	63	39.992	91.336	34.639	1.00	13.84	A
ATOM	445	O	ALA	A	63	38.968	91.556	35.286	1.00	13.50	A
ATOM	446	N	ARG	A	64	41.192	91.754	35.025	1.00	14.65	A

ATOM	447	CA	ARG	A	64	41.366	92.509	36.257	1.00	17.59	A
ATOM	448	CB	ARG	A	64	42.431	91.832	37.122	1.00	19.09	A
ATOM	449	CG	ARG	A	64	42.557	92.447	38.509	1.00	22.61	A
ATOM	450	CD	ARG	A	64	43.792	91.954	39.238	1.00	25.53	A
ATOM	451	NE	ARG	A	64	45.020	92.426	38.605	1.00	28.82	A
ATOM	452	CZ	ARG	A	64	46.236	92.250	39.111	1.00	31.37	A
ATOM	453	NH1	ARG	A	64	46.390	91.608	40.262	1.00	33.09	A
ATOM	454	NH2	ARG	A	64	47.297	92.719	38.469	1.00	32.81	A
ATOM	455	C	ARG	A	64	41.710	93.958	35.946	1.00	18.49	A
ATOM	456	O	ARG	A	64	42.621	94.233	35.163	1.00	18.63	A
ATOM	457	N	ASP	A	65	40.980	94.883	36.558	1.00	20.04	A
ATOM	458	CA	ASP	A	65	41.235	96.303	36.351	1.00	22.22	A
ATOM	459	CB	ASP	A	65	40.117	97.120	37.003	1.00	22.81	A
ATOM	460	CG	ASP	A	65	40.205	98.598	36.667	1.00	24.22	A
ATOM	461	OD1	ASP	A	65	39.885	98.967	35.518	1.00	26.48	A
ATOM	462	OD2	ASP	A	65	40.603	99.387	37.548	1.00	26.15	A
ATOM	463	C	ASP	A	65	42.611	96.581	36.947	1.00	23.72	A
ATOM	464	O	ASP	A	65	42.884	96.210	38.087	1.00	23.99	A
ATOM	465	N	ALA	A	66	43.477	97.229	36.176	1.00	26.04	A
ATOM	466	CA	ALA	A	66	44.828	97.531	36.636	1.00	28.03	A
ATOM	467	CB	ALA	A	66	45.652	98.090	35.483	1.00	28.75	A
ATOM	468	C	ALA	A	66	44.857	98.499	37.814	1.00	28.79	A
ATOM	469	O	ALA	A	66	45.809	98.504	38.595	1.00	29.26	A
ATOM	470	N	ASN	A	67	43.812	99.310	37.946	1.00	29.06	A
ATOM	471	CA	ASN	A	67	43.740	100.288	39.025	1.00	29.85	A
ATOM	472	CB	ASN	A	67	43.019	101.537	38.509	1.00	30.58	A
ATOM	473	CG	ASN	A	67	43.700	102.145	37.298	1.00	32.46	A
ATOM	474	OD1	ASN	A	67	44.886	102.473	37.339	1.00	32.86	A
ATOM	475	ND2	ASN	A	67	42.952	102.300	36.212	1.00	33.03	A
ATOM	476	C	ASN	A	67	43.105	99.717	40.288	1.00	29.38	A
ATOM	477	O	ASN	A	67	43.744	99.655	41.339	1.00	29.66	A
ATOM	478	N	THR	A	68	41.847	99.301	40.179	1.00	27.82	A
ATOM	479	CA	THR	A	68	41.109	98.755	41.314	1.00	26.63	A
ATOM	480	CB	THR	A	68	39.595	98.807	41.060	1.00	25.72	A
ATOM	481	OG1	THR	A	68	39.265	97.930	39.975	1.00	24.07	A
ATOM	482	CG2	THR	A	68	39.166	100.222	40.710	1.00	25.34	A
ATOM	483	C	THR	A	68	41.479	97.313	41.648	1.00	26.22	A
ATOM	484	O	THR	A	68	41.233	96.848	42.761	1.00	26.49	A
ATOM	485	N	LYS	A	69	42.059	96.611	40.681	1.00	25.60	A
ATOM	486	CA	LYS	A	69	42.461	95.221	40.867	1.00	25.08	A
ATOM	487	CB	LYS	A	69	43.465	95.142	42.022	1.00	28.90	A
ATOM	488	CG	LYS	A	69	44.710	95.990	41.814	1.00	33.71	A
ATOM	489	CD	LYS	A	69	45.662	95.872	42.991	1.00	38.30	A
ATOM	490	CE	LYS	A	69	46.885	96.758	42.808	1.00	40.62	A
ATOM	491	NZ	LYS	A	69	47.821	96.646	43.961	1.00	42.64	A
ATOM	492	C	LYS	A	69	41.249	94.314	41.063	1.00	23.09	A
ATOM	493	O	LYS	A	69	41.370	93.209	41.591	1.00	22.36	A
ATOM	494	N	ILE	A	70	40.082	94.785	40.636	1.00	18.73	A
ATOM	495	CA	ILE	A	70	38.851	94.007	40.752	1.00	17.41	A
ATOM	496	CB	ILE	A	70	37.619	94.926	40.921	1.00	18.61	A
ATOM	497	CG2	ILE	A	70	36.343	94.096	40.924	1.00	19.24	A
ATOM	498	CG1	ILE	A	70	37.743	95.733	42.215	1.00	19.23	A
ATOM	499	CD1	ILE	A	70	36.620	96.736	42.423	1.00	20.47	A
ATOM	500	C	ILE	A	70	38.656	93.173	39.490	1.00	15.83	A
ATOM	501	O	ILE	A	70	38.887	93.656	38.383	1.00	15.20	A
ATOM	502	N	TRP	A	71	38.240	91.921	39.663	1.00	13.08	A
ATOM	503	CA	TRP	A	71	38.003	91.026	38.535	1.00	12.55	A
ATOM	504	CB	TRP	A	71	38.318	89.583	38.942	1.00	12.03	A
ATOM	505	CG	TRP	A	71	39.772	89.255	38.964	1.00	13.66	A
ATOM	506	CD2	TRP	A	71	40.549	88.766	37.868	1.00	13.45	A
ATOM	507	CE2	TRP	A	71	41.874	88.607	38.330	1.00	15.39	A

ATOM	508	CE3	TRP	A	71	40.254	88.450	36.536	1.00	13.75	A
ATOM	509	CD1	TRP	A	71	40.630	89.371	40.022	1.00	13.77	A
ATOM	510	NE1	TRP	A	71	41.896	88.981	39.649	1.00	15.77	A
ATOM	511	CZ2	TRP	A	71	42.905	88.142	37.505	1.00	15.44	A
ATOM	512	CZ3	TRP	A	71	41.280	87.987	35.715	1.00	14.18	A
ATOM	513	CH2	TRP	A	71	42.588	87.839	36.206	1.00	15.37	A
ATOM	514	C	TRP	A	71	36.576	91.164	38.036	1.00	12.49	A
ATOM	515	O	TRP	A	71	35.641	91.188	38.831	1.00	12.74	A
ATOM	516	N	ASN	A	72	36.407	91.244	36.718	1.00	11.07	A
ATOM	517	CA	ASN	A	72	35.075	91.350	36.133	1.00	11.34	A
ATOM	518	CB	ASN	A	72	35.022	92.534	35.155	1.00	10.91	A
ATOM	519	CG	ASN	A	72	35.893	92.322	33.928	1.00	12.43	A
ATOM	520	OD1	ASN	A	72	36.262	91.195	33.599	1.00	12.97	A
ATOM	521	ND2	ASN	A	72	36.209	93.410	33.233	1.00	14.86	A
ATOM	522	C	ASN	A	72	34.692	90.034	35.463	1.00	10.96	A
ATOM	523	O	ASN	A	72	35.432	89.049	35.524	1.00	11.26	A
ATOM	524	N	GLY	A	73	33.521	90.034	34.836	1.00	11.00	A
ATOM	525	CA	GLY	A	73	33.038	88.871	34.112	1.00	10.39	A
ATOM	526	C	GLY	A	73	32.798	87.602	34.904	1.00	9.77	A
ATOM	527	O	GLY	A	73	32.636	87.625	36.126	1.00	9.76	A
ATOM	528	N	MET	A	74	32.783	86.480	34.189	1.00	8.85	A
ATOM	529	CA	MET	A	74	32.551	85.179	34.798	1.00	9.58	A
ATOM	530	CB	MET	A	74	32.388	84.130	33.696	1.00	9.64	A
ATOM	531	CG	MET	A	74	31.126	84.314	32.874	1.00	10.68	A
ATOM	532	SD	MET	A	74	30.972	83.136	31.533	1.00	9.47	A
ATOM	533	CE	MET	A	74	32.107	83.851	30.331	1.00	10.20	A
ATOM	534	C	MET	A	74	33.644	84.841	35.792	1.00	9.16	A
ATOM	535	O	MET	A	74	33.374	84.250	36.835	1.00	9.49	A
ATOM	536	N	VAL	A	75	34.882	85.203	35.469	1.00	9.50	A
ATOM	537	CA	VAL	A	75	35.979	84.938	36.383	1.00	10.09	A
ATOM	538	CB	VAL	A	75	37.334	85.382	35.784	1.00	9.77	A
ATOM	539	CG1	VAL	A	75	38.440	85.254	36.831	1.00	11.29	A
ATOM	540	CG2	VAL	A	75	37.663	84.512	34.568	1.00	11.69	A
ATOM	541	C	VAL	A	75	35.690	85.687	37.683	1.00	8.71	A
ATOM	542	O	VAL	A	75	35.847	85.131	38.771	1.00	9.77	A
ATOM	543	N	GLY	A	76	35.243	86.936	37.566	1.00	9.90	A
ATOM	544	CA	GLY	A	76	34.919	87.713	38.753	1.00	10.44	A
ATOM	545	C	GLY	A	76	33.828	87.064	39.590	1.00	9.56	A
ATOM	546	O	GLY	A	76	33.922	87.026	40.815	1.00	9.93	A
ATOM	547	N	GLU	A	77	32.789	86.547	38.943	1.00	9.57	A
ATOM	548	CA	GLU	A	77	31.707	85.905	39.680	1.00	10.67	A
ATOM	549	CB	GLU	A	77	30.583	85.522	38.715	1.00	12.21	A
ATOM	550	CG	GLU	A	77	29.957	86.719	38.025	1.00	14.32	A
ATOM	551	CD	GLU	A	77	28.570	86.433	37.489	1.00	16.51	A
ATOM	552	OE1	GLU	A	77	28.226	85.246	37.321	1.00	18.52	A
ATOM	553	OE2	GLU	A	77	27.825	87.397	37.228	1.00	16.53	A
ATOM	554	C	GLU	A	77	32.241	84.732	40.490	1.00	10.91	A
ATOM	555	O	GLU	A	77	31.785	84.483	41.604	1.00	11.18	A
ATOM	556	N	LEU	A	78	33.209	84.014	39.932	1.00	9.49	A
ATOM	557	CA	LEU	A	78	33.815	82.880	40.619	1.00	10.07	A
ATOM	558	CB	LEU	A	78	34.630	82.074	39.607	1.00	10.23	A
ATOM	559	CG	LEU	A	78	34.212	80.693	39.093	1.00	16.68	A
ATOM	560	CD1	LEU	A	78	32.707	80.498	39.069	1.00	11.70	A
ATOM	561	CD2	LEU	A	78	34.814	80.533	37.707	1.00	12.46	A
ATOM	562	C	LEU	A	78	34.669	83.375	41.782	1.00	10.32	A
ATOM	563	O	LEU	A	78	34.561	82.883	42.902	1.00	10.65	A
ATOM	564	N	VAL	A	79	35.530	84.344	41.495	1.00	9.96	A
ATOM	565	CA	VAL	A	79	36.433	84.906	42.490	1.00	10.88	A
ATOM	566	CB	VAL	A	79	37.312	86.008	41.842	1.00	10.55	A
ATOM	567	CG1	VAL	A	79	38.072	86.795	42.909	1.00	12.96	A
ATOM	568	CG2	VAL	A	79	38.292	85.361	40.867	1.00	12.38	A

ATOM	569	C	VAL	A	79	35.702	85.474	43.703	1.00	11.38	A
ATOM	570	O	VAL	A	79	36.130	85.276	44.843	1.00	11.63	A
ATOM	571	N	TYR	A	80	34.594	86.165	43.459	1.00	11.08	A
ATOM	572	CA	TYR	A	80	33.828	86.777	44.542	1.00	11.80	A
ATOM	573	CB	TYR	A	80	33.337	88.151	44.075	1.00	11.15	A
ATOM	574	CG	TYR	A	80	34.484	89.044	43.675	1.00	11.18	A
ATOM	575	CD1	TYR	A	80	35.504	89.342	44.580	1.00	12.28	A
ATOM	576	CE1	TYR	A	80	36.612	90.094	44.197	1.00	13.38	A
ATOM	577	CD2	TYR	A	80	34.593	89.531	42.374	1.00	11.57	A
ATOM	578	CE2	TYR	A	80	35.696	90.284	41.981	1.00	12.40	A
ATOM	579	CZ	TYR	A	80	36.703	90.557	42.894	1.00	11.80	A
ATOM	580	OH	TYR	A	80	37.815	91.267	42.500	1.00	14.10	A
ATOM	581	C	TYR	A	80	32.724	85.889	45.105	1.00	12.27	A
ATOM	582	O	TYR	A	80	31.949	86.330	45.959	1.00	12.74	A
ATOM	583	N	GLY	A	81	32.650	84.650	44.625	1.00	12.12	A
ATOM	584	CA	GLY	A	81	31.662	83.703	45.121	1.00	13.73	A
ATOM	585	C	GLY	A	81	30.223	83.897	44.685	1.00	13.22	A
ATOM	586	O	GLY	A	81	29.306	83.441	45.373	1.00	15.91	A
ATOM	587	N	LYS	A	82	30.016	84.551	43.548	1.00	12.33	A
ATOM	588	CA	LYS	A	82	28.670	84.796	43.038	1.00	13.83	A
ATOM	589	CB	LYS	A	82	28.671	86.099	42.232	1.00	14.46	A
ATOM	590	CG	LYS	A	82	29.157	87.319	43.004	1.00	18.53	A
ATOM	591	CD	LYS	A	82	28.213	87.684	44.134	1.00	21.87	A
ATOM	592	CE	LYS	A	82	28.698	88.929	44.864	1.00	24.28	A
ATOM	593	NZ	LYS	A	82	27.763	89.348	45.947	1.00	25.39	A
ATOM	594	C	LYS	A	82	28.168	83.602	42.232	1.00	12.74	A
ATOM	595	O	LYS	A	82	26.965	83.452	42.013	1.00	14.81	A
ATOM	596	N	ALA	A	83	29.096	82.763	41.780	1.00	12.25	A
ATOM	597	CA	ALA	A	83	28.753	81.571	41.011	1.00	11.32	A
ATOM	598	CB	ALA	A	83	28.886	81.847	39.516	1.00	12.14	A
ATOM	599	C	ALA	A	83	29.681	80.434	41.424	1.00	10.84	A
ATOM	600	O	ALA	A	83	30.773	80.679	41.941	1.00	10.45	A
ATOM	601	N	ASP	A	84	29.244	79.197	41.195	1.00	10.99	A
ATOM	602	CA	ASP	A	84	30.026	78.021	41.562	1.00	10.42	A
ATOM	603	CB	ASP	A	84	29.091	76.929	42.093	1.00	12.81	A
ATOM	604	CG	ASP	A	84	28.252	77.389	43.264	1.00	14.10	A
ATOM	605	OD1	ASP	A	84	28.829	77.871	44.261	1.00	18.48	A
ATOM	606	OD2	ASP	A	84	27.014	77.258	43.186	1.00	15.34	A
ATOM	607	C	ASP	A	84	30.873	77.493	40.420	1.00	10.51	A
ATOM	608	O	ASP	A	84	31.906	76.864	40.648	1.00	10.54	A
ATOM	609	N	ILE	A	85	30.433	77.735	39.192	1.00	9.58	A
ATOM	610	CA	ILE	A	85	31.148	77.224	38.031	1.00	10.06	A
ATOM	611	CB	ILE	A	85	30.740	75.740	37.802	1.00	10.69	A
ATOM	612	CG2	ILE	A	85	29.253	75.664	37.530	1.00	12.85	A
ATOM	613	CG1	ILE	A	85	31.559	75.099	36.679	1.00	10.70	A
ATOM	614	CD1	ILE	A	85	31.458	73.580	36.685	1.00	14.57	A
ATOM	615	C	ILE	A	85	30.812	78.062	36.802	1.00	9.88	A
ATOM	616	O	ILE	A	85	29.707	78.594	36.694	1.00	10.58	A
ATOM	617	N	ALA	A	86	31.776	78.201	35.895	1.00	8.99	A
ATOM	618	CA	ALA	A	86	31.569	78.949	34.659	1.00	8.68	A
ATOM	619	CB	ALA	A	86	32.602	80.066	34.521	1.00	8.41	A
ATOM	620	C	ALA	A	86	31.713	77.961	33.512	1.00	8.34	A
ATOM	621	O	ALA	A	86	32.723	77.261	33.414	1.00	8.88	A
ATOM	622	N	ILE	A	87	30.691	77.885	32.667	1.00	8.85	A
ATOM	623	CA	ILE	A	87	30.692	76.986	31.518	1.00	8.53	A
ATOM	624	CB	ILE	A	87	29.648	75.857	31.693	1.00	10.55	A
ATOM	625	CG2	ILE	A	87	29.684	74.918	30.490	1.00	10.47	A
ATOM	626	CG1	ILE	A	87	29.954	75.079	32.978	1.00	9.16	A
ATOM	627	CD1	ILE	A	87	28.994	73.948	33.269	1.00	11.00	A
ATOM	628	C	ILE	A	87	30.371	77.856	30.311	1.00	9.03	A
ATOM	629	O	ILE	A	87	29.214	78.208	30.060	1.00	9.01	A

ATOM	630	N	ALA	A	88	31.421	78.206	29.576	1.00	8.95	A
ATOM	631	CA	ALA	A	88	31.309	79.098	28.433	1.00	8.86	A
ATOM	632	CB	ALA	A	88	31.149	80.523	28.948	1.00	11.38	A
ATOM	633	C	ALA	A	88	32.589	78.994	27.609	1.00	8.27	A
ATOM	634	O	ALA	A	88	33.492	78.240	27.960	1.00	9.26	A
ATOM	635	N	PRO	A	89	32.668	79.730	26.485	1.00	9.01	A
ATOM	636	CD	PRO	A	89	31.561	80.392	25.770	1.00	9.13	A
ATOM	637	CA	PRO	A	89	33.883	79.688	25.659	1.00	8.61	A
ATOM	638	CB	PRO	A	89	33.378	80.165	24.294	1.00	8.98	A
ATOM	639	CG	PRO	A	89	32.312	81.179	24.635	1.00	9.79	A
ATOM	640	C	PRO	A	89	34.921	80.580	26.345	1.00	7.75	A
ATOM	641	O	PRO	A	89	35.333	81.614	25.812	1.00	9.37	A
ATOM	642	N	LEU	A	90	35.324	80.169	27.544	1.00	8.01	A
ATOM	643	CA	LEU	A	90	36.275	80.911	28.362	1.00	8.41	A
ATOM	644	CB	LEU	A	90	35.867	80.769	29.833	1.00	9.56	A
ATOM	645	CG	LEU	A	90	36.698	81.544	30.860	1.00	7.48	A
ATOM	646	CD1	LEU	A	90	36.513	83.048	30.672	1.00	8.55	A
ATOM	647	CD2	LEU	A	90	36.265	81.138	32.258	1.00	9.99	A
ATOM	648	C	LEU	A	90	37.679	80.408	28.084	1.00	8.10	A
ATOM	649	O	LEU	A	90	38.040	79.293	28.460	1.00	8.62	A
ATOM	650	N	THR	A	91	38.483	81.250	27.452	1.00	7.27	A
ATOM	651	CA	THR	A	91	39.836	80.876	27.092	1.00	8.12	A
ATOM	652	CB	THR	A	91	40.400	81.907	26.114	1.00	9.08	A
ATOM	653	OG1	THR	A	91	39.507	82.005	24.999	1.00	9.56	A
ATOM	654	CG2	THR	A	91	41.785	81.497	25.622	1.00	10.14	A
ATOM	655	C	THR	A	91	40.745	80.732	28.300	1.00	7.70	A
ATOM	656	O	THR	A	91	40.746	81.572	29.199	1.00	8.49	A
ATOM	657	N	ILE	A	92	41.505	79.645	28.324	1.00	8.89	A
ATOM	658	CA	ILE	A	92	42.436	79.391	29.409	1.00	9.54	A
ATOM	659	CB	ILE	A	92	42.883	77.904	29.418	1.00	8.47	A
ATOM	660	CG2	ILE	A	92	43.970	77.690	30.460	1.00	9.72	A
ATOM	661	CG1	ILE	A	92	41.681	77.000	29.699	1.00	8.90	A
ATOM	662	CD1	ILE	A	92	41.977	75.524	29.544	1.00	11.06	A
ATOM	663	C	ILE	A	92	43.652	80.290	29.200	1.00	10.70	A
ATOM	664	O	ILE	A	92	44.369	80.160	28.203	1.00	11.28	A
ATOM	665	N	THR	A	93	43.860	81.221	30.126	1.00	9.30	A
ATOM	666	CA	THR	A	93	44.995	82.135	30.053	1.00	10.20	A
ATOM	667	CB	THR	A	93	44.561	83.577	29.717	1.00	10.42	A
ATOM	668	OG1	THR	A	93	43.804	84.120	30.807	1.00	11.85	A
ATOM	669	CG2	THR	A	93	43.720	83.602	28.448	1.00	10.24	A
ATOM	670	C	THR	A	93	45.709	82.156	31.394	1.00	10.29	A
ATOM	671	O	THR	A	93	45.131	81.803	32.423	1.00	11.44	A
ATOM	672	N	LEU	A	94	46.965	82.586	31.376	1.00	10.68	A
ATOM	673	CA	LEU	A	94	47.771	82.644	32.583	1.00	10.99	A
ATOM	674	CB	LEU	A	94	49.185	83.111	32.223	1.00	11.64	A
ATOM	675	CG	LEU	A	94	50.083	83.424	33.423	1.00	13.09	A
ATOM	676	CD1	LEU	A	94	50.364	82.151	34.203	1.00	14.45	A
ATOM	677	CD2	LEU	A	94	51.380	84.051	32.935	1.00	16.24	A
ATOM	678	C	LEU	A	94	47.148	83.501	33.677	1.00	10.53	A
ATOM	679	O	LEU	A	94	47.025	83.055	34.812	1.00	10.79	A
ATOM	680	N	VAL	A	95	46.768	84.730	33.345	1.00	11.04	A
ATOM	681	CA	VAL	A	95	46.202	85.610	34.360	1.00	11.98	A
ATOM	682	CB	VAL	A	95	45.950	87.038	33.807	1.00	12.84	A
ATOM	683	CG1	VAL	A	95	47.273	87.682	33.419	1.00	17.48	A
ATOM	684	CG2	VAL	A	95	45.006	86.993	32.625	1.00	13.38	A
ATOM	685	C	VAL	A	95	44.927	85.059	34.991	1.00	10.75	A
ATOM	686	O	VAL	A	95	44.688	85.262	36.181	1.00	12.45	A
ATOM	687	N	ARG	A	96	44.119	84.350	34.206	1.00	10.25	A
ATOM	688	CA	ARG	A	96	42.890	83.764	34.734	1.00	10.47	A
ATOM	689	CB	ARG	A	96	41.944	83.429	33.575	1.00	9.65	A
ATOM	690	CG	ARG	A	96	41.356	84.636	32.883	1.00	10.28	A

ATOM	691	CD	ARG	A	96	40.559	84.214	31.668	1.00	9.89	A
ATOM	692	NE	ARG	A	96	39.948	85.350	30.993	1.00	8.57	A
ATOM	693	CZ	ARG	A	96	39.434	85.296	29.772	1.00	8.23	A
ATOM	694	NH1	ARG	A	96	39.458	84.160	29.087	1.00	9.93	A
ATOM	695	NH2	ARG	A	96	38.897	86.380	29.234	1.00	8.91	A
ATOM	696	C	ARG	A	96	43.231	82.551	35.596	1.00	9.78	A
ATOM	697	O	ARG	A	96	42.658	82.357	36.668	1.00	11.31	A
ATOM	698	N	GLU	A	97	44.172	81.740	35.122	1.00	10.06	A
ATOM	699	CA	GLU	A	97	44.589	80.539	35.841	1.00	9.63	A
ATOM	700	CB	GLU	A	97	45.602	79.771	34.984	1.00	10.82	A
ATOM	701	CG	GLU	A	97	46.124	78.475	35.602	1.00	12.19	A
ATOM	702	CD	GLU	A	97	45.075	77.380	35.668	1.00	13.87	A
ATOM	703	OE1	GLU	A	97	44.169	77.468	36.522	1.00	13.02	A
ATOM	704	OE2	GLU	A	97	45.156	76.429	34.859	1.00	13.68	A
ATOM	705	C	GLU	A	97	45.140	80.882	37.217	1.00	10.77	A
ATOM	706	O	GLU	A	97	45.077	80.073	38.137	1.00	11.69	A
ATOM	707	N	GLU	A	98	45.691	82.084	37.349	1.00	11.36	A
ATOM	708	CA	GLU	A	98	46.266	82.522	38.612	1.00	11.91	A
ATOM	709	CB	GLU	A	98	47.142	83.755	38.352	1.00	13.62	A
ATOM	710	CG	GLU	A	98	48.450	83.437	37.640	1.00	15.61	A
ATOM	711	CD	GLU	A	98	49.211	84.675	37.211	1.00	17.68	A
ATOM	712	OE1	GLU	A	98	50.372	84.531	36.771	1.00	19.08	A
ATOM	713	OE2	GLU	A	98	48.655	85.790	37.302	1.00	18.26	A
ATOM	714	C	GLU	A	98	45.223	82.763	39.697	1.00	12.62	A
ATOM	715	O	GLU	A	98	45.542	82.687	40.887	1.00	12.91	A
ATOM	716	N	VAL	A	99	43.980	83.034	39.303	1.00	11.67	A
ATOM	717	CA	VAL	A	99	42.941	83.321	40.287	1.00	10.90	A
ATOM	718	CB	VAL	A	99	42.364	84.740	40.071	1.00	11.56	A
ATOM	719	CG1	VAL	A	99	43.480	85.766	40.189	1.00	13.71	A
ATOM	720	CG2	VAL	A	99	41.682	84.836	38.714	1.00	11.03	A
ATOM	721	C	VAL	A	99	41.795	82.318	40.405	1.00	11.51	A
ATOM	722	O	VAL	A	99	41.082	82.320	41.405	1.00	11.13	A
ATOM	723	N	ILE	A	100	41.595	81.481	39.393	1.00	10.46	A
ATOM	724	CA	ILE	A	100	40.552	80.457	39.464	1.00	9.90	A
ATOM	725	CB	ILE	A	100	39.286	80.834	38.631	1.00	9.71	A
ATOM	726	CG2	ILE	A	100	38.515	81.951	39.338	1.00	10.50	A
ATOM	727	CG1	ILE	A	100	39.667	81.254	37.204	1.00	11.01	A
ATOM	728	CD1	ILE	A	100	40.105	80.117	36.296	1.00	12.75	A
ATOM	729	C	ILE	A	100	41.116	79.136	38.959	1.00	10.00	A
ATOM	730	O	ILE	A	100	42.239	79.101	38.456	1.00	10.35	A
ATOM	731	N	ASP	A	101	40.359	78.053	39.131	1.00	10.22	A
ATOM	732	CA	ASP	A	101	40.775	76.727	38.661	1.00	11.33	A
ATOM	733	CB	ASP	A	101	40.368	75.639	39.672	1.00	12.26	A
ATOM	734	CG	ASP	A	101	41.200	75.651	40.937	1.00	12.57	A
ATOM	735	OD1	ASP	A	101	42.299	76.244	40.944	1.00	15.62	A
ATOM	736	OD2	ASP	A	101	40.747	75.036	41.927	1.00	16.24	A
ATOM	737	C	ASP	A	101	40.144	76.460	37.294	1.00	11.64	A
ATOM	738	O	ASP	A	101	38.968	76.761	37.083	1.00	13.13	A
ATOM	739	N	PHE	A	102	40.927	75.894	36.377	1.00	11.49	A
ATOM	740	CA	PHE	A	102	40.457	75.544	35.035	1.00	11.37	A
ATOM	741	CB	PHE	A	102	41.356	76.177	33.965	1.00	10.36	A
ATOM	742	CG	PHE	A	102	40.941	77.549	33.515	1.00	11.81	A
ATOM	743	CD1	PHE	A	102	39.781	77.742	32.964	1.00	9.78	A
ATOM	744	CD2	PHE	A	102	41.785	78.523	33.604	1.00	11.62	A
ATOM	745	CE1	PHE	A	102	39.408	78.988	32.442	1.00	9.57	A
ATOM	746	CE2	PHE	A	102	41.505	79.800	33.114	1.00	11.74	A
ATOM	747	CZ	PHE	A	102	40.292	80.033	32.520	1.00	10.93	A
ATOM	748	C	PHE	A	102	40.489	74.029	34.880	1.00	11.55	A
ATOM	749	O	PHE	A	102	41.405	73.366	35.369	1.00	12.64	A
ATOM	750	N	SER	A	103	39.497	73.487	34.188	1.00	10.67	A
ATOM	751	CA	SER	A	103	39.470	72.064	33.895	1.00	11.23	A

ATOM	752	CB	SER	A	103	38.057	71.657	33.485	1.00	11.53	A
ATOM	753	OG	SER	A	103	37.750	72.193	32.198	1.00	11.77	A
ATOM	754	C	SER	A	103	40.421	71.950	32.712	1.00	11.41	A
ATOM	755	O	SER	A	103	40.866	72.960	32.167	1.00	12.01	A
ATOM	756	N	LYS	A	104	40.737	70.723	32.314	1.00	12.11	A
ATOM	757	CA	LYS	A	104	41.548	70.528	31.127	1.00	13.10	A
ATOM	758	CB	LYS	A	104	41.866	69.037	30.969	1.00	14.27	A
ATOM	759	CG	LYS	A	104	42.804	68.479	32.033	1.00	16.73	A
ATOM	760	CD	LYS	A	104	44.135	69.216	32.026	1.00	16.89	A
ATOM	761	CE	LYS	A	104	45.140	68.607	33.008	1.00	16.32	A
ATOM	762	NZ	LYS	A	104	44.760	68.757	34.448	1.00	15.33	A
ATOM	763	C	LYS	A	104	40.632	71.099	30.037	1.00	11.89	A
ATOM	764	O	LYS	A	104	39.415	71.156	30.212	1.00	11.44	A
ATOM	765	N	PRO	A	105	41.191	71.519	28.899	1.00	11.77	A
ATOM	766	CD	PRO	A	105	42.611	71.548	28.522	1.00	13.43	A
ATOM	767	CA	PRO	A	105	40.350	72.085	27.839	1.00	12.57	A
ATOM	768	CB	PRO	A	105	41.374	72.559	26.806	1.00	14.53	A
ATOM	769	CG	PRO	A	105	42.655	72.794	27.577	1.00	16.88	A
ATOM	770	C	PRO	A	105	39.288	71.146	27.281	1.00	9.98	A
ATOM	771	O	PRO	A	105	39.530	69.954	27.108	1.00	10.01	A
ATOM	772	N	PHE	A	106	38.111	71.696	26.993	1.00	9.32	A
ATOM	773	CA	PHE	A	106	37.035	70.899	26.423	1.00	9.75	A
ATOM	774	CB	PHE	A	106	35.718	71.162	27.177	1.00	8.88	A
ATOM	775	CG	PHE	A	106	35.210	72.583	27.087	1.00	8.44	A
ATOM	776	CD1	PHE	A	106	34.605	73.001	26.013	1.00	8.87	A
ATOM	777	CD2	PHE	A	106	35.328	73.370	28.111	1.00	9.33	A
ATOM	778	CE1	PHE	A	106	34.055	74.295	25.921	1.00	8.35	A
ATOM	779	CE2	PHE	A	106	34.813	74.677	28.115	1.00	9.88	A
ATOM	780	CZ	PHE	A	106	34.165	75.142	26.999	1.00	8.63	A
ATOM	781	C	PHE	A	106	36.935	71.147	24.926	1.00	8.06	A
ATOM	782	O	PHE	A	106	36.241	70.422	24.222	1.00	9.73	A
ATOM	783	N	MET	A	107	37.652	72.159	24.439	1.00	8.72	A
ATOM	784	CA	MET	A	107	37.636	72.506	23.021	1.00	9.16	A
ATOM	785	CB	MET	A	107	36.377	73.331	22.711	1.00	12.85	A
ATOM	786	CG	MET	A	107	36.224	73.735	21.245	1.00	12.90	A
ATOM	787	SD	MET	A	107	34.755	74.745	20.904	1.00	15.47	A
ATOM	788	CE	MET	A	107	33.499	73.506	20.828	1.00	15.97	A
ATOM	789	C	MET	A	107	38.916	73.255	22.683	1.00	9.96	A
ATOM	790	O	MET	A	107	39.394	74.071	23.474	1.00	8.85	A
ATOM	791	N	SER	A	108	39.463	72.978	21.506	1.00	8.50	A
ATOM	792	CA	SER	A	108	40.679	73.639	21.056	1.00	9.44	A
ATOM	793	CB	SER	A	108	41.524	72.639	20.273	1.00	11.24	A
ATOM	794	OG	SER	A	108	40.862	72.290	19.072	1.00	14.99	A
ATOM	795	C	SER	A	108	40.332	74.858	20.212	1.00	10.05	A
ATOM	796	O	SER	A	108	39.270	74.929	19.593	1.00	10.23	A
ATOM	797	N	LEU	A	109	41.244	75.819	20.189	1.00	11.63	A
ATOM	798	CA	LEU	A	109	41.057	77.008	19.376	1.00	9.32	A
ATOM	799	CB	LEU	A	109	39.908	77.859	19.924	1.00	11.66	A
ATOM	800	CG	LEU	A	109	40.249	78.706	21.148	1.00	13.88	A
ATOM	801	CD1	LEU	A	109	39.330	79.886	21.191	1.00	19.27	A
ATOM	802	CD2	LEU	A	109	40.156	77.885	22.415	1.00	14.66	A
ATOM	803	C	LEU	A	109	42.353	77.786	19.313	1.00	9.33	A
ATOM	804	O	LEU	A	109	43.278	77.553	20.087	1.00	9.96	A
ATOM	805	N	GLY	A	110	42.396	78.715	18.370	1.00	8.83	A
ATOM	806	CA	GLY	A	110	43.541	79.582	18.207	1.00	8.86	A
ATOM	807	C	GLY	A	110	43.043	80.860	17.570	1.00	9.39	A
ATOM	808	O	GLY	A	110	42.017	80.852	16.890	1.00	9.15	A
ATOM	809	N	ILE	A	111	43.740	81.969	17.802	1.00	9.81	A
ATOM	810	CA	ILE	A	111	43.344	83.226	17.186	1.00	10.07	A
ATOM	811	CB	ILE	A	111	44.243	84.383	17.669	1.00	9.38	A
ATOM	812	CG2	ILE	A	111	43.991	85.640	16.840	1.00	11.77	A

ATOM	813	CG1	ILE	A	111	43.964	84.639	19.151	1.00	10.08	A
ATOM	814	CD1	ILE	A	111	44.944	85.579	19.802	1.00	11.40	A
ATOM	815	C	ILE	A	111	43.483	82.993	15.684	1.00	8.75	A
ATOM	816	O	ILE	A	111	44.429	82.340	15.231	1.00	9.13	A
ATOM	817	N	SER	A	112	42.531	83.512	14.918	1.00	8.66	A
ATOM	818	CA	SER	A	112	42.510	83.305	13.479	1.00	9.16	A
ATOM	819	CB	SER	A	112	41.622	82.096	13.175	1.00	8.16	A
ATOM	820	OG	SER	A	112	40.264	82.396	13.473	1.00	10.60	A
ATOM	821	C	SER	A	112	42.036	84.546	12.750	1.00	9.12	A
ATOM	822	O	SER	A	112	41.534	85.492	13.356	1.00	9.91	A
ATOM	823	N	ILE	A	113	42.165	84.510	11.430	1.00	10.69	A
ATOM	824	CA	ILE	A	113	41.763	85.622	10.583	1.00	11.17	A
ATOM	825	CB	ILE	A	113	42.876	85.965	9.568	1.00	11.13	A
ATOM	826	CG2	ILE	A	113	42.430	87.120	8.676	1.00	12.54	A
ATOM	827	CG1	ILE	A	113	44.168	86.320	10.304	1.00	10.82	A
ATOM	828	CD1	ILE	A	113	45.405	86.307	9.420	1.00	10.07	A
ATOM	829	C	ILE	A	113	40.495	85.307	9.791	1.00	10.13	A
ATOM	830	O	ILE	A	113	40.408	84.267	9.136	1.00	10.81	A
ATOM	831	N	MET	A	114	39.512	86.200	9.872	1.00	10.04	A
ATOM	832	CA	MET	A	114	38.286	86.053	9.099	1.00	10.61	A
ATOM	833	CB	MET	A	114	37.045	86.178	9.988	1.00	10.16	A
ATOM	834	CG	MET	A	114	35.760	86.220	9.157	1.00	10.60	A
ATOM	835	SD	MET	A	114	34.283	86.713	10.057	1.00	12.18	A
ATOM	836	CE	MET	A	114	34.047	85.278	11.121	1.00	13.11	A
ATOM	837	C	MET	A	114	38.310	87.142	8.038	1.00	11.63	A
ATOM	838	O	MET	A	114	38.488	88.320	8.356	1.00	10.82	A
ATOM	839	N	ILE	A	115	38.133	86.749	6.782	1.00	11.48	A
ATOM	840	CA	ILE	A	115	38.105	87.705	5.687	1.00	11.96	A
ATOM	841	CB	ILE	A	115	39.272	87.499	4.685	1.00	11.71	A
ATOM	842	CG2	ILE	A	115	40.595	87.827	5.340	1.00	13.51	A
ATOM	843	CG1	ILE	A	115	39.241	86.067	4.140	1.00	12.50	A
ATOM	844	CD1	ILE	A	115	40.170	85.830	2.954	1.00	16.93	A
ATOM	845	C	ILE	A	115	36.825	87.521	4.894	1.00	11.78	A
ATOM	846	O	ILE	A	115	36.151	86.495	5.001	1.00	11.27	A
ATOM	847	N	LYS	A	116	36.494	88.541	4.112	1.00	13.14	A
ATOM	848	CA	LYS	A	116	35.351	88.500	3.220	1.00	12.56	A
ATOM	849	CB	LYS	A	116	34.941	89.936	2.880	1.00	13.86	A
ATOM	850	CG	LYS	A	116	33.922	90.095	1.758	1.00	18.08	A
ATOM	851	CD	LYS	A	116	32.539	89.615	2.142	1.00	20.52	A
ATOM	852	CE	LYS	A	116	31.476	90.375	1.351	1.00	21.38	A
ATOM	853	NZ	LYS	A	116	31.798	90.486	-0.103	1.00	22.41	A
ATOM	854	C	LYS	A	116	35.954	87.735	2.046	1.00	12.06	A
ATOM	855	O	LYS	A	116	37.093	88.000	1.662	1.00	12.42	A
ATOM	856	N	LYS	A	117	35.221	86.780	1.488	1.00	12.31	A
ATOM	857	CA	LYS	A	117	35.751	86.009	0.366	1.00	12.17	A
ATOM	858	CB	LYS	A	117	34.659	85.090	-0.188	1.00	13.23	A
ATOM	859	CG	LYS	A	117	34.338	83.905	0.701	1.00	13.86	A
ATOM	860	CD	LYS	A	117	33.367	82.955	0.020	1.00	13.48	A
ATOM	861	CE	LYS	A	117	33.108	81.727	0.879	1.00	15.63	A
ATOM	862	NZ	LYS	A	117	32.169	80.780	0.215	1.00	16.49	A
ATOM	863	C	LYS	A	117	36.341	86.924	-0.697	1.00	11.97	A
ATOM	864	O	LYS	A	117	35.742	87.938	-1.063	1.00	12.59	A
ATOM	865	N	GLY	A	118	37.525	86.565	-1.183	1.00	13.45	A
ATOM	866	CA	GLY	A	118	38.167	87.359	-2.216	1.00	13.64	A
ATOM	867	C	GLY	A	118	39.234	88.317	-1.721	1.00	14.42	A
ATOM	868	O	GLY	A	118	40.003	88.860	-2.515	1.00	14.72	A
ATOM	869	N	THR	A	119	39.287	88.532	-0.410	1.00	13.34	A
ATOM	870	CA	THR	A	119	40.283	89.429	0.171	1.00	13.21	A
ATOM	871	CB	THR	A	119	40.025	89.633	1.676	1.00	13.24	A
ATOM	872	OG1	THR	A	119	38.732	90.220	1.858	1.00	14.61	A
ATOM	873	CG2	THR	A	119	41.075	90.551	2.279	1.00	14.14	A

ATOM	874	C	THR	A	119	41.684	88.845	-0.032	1.00	13.53	A
ATOM	875	O	THR	A	119	41.934	87.685	0.292	1.00	13.93	A
ATOM	876	N	PRO	A	120	42.619	89.649	-0.569	1.00	14.13	A
ATOM	877	CD	PRO	A	120	42.403	90.986	-1.148	1.00	14.29	A
ATOM	878	CA	PRO	A	120	43.991	89.195	-0.813	1.00	15.21	A
ATOM	879	CB	PRO	A	120	44.466	90.166	-1.893	1.00	16.18	A
ATOM	880	CG	PRO	A	120	43.871	91.469	-1.451	1.00	15.91	A
ATOM	881	C	PRO	A	120	44.856	89.133	0.442	1.00	14.83	A
ATOM	882	O	PRO	A	120	45.859	89.842	0.557	1.00	16.28	A
ATOM	883	N	ILE	A	121	44.461	88.269	1.373	1.00	15.05	A
ATOM	884	CA	ILE	A	121	45.173	88.072	2.634	1.00	14.62	A
ATOM	885	CB	ILE	A	121	44.468	88.816	3.801	1.00	14.17	A
ATOM	886	CG2	ILE	A	121	45.026	88.343	5.135	1.00	13.82	A
ATOM	887	CG1	ILE	A	121	44.628	90.330	3.643	1.00	14.82	A
ATOM	888	CD1	ILE	A	121	46.058	90.828	3.780	1.00	14.64	A
ATOM	889	C	ILE	A	121	45.193	86.576	2.945	1.00	15.30	A
ATOM	890	O	ILE	A	121	44.154	85.917	2.902	1.00	15.51	A
ATOM	891	N	GLU	A	122	46.370	86.044	3.263	1.00	18.03	A
ATOM	892	CA	GLU	A	122	46.507	84.622	3.563	1.00	19.65	A
ATOM	893	CB	GLU	A	122	47.231	83.936	2.398	1.00	23.87	A
ATOM	894	CG	GLU	A	122	46.538	84.052	1.051	1.00	29.93	A
ATOM	895	CD	GLU	A	122	47.314	83.362	-0.055	1.00	34.09	A
ATOM	896	OE1	GLU	A	122	48.492	83.720	-0.268	1.00	36.67	A
ATOM	897	OE2	GLU	A	122	46.749	82.462	-0.712	1.00	36.93	A
ATOM	898	C	GLU	A	122	47.200	84.348	4.894	1.00	18.90	A
ATOM	899	O	GLU	A	122	47.339	83.189	5.290	1.00	20.61	A
ATOM	900	N	SER	A	123	47.633	85.396	5.590	1.00	16.61	A
ATOM	901	CA	SER	A	123	48.331	85.205	6.858	1.00	15.22	A
ATOM	902	CB	SER	A	123	49.737	84.683	6.569	1.00	15.40	A
ATOM	903	OG	SER	A	123	50.528	85.721	6.012	1.00	17.88	A
ATOM	904	C	SER	A	123	48.380	86.481	7.681	1.00	13.61	A
ATOM	905	O	SER	A	123	48.069	87.567	7.190	1.00	13.29	A
ATOM	906	N	ALA	A	124	48.798	86.335	8.936	1.00	14.71	A
ATOM	907	CA	ALA	A	124	48.931	87.475	9.833	1.00	15.10	A
ATOM	908	CB	ALA	A	124	49.289	87.000	11.235	1.00	15.67	A
ATOM	909	C	ALA	A	124	50.037	88.371	9.281	1.00	14.20	A
ATOM	910	O	ALA	A	124	49.943	89.595	9.337	1.00	14.14	A
ATOM	911	N	ALA	A	125	51.089	87.751	8.752	1.00	14.72	A
ATOM	912	CA	ALA	A	125	52.196	88.505	8.172	1.00	14.98	A
ATOM	913	CB	ALA	A	125	53.245	87.552	7.613	1.00	17.46	A
ATOM	914	C	ALA	A	125	51.654	89.412	7.068	1.00	14.92	A
ATOM	915	O	ALA	A	125	52.038	90.578	6.970	1.00	15.73	A
ATOM	916	N	ASP	A	126	50.758	88.876	6.240	1.00	15.00	A
ATOM	917	CA	ASP	A	126	50.151	89.654	5.160	1.00	13.86	A
ATOM	918	CB	ASP	A	126	49.142	88.792	4.389	1.00	16.41	A
ATOM	919	CG	ASP	A	126	49.799	87.817	3.430	1.00	16.11	A
ATOM	920	OD1	ASP	A	126	51.019	87.929	3.176	1.00	17.69	A
ATOM	921	OD2	ASP	A	126	49.074	86.940	2.915	1.00	18.28	A
ATOM	922	C	ASP	A	126	49.494	90.914	5.721	1.00	14.64	A
ATOM	923	O	ASP	A	126	49.682	92.011	5.198	1.00	16.49	A
ATOM	924	N	LEU	A	127	48.702	90.749	6.776	1.00	14.07	A
ATOM	925	CA	LEU	A	127	48.017	91.878	7.397	1.00	13.65	A
ATOM	926	CB	LEU	A	127	47.061	91.367	8.480	1.00	14.34	A
ATOM	927	CG	LEU	A	127	45.763	90.664	8.087	1.00	13.53	A
ATOM	928	CD1	LEU	A	127	45.078	90.165	9.349	1.00	13.86	A
ATOM	929	CD2	LEU	A	127	44.857	91.617	7.323	1.00	12.53	A
ATOM	930	C	LEU	A	127	48.997	92.901	7.955	1.00	14.30	A
ATOM	931	O	LEU	A	127	48.853	94.098	7.724	1.00	14.36	A
ATOM	932	N	SER	A	128	49.986	92.416	8.696	1.00	15.05	A
ATOM	933	CA	SER	A	128	50.973	93.282	9.331	1.00	15.56	A
ATOM	934	CB	SER	A	128	51.931	92.419	10.159	1.00	15.97	A

ATOM	935	OG	SER	A	128	52.837	91.719	9.321	1.00	17.93	A
ATOM	936	C	SER	A	128	51.722	94.188	8.362	1.00	17.20	A
ATOM	937	O	SER	A	128	52.102	95.301	8.724	1.00	17.49	A
ATOM	938	N	LYS	A	129	51.928	93.712	7.138	1.00	17.72	A
ATOM	939	CA	LYS	A	129	52.672	94.464	6.129	1.00	20.04	A
ATOM	940	CB	LYS	A	129	53.389	93.469	5.210	1.00	20.87	A
ATOM	941	CG	LYS	A	129	54.392	92.568	5.902	1.00	23.87	A
ATOM	942	CD	LYS	A	129	55.000	91.592	4.907	1.00	27.53	A
ATOM	943	CE	LYS	A	129	56.036	90.695	5.561	1.00	29.36	A
ATOM	944	NZ	LYS	A	129	56.599	89.713	4.592	1.00	30.61	A
ATOM	945	C	LYS	A	129	51.860	95.474	5.329	1.00	21.23	A
ATOM	946	O	LYS	A	129	52.348	95.992	4.324	1.00	23.30	A
ATOM	947	N	GLN	A	130	50.636	95.771	5.753	1.00	19.95	A
ATOM	948	CA	GLN	A	130	49.824	96.721	5.003	1.00	18.30	A
ATOM	949	CB	GLN	A	130	49.225	95.991	3.795	1.00	18.41	A
ATOM	950	CG	GLN	A	130	48.329	94.814	4.160	1.00	16.67	A
ATOM	951	CD	GLN	A	130	46.934	95.248	4.557	1.00	16.07	A
ATOM	952	OE1	GLN	A	130	46.181	95.769	3.736	1.00	16.30	A
ATOM	953	NE2	GLN	A	130	46.583	95.039	5.822	1.00	14.90	A
ATOM	954	C	GLN	A	130	48.781	97.420	5.865	1.00	17.82	A
ATOM	955	O	GLN	A	130	48.595	97.083	7.037	1.00	18.78	A
ATOM	956	N	THR	A	131	48.108	98.404	5.274	1.00	18.29	A
ATOM	957	CA	THR	A	131	47.083	99.166	5.975	1.00	18.33	A
ATOM	958	CB	THR	A	131	47.611	100.552	6.404	1.00	19.51	A
ATOM	959	OG1	THR	A	131	48.105	101.250	5.255	1.00	19.09	A
ATOM	960	CG2	THR	A	131	48.731	100.404	7.426	1.00	19.39	A
ATOM	961	C	THR	A	131	45.824	99.367	5.133	1.00	18.32	A
ATOM	962	O	THR	A	131	44.800	99.819	5.645	1.00	18.96	A
ATOM	963	N	GLU	A	132	45.904	99.029	3.848	1.00	18.96	A
ATOM	964	CA	GLU	A	132	44.767	99.165	2.936	1.00	18.71	A
ATOM	965	CB	GLU	A	132	45.192	98.712	1.535	1.00	21.48	A
ATOM	966	CG	GLU	A	132	44.076	98.733	0.498	1.00	27.82	A
ATOM	967	CD	GLU	A	132	43.467	100.110	0.317	1.00	31.71	A
ATOM	968	OE1	GLU	A	132	44.223	101.062	0.031	1.00	34.52	A
ATOM	969	OE2	GLU	A	132	42.232	100.240	0.458	1.00	34.23	A
ATOM	970	C	GLU	A	132	43.583	98.375	3.483	1.00	16.80	A
ATOM	971	O	GLU	A	132	42.447	98.854	3.501	1.00	16.77	A
ATOM	972	N	ILE	A	133	43.858	97.150	3.912	1.00	14.67	A
ATOM	973	CA	ILE	A	133	42.834	96.297	4.488	1.00	13.77	A
ATOM	974	CB	ILE	A	133	43.047	94.823	4.089	1.00	13.06	A
ATOM	975	CG2	ILE	A	133	41.967	93.948	4.716	1.00	13.29	A
ATOM	976	CG1	ILE	A	133	43.007	94.691	2.564	1.00	15.61	A
ATOM	977	CD1	ILE	A	133	43.390	93.322	2.050	1.00	16.33	A
ATOM	978	C	ILE	A	133	42.974	96.453	5.997	1.00	12.06	A
ATOM	979	O	ILE	A	133	43.949	95.998	6.595	1.00	13.27	A
ATOM	980	N	ALA	A	134	42.010	97.131	6.606	1.00	12.33	A
ATOM	981	CA	ALA	A	134	42.040	97.350	8.044	1.00	12.13	A
ATOM	982	CB	ALA	A	134	41.011	98.398	8.429	1.00	12.49	A
ATOM	983	C	ALA	A	134	41.749	96.035	8.754	1.00	11.32	A
ATOM	984	O	ALA	A	134	41.132	95.136	8.179	1.00	13.18	A
ATOM	985	N	TYR	A	135	42.200	95.916	9.998	1.00	10.47	A
ATOM	986	CA	TYR	A	135	41.964	94.694	10.754	1.00	9.42	A
ATOM	987	CB	TYR	A	135	43.006	93.637	10.351	1.00	9.29	A
ATOM	988	CG	TYR	A	135	44.446	94.040	10.576	1.00	9.02	A
ATOM	989	CD1	TYR	A	135	45.090	93.755	11.779	1.00	10.76	A
ATOM	990	CE1	TYR	A	135	46.421	94.111	11.987	1.00	11.52	A
ATOM	991	CD2	TYR	A	135	45.171	94.699	9.582	1.00	11.38	A
ATOM	992	CE2	TYR	A	135	46.504	95.061	9.781	1.00	10.76	A
ATOM	993	CZ	TYR	A	135	47.122	94.763	10.982	1.00	11.29	A
ATOM	994	OH	TYR	A	135	48.437	95.127	11.183	1.00	11.63	A
ATOM	995	C	TYR	A	135	41.924	94.991	12.244	1.00	10.12	A

ATOM	996	O	TYR	A	135	42.615	95.882	12.730	1.00	10.23	A
ATOM	997	N	GLY	A	136	41.104	94.238	12.969	1.00	10.76	A
ATOM	998	CA	GLY	A	136	40.988	94.464	14.394	1.00	9.01	A
ATOM	999	C	GLY	A	136	40.458	93.275	15.167	1.00	10.02	A
ATOM	1000	O	GLY	A	136	40.264	92.186	14.617	1.00	10.81	A
ATOM	1001	N	THR	A	137	40.212	93.508	16.453	1.00	10.56	A
ATOM	1002	CA	THR	A	137	39.721	92.486	17.372	1.00	11.45	A
ATOM	1003	CB	THR	A	137	40.820	92.075	18.379	1.00	13.34	A
ATOM	1004	OG1	THR	A	137	41.070	93.168	19.276	1.00	15.72	A
ATOM	1005	CG2	THR	A	137	42.115	91.724	17.663	1.00	13.60	A
ATOM	1006	C	THR	A	137	38.570	93.052	18.200	1.00	10.89	A
ATOM	1007	O	THR	A	137	38.135	94.192	18.000	1.00	11.43	A
ATOM	1008	N	LEU	A	138	38.077	92.241	19.130	1.00	11.39	A
ATOM	1009	CA	LEU	A	138	37.026	92.684	20.032	1.00	11.58	A
ATOM	1010	CB	LEU	A	138	36.451	91.476	20.774	1.00	12.41	A
ATOM	1011	CG	LEU	A	138	35.496	90.568	20.003	1.00	14.07	A
ATOM	1012	CD1	LEU	A	138	35.299	89.276	20.784	1.00	14.31	A
ATOM	1013	CD2	LEU	A	138	34.174	91.283	19.771	1.00	15.53	A
ATOM	1014	C	LEU	A	138	37.703	93.691	20.955	1.00	14.74	A
ATOM	1015	O	LEU	A	138	38.923	93.641	21.151	1.00	15.25	A
ATOM	1016	N	ASP	A	139	36.922	94.603	21.525	1.00	15.55	A
ATOM	1017	CA	ASP	A	139	37.483	95.618	22.411	1.00	19.69	A
ATOM	1018	CB	ASP	A	139	36.539	96.823	22.455	1.00	24.00	A
ATOM	1019	CG	ASP	A	139	35.192	96.487	23.050	1.00	29.20	A
ATOM	1020	OD1	ASP	A	139	34.547	95.536	22.560	1.00	32.68	A
ATOM	1021	OD2	ASP	A	139	34.776	97.178	24.005	1.00	32.36	A
ATOM	1022	C	ASP	A	139	37.815	95.061	23.792	1.00	19.51	A
ATOM	1023	O	ASP	A	139	38.333	95.777	24.648	1.00	20.23	A
ATOM	1024	N	SER	A	140	37.512	93.787	24.009	1.00	17.95	A
ATOM	1025	CA	SER	A	140	37.802	93.135	25.280	1.00	17.27	A
ATOM	1026	CB	SER	A	140	36.722	93.499	26.305	1.00	19.12	A
ATOM	1027	OG	SER	A	140	35.477	92.929	25.958	1.00	24.29	A
ATOM	1028	C	SER	A	140	37.908	91.636	25.025	1.00	15.40	A
ATOM	1029	O	SER	A	140	37.276	91.110	24.109	1.00	16.77	A
ATOM	1030	N	GLY	A	141	38.707	90.951	25.835	1.00	14.00	A
ATOM	1031	CA	GLY	A	141	38.863	89.520	25.658	1.00	11.82	A
ATOM	1032	C	GLY	A	141	40.307	89.091	25.482	1.00	11.66	A
ATOM	1033	O	GLY	A	141	41.208	89.922	25.354	1.00	12.35	A
ATOM	1034	N	SER	A	142	40.521	87.780	25.445	1.00	10.38	A
ATOM	1035	CA	SER	A	142	41.860	87.215	25.323	1.00	10.71	A
ATOM	1036	CB	SER	A	142	41.788	85.707	25.573	1.00	12.33	A
ATOM	1037	OG	SER	A	142	41.281	85.427	26.861	1.00	20.39	A
ATOM	1038	C	SER	A	142	42.582	87.540	24.025	1.00	10.09	A
ATOM	1039	O	SER	A	142	43.809	87.576	23.995	1.00	11.57	A
ATOM	1040	N	THR	A	143	41.840	87.758	22.947	1.00	8.66	A
ATOM	1041	CA	THR	A	143	42.491	88.067	21.683	1.00	10.00	A
ATOM	1042	CB	THR	A	143	41.506	87.996	20.517	1.00	9.34	A
ATOM	1043	OG1	THR	A	143	40.996	86.660	20.424	1.00	10.10	A
ATOM	1044	CG2	THR	A	143	42.199	88.361	19.216	1.00	11.12	A
ATOM	1045	C	THR	A	143	43.128	89.447	21.738	1.00	9.95	A
ATOM	1046	O	THR	A	143	44.276	89.617	21.333	1.00	11.74	A
ATOM	1047	N	LYS	A	144	42.394	90.432	22.248	1.00	10.61	A
ATOM	1048	CA	LYS	A	144	42.940	91.779	22.361	1.00	12.70	A
ATOM	1049	CB	LYS	A	144	41.858	92.730	22.881	1.00	14.41	A
ATOM	1050	CG	LYS	A	144	42.307	94.186	22.949	1.00	16.73	A
ATOM	1051	CD	LYS	A	144	41.216	95.069	23.544	1.00	21.27	A
ATOM	1052	CE	LYS	A	144	41.672	96.512	23.677	1.00	23.82	A
ATOM	1053	NZ	LYS	A	144	40.633	97.363	24.322	1.00	25.58	A
ATOM	1054	C	LYS	A	144	44.162	91.715	23.271	1.00	12.70	A
ATOM	1055	O	LYS	A	144	45.197	92.314	22.980	1.00	13.06	A
ATOM	1056	N	GLU	A	145	44.040	90.976	24.369	1.00	13.84	A

ATOM	1057	CA	GLU	A	145	45.141	90.840	25.317	1.00	14.37	A
ATOM	1058	CB	GLU	A	145	44.646	90.108	26.567	1.00	18.35	A
ATOM	1059	CG	GLU	A	145	43.661	90.914	27.394	1.00	23.95	A
ATOM	1060	CD	GLU	A	145	44.154	92.323	27.666	1.00	27.85	A
ATOM	1061	OE1	GLU	A	145	45.300	92.474	28.140	1.00	29.32	A
ATOM	1062	OE2	GLU	A	145	43.393	93.279	27.408	1.00	31.79	A
ATOM	1063	C	GLU	A	145	46.350	90.172	24.677	1.00	13.58	A
ATOM	1064	O	GLU	A	145	47.489	90.542	24.963	1.00	13.47	A
ATOM	1065	N	PHE	A	146	46.105	89.189	23.814	1.00	11.98	A
ATOM	1066	CA	PHE	A	146	47.188	88.488	23.135	1.00	12.54	A
ATOM	1067	CB	PHE	A	146	46.609	87.440	22.178	1.00	11.57	A
ATOM	1068	CG	PHE	A	146	47.635	86.830	21.255	1.00	12.50	A
ATOM	1069	CD1	PHE	A	146	48.313	85.795	21.634	1.00	12.88	A
ATOM	1070	CD2	PHE	A	146	47.850	87.354	20.089	1.00	12.84	A
ATOM	1071	CE1	PHE	A	146	49.290	85.202	20.820	1.00	13.90	A
ATOM	1072	CE2	PHE	A	146	48.807	86.837	19.201	1.00	13.55	A
ATOM	1073	CZ	PHE	A	146	49.539	85.737	19.581	1.00	14.05	A
ATOM	1074	C	PHE	A	146	48.049	89.509	22.410	1.00	11.89	A
ATOM	1075	O	PHE	A	146	49.269	89.521	22.553	1.00	12.44	A
ATOM	1076	N	PHE	A	147	47.401	90.363	21.626	1.00	11.06	A
ATOM	1077	CA	PHE	A	147	48.110	91.377	20.861	1.00	12.11	A
ATOM	1078	CB	PHE	A	147	47.148	91.980	19.831	1.00	10.46	A
ATOM	1079	CG	PHE	A	147	46.901	91.088	18.640	1.00	11.19	A
ATOM	1080	CD1	PHE	A	147	47.825	90.940	17.745	1.00	10.73	A
ATOM	1081	CD2	PHE	A	147	45.774	90.457	18.522	1.00	10.42	A
ATOM	1082	CE1	PHE	A	147	47.658	90.111	16.634	1.00	10.56	A
ATOM	1083	CE2	PHE	A	147	45.509	89.603	17.446	1.00	11.65	A
ATOM	1084	CZ	PHE	A	147	46.472	89.428	16.486	1.00	10.21	A
ATOM	1085	C	PHE	A	147	48.776	92.416	21.752	1.00	13.23	A
ATOM	1086	O	PHE	A	147	49.932	92.769	21.531	1.00	12.92	A
ATOM	1087	N	ARG	A	148	48.054	92.901	22.755	1.00	12.51	A
ATOM	1088	CA	ARG	A	148	48.594	93.909	23.660	1.00	13.44	A
ATOM	1089	CB	ARG	A	148	47.506	94.320	24.660	1.00	15.03	A
ATOM	1090	CG	ARG	A	148	47.954	95.387	25.653	1.00	17.55	A
ATOM	1091	CD	ARG	A	148	47.032	95.439	26.863	1.00	23.81	A
ATOM	1092	NE	ARG	A	148	45.666	95.820	26.517	1.00	27.85	A
ATOM	1093	CZ	ARG	A	148	45.297	97.046	26.162	1.00	29.59	A
ATOM	1094	NH1	ARG	A	148	46.195	98.020	26.105	1.00	31.38	A
ATOM	1095	NH2	ARG	A	148	44.028	97.302	25.870	1.00	30.78	A
ATOM	1096	C	ARG	A	148	49.868	93.442	24.355	1.00	14.63	A
ATOM	1097	O	ARG	A	148	50.803	94.224	24.529	1.00	15.99	A
ATOM	1098	N	ARG	A	149	49.912	92.169	24.739	1.00	14.85	A
ATOM	1099	CA	ARG	A	149	51.060	91.622	25.461	1.00	16.63	A
ATOM	1100	CB	ARG	A	149	50.530	90.711	26.575	1.00	18.90	A
ATOM	1101	CG	ARG	A	149	49.718	91.426	27.642	1.00	23.96	A
ATOM	1102	CD	ARG	A	149	49.027	90.436	28.571	1.00	28.31	A
ATOM	1103	NE	ARG	A	149	49.958	89.477	29.163	1.00	32.87	A
ATOM	1104	CZ	ARG	A	149	49.601	88.510	30.004	1.00	34.71	A
ATOM	1105	NH1	ARG	A	149	48.330	88.370	30.356	1.00	35.27	A
ATOM	1106	NH2	ARG	A	149	50.512	87.678	30.491	1.00	35.30	A
ATOM	1107	C	ARG	A	149	52.119	90.918	24.617	1.00	14.67	A
ATOM	1108	O	ARG	A	149	53.164	90.531	25.141	1.00	16.69	A
ATOM	1109	N	SER	A	150	51.877	90.748	23.323	1.00	14.80	A
ATOM	1110	CA	SER	A	150	52.843	90.038	22.494	1.00	15.33	A
ATOM	1111	CB	SER	A	150	52.209	89.706	21.142	1.00	16.25	A
ATOM	1112	OG	SER	A	150	53.102	88.924	20.362	1.00	16.71	A
ATOM	1113	C	SER	A	150	54.187	90.738	22.335	1.00	16.91	A
ATOM	1114	O	SER	A	150	54.266	91.967	22.254	1.00	18.19	A
ATOM	1115	N	ALA	A	151	55.240	89.926	22.288	1.00	17.17	A
ATOM	1116	CA	ALA	A	151	56.605	90.401	22.100	1.00	17.74	A
ATOM	1117	CB	ALA	A	151	57.504	89.905	23.233	1.00	17.92	A

ATOM	1118	C	ALA	A	151	57.085	89.849	20.757	1.00	18.11	A
ATOM	1119	O	ALA	A	151	58.243	90.018	20.376	1.00	19.71	A
ATOM	1120	N	ILE	A	152	56.179	89.171	20.053	1.00	16.75	A
ATOM	1121	CA	ILE	A	152	56.469	88.599	18.739	1.00	16.86	A
ATOM	1122	CB	ILE	A	152	55.448	87.494	18.380	1.00	16.79	A
ATOM	1123	CG2	ILE	A	152	55.760	86.920	17.008	1.00	15.71	A
ATOM	1124	CG1	ILE	A	152	55.458	86.396	19.451	1.00	19.51	A
ATOM	1125	CD1	ILE	A	152	56.784	85.681	19.602	1.00	22.08	A
ATOM	1126	C	ILE	A	152	56.367	89.727	17.709	1.00	15.48	A
ATOM	1127	O	ILE	A	152	55.329	90.373	17.596	1.00	15.67	A
ATOM	1128	N	ALA	A	153	57.438	89.950	16.954	1.00	15.61	A
ATOM	1129	CA	ALA	A	153	57.485	91.028	15.962	1.00	14.18	A
ATOM	1130	CB	ALA	A	153	58.690	90.836	15.052	1.00	14.47	A
ATOM	1131	C	ALA	A	153	56.231	91.241	15.114	1.00	12.53	A
ATOM	1132	O	ALA	A	153	55.697	92.353	15.051	1.00	13.88	A
ATOM	1133	N	VAL	A	154	55.762	90.193	14.448	1.00	13.33	A
ATOM	1134	CA	VAL	A	154	54.576	90.330	13.613	1.00	12.94	A
ATOM	1135	CB	VAL	A	154	54.255	89.008	12.870	1.00	14.20	A
ATOM	1136	CG1	VAL	A	154	52.905	89.108	12.179	1.00	14.95	A
ATOM	1137	CG2	VAL	A	154	55.342	88.715	11.849	1.00	16.93	A
ATOM	1138	C	VAL	A	154	53.352	90.758	14.420	1.00	11.60	A
ATOM	1139	O	VAL	A	154	52.606	91.649	14.006	1.00	12.26	A
ATOM	1140	N	PHE	A	155	53.161	90.141	15.582	1.00	11.98	A
ATOM	1141	CA	PHE	A	155	52.004	90.448	16.413	1.00	12.64	A
ATOM	1142	CB	PHE	A	155	51.753	89.287	17.387	1.00	12.89	A
ATOM	1143	CG	PHE	A	155	51.641	87.936	16.718	1.00	12.14	A
ATOM	1144	CD1	PHE	A	155	51.079	87.824	15.556	1.00	13.16	A
ATOM	1145	CD2	PHE	A	155	52.103	86.888	17.317	1.00	13.67	A
ATOM	1146	CE1	PHE	A	155	50.950	86.587	14.903	1.00	13.25	A
ATOM	1147	CE2	PHE	A	155	52.024	85.609	16.756	1.00	14.31	A
ATOM	1148	CZ	PHE	A	155	51.436	85.459	15.523	1.00	13.23	A
ATOM	1149	C	PHE	A	155	52.088	91.801	17.110	1.00	12.95	A
ATOM	1150	O	PHE	A	155	51.076	92.498	17.223	1.00	12.80	A
ATOM	1151	N	ASP	A	156	53.268	92.182	17.597	1.00	14.04	A
ATOM	1152	CA	ASP	A	156	53.364	93.473	18.262	1.00	14.31	A
ATOM	1153	CB	ASP	A	156	54.637	93.553	19.130	1.00	17.42	A
ATOM	1154	CG	ASP	A	156	55.910	93.340	18.347	1.00	20.36	A
ATOM	1155	OD1	ASP	A	156	56.114	94.029	17.330	1.00	21.14	A
ATOM	1156	OD2	ASP	A	156	56.721	92.488	18.770	1.00	23.78	A
ATOM	1157	C	ASP	A	156	53.208	94.598	17.243	1.00	13.14	A
ATOM	1158	O	ASP	A	156	52.723	95.677	17.587	1.00	13.21	A
ATOM	1159	N	LYS	A	157	53.588	94.349	15.991	1.00	12.71	A
ATOM	1160	CA	LYS	A	157	53.422	95.363	14.955	1.00	13.09	A
ATOM	1161	CB	LYS	A	157	54.214	94.978	13.703	1.00	14.27	A
ATOM	1162	CG	LYS	A	157	54.016	95.968	12.566	1.00	15.61	A
ATOM	1163	CD	LYS	A	157	54.948	95.701	11.398	1.00	20.68	A
ATOM	1164	CE	LYS	A	157	54.727	96.719	10.290	1.00	22.88	A
ATOM	1165	NZ	LYS	A	157	55.582	96.451	9.104	1.00	25.73	A
ATOM	1166	C	LYS	A	157	51.924	95.507	14.688	1.00	12.13	A
ATOM	1167	O	LYS	A	157	51.418	96.610	14.479	1.00	12.98	A
ATOM	1168	N	MET	A	158	51.217	94.380	14.691	1.00	11.25	A
ATOM	1169	CA	MET	A	158	49.777	94.383	14.465	1.00	11.17	A
ATOM	1170	CB	MET	A	158	49.279	92.936	14.346	1.00	10.94	A
ATOM	1171	CG	MET	A	158	49.636	92.265	13.024	1.00	10.67	A
ATOM	1172	SD	MET	A	158	49.209	90.507	12.972	1.00	12.05	A
ATOM	1173	CE	MET	A	158	47.417	90.562	12.875	1.00	12.53	A
ATOM	1174	C	MET	A	158	49.084	95.170	15.570	1.00	9.74	A
ATOM	1175	O	MET	A	158	48.154	95.931	15.301	1.00	10.03	A
ATOM	1176	N	TRP	A	159	49.537	94.995	16.809	1.00	10.33	A
ATOM	1177	CA	TRP	A	159	48.938	95.708	17.933	1.00	11.27	A
ATOM	1178	CB	TRP	A	159	49.509	95.184	19.252	1.00	10.95	A

ATOM	1179	CG	TRP	A	159	49.008	95.972	20.431	1.00	12.47	A
ATOM	1180	CD2	TRP	A	159	47.647	96.090	20.867	1.00	12.97	A
ATOM	1181	CE2	TRP	A	159	47.638	96.966	21.976	1.00	14.72	A
ATOM	1182	CE3	TRP	A	159	46.433	95.541	20.428	1.00	13.48	A
ATOM	1183	CD1	TRP	A	159	49.749	96.757	21.271	1.00	15.07	A
ATOM	1184	NE1	TRP	A	159	48.932	97.358	22.201	1.00	15.53	A
ATOM	1185	CZ2	TRP	A	159	46.460	97.307	22.653	1.00	17.62	A
ATOM	1186	CZ3	TRP	A	159	45.259	95.882	21.104	1.00	16.05	A
ATOM	1187	CH2	TRP	A	159	45.285	96.757	22.203	1.00	17.88	A
ATOM	1188	C	TRP	A	159	49.138	97.208	17.785	1.00	11.68	A
ATOM	1189	O	TRP	A	159	48.205	97.991	17.958	1.00	11.37	A
ATOM	1190	N	THR	A	160	50.366	97.609	17.479	1.00	11.80	A
ATOM	1191	CA	THR	A	160	50.672	99.023	17.318	1.00	11.05	A
ATOM	1192	CB	THR	A	160	52.154	99.221	16.973	1.00	14.07	A
ATOM	1193	OG1	THR	A	160	52.951	98.816	18.094	1.00	16.78	A
ATOM	1194	CG2	THR	A	160	52.441	100.682	16.647	1.00	15.23	A
ATOM	1195	C	THR	A	160	49.790	99.621	16.228	1.00	11.18	A
ATOM	1196	O	THR	A	160	49.295	100.740	16.367	1.00	11.33	A
ATOM	1197	N	TYR	A	161	49.591	98.872	15.149	1.00	10.84	A
ATOM	1198	CA	TYR	A	161	48.736	99.325	14.062	1.00	11.33	A
ATOM	1199	CB	TYR	A	161	48.813	98.346	12.881	1.00	11.26	A
ATOM	1200	CG	TYR	A	161	47.562	98.409	12.034	1.00	12.15	A
ATOM	1201	CD1	TYR	A	161	47.415	99.374	11.042	1.00	11.53	A
ATOM	1202	CE1	TYR	A	161	46.217	99.517	10.351	1.00	12.22	A
ATOM	1203	CD2	TYR	A	161	46.475	97.578	12.307	1.00	10.65	A
ATOM	1204	CE2	TYR	A	161	45.275	97.713	11.625	1.00	12.74	A
ATOM	1205	CZ	TYR	A	161	45.150	98.686	10.651	1.00	12.21	A
ATOM	1206	OH	TYR	A	161	43.948	98.846	10.006	1.00	14.64	A
ATOM	1207	C	TYR	A	161	47.298	99.465	14.563	1.00	11.26	A
ATOM	1208	O	TYR	A	161	46.643	100.477	14.323	1.00	12.43	A
ATOM	1209	N	MET	A	162	46.805	98.433	15.243	1.00	11.09	A
ATOM	1210	CA	MET	A	162	45.431	98.433	15.740	1.00	12.07	A
ATOM	1211	CB	MET	A	162	45.127	97.092	16.411	1.00	13.59	A
ATOM	1212	CG	MET	A	162	44.945	95.934	15.464	1.00	12.93	A
ATOM	1213	SD	MET	A	162	44.421	94.492	16.402	1.00	18.46	A
ATOM	1214	CE	MET	A	162	45.964	93.644	16.600	1.00	21.20	A
ATOM	1215	C	MET	A	162	45.129	99.592	16.661	1.00	12.55	A
ATOM	1216	O	MET	A	162	44.095	100.246	16.530	1.00	12.30	A
ATOM	1217	N	ARG	A	163	46.031	99.846	17.598	1.00	11.90	A
ATOM	1218	CA	ARG	A	163	45.811	100.913	18.556	1.00	12.87	A
ATOM	1219	CB	ARG	A	163	46.821	100.766	19.696	1.00	16.20	A
ATOM	1220	CG	ARG	A	163	46.382	101.452	20.975	1.00	19.85	A
ATOM	1221	CD	ARG	A	163	47.426	101.347	22.070	1.00	23.43	A
ATOM	1222	NE	ARG	A	163	46.933	101.936	23.310	1.00	26.48	A
ATOM	1223	CZ	ARG	A	163	47.693	102.223	24.361	1.00	27.67	A
ATOM	1224	NH1	ARG	A	163	48.996	101.978	24.330	1.00	27.83	A
ATOM	1225	NH2	ARG	A	163	47.145	102.758	25.443	1.00	29.17	A
ATOM	1226	C	ARG	A	163	45.826	102.299	17.920	1.00	13.03	A
ATOM	1227	O	ARG	A	163	45.173	103.216	18.419	1.00	13.70	A
ATOM	1228	N	SER	A	164	46.550	102.453	16.816	1.00	11.77	A
ATOM	1229	CA	SER	A	164	46.645	103.754	16.157	1.00	11.84	A
ATOM	1230	CB	SER	A	164	48.124	104.065	15.902	1.00	12.55	A
ATOM	1231	OG	SER	A	164	48.682	103.162	14.961	1.00	14.03	A
ATOM	1232	C	SER	A	164	45.800	103.911	14.894	1.00	12.15	A
ATOM	1233	O	SER	A	164	45.750	104.995	14.316	1.00	13.15	A
ATOM	1234	N	ALA	A	165	45.127	102.847	14.468	1.00	12.42	A
ATOM	1235	CA	ALA	A	165	44.315	102.906	13.256	1.00	12.32	A
ATOM	1236	CB	ALA	A	165	43.963	101.495	12.803	1.00	13.52	A
ATOM	1237	C	ALA	A	165	43.040	103.742	13.380	1.00	12.82	A
ATOM	1238	O	ALA	A	165	42.374	103.731	14.413	1.00	13.31	A
ATOM	1239	N	GLU	A	166	42.710	104.459	12.307	1.00	13.69	A

ATOM	1240	CA	GLU	A	166	41.518	105.300	12.257	1.00	14.95	A
ATOM	1241	CB	GLU	A	166	41.923	106.767	12.392	1.00	14.11	A
ATOM	1242	CG	GLU	A	166	42.629	107.113	13.680	1.00	14.49	A
ATOM	1243	CD	GLU	A	166	42.760	108.609	13.864	1.00	13.93	A
ATOM	1244	OE1	GLU	A	166	43.460	109.257	13.055	1.00	14.76	A
ATOM	1245	OE2	GLU	A	166	42.149	109.138	14.813	1.00	14.89	A
ATOM	1246	C	GLU	A	166	40.776	105.033	10.952	1.00	15.15	A
ATOM	1247	O	GLU	A	166	41.384	105.028	9.881	1.00	17.39	A
ATOM	1248	N	PRO	A	167	39.453	104.808	11.020	1.00	15.65	A
ATOM	1249	CD	PRO	A	167	38.614	104.781	9.813	1.00	15.88	A
ATOM	1250	CA	PRO	A	167	38.617	104.783	12.226	1.00	14.51	A
ATOM	1251	CB	PRO	A	167	37.191	104.766	11.655	1.00	15.59	A
ATOM	1252	CG	PRO	A	167	37.307	105.477	10.328	1.00	19.02	A
ATOM	1253	C	PRO	A	167	38.980	103.575	13.082	1.00	13.89	A
ATOM	1254	O	PRO	A	167	39.716	102.697	12.635	1.00	13.09	A
ATOM	1255	N	SER	A	168	38.462	103.530	14.306	1.00	14.02	A
ATOM	1256	CA	SER	A	168	38.744	102.419	15.210	1.00	13.10	A
ATOM	1257	CB	SER	A	168	37.928	102.582	16.490	1.00	14.12	A
ATOM	1258	OG	SER	A	168	38.111	101.448	17.317	1.00	15.45	A
ATOM	1259	C	SER	A	168	38.482	101.080	14.538	1.00	11.80	A
ATOM	1260	O	SER	A	168	37.459	100.895	13.875	1.00	13.09	A
ATOM	1261	N	VAL	A	169	39.409	100.146	14.727	1.00	11.45	A
ATOM	1262	CA	VAL	A	169	39.291	98.813	14.147	1.00	11.66	A
ATOM	1263	CB	VAL	A	169	40.660	98.291	13.646	1.00	11.62	A
ATOM	1264	CG1	VAL	A	169	41.163	99.175	12.515	1.00	12.91	A
ATOM	1265	CG2	VAL	A	169	41.668	98.251	14.795	1.00	11.90	A
ATOM	1266	C	VAL	A	169	38.730	97.814	15.150	1.00	11.83	A
ATOM	1267	O	VAL	A	169	38.575	96.633	14.840	1.00	11.71	A
ATOM	1268	N	PHE	A	170	38.424	98.287	16.353	1.00	11.38	A
ATOM	1269	CA	PHE	A	170	37.881	97.413	17.384	1.00	12.11	A
ATOM	1270	CB	PHE	A	170	38.343	97.905	18.762	1.00	11.45	A
ATOM	1271	CG	PHE	A	170	39.834	97.882	18.943	1.00	12.69	A
ATOM	1272	CD1	PHE	A	170	40.454	96.752	19.066	1.00	13.27	A
ATOM	1273	CD2	PHE	A	170	40.499	98.993	18.954	1.00	13.73	A
ATOM	1274	CE1	PHE	A	170	41.845	96.679	19.213	1.00	13.67	A
ATOM	1275	CE2	PHE	A	170	41.890	99.030	19.095	1.00	14.80	A
ATOM	1276	CZ	PHE	A	170	42.574	97.845	19.227	1.00	14.22	A
ATOM	1277	C	PHE	A	170	36.368	97.324	17.266	1.00	12.92	A
ATOM	1278	O	PHE	A	170	35.707	98.276	16.843	1.00	13.95	A
ATOM	1279	N	VAL	A	171	35.828	96.164	17.627	1.00	13.05	A
ATOM	1280	CA	VAL	A	171	34.388	95.933	17.599	1.00	13.17	A
ATOM	1281	CB	VAL	A	171	34.006	94.876	16.535	1.00	13.33	A
ATOM	1282	CG1	VAL	A	171	34.385	95.385	15.147	1.00	13.29	A
ATOM	1283	CG2	VAL	A	171	34.696	93.554	16.830	1.00	13.56	A
ATOM	1284	C	VAL	A	171	33.941	95.486	18.990	1.00	13.90	A
ATOM	1285	O	VAL	A	171	34.747	94.994	19.778	1.00	13.56	A
ATOM	1286	N	ALA	A	172	32.658	95.668	19.291	1.00	15.24	A
ATOM	1287	CA	ALA	A	172	32.123	95.320	20.604	1.00	15.32	A
ATOM	1288	CB	ALA	A	172	30.989	96.277	20.961	1.00	16.56	A
ATOM	1289	C	ALA	A	172	31.643	93.883	20.754	1.00	14.93	A
ATOM	1290	O	ALA	A	172	31.708	93.318	21.846	1.00	15.25	A
ATOM	1291	N	THR	A	173	31.162	93.293	19.666	1.00	14.48	A
ATOM	1292	CA	THR	A	173	30.650	91.928	19.713	1.00	14.40	A
ATOM	1293	CB	THR	A	173	29.120	91.917	19.736	1.00	14.21	A
ATOM	1294	OG1	THR	A	173	28.639	92.402	18.477	1.00	15.42	A
ATOM	1295	CG2	THR	A	173	28.586	92.804	20.853	1.00	15.19	A
ATOM	1296	C	THR	A	173	31.077	91.135	18.489	1.00	13.03	A
ATOM	1297	O	THR	A	173	31.485	91.707	17.477	1.00	13.31	A
ATOM	1298	N	THR	A	174	30.959	89.815	18.578	1.00	12.27	A
ATOM	1299	CA	THR	A	174	31.320	88.952	17.465	1.00	13.54	A
ATOM	1300	CB	THR	A	174	31.082	87.475	17.820	1.00	12.72	A

ATOM	1301	OG1	THR	A	174	31.902	87.124	18.941	1.00	13.63	A
ATOM	1302	CG2	THR	A	174	31.437	86.572	16.643	1.00	12.54	A
ATOM	1303	C	THR	A	174	30.478	89.326	16.249	1.00	13.64	A
ATOM	1304	O	THR	A	174	30.994	89.446	15.136	1.00	12.34	A
ATOM	1305	N	ALA	A	175	29.182	89.528	16.470	1.00	13.64	A
ATOM	1306	CA	ALA	A	175	28.267	89.889	15.392	1.00	14.24	A
ATOM	1307	CB	ALA	A	175	26.849	90.026	15.939	1.00	15.47	A
ATOM	1308	C	ALA	A	175	28.689	91.183	14.697	1.00	14.01	A
ATOM	1309	O	ALA	A	175	28.568	91.308	13.478	1.00	14.70	A
ATOM	1310	N	GLU	A	176	29.181	92.143	15.476	1.00	13.28	A
ATOM	1311	CA	GLU	A	176	29.624	93.423	14.930	1.00	14.06	A
ATOM	1312	CB	GLU	A	176	29.903	94.387	16.085	1.00	15.36	A
ATOM	1313	CG	GLU	A	176	30.259	95.796	15.652	1.00	21.05	A
ATOM	1314	CD	GLU	A	176	30.652	96.674	16.823	1.00	23.31	A
ATOM	1315	OE1	GLU	A	176	29.946	96.641	17.852	1.00	25.59	A
ATOM	1316	OE2	GLU	A	176	31.660	97.402	16.713	1.00	25.39	A
ATOM	1317	C	GLU	A	176	30.841	93.202	14.036	1.00	13.19	A
ATOM	1318	O	GLU	A	176	30.954	93.799	12.965	1.00	12.97	A
ATOM	1319	N	GLY	A	177	31.757	92.351	14.491	1.00	11.87	A
ATOM	1320	CA	GLY	A	177	32.948	92.062	13.711	1.00	12.60	A
ATOM	1321	C	GLY	A	177	32.588	91.401	12.394	1.00	12.97	A
ATOM	1322	O	GLY	A	177	33.098	91.779	11.334	1.00	11.59	A
ATOM	1323	N	VAL	A	178	31.699	90.416	12.460	1.00	12.50	A
ATOM	1324	CA	VAL	A	178	31.257	89.697	11.272	1.00	12.49	A
ATOM	1325	CB	VAL	A	178	30.294	88.547	11.645	1.00	13.51	A
ATOM	1326	CG1	VAL	A	178	29.691	87.941	10.384	1.00	12.61	A
ATOM	1327	CG2	VAL	A	178	31.035	87.484	12.434	1.00	14.57	A
ATOM	1328	C	VAL	A	178	30.557	90.637	10.293	1.00	12.98	A
ATOM	1329	O	VAL	A	178	30.807	90.590	9.089	1.00	13.29	A
ATOM	1330	N	ALA	A	179	29.677	91.489	10.810	1.00	12.81	A
ATOM	1331	CA	ALA	A	179	28.962	92.436	9.961	1.00	13.11	A
ATOM	1332	CB	ALA	A	179	27.945	93.223	10.788	1.00	13.80	A
ATOM	1333	C	ALA	A	179	29.938	93.394	9.288	1.00	14.25	A
ATOM	1334	O	ALA	A	179	29.770	93.745	8.122	1.00	14.57	A
ATOM	1335	N	ARG	A	180	30.962	93.816	10.025	1.00	12.82	A
ATOM	1336	CA	ARG	A	180	31.946	94.737	9.472	1.00	12.12	A
ATOM	1337	CB	ARG	A	180	32.859	95.239	10.589	1.00	12.50	A
ATOM	1338	CG	ARG	A	180	33.793	96.343	10.145	1.00	13.41	A
ATOM	1339	CD	ARG	A	180	34.401	97.029	11.346	1.00	13.48	A
ATOM	1340	NE	ARG	A	180	35.338	98.071	10.948	1.00	14.00	A
ATOM	1341	CZ	ARG	A	180	36.000	98.838	11.805	1.00	14.74	A
ATOM	1342	NH1	ARG	A	180	35.821	98.682	13.110	1.00	15.16	A
ATOM	1343	NH2	ARG	A	180	36.855	99.746	11.355	1.00	16.18	A
ATOM	1344	C	ARG	A	180	32.692	94.070	8.326	1.00	12.59	A
ATOM	1345	O	ARG	A	180	32.947	94.694	7.298	1.00	13.27	A
ATOM	1346	N	VAL	A	181	33.048	92.802	8.501	1.00	11.72	A
ATOM	1347	CA	VAL	A	181	33.738	92.076	7.441	1.00	11.47	A
ATOM	1348	CB	VAL	A	181	34.089	90.636	7.883	1.00	11.29	A
ATOM	1349	CG1	VAL	A	181	34.543	89.810	6.685	1.00	12.77	A
ATOM	1350	CG2	VAL	A	181	35.180	90.669	8.944	1.00	11.42	A
ATOM	1351	C	VAL	A	181	32.832	92.000	6.209	1.00	12.09	A
ATOM	1352	O	VAL	A	181	33.257	92.286	5.088	1.00	12.61	A
ATOM	1353	N	ARG	A	182	31.574	91.640	6.433	1.00	11.83	A
ATOM	1354	CA	ARG	A	182	30.607	91.492	5.350	1.00	12.81	A
ATOM	1355	CB	ARG	A	182	29.352	90.805	5.899	1.00	13.78	A
ATOM	1356	CG	ARG	A	182	29.567	89.354	6.291	1.00	14.34	A
ATOM	1357	CD	ARG	A	182	28.296	88.715	6.820	1.00	13.02	A
ATOM	1358	NE	ARG	A	182	28.426	87.264	6.889	1.00	13.79	A
ATOM	1359	CZ	ARG	A	182	27.743	86.491	7.726	1.00	15.56	A
ATOM	1360	NH1	ARG	A	182	26.878	87.028	8.576	1.00	15.17	A
ATOM	1361	NH2	ARG	A	182	27.924	85.178	7.711	1.00	16.94	A

ATOM	1362	C	ARG	A	182	30.272	92.769	4.596	1.00	14.15	A
ATOM	1363	O	ARG	A	182	30.014	92.724	3.392	1.00	15.65	A
ATOM	1364	N	ALA	A	183	30.275	93.903	5.289	1.00	14.36	A
ATOM	1365	CA	ALA	A	183	29.922	95.168	4.655	1.00	15.55	A
ATOM	1366	CB	ALA	A	183	28.981	95.942	5.570	1.00	16.27	A
ATOM	1367	C	ALA	A	183	31.081	96.067	4.242	1.00	16.15	A
ATOM	1368	O	ALA	A	183	30.852	97.151	3.701	1.00	18.41	A
ATOM	1369	N	SER	A	184	32.316	95.628	4.465	1.00	15.26	A
ATOM	1370	CA	SER	A	184	33.470	96.462	4.133	1.00	15.42	A
ATOM	1371	CB	SER	A	184	34.459	96.412	5.303	1.00	15.55	A
ATOM	1372	OG	SER	A	184	33.877	96.983	6.466	1.00	16.22	A
ATOM	1373	C	SER	A	184	34.125	96.194	2.780	1.00	14.72	A
ATOM	1374	O	SER	A	184	35.223	96.681	2.517	1.00	15.02	A
ATOM	1375	N	ALA	A	185	33.451	95.430	1.925	1.00	15.34	A
ATOM	1376	CA	ALA	A	185	33.961	95.129	0.588	1.00	16.07	A
ATOM	1377	CB	ALA	A	185	33.834	96.364	-0.299	1.00	16.92	A
ATOM	1378	C	ALA	A	185	35.403	94.628	0.569	1.00	16.48	A
ATOM	1379	O	ALA	A	185	36.176	94.967	-0.334	1.00	17.01	A
ATOM	1380	N	GLY	A	186	35.761	93.824	1.565	1.00	15.70	A
ATOM	1381	CA	GLY	A	186	37.104	93.282	1.640	1.00	15.00	A
ATOM	1382	C	GLY	A	186	38.130	94.205	2.272	1.00	12.92	A
ATOM	1383	O	GLY	A	186	39.321	93.894	2.260	1.00	15.00	A
ATOM	1384	N	LYS	A	187	37.678	95.326	2.831	1.00	12.80	A
ATOM	1385	CA	LYS	A	187	38.588	96.285	3.452	1.00	13.16	A
ATOM	1386	CB	LYS	A	187	38.183	97.706	3.044	1.00	14.68	A
ATOM	1387	CG	LYS	A	187	38.165	97.942	1.541	1.00	16.39	A
ATOM	1388	CD	LYS	A	187	39.530	97.720	0.916	1.00	19.92	A
ATOM	1389	CE	LYS	A	187	39.476	97.944	-0.590	1.00	22.39	A
ATOM	1390	NZ	LYS	A	187	40.797	97.715	-1.237	1.00	24.55	A
ATOM	1391	C	LYS	A	187	38.710	96.122	4.962	1.00	13.20	A
ATOM	1392	O	LYS	A	187	39.306	96.960	5.630	1.00	12.61	A
ATOM	1393	N	TYR	A	188	38.131	95.059	5.506	1.00	11.47	A
ATOM	1394	CA	TYR	A	188	38.238	94.798	6.936	1.00	10.48	A
ATOM	1395	CB	TYR	A	188	37.025	95.349	7.697	1.00	9.76	A
ATOM	1396	CG	TYR	A	188	37.156	95.179	9.205	1.00	9.93	A
ATOM	1397	CD1	TYR	A	188	37.983	96.021	9.956	1.00	11.85	A
ATOM	1398	CE1	TYR	A	188	38.152	95.837	11.332	1.00	11.50	A
ATOM	1399	CD2	TYR	A	188	36.498	94.144	9.875	1.00	9.54	A
ATOM	1400	CE2	TYR	A	188	36.664	93.950	11.252	1.00	10.41	A
ATOM	1401	CZ	TYR	A	188	37.491	94.801	11.973	1.00	9.98	A
ATOM	1402	OH	TYR	A	188	37.657	94.612	13.324	1.00	10.94	A
ATOM	1403	C	TYR	A	188	38.390	93.309	7.155	1.00	9.90	A
ATOM	1404	O	TYR	A	188	37.642	92.514	6.587	1.00	11.93	A
ATOM	1405	N	ALA	A	189	39.365	92.943	7.977	1.00	9.93	A
ATOM	1406	CA	ALA	A	189	39.605	91.549	8.334	1.00	10.69	A
ATOM	1407	CB	ALA	A	189	41.013	91.124	7.947	1.00	11.59	A
ATOM	1408	C	ALA	A	189	39.426	91.504	9.849	1.00	9.86	A
ATOM	1409	O	ALA	A	189	39.845	92.421	10.556	1.00	11.37	A
ATOM	1410	N	TYR	A	190	38.807	90.441	10.348	1.00	9.99	A
ATOM	1411	CA	TYR	A	190	38.535	90.327	11.772	1.00	9.79	A
ATOM	1412	CB	TYR	A	190	37.011	90.171	11.928	1.00	9.92	A
ATOM	1413	CG	TYR	A	190	36.500	89.957	13.337	1.00	10.09	A
ATOM	1414	CD1	TYR	A	190	37.043	90.648	14.415	1.00	11.70	A
ATOM	1415	CE1	TYR	A	190	36.576	90.437	15.714	1.00	12.47	A
ATOM	1416	CD2	TYR	A	190	35.468	89.052	13.587	1.00	11.76	A
ATOM	1417	CE2	TYR	A	190	34.995	88.833	14.876	1.00	12.05	A
ATOM	1418	CZ	TYR	A	190	35.555	89.523	15.934	1.00	12.04	A
ATOM	1419	OH	TYR	A	190	35.124	89.258	17.215	1.00	14.89	A
ATOM	1420	C	TYR	A	190	39.351	89.225	12.439	1.00	8.97	A
ATOM	1421	O	TYR	A	190	39.390	88.095	11.957	1.00	10.33	A
ATOM	1422	N	LEU	A	191	40.020	89.568	13.537	1.00	9.20	A

ATOM	1423	CA	LEU	A	191	40.817	88.606	14.295	1.00	9.62	A
ATOM	1424	CB	LEU	A	191	42.075	89.294	14.825	1.00	10.20	A
ATOM	1425	CG	LEU	A	191	43.170	89.563	13.791	1.00	11.97	A
ATOM	1426	CD1	LEU	A	191	44.047	90.708	14.253	1.00	15.67	A
ATOM	1427	CD2	LEU	A	191	43.984	88.297	13.565	1.00	12.16	A
ATOM	1428	C	LEU	A	191	39.928	88.062	15.400	1.00	10.23	A
ATOM	1429	O	LEU	A	191	39.533	88.803	16.301	1.00	10.12	A
ATOM	1430	N	LEU	A	192	39.624	86.769	15.329	1.00	10.06	A
ATOM	1431	CA	LEU	A	192	38.761	86.128	16.315	1.00	9.01	A
ATOM	1432	CB	LEU	A	192	37.301	86.240	15.861	1.00	10.17	A
ATOM	1433	CG	LEU	A	192	36.844	85.219	14.813	1.00	9.95	A
ATOM	1434	CD1	LEU	A	192	35.344	85.357	14.609	1.00	10.24	A
ATOM	1435	CD2	LEU	A	192	37.582	85.425	13.495	1.00	10.31	A
ATOM	1436	C	LEU	A	192	39.183	84.682	16.532	1.00	8.95	A
ATOM	1437	O	LEU	A	192	40.000	84.136	15.788	1.00	8.84	A
ATOM	1438	N	GLU	A	193	38.616	84.042	17.546	1.00	9.42	A
ATOM	1439	CA	GLU	A	193	38.969	82.658	17.815	1.00	9.32	A
ATOM	1440	CB	GLU	A	193	38.484	82.303	19.226	1.00	9.15	A
ATOM	1441	CG	GLU	A	193	39.210	83.161	20.264	1.00	9.00	A
ATOM	1442	CD	GLU	A	193	38.783	82.924	21.698	1.00	7.63	A
ATOM	1443	OE1	GLU	A	193	37.618	82.541	21.929	1.00	8.76	A
ATOM	1444	OE2	GLU	A	193	39.619	83.143	22.596	1.00	8.73	A
ATOM	1445	C	GLU	A	193	38.477	81.746	16.686	1.00	9.08	A
ATOM	1446	O	GLU	A	193	37.391	81.937	16.132	1.00	8.87	A
ATOM	1447	N	SER	A	194	39.312	80.769	16.338	1.00	9.00	A
ATOM	1448	CA	SER	A	194	39.031	79.836	15.247	1.00	9.40	A
ATOM	1449	CB	SER	A	194	40.172	78.819	15.167	1.00	9.63	A
ATOM	1450	OG	SER	A	194	40.297	78.090	16.375	1.00	9.18	A
ATOM	1451	C	SER	A	194	37.659	79.183	15.344	1.00	9.07	A
ATOM	1452	O	SER	A	194	37.016	78.919	14.327	1.00	8.31	A
ATOM	1453	N	THR	A	195	37.226	78.913	16.569	1.00	8.83	A
ATOM	1454	CA	THR	A	195	35.928	78.314	16.827	1.00	9.21	A
ATOM	1455	CB	THR	A	195	35.771	78.100	18.328	1.00	11.82	A
ATOM	1456	OG1	THR	A	195	36.318	79.236	19.005	1.00	10.54	A
ATOM	1457	CG2	THR	A	195	36.518	76.845	18.773	1.00	11.99	A
ATOM	1458	C	THR	A	195	34.797	79.203	16.287	1.00	9.86	A
ATOM	1459	O	THR	A	195	33.918	78.723	15.580	1.00	9.91	A
ATOM	1460	N	MET	A	196	34.814	80.496	16.607	1.00	10.11	A
ATOM	1461	CA	MET	A	196	33.776	81.396	16.100	1.00	11.13	A
ATOM	1462	CB	MET	A	196	33.866	82.767	16.781	1.00	10.81	A
ATOM	1463	CG	MET	A	196	33.280	82.832	18.176	1.00	12.64	A
ATOM	1464	SD	MET	A	196	34.294	81.964	19.362	1.00	12.02	A
ATOM	1465	CE	MET	A	196	33.945	82.894	20.858	1.00	13.21	A
ATOM	1466	C	MET	A	196	33.895	81.525	14.589	1.00	10.05	A
ATOM	1467	O	MET	A	196	32.892	81.583	13.878	1.00	11.28	A
ATOM	1468	N	ASN	A	197	35.133	81.585	14.111	1.00	10.27	A
ATOM	1469	CA	ASN	A	197	35.415	81.724	12.685	1.00	10.27	A
ATOM	1470	CB	ASN	A	197	36.936	81.798	12.506	1.00	10.10	A
ATOM	1471	CG	ASN	A	197	37.349	82.493	11.223	1.00	11.64	A
ATOM	1472	OD1	ASN	A	197	36.534	82.715	10.330	1.00	10.77	A
ATOM	1473	ND2	ASN	A	197	38.628	82.833	11.125	1.00	9.60	A
ATOM	1474	C	ASN	A	197	34.777	80.572	11.902	1.00	10.52	A
ATOM	1475	O	ASN	A	197	34.086	80.786	10.901	1.00	10.37	A
ATOM	1476	N	GLU	A	198	35.022	79.349	12.367	1.00	11.10	A
ATOM	1477	CA	GLU	A	198	34.493	78.140	11.732	1.00	11.31	A
ATOM	1478	CB	GLU	A	198	35.101	76.914	12.420	1.00	13.92	A
ATOM	1479	CG	GLU	A	198	36.607	76.801	12.283	1.00	15.71	A
ATOM	1480	CD	GLU	A	198	37.231	75.942	13.370	1.00	19.06	A
ATOM	1481	OE1	GLU	A	198	38.462	75.737	13.329	1.00	20.07	A
ATOM	1482	OE2	GLU	A	198	36.497	75.477	14.269	1.00	19.02	A
ATOM	1483	C	GLU	A	198	32.970	78.125	11.762	1.00	10.82	A

ATOM	1484	O	GLU	A	198	32.322	77.698	10.803	1.00	12.14	A
ATOM	1485	N	TYR	A	199	32.402	78.583	12.872	1.00	11.22	A
ATOM	1486	CA	TYR	A	199	30.956	78.622	13.024	1.00	11.52	A
ATOM	1487	CB	TYR	A	199	30.615	79.051	14.449	1.00	12.35	A
ATOM	1488	CG	TYR	A	199	29.172	79.466	14.616	1.00	11.56	A
ATOM	1489	CD1	TYR	A	199	28.144	78.523	14.590	1.00	13.00	A
ATOM	1490	CE1	TYR	A	199	26.807	78.911	14.722	1.00	12.91	A
ATOM	1491	CD2	TYR	A	199	28.832	80.809	14.778	1.00	12.75	A
ATOM	1492	CE2	TYR	A	199	27.504	81.207	14.910	1.00	14.56	A
ATOM	1493	CZ	TYR	A	199	26.499	80.254	14.882	1.00	13.63	A
ATOM	1494	OH	TYR	A	199	25.189	80.651	15.018	1.00	17.35	A
ATOM	1495	C	TYR	A	199	30.343	79.544	11.979	1.00	11.53	A
ATOM	1496	O	TYR	A	199	29.429	79.155	11.254	1.00	13.28	A
ATOM	1497	N	ILE	A	200	30.854	80.770	11.912	1.00	12.00	A
ATOM	1498	CA	ILE	A	200	30.359	81.771	10.972	1.00	12.68	A
ATOM	1499	CB	ILE	A	200	31.058	83.135	11.214	1.00	13.01	A
ATOM	1500	CG2	ILE	A	200	30.630	84.144	10.155	1.00	12.44	A
ATOM	1501	CG1	ILE	A	200	30.715	83.664	12.614	1.00	14.61	A
ATOM	1502	CD1	ILE	A	200	29.244	84.000	12.829	1.00	14.43	A
ATOM	1503	C	ILE	A	200	30.563	81.350	9.515	1.00	12.69	A
ATOM	1504	O	ILE	A	200	29.748	81.668	8.646	1.00	12.52	A
ATOM	1505	N	GLU	A	201	31.651	80.634	9.255	1.00	12.45	A
ATOM	1506	CA	GLU	A	201	31.964	80.170	7.910	1.00	15.01	A
ATOM	1507	CB	GLU	A	201	33.330	79.483	7.942	1.00	15.01	A
ATOM	1508	CG	GLU	A	201	33.910	79.134	6.586	1.00	20.19	A
ATOM	1509	CD	GLU	A	201	35.322	78.593	6.698	1.00	21.08	A
ATOM	1510	OE1	GLU	A	201	35.507	77.530	7.328	1.00	24.42	A
ATOM	1511	OE2	GLU	A	201	36.249	79.234	6.164	1.00	25.13	A
ATOM	1512	C	GLU	A	201	30.857	79.272	7.366	1.00	15.85	A
ATOM	1513	O	GLU	A	201	30.718	79.120	6.151	1.00	15.98	A
ATOM	1514	N	GLN	A	202	30.070	78.682	8.263	1.00	15.03	A
ATOM	1515	CA	GLN	A	202	28.982	77.792	7.864	1.00	17.87	A
ATOM	1516	CB	GLN	A	202	29.070	76.499	8.687	1.00	18.85	A
ATOM	1517	CG	GLN	A	202	30.394	75.758	8.569	1.00	22.01	A
ATOM	1518	CD	GLN	A	202	30.753	75.418	7.135	1.00	25.59	A
ATOM	1519	OE1	GLN	A	202	29.948	74.848	6.399	1.00	28.46	A
ATOM	1520	NE2	GLN	A	202	31.973	75.758	6.734	1.00	26.17	A
ATOM	1521	C	GLN	A	202	27.622	78.479	7.987	1.00	18.30	A
ATOM	1522	O	GLN	A	202	26.586	77.813	8.026	1.00	21.15	A
ATOM	1523	N	ARG	A	203	27.624	79.806	8.044	1.00	17.72	A
ATOM	1524	CA	ARG	A	203	26.384	80.569	8.167	1.00	17.74	A
ATOM	1525	CB	ARG	A	203	26.448	81.435	9.432	1.00	19.84	A
ATOM	1526	CG	ARG	A	203	26.722	80.670	10.716	1.00	20.83	A
ATOM	1527	CD	ARG	A	203	25.507	79.882	11.176	1.00	24.68	A
ATOM	1528	NE	ARG	A	203	24.412	80.761	11.576	1.00	27.02	A
ATOM	1529	CZ	ARG	A	203	23.261	80.336	12.087	1.00	28.82	A
ATOM	1530	NH1	ARG	A	203	23.050	79.039	12.262	1.00	28.91	A
ATOM	1531	NH2	ARG	A	203	22.322	81.210	12.426	1.00	28.42	A
ATOM	1532	C	ARG	A	203	26.159	81.401	6.912	1.00	17.54	A
ATOM	1533	O	ARG	A	203	27.105	81.941	6.337	1.00	16.78	A
ATOM	1534	N	LYS	A	204	24.904	81.502	6.487	1.00	19.44	A
ATOM	1535	CA	LYS	A	204	24.568	82.301	5.316	1.00	20.89	A
ATOM	1536	CB	LYS	A	204	23.086	82.103	4.981	1.00	22.65	A
ATOM	1537	CG	LYS	A	204	22.733	80.694	4.520	1.00	26.49	A
ATOM	1538	CD	LYS	A	204	21.223	80.488	4.438	1.00	29.93	A
ATOM	1539	CE	LYS	A	204	20.572	81.455	3.461	1.00	32.13	A
ATOM	1540	NZ	LYS	A	204	19.090	81.293	3.421	1.00	34.80	A
ATOM	1541	C	LYS	A	204	24.926	83.737	5.682	1.00	20.57	A
ATOM	1542	O	LYS	A	204	24.876	84.113	6.855	1.00	21.17	A
ATOM	1543	N	PRO	A	205	25.259	84.573	4.687	1.00	20.27	A
ATOM	1544	CD	PRO	A	205	25.404	86.015	4.951	1.00	20.25	A

ATOM	1545	CA	PRO	A	205	25.332	84.310	3.247	1.00	19.98	A
ATOM	1546	CB	PRO	A	205	25.111	85.700	2.659	1.00	20.23	A
ATOM	1547	CG	PRO	A	205	25.918	86.568	3.569	1.00	22.10	A
ATOM	1548	C	PRO	A	205	26.578	83.585	2.727	1.00	19.52	A
ATOM	1549	O	PRO	A	205	26.893	83.678	1.541	1.00	20.02	A
ATOM	1550	N	CYS	A	206	27.292	82.877	3.597	1.00	17.94	A
ATOM	1551	CA	CYS	A	206	28.474	82.127	3.171	1.00	17.10	A
ATOM	1552	C	CYS	A	206	29.475	83.007	2.435	1.00	16.19	A
ATOM	1553	O	CYS	A	206	30.006	82.610	1.396	1.00	16.94	A
ATOM	1554	CB	CYS	A	206	28.018	80.945	2.310	1.00	18.59	A
ATOM	1555	SG	CYS	A	206	26.707	79.952	3.079	1.00	20.55	A
ATOM	1556	N	ASP	A	207	29.744	84.189	2.976	1.00	15.45	A
ATOM	1557	CA	ASP	A	207	30.666	85.116	2.334	1.00	14.32	A
ATOM	1558	CB	ASP	A	207	29.907	86.408	2.009	1.00	16.26	A
ATOM	1559	CG	ASP	A	207	29.412	87.120	3.252	1.00	15.80	A
ATOM	1560	OD1	ASP	A	207	29.376	86.488	4.330	1.00	16.40	A
ATOM	1561	OD2	ASP	A	207	29.048	88.311	3.150	1.00	18.95	A
ATOM	1562	C	ASP	A	207	31.937	85.361	3.139	1.00	14.39	A
ATOM	1563	O	ASP	A	207	32.711	86.261	2.817	1.00	13.94	A
ATOM	1564	N	THR	A	208	32.155	84.573	4.187	1.00	14.10	A
ATOM	1565	CA	THR	A	208	33.358	84.734	4.997	1.00	13.35	A
ATOM	1566	CB	THR	A	208	33.027	84.977	6.483	1.00	13.59	A
ATOM	1567	OG1	THR	A	208	32.375	83.823	7.026	1.00	15.09	A
ATOM	1568	CG2	THR	A	208	32.123	86.193	6.634	1.00	14.70	A
ATOM	1569	C	THR	A	208	34.226	83.487	4.891	1.00	13.65	A
ATOM	1570	O	THR	A	208	33.753	82.414	4.506	1.00	14.29	A
ATOM	1571	N	MET	A	209	35.497	83.627	5.241	1.00	13.49	A
ATOM	1572	CA	MET	A	209	36.419	82.509	5.166	1.00	14.22	A
ATOM	1573	CB	MET	A	209	36.919	82.399	3.723	1.00	17.35	A
ATOM	1574	CG	MET	A	209	38.022	81.385	3.508	1.00	20.95	A
ATOM	1575	SD	MET	A	209	38.507	81.287	1.773	1.00	25.45	A
ATOM	1576	CE	MET	A	209	39.516	82.733	1.609	1.00	25.90	A
ATOM	1577	C	MET	A	209	37.550	82.654	6.168	1.00	13.82	A
ATOM	1578	O	MET	A	209	38.030	83.762	6.417	1.00	13.46	A
ATOM	1579	N	LYS	A	210	37.963	81.531	6.749	1.00	15.10	A
ATOM	1580	CA	LYS	A	210	39.076	81.515	7.690	1.00	15.37	A
ATOM	1581	CB	LYS	A	210	38.870	80.410	8.734	1.00	16.35	A
ATOM	1582	CG	LYS	A	210	40.045	80.256	9.702	1.00	19.49	A
ATOM	1583	CD	LYS	A	210	39.752	79.249	10.813	1.00	21.65	A
ATOM	1584	CE	LYS	A	210	39.665	77.824	10.288	1.00	23.45	A
ATOM	1585	NZ	LYS	A	210	40.975	77.345	9.768	1.00	24.20	A
ATOM	1586	C	LYS	A	210	40.316	81.294	6.834	1.00	15.15	A
ATOM	1587	O	LYS	A	210	40.356	80.361	6.032	1.00	16.64	A
ATOM	1588	N	VAL	A	211	41.323	82.148	6.990	1.00	14.55	A
ATOM	1589	CA	VAL	A	211	42.544	82.007	6.202	1.00	15.65	A
ATOM	1590	CB	VAL	A	211	42.695	83.150	5.167	1.00	15.98	A
ATOM	1591	CG1	VAL	A	211	41.593	83.061	4.133	1.00	17.55	A
ATOM	1592	CG2	VAL	A	211	42.666	84.500	5.867	1.00	15.82	A
ATOM	1593	C	VAL	A	211	43.806	81.967	7.047	1.00	16.70	A
ATOM	1594	O	VAL	A	211	43.872	82.574	8.117	1.00	15.53	A
ATOM	1595	N	GLY	A	212	44.809	81.250	6.547	1.00	18.12	A
ATOM	1596	CA	GLY	A	212	46.072	81.134	7.249	1.00	19.13	A
ATOM	1597	C	GLY	A	212	45.986	80.237	8.465	1.00	18.29	A
ATOM	1598	O	GLY	A	212	44.898	79.830	8.876	1.00	20.17	A
ATOM	1599	N	GLY	A	213	47.139	79.912	9.036	1.00	17.49	A
ATOM	1600	CA	GLY	A	213	47.147	79.076	10.218	1.00	16.45	A
ATOM	1601	C	GLY	A	213	46.769	79.928	11.411	1.00	14.83	A
ATOM	1602	O	GLY	A	213	46.769	81.161	11.328	1.00	17.42	A
ATOM	1603	N	ASN	A	214	46.433	79.288	12.522	1.00	13.24	A
ATOM	1604	CA	ASN	A	214	46.073	80.039	13.713	1.00	11.96	A
ATOM	1605	CB	ASN	A	214	45.423	79.103	14.735	1.00	13.42	A

ATOM	1606	CG	ASN	A	214	44.093	78.554	14.262	1.00	14.31	A
ATOM	1607	OD1	ASN	A	214	43.445	79.128	13.386	1.00	14.64	A
ATOM	1608	ND2	ASN	A	214	43.671	77.444	14.854	1.00	16.40	A
ATOM	1609	C	ASN	A	214	47.329	80.722	14.238	1.00	11.82	A
ATOM	1610	O	ASN	A	214	48.442	80.237	14.027	1.00	13.30	A
ATOM	1611	N	LEU	A	215	47.145	81.842	14.927	1.00	10.88	A
ATOM	1612	CA	LEU	A	215	48.267	82.592	15.478	1.00	11.07	A
ATOM	1613	CB	LEU	A	215	47.867	84.061	15.644	1.00	11.85	A
ATOM	1614	CG	LEU	A	215	47.760	84.915	14.375	1.00	12.48	A
ATOM	1615	CD1	LEU	A	215	46.698	84.359	13.439	1.00	15.01	A
ATOM	1616	CD2	LEU	A	215	47.430	86.344	14.768	1.00	13.40	A
ATOM	1617	C	LEU	A	215	48.784	81.968	16.768	1.00	11.18	A
ATOM	1618	O	LEU	A	215	49.931	82.197	17.151	1.00	13.06	A
ATOM	1619	N	ASP	A	216	47.935	81.203	17.451	1.00	10.77	A
ATOM	1620	CA	ASP	A	216	48.328	80.531	18.686	1.00	10.05	A
ATOM	1621	CB	ASP	A	216	48.230	81.498	19.887	1.00	10.46	A
ATOM	1622	CG	ASP	A	216	46.805	81.909	20.231	1.00	9.55	A
ATOM	1623	OD1	ASP	A	216	45.849	81.513	19.528	1.00	9.84	A
ATOM	1624	OD2	ASP	A	216	46.658	82.649	21.231	1.00	10.37	A
ATOM	1625	C	ASP	A	216	47.519	79.250	18.841	1.00	9.18	A
ATOM	1626	O	ASP	A	216	46.689	78.937	17.990	1.00	10.30	A
ATOM	1627	N	SER	A	217	47.782	78.511	19.916	1.00	10.24	A
ATOM	1628	CA	SER	A	217	47.103	77.244	20.179	1.00	10.49	A
ATOM	1629	CB	SER	A	217	48.017	76.095	19.747	1.00	13.97	A
ATOM	1630	OG	SER	A	217	48.283	76.142	18.362	1.00	20.86	A
ATOM	1631	C	SER	A	217	46.729	77.169	21.649	1.00	10.89	A
ATOM	1632	O	SER	A	217	47.595	77.133	22.519	1.00	12.10	A
ATOM	1633	N	LYS	A	218	45.431	77.124	21.926	1.00	11.01	A
ATOM	1634	CA	LYS	A	218	44.961	77.075	23.300	1.00	10.66	A
ATOM	1635	CB	LYS	A	218	44.917	78.507	23.845	1.00	10.42	A
ATOM	1636	CG	LYS	A	218	44.102	79.476	22.999	1.00	10.17	A
ATOM	1637	CD	LYS	A	218	44.537	80.910	23.264	1.00	9.85	A
ATOM	1638	CE	LYS	A	218	43.734	81.900	22.438	1.00	8.64	A
ATOM	1639	NZ	LYS	A	218	44.316	83.269	22.501	1.00	8.85	A
ATOM	1640	C	LYS	A	218	43.628	76.348	23.369	1.00	9.98	A
ATOM	1641	O	LYS	A	218	43.281	75.584	22.469	1.00	9.15	A
ATOM	1642	N	GLY	A	219	42.877	76.587	24.438	1.00	10.04	A
ATOM	1643	CA	GLY	A	219	41.597	75.924	24.582	1.00	9.98	A
ATOM	1644	C	GLY	A	219	40.682	76.612	25.570	1.00	9.33	A
ATOM	1645	O	GLY	A	219	41.098	77.525	26.286	1.00	9.61	A
ATOM	1646	N	TYR	A	220	39.424	76.182	25.575	1.00	8.52	A
ATOM	1647	CA	TYR	A	220	38.418	76.700	26.502	1.00	9.25	A
ATOM	1648	CB	TYR	A	220	37.034	76.765	25.852	1.00	8.84	A
ATOM	1649	CG	TYR	A	220	36.885	77.684	24.677	1.00	8.82	A
ATOM	1650	CD1	TYR	A	220	37.475	78.946	24.664	1.00	7.89	A
ATOM	1651	CE1	TYR	A	220	37.277	79.813	23.606	1.00	8.92	A
ATOM	1652	CD2	TYR	A	220	36.094	77.312	23.596	1.00	9.12	A
ATOM	1653	CE2	TYR	A	220	35.887	78.172	22.531	1.00	9.33	A
ATOM	1654	CZ	TYR	A	220	36.483	79.421	22.543	1.00	8.81	A
ATOM	1655	OH	TYR	A	220	36.288	80.272	21.483	1.00	9.44	A
ATOM	1656	C	TYR	A	220	38.386	75.740	27.670	1.00	8.73	A
ATOM	1657	O	TYR	A	220	38.493	74.524	27.484	1.00	8.20	A
ATOM	1658	N	GLY	A	221	38.221	76.277	28.870	1.00	8.26	A
ATOM	1659	CA	GLY	A	221	38.146	75.423	30.035	1.00	8.92	A
ATOM	1660	C	GLY	A	221	36.988	75.801	30.934	1.00	7.99	A
ATOM	1661	O	GLY	A	221	36.505	76.936	30.900	1.00	8.94	A
ATOM	1662	N	ILE	A	222	36.516	74.838	31.716	1.00	9.12	A
ATOM	1663	CA	ILE	A	222	35.442	75.092	32.663	1.00	9.00	A
ATOM	1664	CB	ILE	A	222	34.692	73.787	33.019	1.00	9.58	A
ATOM	1665	CG2	ILE	A	222	33.793	74.015	34.229	1.00	9.65	A
ATOM	1666	CG1	ILE	A	222	33.871	73.324	31.809	1.00	12.96	A

ATOM	1667	CD1	ILE	A	222	33.042	72.072	32.047	1.00	14.76	A
ATOM	1668	C	ILE	A	222	36.147	75.659	33.893	1.00	9.66	A
ATOM	1669	O	ILE	A	222	37.166	75.120	34.334	1.00	11.79	A
ATOM	1670	N	ALA	A	223	35.622	76.746	34.445	1.00	9.36	A
ATOM	1671	CA	ALA	A	223	36.260	77.373	35.590	1.00	9.69	A
ATOM	1672	CB	ALA	A	223	36.540	78.843	35.280	1.00	9.35	A
ATOM	1673	C	ALA	A	223	35.460	77.258	36.879	1.00	9.65	A
ATOM	1674	O	ALA	A	223	34.230	77.289	36.877	1.00	9.55	A
ATOM	1675	N	THR	A	224	36.188	77.124	37.982	1.00	10.12	A
ATOM	1676	CA	THR	A	224	35.601	77.035	39.314	1.00	10.80	A
ATOM	1677	CB	THR	A	224	35.577	75.578	39.829	1.00	11.59	A
ATOM	1678	OG1	THR	A	224	36.849	74.967	39.589	1.00	12.02	A
ATOM	1679	CG2	THR	A	224	34.489	74.778	39.141	1.00	11.59	A
ATOM	1680	C	THR	A	224	36.473	77.867	40.251	1.00	11.60	A
ATOM	1681	O	THR	A	224	37.629	78.153	39.940	1.00	11.33	A
ATOM	1682	N	PRO	A	225	35.928	78.290	41.403	1.00	11.75	A
ATOM	1683	CD	PRO	A	225	34.573	78.100	41.944	1.00	12.51	A
ATOM	1684	CA	PRO	A	225	36.755	79.082	42.317	1.00	12.26	A
ATOM	1685	CB	PRO	A	225	35.744	79.535	43.372	1.00	14.55	A
ATOM	1686	CG	PRO	A	225	34.792	78.384	43.476	1.00	17.48	A
ATOM	1687	C	PRO	A	225	37.904	78.220	42.829	1.00	14.13	A
ATOM	1688	O	PRO	A	225	37.762	77.004	42.948	1.00	13.19	A
ATOM	1689	N	LYS	A	226	39.043	78.838	43.118	1.00	15.99	A
ATOM	1690	CA	LYS	A	226	40.187	78.087	43.617	1.00	19.79	A
ATOM	1691	CB	LYS	A	226	41.352	79.040	43.890	1.00	20.79	A
ATOM	1692	CG	LYS	A	226	42.257	79.278	42.705	1.00	22.75	A
ATOM	1693	CD	LYS	A	226	43.553	79.930	43.156	1.00	24.00	A
ATOM	1694	CE	LYS	A	226	44.558	80.005	42.025	1.00	25.83	A
ATOM	1695	NZ	LYS	A	226	45.870	80.514	42.503	1.00	28.01	A
ATOM	1696	C	LYS	A	226	39.807	77.277	44.845	1.00	21.58	A
ATOM	1697	O	LYS	A	226	39.138	77.778	45.750	1.00	21.79	A
ATOM	1698	N	GLY	A	227	40.236	76.019	44.869	1.00	22.89	A
ATOM	1699	CA	GLY	A	227	39.950	75.159	46.001	1.00	23.86	A
ATOM	1700	C	GLY	A	227	38.567	74.540	46.021	1.00	24.69	A
ATOM	1701	O	GLY	A	227	38.251	73.767	46.924	1.00	25.45	A
ATOM	1702	N	SER	A	228	37.738	74.871	45.034	1.00	23.96	A
ATOM	1703	CA	SER	A	228	36.386	74.326	44.964	1.00	24.91	A
ATOM	1704	CB	SER	A	228	35.671	74.896	43.738	1.00	24.44	A
ATOM	1705	OG	SER	A	228	34.442	74.224	43.526	1.00	27.04	A
ATOM	1706	C	SER	A	228	36.406	72.804	44.966	1.00	25.46	A
ATOM	1707	O	SER	A	228	37.220	72.183	44.284	1.00	24.95	A
ATOM	1708	N	SER	A	229	35.493	72.210	45.725	1.00	26.15	A
ATOM	1709	CA	SER	A	229	35.400	70.759	45.821	1.00	26.28	A
ATOM	1710	CB	SER	A	229	34.715	70.393	47.141	1.00	27.58	A
ATOM	1711	OG	SER	A	229	33.401	70.921	47.192	1.00	29.90	A
ATOM	1712	C	SER	A	229	34.684	70.183	44.604	1.00	25.17	A
ATOM	1713	O	SER	A	229	34.470	68.975	44.518	1.00	25.95	A
ATOM	1714	N	LEU	A	230	34.312	71.050	43.669	1.00	22.39	A
ATOM	1715	CA	LEU	A	230	33.619	70.621	42.461	1.00	21.14	A
ATOM	1716	CB	LEU	A	230	32.500	71.625	42.148	1.00	23.01	A
ATOM	1717	CG	LEU	A	230	31.110	71.083	41.797	1.00	25.72	A
ATOM	1718	CD1	LEU	A	230	31.209	70.108	40.638	1.00	26.03	A
ATOM	1719	CD2	LEU	A	230	30.507	70.401	43.012	1.00	26.48	A
ATOM	1720	C	LEU	A	230	34.636	70.494	41.333	1.00	19.19	A
ATOM	1721	O	LEU	A	230	34.412	69.776	40.357	1.00	18.25	A
ATOM	1722	N	GLY	A	231	35.760	71.189	41.489	1.00	17.43	A
ATOM	1723	CA	GLY	A	231	36.808	71.184	40.483	1.00	18.17	A
ATOM	1724	C	GLY	A	231	37.296	69.838	39.983	1.00	17.92	A
ATOM	1725	O	GLY	A	231	37.350	69.611	38.774	1.00	15.95	A
ATOM	1726	N	ASN	A	232	37.655	68.944	40.898	1.00	17.85	A
ATOM	1727	CA	ASN	A	232	38.158	67.632	40.508	1.00	18.27	A

ATOM	1728	CB	ASN	A	232	38.634	66.880	41.754	1.00	21.28	A
ATOM	1729	CG	ASN	A	232	39.138	65.484	41.432	1.00	23.57	A
ATOM	1730	OD1	ASN	A	232	40.094	65.315	40.673	1.00	24.62	A
ATOM	1731	ND2	ASN	A	232	38.491	64.474	42.005	1.00	24.98	A
ATOM	1732	C	ASN	A	232	37.137	66.841	39.699	1.00	16.30	A
ATOM	1733	O	ASN	A	232	37.456	66.323	38.628	1.00	15.12	A
ATOM	1734	N	ALA	A	233	35.914	66.742	40.214	1.00	15.63	A
ATOM	1735	CA	ALA	A	233	34.861	66.000	39.532	1.00	14.98	A
ATOM	1736	CB	ALA	A	233	33.581	66.015	40.364	1.00	16.59	A
ATOM	1737	C	ALA	A	233	34.586	66.559	38.140	1.00	13.06	A
ATOM	1738	O	ALA	A	233	34.446	65.810	37.176	1.00	13.37	A
ATOM	1739	N	VAL	A	234	34.513	67.881	38.039	1.00	12.94	A
ATOM	1740	CA	VAL	A	234	34.250	68.521	36.758	1.00	13.25	A
ATOM	1741	CB	VAL	A	234	34.108	70.048	36.928	1.00	14.43	A
ATOM	1742	CG1	VAL	A	234	34.200	70.742	35.577	1.00	16.13	A
ATOM	1743	CG2	VAL	A	234	32.780	70.362	37.598	1.00	16.27	A
ATOM	1744	C	VAL	A	234	35.347	68.210	35.751	1.00	11.85	A
ATOM	1745	O	VAL	A	234	35.064	67.942	34.582	1.00	11.28	A
ATOM	1746	N	ASN	A	235	36.597	68.240	36.202	1.00	12.84	A
ATOM	1747	CA	ASN	A	235	37.712	67.947	35.311	1.00	12.21	A
ATOM	1748	CB	ASN	A	235	39.034	68.259	36.013	1.00	13.94	A
ATOM	1749	CG	ASN	A	235	40.228	68.035	35.112	1.00	14.29	A
ATOM	1750	OD1	ASN	A	235	40.335	68.647	34.050	1.00	12.99	A
ATOM	1751	ND2	ASN	A	235	41.129	67.146	35.521	1.00	15.45	A
ATOM	1752	C	ASN	A	235	37.638	66.502	34.822	1.00	12.06	A
ATOM	1753	O	ASN	A	235	37.816	66.231	33.636	1.00	12.54	A
ATOM	1754	N	LEU	A	236	37.383	65.572	35.737	1.00	12.33	A
ATOM	1755	CA	LEU	A	236	37.289	64.170	35.356	1.00	12.19	A
ATOM	1756	CB	LEU	A	236	37.142	63.304	36.610	1.00	12.94	A
ATOM	1757	CG	LEU	A	236	38.330	63.274	37.571	1.00	14.02	A
ATOM	1758	CD1	LEU	A	236	38.016	62.336	38.727	1.00	16.16	A
ATOM	1759	CD2	LEU	A	236	39.582	62.816	36.838	1.00	15.03	A
ATOM	1760	C	LEU	A	236	36.144	63.990	34.369	1.00	11.11	A
ATOM	1761	O	LEU	A	236	36.234	63.181	33.450	1.00	11.50	A
ATOM	1762	N	ALA	A	237	35.064	64.744	34.555	1.00	10.73	A
ATOM	1763	CA	ALA	A	237	33.922	64.641	33.653	1.00	11.06	A
ATOM	1764	CB	ALA	A	237	32.761	65.476	34.174	1.00	11.63	A
ATOM	1765	C	ALA	A	237	34.314	65.092	32.246	1.00	8.82	A
ATOM	1766	O	ALA	A	237	33.938	64.466	31.254	1.00	10.10	A
ATOM	1767	N	VAL	A	238	35.069	66.181	32.155	1.00	9.53	A
ATOM	1768	CA	VAL	A	238	35.514	66.669	30.855	1.00	9.58	A
ATOM	1769	CB	VAL	A	238	36.331	67.979	30.992	1.00	9.67	A
ATOM	1770	CG1	VAL	A	238	37.014	68.306	29.673	1.00	11.56	A
ATOM	1771	CG2	VAL	A	238	35.412	69.124	31.410	1.00	10.33	A
ATOM	1772	C	VAL	A	238	36.375	65.602	30.166	1.00	9.59	A
ATOM	1773	O	VAL	A	238	36.224	65.344	28.974	1.00	10.14	A
ATOM	1774	N	LEU	A	239	37.268	64.975	30.924	1.00	10.44	A
ATOM	1775	CA	LEU	A	239	38.131	63.946	30.363	1.00	10.94	A
ATOM	1776	CB	LEU	A	239	39.161	63.531	31.417	1.00	12.73	A
ATOM	1777	CG	LEU	A	239	40.180	64.613	31.790	1.00	16.19	A
ATOM	1778	CD1	LEU	A	239	41.084	64.109	32.887	1.00	18.37	A
ATOM	1779	CD2	LEU	A	239	40.998	64.978	30.587	1.00	19.19	A
ATOM	1780	C	LEU	A	239	37.300	62.778	29.842	1.00	10.02	A
ATOM	1781	O	LEU	A	239	37.566	62.255	28.760	1.00	10.81	A
ATOM	1782	N	LYS	A	240	36.292	62.370	30.609	1.00	10.83	A
ATOM	1783	CA	LYS	A	240	35.445	61.261	30.196	1.00	11.07	A
ATOM	1784	CB	LYS	A	240	34.516	60.869	31.349	1.00	13.99	A
ATOM	1785	CG	LYS	A	240	33.663	59.642	31.052	1.00	19.14	A
ATOM	1786	CD	LYS	A	240	32.876	59.203	32.278	1.00	25.66	A
ATOM	1787	CE	LYS	A	240	32.113	57.914	32.011	1.00	29.89	A
ATOM	1788	NZ	LYS	A	240	31.381	57.433	33.218	1.00	33.32	A

ATOM	1789	C	LYS	A	240	34.699	61.620	28.919	1.00	10.37	A
ATOM	1790	O	LYS	A	240	34.679	60.841	27.972	1.00	11.74	A
ATOM	1791	N	LEU	A	241	34.082	62.800	28.889	1.00	10.03	A
ATOM	1792	CA	LEU	A	241	33.344	63.226	27.702	1.00	9.53	A
ATOM	1793	CB	LEU	A	241	32.672	64.576	27.979	1.00	10.84	A
ATOM	1794	CG	LEU	A	241	31.605	64.579	29.081	1.00	11.02	A
ATOM	1795	CD1	LEU	A	241	31.140	66.000	29.344	1.00	12.25	A
ATOM	1796	CD2	LEU	A	241	30.437	63.698	28.669	1.00	12.82	A
ATOM	1797	C	LEU	A	241	34.275	63.255	26.495	1.00	9.51	A
ATOM	1798	O	LEU	A	241	33.883	62.890	25.389	1.00	10.36	A
ATOM	1799	N	SER	A	242	35.507	63.705	26.714	1.00	9.60	A
ATOM	1800	CA	SER	A	242	36.500	63.760	25.653	1.00	10.00	A
ATOM	1801	CB	SER	A	242	37.769	64.418	26.191	1.00	10.04	A
ATOM	1802	OG	SER	A	242	38.843	64.252	25.274	1.00	11.08	A
ATOM	1803	C	SER	A	242	36.768	62.363	25.111	1.00	9.77	A
ATOM	1804	O	SER	A	242	36.660	62.120	23.911	1.00	10.50	A
ATOM	1805	N	GLU	A	243	37.122	61.455	26.017	1.00	10.78	A
ATOM	1806	CA	GLU	A	243	37.441	60.082	25.654	1.00	12.16	A
ATOM	1807	CB	GLU	A	243	38.086	59.396	26.865	1.00	12.47	A
ATOM	1808	CG	GLU	A	243	39.500	59.917	27.109	1.00	13.04	A
ATOM	1809	CD	GLU	A	243	40.207	59.282	28.288	1.00	13.31	A
ATOM	1810	OE1	GLU	A	243	39.712	58.267	28.825	1.00	14.76	A
ATOM	1811	OE2	GLU	A	243	41.278	59.801	28.671	1.00	13.41	A
ATOM	1812	C	GLU	A	243	36.284	59.307	25.043	1.00	11.98	A
ATOM	1813	O	GLU	A	243	36.511	58.373	24.275	1.00	13.80	A
ATOM	1814	N	GLN	A	244	35.053	59.692	25.368	1.00	12.01	A
ATOM	1815	CA	GLN	A	244	33.880	59.015	24.816	1.00	12.65	A
ATOM	1816	CB	GLN	A	244	32.699	59.154	25.782	1.00	15.70	A
ATOM	1817	CG	GLN	A	244	32.901	58.503	27.137	1.00	21.85	A
ATOM	1818	CD	GLN	A	244	31.694	58.672	28.041	1.00	26.51	A
ATOM	1819	OE1	GLN	A	244	31.224	59.788	28.270	1.00	30.47	A
ATOM	1820	NE2	GLN	A	244	31.188	57.563	28.565	1.00	29.00	A
ATOM	1821	C	GLN	A	244	33.542	59.545	23.431	1.00	12.25	A
ATOM	1822	O	GLN	A	244	32.700	58.978	22.740	1.00	14.55	A
ATOM	1823	N	GLY	A	245	34.193	60.634	23.035	1.00	12.61	A
ATOM	1824	CA	GLY	A	245	33.934	61.229	21.734	1.00	12.75	A
ATOM	1825	C	GLY	A	245	32.721	62.146	21.742	1.00	11.07	A
ATOM	1826	O	GLY	A	245	32.313	62.667	20.702	1.00	10.93	A
ATOM	1827	N	LEU	A	246	32.155	62.359	22.925	1.00	12.32	A
ATOM	1828	CA	LEU	A	246	30.971	63.196	23.075	1.00	12.25	A
ATOM	1829	CB	LEU	A	246	30.386	62.969	24.473	1.00	13.71	A
ATOM	1830	CG	LEU	A	246	29.713	61.612	24.706	1.00	16.08	A
ATOM	1831	CD1	LEU	A	246	29.284	61.490	26.158	1.00	20.32	A
ATOM	1832	CD2	LEU	A	246	28.511	61.472	23.782	1.00	18.93	A
ATOM	1833	C	LEU	A	246	31.229	64.665	22.754	1.00	11.72	A
ATOM	1834	O	LEU	A	246	30.354	65.346	22.224	1.00	11.90	A
ATOM	1835	N	LEU	A	247	32.420	65.158	23.076	1.00	10.24	A
ATOM	1836	CA	LEU	A	247	32.741	66.548	22.784	1.00	10.90	A
ATOM	1837	CB	LEU	A	247	34.016	66.951	23.532	1.00	12.45	A
ATOM	1838	CG	LEU	A	247	33.937	66.865	25.059	1.00	10.89	A
ATOM	1839	CD1	LEU	A	247	35.259	67.333	25.661	1.00	12.02	A
ATOM	1840	CD2	LEU	A	247	32.785	67.714	25.578	1.00	13.73	A
ATOM	1841	C	LEU	A	247	32.830	66.729	21.273	1.00	10.25	A
ATOM	1842	O	LEU	A	247	32.450	67.775	20.747	1.00	11.03	A
ATOM	1843	N	ASP	A	248	33.334	65.716	20.568	1.00	10.83	A
ATOM	1844	CA	ASP	A	248	33.431	65.796	19.113	1.00	12.99	A
ATOM	1845	CB	ASP	A	248	34.254	64.622	18.565	1.00	12.21	A
ATOM	1846	CG	ASP	A	248	35.707	64.672	18.983	1.00	13.84	A
ATOM	1847	OD1	ASP	A	248	36.291	65.777	18.999	1.00	15.46	A
ATOM	1848	OD2	ASP	A	248	36.271	63.597	19.278	1.00	17.21	A
ATOM	1849	C	ASP	A	248	32.024	65.841	18.526	1.00	12.51	A

ATOM	1850	O	ASP	A	248	31.750	66.614	17.610	1.00	13.15	A
ATOM	1851	N	LYS	A	249	31.136	65.005	19.058	1.00	12.00	A
ATOM	1852	CA	LYS	A	249	29.757	64.957	18.589	1.00	13.30	A
ATOM	1853	CB	LYS	A	249	29.030	63.802	19.287	1.00	15.41	A
ATOM	1854	CG	LYS	A	249	27.582	63.635	18.860	1.00	22.53	A
ATOM	1855	CD	LYS	A	249	26.910	62.498	19.611	1.00	25.97	A
ATOM	1856	CE	LYS	A	249	25.468	62.317	19.163	1.00	28.10	A
ATOM	1857	NZ	LYS	A	249	25.374	62.030	17.702	1.00	29.71	A
ATOM	1858	C	LYS	A	249	29.073	66.304	18.812	1.00	12.10	A
ATOM	1859	O	LYS	A	249	28.326	66.779	17.956	1.00	12.22	A
ATOM	1860	N	LEU	A	250	29.339	66.912	19.963	1.00	11.38	A
ATOM	1861	CA	LEU	A	250	28.747	68.192	20.320	1.00	13.81	A
ATOM	1862	CB	LEU	A	250	29.052	68.476	21.791	1.00	15.34	A
ATOM	1863	CG	LEU	A	250	28.126	69.460	22.502	1.00	19.52	A
ATOM	1864	CD1	LEU	A	250	26.693	68.947	22.444	1.00	19.78	A
ATOM	1865	CD2	LEU	A	250	28.575	69.624	23.942	1.00	18.91	A
ATOM	1866	C	LEU	A	250	29.207	69.299	19.380	1.00	11.31	A
ATOM	1867	O	LEU	A	250	28.409	70.147	18.983	1.00	11.72	A
ATOM	1868	N	LYS	A	251	30.489	69.303	19.015	1.00	11.59	A
ATOM	1869	CA	LYS	A	251	30.966	70.338	18.104	1.00	12.31	A
ATOM	1870	CB	LYS	A	251	32.499	70.357	18.036	1.00	13.49	A
ATOM	1871	CG	LYS	A	251	32.995	71.489	17.133	1.00	16.13	A
ATOM	1872	CD	LYS	A	251	34.501	71.665	17.107	1.00	16.95	A
ATOM	1873	CE	LYS	A	251	34.851	72.951	16.360	1.00	18.24	A
ATOM	1874	NZ	LYS	A	251	36.310	73.139	16.173	1.00	21.00	A
ATOM	1875	C	LYS	A	251	30.332	70.150	16.730	1.00	11.48	A
ATOM	1876	O	LYS	A	251	29.900	71.116	16.105	1.00	11.25	A
ATOM	1877	N	ASN	A	252	30.284	68.909	16.252	1.00	11.86	A
ATOM	1878	CA	ASN	A	252	29.687	68.649	14.947	1.00	13.33	A
ATOM	1879	CB	ASN	A	252	29.837	67.168	14.586	1.00	16.75	A
ATOM	1880	CG	ASN	A	252	31.266	66.787	14.287	1.00	20.29	A
ATOM	1881	OD1	ASN	A	252	32.017	67.571	13.709	1.00	23.39	A
ATOM	1882	ND2	ASN	A	252	31.648	65.572	14.663	1.00	22.44	A
ATOM	1883	C	ASN	A	252	28.240	69.106	14.939	1.00	13.81	A
ATOM	1884	O	ASN	A	252	27.777	69.704	13.975	1.00	13.29	A
ATOM	1885	N	LYS	A	253	27.529	68.819	16.023	1.00	12.19	A
ATOM	1886	CA	LYS	A	253	26.127	69.199	16.134	1.00	13.41	A
ATOM	1887	CB	LYS	A	253	25.583	68.695	17.475	1.00	14.37	A
ATOM	1888	CG	LYS	A	253	24.183	69.195	17.808	1.00	13.86	A
ATOM	1889	CD	LYS	A	253	23.730	68.716	19.185	1.00	14.28	A
ATOM	1890	CE	LYS	A	253	22.346	69.242	19.527	1.00	16.70	A
ATOM	1891	NZ	LYS	A	253	21.928	68.869	20.909	1.00	20.13	A
ATOM	1892	C	LYS	A	253	25.905	70.696	15.953	1.00	13.48	A
ATOM	1893	O	LYS	A	253	25.082	71.113	15.139	1.00	14.39	A
ATOM	1894	N	TRP	A	254	26.657	71.500	16.699	1.00	11.82	A
ATOM	1895	CA	TRP	A	254	26.484	72.945	16.660	1.00	12.08	A
ATOM	1896	CB	TRP	A	254	26.754	73.493	18.068	1.00	11.54	A
ATOM	1897	CG	TRP	A	254	25.733	73.030	19.059	1.00	10.58	A
ATOM	1898	CD2	TRP	A	254	24.393	73.514	19.185	1.00	9.75	A
ATOM	1899	CE2	TRP	A	254	23.766	72.760	20.201	1.00	10.91	A
ATOM	1900	CE3	TRP	A	254	23.658	74.512	18.531	1.00	10.72	A
ATOM	1901	CD1	TRP	A	254	25.867	72.028	19.981	1.00	10.86	A
ATOM	1902	NE1	TRP	A	254	24.686	71.859	20.672	1.00	10.73	A
ATOM	1903	CZ2	TRP	A	254	22.438	72.974	20.580	1.00	11.83	A
ATOM	1904	CZ3	TRP	A	254	22.340	74.725	18.907	1.00	12.00	A
ATOM	1905	CH2	TRP	A	254	21.745	73.959	19.923	1.00	11.75	A
ATOM	1906	C	TRP	A	254	27.238	73.701	15.572	1.00	11.48	A
ATOM	1907	O	TRP	A	254	26.907	74.853	15.287	1.00	12.01	A
ATOM	1908	N	TRP	A	255	28.226	73.062	14.957	1.00	11.38	A
ATOM	1909	CA	TRP	A	255	29.018	73.707	13.912	1.00	13.24	A
ATOM	1910	CB	TRP	A	255	30.506	73.489	14.201	1.00	13.18	A

ATOM	1911	CG	TRP	A	255	31.156	74.556	14.996	1.00	11.40	A
ATOM	1912	CD2	TRP	A	255	31.010	74.782	16.398	1.00	10.32	A
ATOM	1913	CE2	TRP	A	255	31.820	75.890	16.727	1.00	10.52	A
ATOM	1914	CE3	TRP	A	255	30.271	74.154	17.409	1.00	11.07	A
ATOM	1915	CD1	TRP	A	255	32.022	75.507	14.539	1.00	11.83	A
ATOM	1916	NE1	TRP	A	255	32.426	76.312	15.574	1.00	10.82	A
ATOM	1917	CZ2	TRP	A	255	31.914	76.387	18.029	1.00	9.89	A
ATOM	1918	CZ3	TRP	A	255	30.363	74.647	18.706	1.00	10.99	A
ATOM	1919	CH2	TRP	A	255	31.181	75.756	19.005	1.00	10.54	A
ATOM	1920	C	TRP	A	255	28.693	73.270	12.494	1.00	14.87	A
ATOM	1921	O	TRP	A	255	28.460	74.104	11.622	1.00	15.77	A
ATOM	1922	N	TYR	A	256	28.679	71.960	12.269	1.00	17.01	A
ATOM	1923	CA	TYR	A	256	28.487	71.426	10.927	1.00	18.48	A
ATOM	1924	CB	TYR	A	256	29.692	70.530	10.639	1.00	17.86	A
ATOM	1925	CG	TYR	A	256	31.002	71.189	11.015	1.00	17.74	A
ATOM	1926	CD1	TYR	A	256	31.445	72.332	10.350	1.00	19.92	A
ATOM	1927	CE1	TYR	A	256	32.626	72.971	10.725	1.00	19.08	A
ATOM	1928	CD2	TYR	A	256	31.776	70.697	12.065	1.00	18.11	A
ATOM	1929	CE2	TYR	A	256	32.959	71.329	12.447	1.00	20.70	A
ATOM	1930	CZ	TYR	A	256	33.375	72.466	11.773	1.00	19.95	A
ATOM	1931	OH	TYR	A	256	34.536	73.104	12.151	1.00	23.67	A
ATOM	1932	C	TYR	A	256	27.158	70.754	10.605	1.00	21.44	A
ATOM	1933	O	TYR	A	256	26.645	70.903	9.495	1.00	22.92	A
ATOM	1934	N	ASP	A	257	26.608	70.006	11.554	1.00	23.80	A
ATOM	1935	CA	ASP	A	257	25.342	69.312	11.337	1.00	27.48	A
ATOM	1936	CB	ASP	A	257	24.902	68.668	12.655	1.00	27.47	A
ATOM	1937	CG	ASP	A	257	25.709	67.427	12.997	1.00	28.50	A
ATOM	1938	OD1	ASP	A	257	26.875	67.328	12.561	1.00	29.59	A
ATOM	1939	OD2	ASP	A	257	25.179	66.552	13.713	1.00	28.83	A
ATOM	1940	C	ASP	A	257	24.292	70.241	10.733	1.00	29.42	A
ATOM	1941	O	ASP	A	257	23.423	69.802	9.978	1.00	31.16	A
ATOM	1942	N	GLY	A	258	24.380	71.525	11.062	1.00	31.16	A
ATOM	1943	CA	GLY	A	258	23.429	72.487	10.536	1.00	32.33	A
ATOM	1944	C	GLY	A	258	24.059	73.441	9.539	1.00	33.05	A
ATOM	1945	O	GLY	A	258	23.484	74.482	9.220	1.00	34.08	A
ATOM	1946	N	GLY	A	259	25.242	73.082	9.048	1.00	33.37	A
ATOM	1947	CA	GLY	A	259	25.941	73.919	8.087	1.00	32.81	A
ATOM	1948	C	GLY	A	259	25.036	74.455	6.995	1.00	33.01	A
ATOM	1949	O	GLY	A	259	24.345	73.692	6.317	1.00	32.94	A
ATOM	1950	N	GLU	A	260	25.044	75.773	6.823	1.00	32.45	A
ATOM	1951	CA	GLU	A	260	24.217	76.427	5.817	1.00	31.91	A
ATOM	1952	CB	GLU	A	260	23.638	77.713	6.414	1.00	32.09	A
ATOM	1953	CG	GLU	A	260	22.761	77.502	7.635	1.00	32.14	A
ATOM	1954	CD	GLU	A	260	22.348	78.810	8.285	1.00	32.27	A
ATOM	1955	OE1	GLU	A	260	21.521	78.777	9.223	1.00	32.26	A
ATOM	1956	OE2	GLU	A	260	22.853	79.871	7.862	1.00	33.19	A
ATOM	1957	C	GLU	A	260	25.002	76.681	4.537	1.00	31.22	A
ATOM	1958	O	GLU	A	260	24.459	77.212	3.569	1.00	32.04	A
ATOM	1959	N	CYS	A	261	26.275	76.303	4.532	1.00	30.64	A
ATOM	1960	CA	CYS	A	261	27.120	76.519	3.365	1.00	30.66	A
ATOM	1961	CB	CYS	A	261	28.266	77.457	3.761	1.00	27.88	A
ATOM	1962	SG	CYS	A	261	27.700	78.992	4.563	1.00	22.41	A
ATOM	1963	C	CYS	A	261	27.595	75.199	2.768	1.00	32.66	A
ATOM	1964	OT1	CYS	A	261	28.824	74.998	2.684	1.00	34.27	A
ATOM	1965	OT2	CYS	A	261	26.729	74.384	2.386	1.00	33.85	A
ATOM	1966	N	KAI	D	999	52.259	58.965	24.382	1.00	8.63	D
ATOM	1967	CD	KAI	D	999	53.638	58.501	23.988	1.00	10.80	D
ATOM	1968	CD1	KAI	D	999	55.552	56.535	23.071	1.00	12.20	D
ATOM	1969	CD2	KAI	D	999	54.558	54.578	24.118	1.00	11.04	D
ATOM	1970	CA	KAI	D	999	51.419	57.830	24.582	1.00	9.63	D
ATOM	1971	CB	KAI	D	999	52.093	56.616	23.960	1.00	10.19	D

ATOM	1972	CB1	KAI	D	999	51.980	56.522	22.435	1.00	10.60	D
ATOM	1973	CG	KAI	D	999	53.489	56.931	24.227	1.00	10.61	D
ATOM	1974	CG1	KAI	D	999	50.770	55.761	21.918	1.00	10.59	D
ATOM	1975	CG2	KAI	D	999	54.632	56.001	23.768	1.00	10.26	D
ATOM	1976	C	KAI	D	999	51.075	57.648	26.071	1.00	9.43	D
ATOM	1977	O	KAI	D	999	51.316	58.626	26.818	1.00	8.26	D
ATOM	1978	OD1	KAI	D	999	50.585	55.802	20.683	1.00	10.86	D
ATOM	1979	OD2	KAI	D	999	50.054	55.152	22.744	1.00	12.88	D
ATOM	1980	OT	KAI	D	999	50.572	56.547	26.391	1.00	10.08	D
ATOM	1981	C	GLY	B	4	66.467	69.848	45.552	1.00	25.87	B
ATOM	1982	O	GLY	B	4	65.518	70.397	44.992	1.00	26.65	B
ATOM	1983	N	GLY	B	4	65.769	70.992	47.668	1.00	28.44	B
ATOM	1984	CA	GLY	B	4	66.664	69.975	47.051	1.00	26.72	B
ATOM	1985	N	THR	B	5	67.368	69.121	44.902	1.00	23.55	B
ATOM	1986	CA	THR	B	5	67.290	68.918	43.462	1.00	20.59	B
ATOM	1987	CB	THR	B	5	68.519	68.144	42.948	1.00	20.71	B
ATOM	1988	OG1	THR	B	5	69.704	68.909	43.207	1.00	22.39	B
ATOM	1989	CG2	THR	B	5	68.403	67.883	41.451	1.00	19.82	B
ATOM	1990	C	THR	B	5	66.025	68.147	43.097	1.00	18.19	B
ATOM	1991	O	THR	B	5	65.721	67.109	43.684	1.00	18.92	B
ATOM	1992	N	VAL	B	6	65.289	68.671	42.125	1.00	15.33	B
ATOM	1993	CA	VAL	B	6	64.056	68.045	41.669	1.00	14.60	B
ATOM	1994	CB	VAL	B	6	63.195	69.063	40.889	1.00	12.72	B
ATOM	1995	CG1	VAL	B	6	61.990	68.376	40.267	1.00	13.98	B
ATOM	1996	CG2	VAL	B	6	62.754	70.184	41.826	1.00	13.51	B
ATOM	1997	C	VAL	B	6	64.373	66.851	40.778	1.00	13.37	B
ATOM	1998	O	VAL	B	6	65.198	66.948	39.872	1.00	14.05	B
ATOM	1999	N	VAL	B	7	63.732	65.719	41.049	1.00	11.84	B
ATOM	2000	CA	VAL	B	7	63.952	64.526	40.248	1.00	11.72	B
ATOM	2001	CB	VAL	B	7	63.857	63.247	41.096	1.00	12.00	B
ATOM	2002	CG1	VAL	B	7	63.972	62.018	40.198	1.00	13.16	B
ATOM	2003	CG2	VAL	B	7	64.962	63.244	42.138	1.00	13.65	B
ATOM	2004	C	VAL	B	7	62.924	64.461	39.131	1.00	10.82	B
ATOM	2005	O	VAL	B	7	61.726	64.290	39.373	1.00	11.42	B
ATOM	2006	N	VAL	B	8	63.404	64.612	37.904	1.00	11.28	B
ATOM	2007	CA	VAL	B	8	62.545	64.571	36.737	1.00	11.25	B
ATOM	2008	CB	VAL	B	8	62.989	65.613	35.679	1.00	11.15	B
ATOM	2009	CG1	VAL	B	8	62.102	65.517	34.436	1.00	12.30	B
ATOM	2010	CG2	VAL	B	8	62.937	67.010	36.272	1.00	10.83	B
ATOM	2011	C	VAL	B	8	62.634	63.198	36.106	1.00	11.06	B
ATOM	2012	O	VAL	B	8	63.735	62.692	35.870	1.00	11.58	B
ATOM	2013	N	THR	B	9	61.489	62.570	35.871	1.00	9.47	B
ATOM	2014	CA	THR	B	9	61.508	61.287	35.196	1.00	9.39	B
ATOM	2015	CB	THR	B	9	60.576	60.227	35.847	1.00	10.31	B
ATOM	2016	OG1	THR	B	9	60.678	59.000	35.106	1.00	11.00	B
ATOM	2017	CG2	THR	B	9	59.121	60.683	35.852	1.00	11.65	B
ATOM	2018	C	THR	B	9	61.059	61.550	33.768	1.00	9.23	B
ATOM	2019	O	THR	B	9	60.139	62.340	33.518	1.00	9.76	B
ATOM	2020	N	THR	B	10	61.747	60.921	32.826	1.00	8.57	B
ATOM	2021	CA	THR	B	10	61.413	61.075	31.427	1.00	8.66	B
ATOM	2022	CB	THR	B	10	62.136	62.304	30.801	1.00	9.52	B
ATOM	2023	OG1	THR	B	10	61.581	62.579	29.510	1.00	9.17	B
ATOM	2024	CG2	THR	B	10	63.632	62.070	30.681	1.00	9.62	B
ATOM	2025	C	THR	B	10	61.766	59.771	30.729	1.00	9.19	B
ATOM	2026	O	THR	B	10	62.116	58.793	31.388	1.00	8.78	B
ATOM	2027	N	ILE	B	11	61.676	59.746	29.408	1.00	8.42	B
ATOM	2028	CA	ILE	B	11	61.925	58.516	28.674	1.00	9.57	B
ATOM	2029	CB	ILE	B	11	60.584	57.731	28.534	1.00	10.19	B
ATOM	2030	CG2	ILE	B	11	59.605	58.521	27.674	1.00	10.71	B
ATOM	2031	CG1	ILE	B	11	60.817	56.335	27.958	1.00	9.87	B
ATOM	2032	CD1	ILE	B	11	59.587	55.440	28.079	1.00	12.32	B

ATOM	2033	C	ILE	B	11	62.507	58.851	27.310	1.00	10.25	B
ATOM	2034	O	ILE	B	11	62.250	59.928	26.768	1.00	10.08	B
ATOM	2035	N	LEU	B	12	63.306	57.937	26.765	1.00	10.50	B
ATOM	2036	CA	LEU	B	12	63.905	58.152	25.459	1.00	12.34	B
ATOM	2037	CB	LEU	B	12	65.150	57.266	25.313	1.00	12.17	B
ATOM	2038	CG	LEU	B	12	66.280	57.520	26.317	1.00	12.21	B
ATOM	2039	CD1	LEU	B	12	67.424	56.543	26.062	1.00	13.28	B
ATOM	2040	CD2	LEU	B	12	66.766	58.958	26.204	1.00	15.41	B
ATOM	2041	C	LEU	B	12	62.850	57.900	24.391	1.00	12.73	B
ATOM	2042	O	LEU	B	12	62.301	56.802	24.287	1.00	15.53	B
ATOM	2043	N	GLU	B	13	62.551	58.940	23.621	1.00	11.26	B
ATOM	2044	CA	GLU	B	13	61.581	58.878	22.529	1.00	11.65	B
ATOM	2045	CB	GLU	B	13	60.151	58.869	23.090	1.00	11.63	B
ATOM	2046	CG	GLU	B	13	59.056	58.898	22.008	1.00	12.30	B
ATOM	2047	CD	GLU	B	13	58.836	57.558	21.315	1.00	13.74	B
ATOM	2048	OE1	GLU	B	13	58.263	57.556	20.205	1.00	15.08	B
ATOM	2049	OE2	GLU	B	13	59.215	56.506	21.873	1.00	13.46	B
ATOM	2050	C	GLU	B	13	61.877	60.097	21.668	1.00	10.94	B
ATOM	2051	O	GLU	B	13	61.802	61.226	22.145	1.00	11.44	B
ATOM	2052	N	SER	B	14	62.221	59.875	20.403	1.00	11.40	B
ATOM	2053	CA	SER	B	14	62.540	60.975	19.496	1.00	10.45	B
ATOM	2054	CB	SER	B	14	63.303	60.417	18.292	1.00	12.41	B
ATOM	2055	OG	SER	B	14	64.464	59.727	18.699	1.00	14.94	B
ATOM	2056	C	SER	B	14	61.277	61.718	19.085	1.00	10.94	B
ATOM	2057	O	SER	B	14	60.239	61.105	18.845	1.00	12.89	B
ATOM	2058	N	PRO	B	15	61.348	63.054	18.976	1.00	11.14	B
ATOM	2059	CD	PRO	B	15	60.292	63.756	18.224	1.00	11.21	B
ATOM	2060	CA	PRO	B	15	62.488	63.943	19.200	1.00	11.12	B
ATOM	2061	CB	PRO	B	15	62.361	64.903	18.029	1.00	10.05	B
ATOM	2062	CG	PRO	B	15	60.879	65.212	18.052	1.00	10.43	B
ATOM	2063	C	PRO	B	15	62.392	64.599	20.576	1.00	11.05	B
ATOM	2064	O	PRO	B	15	62.964	65.665	20.801	1.00	11.55	B
ATOM	2065	N	TYR	B	16	61.667	63.958	21.488	1.00	10.36	B
ATOM	2066	CA	TYR	B	16	61.458	64.483	22.837	1.00	10.25	B
ATOM	2067	CB	TYR	B	16	60.265	63.755	23.461	1.00	10.31	B
ATOM	2068	CG	TYR	B	16	59.030	63.764	22.591	1.00	8.58	B
ATOM	2069	CD1	TYR	B	16	58.156	64.853	22.586	1.00	9.19	B
ATOM	2070	CE1	TYR	B	16	57.020	64.853	21.775	1.00	8.77	B
ATOM	2071	CD2	TYR	B	16	58.741	62.682	21.764	1.00	9.76	B
ATOM	2072	CE2	TYR	B	16	57.618	62.674	20.954	1.00	10.41	B
ATOM	2073	CZ	TYR	B	16	56.761	63.758	20.965	1.00	9.82	B
ATOM	2074	OH	TYR	B	16	55.641	63.734	20.171	1.00	11.39	B
ATOM	2075	C	TYR	B	16	62.705	64.404	23.702	1.00	10.28	B
ATOM	2076	O	TYR	B	16	63.099	65.394	24.315	1.00	9.88	B
ATOM	2077	N	VAL	B	17	63.303	63.218	23.773	1.00	10.38	B
ATOM	2078	CA	VAL	B	17	64.518	63.004	24.553	1.00	10.31	B
ATOM	2079	CB	VAL	B	17	64.216	62.510	25.987	1.00	10.46	B
ATOM	2080	CG1	VAL	B	17	65.503	62.456	26.800	1.00	11.76	B
ATOM	2081	CG2	VAL	B	17	63.207	63.429	26.655	1.00	11.78	B
ATOM	2082	C	VAL	B	17	65.357	61.948	23.850	1.00	9.86	B
ATOM	2083	O	VAL	B	17	64.873	60.854	23.551	1.00	10.88	B
ATOM	2084	N	MET	B	18	66.612	62.294	23.581	1.00	10.26	B
ATOM	2085	CA	MET	B	18	67.549	61.406	22.906	1.00	12.06	B
ATOM	2086	CB	MET	B	18	67.583	61.761	21.409	1.00	15.22	B
ATOM	2087	CG	MET	B	18	66.216	61.838	20.728	1.00	19.02	B
ATOM	2088	SD	MET	B	18	66.244	62.690	19.120	1.00	21.27	B
ATOM	2089	CE	MET	B	18	66.218	64.416	19.671	1.00	17.44	B
ATOM	2090	C	MET	B	18	68.909	61.592	23.566	1.00	11.87	B
ATOM	2091	O	MET	B	18	69.196	62.662	24.102	1.00	11.59	B
ATOM	2092	N	MET	B	19	69.744	60.558	23.553	1.00	12.57	B
ATOM	2093	CA	MET	B	19	71.082	60.700	24.109	1.00	12.32	B

ATOM	2094	CB	MET	B	19	71.641	59.334	24.535	1.00	15.07	B
ATOM	2095	CG	MET	B	19	70.992	58.722	25.765	1.00	13.93	B
ATOM	2096	SD	MET	B	19	72.099	57.536	26.585	1.00	15.99	B
ATOM	2097	CE	MET	B	19	72.981	58.624	27.712	1.00	16.50	B
ATOM	2098	C	MET	B	19	71.911	61.354	23.008	1.00	12.90	B
ATOM	2099	O	MET	B	19	71.833	60.944	21.850	1.00	14.84	B
ATOM	2100	N	LYS	B	20	72.690	62.372	23.356	1.00	12.52	B
ATOM	2101	CA	LYS	B	20	73.533	63.038	22.367	1.00	14.47	B
ATOM	2102	CB	LYS	B	20	74.250	64.229	23.005	1.00	12.95	B
ATOM	2103	CG	LYS	B	20	73.374	65.417	23.367	1.00	13.71	B
ATOM	2104	CD	LYS	B	20	74.223	66.480	24.046	1.00	15.05	B
ATOM	2105	CE	LYS	B	20	73.396	67.668	24.509	1.00	14.15	B
ATOM	2106	NZ	LYS	B	20	74.229	68.600	25.320	1.00	15.71	B
ATOM	2107	C	LYS	B	20	74.511	62.008	21.827	1.00	16.21	B
ATOM	2108	O	LYS	B	20	74.881	61.068	22.529	1.00	14.97	B
ATOM	2109	N	ALA	B	21	74.942	62.196	20.584	1.00	18.29	B
ATOM	2110	CA	ALA	B	21	75.882	61.275	19.965	1.00	19.51	B
ATOM	2111	CB	ALA	B	21	76.177	61.721	18.535	1.00	21.05	B
ATOM	2112	C	ALA	B	21	77.176	61.201	20.773	1.00	19.76	B
ATOM	2113	O	ALA	B	21	77.802	60.144	20.864	1.00	21.42	B
ATOM	2114	N	ASN	B	22	77.557	62.325	21.372	1.00	19.02	B
ATOM	2115	CA	ASN	B	22	78.781	62.413	22.163	1.00	18.97	B
ATOM	2116	CB	ASN	B	22	79.521	63.693	21.766	1.00	20.30	B
ATOM	2117	CG	ASN	B	22	78.804	64.946	22.235	1.00	21.39	B
ATOM	2118	OD1	ASN	B	22	77.584	65.061	22.104	1.00	22.04	B
ATOM	2119	ND2	ASN	B	22	79.560	65.895	22.780	1.00	22.05	B
ATOM	2120	C	ASN	B	22	78.479	62.360	23.658	1.00	17.27	B
ATOM	2121	O	ASN	B	22	79.224	62.925	24.462	1.00	17.70	B
ATOM	2122	N	HIS	B	23	77.400	61.678	24.033	1.00	16.09	B
ATOM	2123	CA	HIS	B	23	77.013	61.598	25.438	1.00	16.05	B
ATOM	2124	CB	HIS	B	23	75.685	60.827	25.551	1.00	15.26	B
ATOM	2125	CG	HIS	B	23	75.793	59.364	25.245	1.00	14.60	B
ATOM	2126	CD2	HIS	B	23	75.483	58.662	24.129	1.00	15.86	B
ATOM	2127	ND1	HIS	B	23	76.238	58.440	26.165	1.00	14.48	B
ATOM	2128	CE1	HIS	B	23	76.195	57.232	25.632	1.00	17.13	B
ATOM	2129	NE2	HIS	B	23	75.740	57.339	24.397	1.00	15.98	B
ATOM	2130	C	HIS	B	23	78.118	61.062	26.351	1.00	15.69	B
ATOM	2131	O	HIS	B	23	78.184	61.428	27.521	1.00	15.50	B
ATOM	2132	N	ALA	B	24	78.995	60.217	25.817	1.00	17.18	B
ATOM	2133	CA	ALA	B	24	80.079	59.650	26.616	1.00	18.81	B
ATOM	2134	CB	ALA	B	24	80.816	58.586	25.810	1.00	19.51	B
ATOM	2135	C	ALA	B	24	81.070	60.702	27.117	1.00	18.71	B
ATOM	2136	O	ALA	B	24	81.774	60.482	28.102	1.00	18.45	B
ATOM	2137	N	MET	B	25	81.126	61.844	26.439	1.00	18.56	B
ATOM	2138	CA	MET	B	25	82.037	62.919	26.822	1.00	18.29	B
ATOM	2139	CB	MET	B	25	82.622	63.549	25.560	1.00	19.57	B
ATOM	2140	CG	MET	B	25	83.465	62.621	24.725	1.00	21.10	B
ATOM	2141	SD	MET	B	25	84.120	63.508	23.313	1.00	23.59	B
ATOM	2142	CE	MET	B	25	85.415	64.460	24.100	1.00	24.46	B
ATOM	2143	C	MET	B	25	81.326	63.950	27.684	1.00	18.23	B
ATOM	2144	O	MET	B	25	81.903	64.985	28.033	1.00	18.60	B
ATOM	2145	N	LEU	B	26	80.074	63.666	28.026	1.00	18.31	B
ATOM	2146	CA	LEU	B	26	79.266	64.587	28.812	1.00	16.85	B
ATOM	2147	CB	LEU	B	26	78.088	65.041	27.947	1.00	16.92	B
ATOM	2148	CG	LEU	B	26	78.475	65.583	26.567	1.00	17.51	B
ATOM	2149	CD1	LEU	B	26	77.230	65.836	25.739	1.00	16.45	B
ATOM	2150	CD2	LEU	B	26	79.279	66.862	26.726	1.00	17.51	B
ATOM	2151	C	LEU	B	26	78.830	63.976	30.137	1.00	16.24	B
ATOM	2152	O	LEU	B	26	79.043	62.791	30.394	1.00	15.00	B
ATOM	2153	N	ALA	B	27	78.207	64.800	30.971	1.00	16.05	B
ATOM	2154	CA	ALA	B	27	77.743	64.357	32.278	1.00	15.70	B

ATOM	2155	CB	ALA	B	27	78.774	64.724	33.340	1.00	16.75	B
ATOM	2156	C	ALA	B	27	76.397	64.975	32.633	1.00	14.51	B
ATOM	2157	O	ALA	B	27	76.049	66.059	32.165	1.00	14.31	B
ATOM	2158	N	GLY	B	28	75.634	64.272	33.461	1.00	12.99	B
ATOM	2159	CA	GLY	B	28	74.345	64.784	33.893	1.00	12.86	B
ATOM	2160	C	GLY	B	28	73.346	65.108	32.799	1.00	10.18	B
ATOM	2161	O	GLY	B	28	73.243	64.402	31.792	1.00	10.92	B
ATOM	2162	N	ASN	B	29	72.606	66.194	32.997	1.00	10.97	B
ATOM	2163	CA	ASN	B	29	71.588	66.617	32.042	1.00	11.28	B
ATOM	2164	CB	ASN	B	29	70.871	67.866	32.575	1.00	12.52	B
ATOM	2165	CG	ASN	B	29	70.099	67.613	33.862	1.00	13.16	B
ATOM	2166	OD1	ASN	B	29	69.615	68.557	34.496	1.00	16.07	B
ATOM	2167	ND2	ASN	B	29	69.968	66.351	34.249	1.00	10.44	B
ATOM	2168	C	ASN	B	29	72.159	66.854	30.647	1.00	11.11	B
ATOM	2169	O	ASN	B	29	71.440	66.751	29.662	1.00	12.20	B
ATOM	2170	N	GLU	B	30	73.445	67.190	30.574	1.00	11.25	B
ATOM	2171	CA	GLU	B	30	74.116	67.468	29.302	1.00	11.59	B
ATOM	2172	CB	GLU	B	30	75.531	67.982	29.592	1.00	13.28	B
ATOM	2173	CG	GLU	B	30	75.600	69.370	30.208	1.00	18.28	B
ATOM	2174	CD	GLU	B	30	75.494	70.476	29.176	1.00	22.46	B
ATOM	2175	OE1	GLU	B	30	75.433	70.163	27.969	1.00	23.11	B
ATOM	2176	OE2	GLU	B	30	75.482	71.662	29.575	1.00	24.65	B
ATOM	2177	C	GLU	B	30	74.135	66.296	28.324	1.00	10.36	B
ATOM	2178	O	GLU	B	30	74.352	66.487	27.128	1.00	11.64	B
ATOM	2179	N	ARG	B	31	73.923	65.086	28.834	1.00	9.81	B
ATOM	2180	CA	ARG	B	31	73.930	63.887	28.003	1.00	10.32	B
ATOM	2181	CB	ARG	B	31	73.955	62.647	28.899	1.00	10.62	B
ATOM	2182	CG	ARG	B	31	75.192	62.443	29.743	1.00	10.62	B
ATOM	2183	CD	ARG	B	31	74.937	61.315	30.732	1.00	9.95	B
ATOM	2184	NE	ARG	B	31	73.920	61.704	31.706	1.00	10.06	B
ATOM	2185	CZ	ARG	B	31	73.348	60.876	32.574	1.00	9.21	B
ATOM	2186	NH1	ARG	B	31	73.681	59.595	32.597	1.00	11.18	B
ATOM	2187	NH2	ARG	B	31	72.452	61.338	33.433	1.00	10.47	B
ATOM	2188	C	ARG	B	31	72.744	63.814	27.057	1.00	10.20	B
ATOM	2189	O	ARG	B	31	72.797	63.101	26.058	1.00	11.31	B
ATOM	2190	N	TYR	B	32	71.676	64.538	27.387	1.00	9.98	B
ATOM	2191	CA	TYR	B	32	70.425	64.496	26.627	1.00	8.83	B
ATOM	2192	CB	TYR	B	32	69.291	64.157	27.603	1.00	10.20	B
ATOM	2193	CG	TYR	B	32	69.544	62.935	28.451	1.00	9.07	B
ATOM	2194	CD1	TYR	B	32	69.397	61.655	27.923	1.00	10.68	B
ATOM	2195	CE1	TYR	B	32	69.645	60.522	28.698	1.00	10.81	B
ATOM	2196	CD2	TYR	B	32	69.949	63.059	29.778	1.00	10.74	B
ATOM	2197	CE2	TYR	B	32	70.203	61.935	30.562	1.00	10.68	B
ATOM	2198	CZ	TYR	B	32	70.048	60.670	30.015	1.00	9.71	B
ATOM	2199	OH	TYR	B	32	70.304	59.557	30.786	1.00	12.33	B
ATOM	2200	C	TYR	B	32	70.086	65.741	25.825	1.00	9.96	B
ATOM	2201	O	TYR	B	32	70.530	66.840	26.137	1.00	9.85	B
ATOM	2202	N	GLU	B	33	69.267	65.547	24.794	1.00	9.25	B
ATOM	2203	CA	GLU	B	33	68.802	66.637	23.945	1.00	9.61	B
ATOM	2204	CB	GLU	B	33	69.789	66.877	22.801	1.00	12.38	B
ATOM	2205	CG	GLU	B	33	69.882	65.719	21.823	1.00	15.84	B
ATOM	2206	CD	GLU	B	33	70.830	65.994	20.670	1.00	19.62	B
ATOM	2207	OE1	GLU	B	33	71.160	65.039	19.936	1.00	21.62	B
ATOM	2208	OE2	GLU	B	33	71.240	67.161	20.495	1.00	22.03	B
ATOM	2209	C	GLU	B	33	67.412	66.291	23.441	1.00	10.42	B
ATOM	2210	O	GLU	B	33	67.012	65.118	23.431	1.00	10.16	B
ATOM	2211	N	GLY	B	34	66.672	67.314	23.028	1.00	9.75	B
ATOM	2212	CA	GLY	B	34	65.339	67.083	22.510	1.00	9.73	B
ATOM	2213	C	GLY	B	34	64.321	68.084	23.016	1.00	8.85	B
ATOM	2214	O	GLY	B	34	64.616	68.904	23.887	1.00	10.30	B
ATOM	2215	N	TYR	B	35	63.115	68.003	22.468	1.00	8.53	B

ATOM	2216	CA	TYR	B	35	62.032	68.902	22.838	1.00	9.68	B
ATOM	2217	CB	TYR	B	35	60.782	68.528	22.031	1.00	10.10	B
ATOM	2218	CG	TYR	B	35	59.547	69.312	22.415	1.00	9.72	B
ATOM	2219	CD1	TYR	B	35	58.848	69.024	23.590	1.00	9.32	B
ATOM	2220	CE1	TYR	B	35	57.721	69.755	23.954	1.00	10.16	B
ATOM	2221	CD2	TYR	B	35	59.086	70.355	21.613	1.00	10.84	B
ATOM	2222	CE2	TYR	B	35	57.962	71.094	21.970	1.00	11.51	B
ATOM	2223	CZ	TYR	B	35	57.287	70.789	23.140	1.00	9.88	B
ATOM	2224	OH	TYR	B	35	56.185	71.530	23.507	1.00	12.71	B
ATOM	2225	C	TYR	B	35	61.773	68.928	24.341	1.00	9.67	B
ATOM	2226	O	TYR	B	35	61.676	70.000	24.943	1.00	10.24	B
ATOM	2227	N	CYS	B	36	61.644	67.755	24.952	1.00	9.69	B
ATOM	2228	CA	CYS	B	36	61.369	67.698	26.383	1.00	9.64	B
ATOM	2229	CB	CYS	B	36	60.823	66.312	26.744	1.00	11.19	B
ATOM	2230	SG	CYS	B	36	59.098	66.081	26.239	1.00	11.34	B
ATOM	2231	C	CYS	B	36	62.553	68.128	27.232	1.00	10.65	B
ATOM	2232	O	CYS	B	36	62.377	68.564	28.366	1.00	10.55	B
ATOM	2233	N	VAL	B	37	63.760	67.997	26.695	1.00	9.52	B
ATOM	2234	CA	VAL	B	37	64.945	68.430	27.423	1.00	10.61	B
ATOM	2235	CB	VAL	B	37	66.235	67.947	26.721	1.00	9.82	B
ATOM	2236	CG1	VAL	B	37	67.459	68.492	27.442	1.00	11.76	B
ATOM	2237	CG2	VAL	B	37	66.273	66.424	26.714	1.00	12.23	B
ATOM	2238	C	VAL	B	37	64.908	69.962	27.465	1.00	10.09	B
ATOM	2239	O	VAL	B	37	65.147	70.577	28.507	1.00	11.08	B
ATOM	2240	N	ASP	B	38	64.592	70.572	26.326	1.00	10.59	B
ATOM	2241	CA	ASP	B	38	64.495	72.024	26.232	1.00	9.97	B
ATOM	2242	CB	ASP	B	38	64.314	72.438	24.768	1.00	11.07	B
ATOM	2243	CG	ASP	B	38	65.571	72.264	23.939	1.00	10.71	B
ATOM	2244	OD1	ASP	B	38	65.470	72.430	22.707	1.00	12.33	B
ATOM	2245	OD2	ASP	B	38	66.644	71.977	24.506	1.00	13.75	B
ATOM	2246	C	ASP	B	38	63.336	72.504	27.100	1.00	10.54	B
ATOM	2247	O	ASP	B	38	63.442	73.529	27.776	1.00	10.16	B
ATOM	2248	N	LEU	B	39	62.222	71.772	27.066	1.00	9.79	B
ATOM	2249	CA	LEU	B	39	61.055	72.147	27.854	1.00	10.05	B
ATOM	2250	CB	LEU	B	39	59.870	71.244	27.490	1.00	11.14	B
ATOM	2251	CG	LEU	B	39	58.603	71.478	28.324	1.00	10.08	B
ATOM	2252	CD1	LEU	B	39	58.137	72.921	28.178	1.00	11.75	B
ATOM	2253	CD2	LEU	B	39	57.516	70.503	27.885	1.00	11.65	B
ATOM	2254	C	LEU	B	39	61.393	72.098	29.334	1.00	9.39	B
ATOM	2255	O	LEU	B	39	61.048	73.010	30.086	1.00	10.29	B
ATOM	2256	N	ALA	B	40	62.061	71.030	29.758	1.00	9.61	B
ATOM	2257	CA	ALA	B	40	62.432	70.896	31.162	1.00	10.73	B
ATOM	2258	CB	ALA	B	40	63.196	69.595	31.380	1.00	11.25	B
ATOM	2259	C	ALA	B	40	63.270	72.088	31.622	1.00	11.73	B
ATOM	2260	O	ALA	B	40	63.046	72.638	32.701	1.00	12.59	B
ATOM	2261	N	ALA	B	41	64.230	72.498	30.801	1.00	11.86	B
ATOM	2262	CA	ALA	B	41	65.082	73.626	31.153	1.00	12.18	B
ATOM	2263	CB	ALA	B	41	66.173	73.809	30.098	1.00	13.52	B
ATOM	2264	C	ALA	B	41	64.268	74.909	31.311	1.00	12.68	B
ATOM	2265	O	ALA	B	41	64.528	75.704	32.214	1.00	13.44	B
ATOM	2266	N	GLU	B	42	63.289	75.111	30.433	1.00	12.40	B
ATOM	2267	CA	GLU	B	42	62.445	76.299	30.499	1.00	13.32	B
ATOM	2268	CB	GLU	B	42	61.657	76.433	29.192	1.00	14.71	B
ATOM	2269	CG	GLU	B	42	62.430	77.116	28.081	1.00	18.34	B
ATOM	2270	CD	GLU	B	42	62.565	78.614	28.306	1.00	20.10	B
ATOM	2271	OE1	GLU	B	42	62.279	79.083	29.429	1.00	20.21	B
ATOM	2272	OE2	GLU	B	42	62.962	79.326	27.361	1.00	21.49	B
ATOM	2273	C	GLU	B	42	61.552	76.273	31.730	1.00	13.78	B
ATOM	2274	O	GLU	B	42	61.370	77.293	32.392	1.00	14.79	B
ATOM	2275	N	ILE	B	43	60.978	75.113	32.030	1.00	13.34	B
ATOM	2276	CA	ILE	B	43	60.115	74.987	33.199	1.00	13.46	B

ATOM	2277	CB	ILE	B	43	59.490	73.572	33.289	1.00	13.33	B
ATOM	2278	CG2	ILE	B	43	58.751	73.408	34.613	1.00	12.28	B
ATOM	2279	CG1	ILE	B	43	58.541	73.339	32.110	1.00	14.86	B
ATOM	2280	CD1	ILE	B	43	57.323	74.242	32.101	1.00	16.43	B
ATOM	2281	C	ILE	B	43	60.925	75.263	34.468	1.00	13.03	B
ATOM	2282	O	ILE	B	43	60.498	76.023	35.339	1.00	15.24	B
ATOM	2283	N	ALA	B	44	62.102	74.653	34.563	1.00	13.22	B
ATOM	2284	CA	ALA	B	44	62.966	74.840	35.725	1.00	13.12	B
ATOM	2285	CB	ALA	B	44	64.197	73.962	35.599	1.00	13.62	B
ATOM	2286	C	ALA	B	44	63.379	76.298	35.886	1.00	14.36	B
ATOM	2287	O	ALA	B	44	63.439	76.812	37.001	1.00	14.64	B
ATOM	2288	N	LYS	B	45	63.666	76.959	34.769	1.00	15.50	B
ATOM	2289	CA	LYS	B	45	64.073	78.358	34.784	1.00	18.35	B
ATOM	2290	CB	LYS	B	45	64.464	78.775	33.366	1.00	19.84	B
ATOM	2291	CG	LYS	B	45	65.067	80.167	33.270	1.00	24.18	B
ATOM	2292	CD	LYS	B	45	65.213	80.612	31.819	1.00	28.35	B
ATOM	2293	CE	LYS	B	45	65.838	79.523	30.960	1.00	30.41	B
ATOM	2294	NZ	LYS	B	45	67.050	78.941	31.597	1.00	32.84	B
ATOM	2295	C	LYS	B	45	62.962	79.225	35.360	1.00	18.22	B
ATOM	2296	O	LYS	B	45	63.206	80.084	36.208	1.00	18.79	B
ATOM	2297	N	HIS	B	46	61.738	79.002	34.893	1.00	16.85	B
ATOM	2298	CA	HIS	B	46	60.597	79.781	35.357	1.00	18.06	B
ATOM	2299	CB	HIS	B	46	59.451	79.650	34.346	1.00	16.99	B
ATOM	2300	CG	HIS	B	46	59.668	80.432	33.089	1.00	18.62	B
ATOM	2301	CD2	HIS	B	46	59.222	81.655	32.716	1.00	19.23	B
ATOM	2302	ND1	HIS	B	46	60.476	79.990	32.064	1.00	20.49	B
ATOM	2303	CE1	HIS	B	46	60.520	80.908	31.115	1.00	20.66	B
ATOM	2304	NE2	HIS	B	46	59.768	81.928	31.486	1.00	22.31	B
ATOM	2305	C	HIS	B	46	60.166	79.459	36.783	1.00	18.25	B
ATOM	2306	O	HIS	B	46	59.643	80.328	37.481	1.00	20.05	B
ATOM	2307	N	CYS	B	47	60.381	78.224	37.224	1.00	18.44	B
ATOM	2308	CA	CYS	B	47	59.993	77.827	38.575	1.00	17.80	B
ATOM	2309	CB	CYS	B	47	59.473	76.389	38.549	1.00	18.10	B
ATOM	2310	SG	CYS	B	47	57.992	76.181	37.546	1.00	16.20	B
ATOM	2311	C	CYS	B	47	61.129	78.027	39.564	1.00	18.32	B
ATOM	2312	O	CYS	B	47	60.924	77.976	40.777	1.00	19.27	B
ATOM	2313	N	GLY	B	48	62.329	78.237	39.039	1.00	17.47	B
ATOM	2314	CA	GLY	B	48	63.483	78.460	39.887	1.00	17.87	B
ATOM	2315	C	GLY	B	48	63.989	77.250	40.647	1.00	17.16	B
ATOM	2316	O	GLY	B	48	64.315	77.357	41.829	1.00	19.29	B
ATOM	2317	N	PHE	B	49	64.056	76.096	39.991	1.00	16.57	B
ATOM	2318	CA	PHE	B	49	64.563	74.908	40.662	1.00	15.09	B
ATOM	2319	CB	PHE	B	49	63.397	73.957	41.021	1.00	15.47	B
ATOM	2320	CG	PHE	B	49	62.679	73.346	39.832	1.00	14.74	B
ATOM	2321	CD1	PHE	B	49	63.277	72.476	39.080	1.00	13.45	B
ATOM	2322	CD2	PHE	B	49	61.443	73.662	39.599	1.00	13.69	B
ATOM	2323	CE1	PHE	B	49	62.630	71.844	38.006	1.00	15.09	B
ATOM	2324	CE2	PHE	B	49	60.709	73.086	38.549	1.00	15.17	B
ATOM	2325	CZ	PHE	B	49	61.319	72.159	37.741	1.00	14.08	B
ATOM	2326	C	PHE	B	49	65.657	74.240	39.847	1.00	14.16	B
ATOM	2327	O	PHE	B	49	65.747	74.429	38.634	1.00	13.98	B
ATOM	2328	N	ALA	B	50	66.512	73.493	40.540	1.00	13.90	B
ATOM	2329	CA	ALA	B	50	67.580	72.740	39.896	1.00	13.70	B
ATOM	2330	CB	ALA	B	50	68.814	72.695	40.785	1.00	16.32	B
ATOM	2331	C	ALA	B	50	66.979	71.350	39.743	1.00	13.30	B
ATOM	2332	O	ALA	B	50	66.143	70.945	40.553	1.00	13.71	B
ATOM	2333	N	TYR	B	51	67.391	70.614	38.719	1.00	13.03	B
ATOM	2334	CA	TYR	B	51	66.812	69.296	38.500	1.00	11.76	B
ATOM	2335	CB	TYR	B	51	65.573	69.443	37.617	1.00	11.44	B
ATOM	2336	CG	TYR	B	51	65.911	69.967	36.243	1.00	11.49	B
ATOM	2337	CD1	TYR	B	51	66.193	71.315	36.048	1.00	12.38	B

ATOM	2338	CE1	TYR	B	51	66.566	71.799	34.802	1.00	12.32	B
ATOM	2339	CD2	TYR	B	51	66.010	69.106	35.148	1.00	12.07	B
ATOM	2340	CE2	TYR	B	51	66.386	69.583	33.895	1.00	11.64	B
ATOM	2341	CZ	TYR	B	51	66.662	70.930	33.732	1.00	12.48	B
ATOM	2342	OH	TYR	B	51	67.034	71.413	32.504	1.00	14.13	B
ATOM	2343	C	TYR	B	51	67.784	68.307	37.898	1.00	11.11	B
ATOM	2344	O	TYR	B	51	68.827	68.673	37.353	1.00	11.36	B
ATOM	2345	N	ALA	B	52	67.402	67.040	37.983	1.00	11.04	B
ATOM	2346	CA	ALA	B	52	68.190	65.953	37.435	1.00	11.50	B
ATOM	2347	CB	ALA	B	52	68.743	65.097	38.556	1.00	14.07	B
ATOM	2348	C	ALA	B	52	67.282	65.120	36.542	1.00	12.04	B
ATOM	2349	O	ALA	B	52	66.230	64.655	36.983	1.00	11.18	B
ATOM	2350	N	LEU	B	53	67.677	64.952	35.283	1.00	11.19	B
ATOM	2351	CA	LEU	B	53	66.907	64.145	34.342	1.00	11.11	B
ATOM	2352	CB	LEU	B	53	67.237	64.557	32.902	1.00	12.06	B
ATOM	2353	CG	LEU	B	53	66.890	65.967	32.423	1.00	11.30	B
ATOM	2354	CD1	LEU	B	53	67.398	66.148	30.995	1.00	13.51	B
ATOM	2355	CD2	LEU	B	53	65.389	66.189	32.492	1.00	12.62	B
ATOM	2356	C	LEU	B	53	67.235	62.683	34.591	1.00	11.07	B
ATOM	2357	O	LEU	B	53	68.401	62.291	34.550	1.00	12.22	B
ATOM	2358	N	THR	B	54	66.210	61.881	34.858	1.00	10.41	B
ATOM	2359	CA	THR	B	54	66.394	60.452	35.079	1.00	10.10	B
ATOM	2360	CB	THR	B	54	66.036	60.030	36.525	1.00	11.69	B
ATOM	2361	OG1	THR	B	54	64.630	60.203	36.752	1.00	12.12	B
ATOM	2362	CG2	THR	B	54	66.816	60.862	37.527	1.00	12.54	B
ATOM	2363	C	THR	B	54	65.482	59.730	34.095	1.00	10.22	B
ATOM	2364	O	THR	B	54	64.430	60.247	33.721	1.00	10.58	B
ATOM	2365	N	ILE	B	55	65.898	58.546	33.661	1.00	11.35	B
ATOM	2366	CA	ILE	B	55	65.123	57.775	32.701	1.00	9.56	B
ATOM	2367	CB	ILE	B	55	66.054	57.099	31.677	1.00	10.28	B
ATOM	2368	CG2	ILE	B	55	65.230	56.422	30.596	1.00	10.52	B
ATOM	2369	CG1	ILE	B	55	66.997	58.141	31.066	1.00	12.28	B
ATOM	2370	CD1	ILE	B	55	66.297	59.307	30.389	1.00	13.29	B
ATOM	2371	C	ILE	B	55	64.293	56.721	33.415	1.00	11.06	B
ATOM	2372	O	ILE	B	55	64.822	55.907	34.175	1.00	10.82	B
ATOM	2373	N	VAL	B	56	62.986	56.743	33.170	1.00	11.05	B
ATOM	2374	CA	VAL	B	56	62.066	55.809	33.807	1.00	11.37	B
ATOM	2375	CB	VAL	B	56	60.629	55.969	33.228	1.00	9.97	B
ATOM	2376	CG1	VAL	B	56	60.615	55.684	31.744	1.00	9.92	B
ATOM	2377	CG2	VAL	B	56	59.667	55.064	33.966	1.00	11.61	B
ATOM	2378	C	VAL	B	56	62.543	54.360	33.703	1.00	11.84	B
ATOM	2379	O	VAL	B	56	62.792	53.835	32.616	1.00	11.48	B
ATOM	2380	N	GLY	B	57	62.657	53.723	34.862	1.00	12.37	B
ATOM	2381	CA	GLY	B	57	63.146	52.360	34.937	1.00	13.63	B
ATOM	2382	C	GLY	B	57	62.508	51.288	34.080	1.00	14.12	B
ATOM	2383	O	GLY	B	57	63.221	50.521	33.430	1.00	15.65	B
ATOM	2384	N	ASP	B	58	61.178	51.223	34.068	1.00	14.76	B
ATOM	2385	CA	ASP	B	58	60.486	50.189	33.307	1.00	14.59	B
ATOM	2386	CB	ASP	B	58	59.266	49.713	34.110	1.00	14.42	B
ATOM	2387	CG	ASP	B	58	58.191	50.776	34.243	1.00	13.18	B
ATOM	2388	OD1	ASP	B	58	57.230	50.545	35.005	1.00	16.08	B
ATOM	2389	OD2	ASP	B	58	58.296	51.835	33.586	1.00	12.74	B
ATOM	2390	C	ASP	B	58	60.143	50.567	31.872	1.00	14.19	B
ATOM	2391	O	ASP	B	58	59.470	49.805	31.180	1.00	15.43	B
ATOM	2392	N	GLY	B	59	60.594	51.737	31.428	1.00	14.19	B
ATOM	2393	CA	GLY	B	59	60.331	52.162	30.062	1.00	11.83	B
ATOM	2394	C	GLY	B	59	58.867	52.283	29.684	1.00	12.48	B
ATOM	2395	O	GLY	B	59	58.514	52.155	28.510	1.00	12.94	B
ATOM	2396	N	LYS	B	60	58.017	52.551	30.672	1.00	11.56	B
ATOM	2397	CA	LYS	B	60	56.577	52.677	30.450	1.00	12.01	B
ATOM	2398	CB	LYS	B	60	55.846	51.652	31.326	1.00	13.09	B

ATOM	2399	CG	LYS	B	60	56.245	50.200	31.110	1.00	15.47	B
ATOM	2400	CD	LYS	B	60	55.738	49.675	29.786	1.00	18.86	B
ATOM	2401	CE	LYS	B	60	56.022	48.185	29.656	1.00	20.26	B
ATOM	2402	NZ	LYS	B	60	55.522	47.641	28.365	1.00	21.95	B
ATOM	2403	C	LYS	B	60	56.104	54.098	30.731	1.00	10.84	B
ATOM	2404	O	LYS	B	60	56.786	54.875	31.408	1.00	11.54	B
ATOM	2405	N	TYR	B	61	54.923	54.432	30.217	1.00	10.31	B
ATOM	2406	CA	TYR	B	61	54.352	55.754	30.435	1.00	10.95	B
ATOM	2407	CB	TYR	B	61	53.617	56.209	29.172	1.00	10.41	B
ATOM	2408	CG	TYR	B	61	54.567	56.686	28.106	1.00	10.06	B
ATOM	2409	CD1	TYR	B	61	55.372	55.783	27.409	1.00	10.42	B
ATOM	2410	CE1	TYR	B	61	56.304	56.224	26.479	1.00	10.50	B
ATOM	2411	CD2	TYR	B	61	54.717	58.047	27.837	1.00	10.35	B
ATOM	2412	CE2	TYR	B	61	55.648	58.499	26.906	1.00	10.24	B
ATOM	2413	CZ	TYR	B	61	56.435	57.581	26.234	1.00	11.07	B
ATOM	2414	OH	TYR	B	61	57.349	58.030	25.310	1.00	12.79	B
ATOM	2415	C	TYR	B	61	53.487	55.771	31.685	1.00	9.95	B
ATOM	2416	O	TYR	B	61	53.714	56.578	32.585	1.00	11.01	B
ATOM	2417	N	GLY	B	62	52.499	54.884	31.750	1.00	10.51	B
ATOM	2418	CA	GLY	B	62	51.653	54.847	32.930	1.00	11.84	B
ATOM	2419	C	GLY	B	62	50.340	54.109	32.768	1.00	10.79	B
ATOM	2420	O	GLY	B	62	49.416	54.599	32.116	1.00	10.82	B
ATOM	2421	N	ALA	B	63	50.264	52.927	33.370	1.00	12.75	B
ATOM	2422	CA	ALA	B	63	49.065	52.100	33.330	1.00	13.25	B
ATOM	2423	CB	ALA	B	63	49.122	51.145	32.147	1.00	13.85	B
ATOM	2424	C	ALA	B	63	49.002	51.321	34.637	1.00	14.70	B
ATOM	2425	O	ALA	B	63	50.030	51.085	35.276	1.00	14.41	B
ATOM	2426	N	ARG	B	64	47.796	50.926	35.032	1.00	15.95	B
ATOM	2427	CA	ARG	B	64	47.603	50.178	36.268	1.00	18.84	B
ATOM	2428	CB	ARG	B	64	46.555	50.896	37.129	1.00	20.04	B
ATOM	2429	CG	ARG	B	64	46.300	50.249	38.487	1.00	23.49	B
ATOM	2430	CD	ARG	B	64	44.957	49.522	38.541	1.00	27.55	B
ATOM	2431	NE	ARG	B	64	43.825	50.438	38.421	1.00	28.94	B
ATOM	2432	CZ	ARG	B	64	42.551	50.076	38.545	1.00	30.80	B
ATOM	2433	NH1	ARG	B	64	42.238	48.812	38.797	1.00	29.54	B
ATOM	2434	NH2	ARG	B	64	41.587	50.977	38.417	1.00	31.20	B
ATOM	2435	C	ARG	B	64	47.233	48.734	35.961	1.00	19.59	B
ATOM	2436	O	ARG	B	64	46.286	48.470	35.220	1.00	19.24	B
ATOM	2437	N	ASP	B	65	47.990	47.801	36.530	1.00	21.81	B
ATOM	2438	CA	ASP	B	65	47.723	46.382	36.327	1.00	23.78	B
ATOM	2439	CB	ASP	B	65	48.852	45.563	36.956	1.00	24.91	B
ATOM	2440	CG	ASP	B	65	48.744	44.084	36.636	1.00	26.39	B
ATOM	2441	OD1	ASP	B	65	48.998	43.707	35.473	1.00	27.64	B
ATOM	2442	OD2	ASP	B	65	48.397	43.302	37.544	1.00	28.63	B
ATOM	2443	C	ASP	B	65	46.356	46.098	36.941	1.00	24.92	B
ATOM	2444	O	ASP	B	65	46.096	46.465	38.086	1.00	25.04	B
ATOM	2445	N	ALA	B	66	45.483	45.444	36.181	1.00	26.95	B
ATOM	2446	CA	ALA	B	66	44.140	45.136	36.659	1.00	28.23	B
ATOM	2447	CB	ALA	B	66	43.292	44.605	35.509	1.00	28.97	B
ATOM	2448	C	ALA	B	66	44.129	44.140	37.814	1.00	28.97	B
ATOM	2449	O	ALA	B	66	43.167	44.083	38.580	1.00	29.82	B
ATOM	2450	N	ASN	B	67	45.198	43.363	37.942	1.00	28.97	B
ATOM	2451	CA	ASN	B	67	45.289	42.365	39.000	1.00	29.76	B
ATOM	2452	CB	ASN	B	67	46.029	41.137	38.458	1.00	30.71	B
ATOM	2453	CG	ASN	B	67	45.317	40.501	37.279	1.00	32.34	B
ATOM	2454	OD1	ASN	B	67	44.160	40.094	37.385	1.00	33.09	B
ATOM	2455	ND2	ASN	B	67	46.007	40.411	36.146	1.00	33.17	B
ATOM	2456	C	ASN	B	67	45.917	42.922	40.274	1.00	28.95	B
ATOM	2457	O	ASN	B	67	45.293	42.916	41.336	1.00	29.70	B
ATOM	2458	N	THR	B	68	47.151	43.405	40.163	1.00	27.58	B
ATOM	2459	CA	THR	B	68	47.876	43.945	41.309	1.00	25.51	B

ATOM	2460	CB	THR	B	68	49.394	43.894	41.073	1.00	25.12	B
ATOM	2461	OG1	THR	B	68	49.745	44.801	40.019	1.00	20.95	B
ATOM	2462	CG2	THR	B	68	49.822	42.489	40.687	1.00	24.96	B
ATOM	2463	C	THR	B	68	47.505	45.384	41.647	1.00	24.97	B
ATOM	2464	O	THR	B	68	47.760	45.849	42.758	1.00	25.29	B
ATOM	2465	N	LYS	B	69	46.909	46.083	40.687	1.00	24.16	B
ATOM	2466	CA	LYS	B	69	46.514	47.475	40.868	1.00	23.37	B
ATOM	2467	CB	LYS	B	69	45.496	47.579	42.010	1.00	26.52	B
ATOM	2468	CG	LYS	B	69	44.139	46.975	41.679	1.00	29.62	B
ATOM	2469	CD	LYS	B	69	43.086	47.390	42.694	1.00	32.54	B
ATOM	2470	CE	LYS	B	69	41.702	46.906	42.287	1.00	34.99	B
ATOM	2471	NZ	LYS	B	69	40.648	47.378	43.230	1.00	35.23	B
ATOM	2472	C	LYS	B	69	47.732	48.372	41.062	1.00	21.74	B
ATOM	2473	O	LYS	B	69	47.623	49.479	41.593	1.00	20.74	B
ATOM	2474	N	ILE	B	70	48.891	47.890	40.628	1.00	18.80	B
ATOM	2475	CA	ILE	B	70	50.126	48.657	40.735	1.00	17.97	B
ATOM	2476	CB	ILE	B	70	51.352	47.729	40.900	1.00	18.88	B
ATOM	2477	CG2	ILE	B	70	52.640	48.538	40.806	1.00	20.23	B
ATOM	2478	CG1	ILE	B	70	51.269	46.995	42.241	1.00	20.76	B
ATOM	2479	CD1	ILE	B	70	52.423	46.045	42.499	1.00	22.88	B
ATOM	2480	C	ILE	B	70	50.309	49.492	39.471	1.00	15.47	B
ATOM	2481	O	ILE	B	70	50.047	49.019	38.365	1.00	15.13	B
ATOM	2482	N	TRP	B	71	50.742	50.737	39.644	1.00	13.13	B
ATOM	2483	CA	TRP	B	71	50.975	51.636	38.520	1.00	12.67	B
ATOM	2484	CB	TRP	B	71	50.674	53.079	38.937	1.00	12.72	B
ATOM	2485	CG	TRP	B	71	49.224	53.410	38.968	1.00	13.58	B
ATOM	2486	CD2	TRP	B	71	48.438	53.888	37.873	1.00	14.46	B
ATOM	2487	CE2	TRP	B	71	47.116	54.046	38.345	1.00	15.69	B
ATOM	2488	CE3	TRP	B	71	48.722	54.198	36.536	1.00	13.52	B
ATOM	2489	CD1	TRP	B	71	48.373	53.297	40.033	1.00	14.51	B
ATOM	2490	NE1	TRP	B	71	47.106	53.679	39.665	1.00	16.14	B
ATOM	2491	CZ2	TRP	B	71	46.077	54.500	37.526	1.00	14.84	B
ATOM	2492	CZ3	TRP	B	71	47.687	54.651	35.721	1.00	15.20	B
ATOM	2493	CH2	TRP	B	71	46.381	54.796	36.222	1.00	14.88	B
ATOM	2494	C	TRP	B	71	52.402	51.491	38.026	1.00	11.67	B
ATOM	2495	O	TRP	B	71	53.335	51.458	38.826	1.00	13.19	B
ATOM	2496	N	ASN	B	72	52.574	51.412	36.708	1.00	10.89	B
ATOM	2497	CA	ASN	B	72	53.909	51.305	36.136	1.00	10.92	B
ATOM	2498	CB	ASN	B	72	53.971	50.121	35.155	1.00	11.32	B
ATOM	2499	CG	ASN	B	72	53.110	50.331	33.920	1.00	11.78	B
ATOM	2500	OD1	ASN	B	72	52.720	51.456	33.596	1.00	12.64	B
ATOM	2501	ND2	ASN	B	72	52.826	49.245	33.213	1.00	15.85	B
ATOM	2502	C	ASN	B	72	54.284	52.625	35.471	1.00	9.96	B
ATOM	2503	O	ASN	B	72	53.560	53.616	35.562	1.00	10.53	B
ATOM	2504	N	GLY	B	73	55.440	52.619	34.819	1.00	10.42	B
ATOM	2505	CA	GLY	B	73	55.915	53.781	34.089	1.00	9.99	B
ATOM	2506	C	GLY	B	73	56.175	55.046	34.877	1.00	9.20	B
ATOM	2507	O	GLY	B	73	56.366	55.017	36.093	1.00	9.61	B
ATOM	2508	N	MET	B	74	56.195	56.170	34.161	1.00	9.33	B
ATOM	2509	CA	MET	B	74	56.438	57.468	34.775	1.00	9.66	B
ATOM	2510	CB	MET	B	74	56.612	58.526	33.683	1.00	9.48	B
ATOM	2511	CG	MET	B	74	57.870	58.331	32.857	1.00	10.36	B
ATOM	2512	SD	MET	B	74	58.035	59.534	31.542	1.00	9.40	B
ATOM	2513	CE	MET	B	74	56.941	58.818	30.315	1.00	10.99	B
ATOM	2514	C	MET	B	74	55.345	57.817	35.767	1.00	8.74	B
ATOM	2515	O	MET	B	74	55.615	58.424	36.802	1.00	9.06	B
ATOM	2516	N	VAL	B	75	54.107	57.448	35.454	1.00	9.57	B
ATOM	2517	CA	VAL	B	75	53.012	57.722	36.372	1.00	10.23	B
ATOM	2518	CB	VAL	B	75	51.650	57.289	35.774	1.00	10.32	B
ATOM	2519	CG1	VAL	B	75	50.555	57.392	36.832	1.00	11.55	B
ATOM	2520	CG2	VAL	B	75	51.305	58.187	34.582	1.00	11.56	B

ATOM	2521	C	VAL	B	75	53.298	56.973	37.675	1.00	9.02	B
ATOM	2522	O	VAL	B	75	53.161	57.532	38.761	1.00	9.52	B
ATOM	2523	N	GLY	B	76	53.719	55.716	37.564	1.00	9.20	B
ATOM	2524	CA	GLY	B	76	54.035	54.948	38.756	1.00	10.49	B
ATOM	2525	C	GLY	B	76	55.137	55.590	39.585	1.00	10.06	B
ATOM	2526	O	GLY	B	76	55.057	55.627	40.812	1.00	10.24	B
ATOM	2527	N	GLU	B	77	56.172	56.106	38.927	1.00	10.03	B
ATOM	2528	CA	GLU	B	77	57.262	56.739	39.656	1.00	11.26	B
ATOM	2529	CB	GLU	B	77	58.387	57.115	38.688	1.00	12.58	B
ATOM	2530	CG	GLU	B	77	59.025	55.921	37.999	1.00	14.21	B
ATOM	2531	CD	GLU	B	77	60.416	56.222	37.479	1.00	16.09	B
ATOM	2532	OE1	GLU	B	77	60.720	57.408	37.234	1.00	19.00	B
ATOM	2533	OE2	GLU	B	77	61.204	55.270	37.307	1.00	16.26	B
ATOM	2534	C	GLU	B	77	56.742	57.918	40.466	1.00	10.75	B
ATOM	2535	O	GLU	B	77	57.215	58.169	41.569	1.00	11.53	B
ATOM	2536	N	LEU	B	78	55.770	58.644	39.924	1.00	9.82	B
ATOM	2537	CA	LEU	B	78	55.192	59.781	40.639	1.00	9.75	B
ATOM	2538	CB	LEU	B	78	54.402	60.650	39.664	1.00	10.18	B
ATOM	2539	CG	LEU	B	78	55.183	61.318	38.532	1.00	11.06	B
ATOM	2540	CD1	LEU	B	78	54.201	62.002	37.607	1.00	12.43	B
ATOM	2541	CD2	LEU	B	78	56.190	62.320	39.088	1.00	10.65	B
ATOM	2542	C	LEU	B	78	54.323	59.283	41.787	1.00	10.67	B
ATOM	2543	O	LEU	B	78	54.421	59.768	42.913	1.00	11.04	B
ATOM	2544	N	VAL	B	79	53.465	58.319	41.485	1.00	10.25	B
ATOM	2545	CA	VAL	B	79	52.557	57.754	42.470	1.00	11.27	B
ATOM	2546	CB	VAL	B	79	51.688	56.649	41.821	1.00	11.30	B
ATOM	2547	CG1	VAL	B	79	50.928	55.865	42.888	1.00	12.72	B
ATOM	2548	CG2	VAL	B	79	50.715	57.282	40.832	1.00	13.10	B
ATOM	2549	C	VAL	B	79	53.288	57.184	43.683	1.00	11.56	B
ATOM	2550	O	VAL	B	79	52.852	57.375	44.822	1.00	11.77	B
ATOM	2551	N	TYR	B	80	54.408	56.508	43.444	1.00	10.46	B
ATOM	2552	CA	TYR	B	80	55.167	55.895	44.532	1.00	11.28	B
ATOM	2553	CB	TYR	B	80	55.659	54.517	44.069	1.00	11.09	B
ATOM	2554	CG	TYR	B	80	54.513	53.621	43.670	1.00	10.97	B
ATOM	2555	CD1	TYR	B	80	53.496	53.321	44.575	1.00	12.84	B
ATOM	2556	CE1	TYR	B	80	52.384	52.571	44.191	1.00	12.75	B
ATOM	2557	CD2	TYR	B	80	54.397	53.138	42.368	1.00	11.00	B
ATOM	2558	CE2	TYR	B	80	53.291	52.388	41.973	1.00	12.20	B
ATOM	2559	CZ	TYR	B	80	52.286	52.112	42.887	1.00	11.32	B
ATOM	2560	OH	TYR	B	80	51.168	51.408	42.495	1.00	12.36	B
ATOM	2561	C	TYR	B	80	56.269	56.779	45.104	1.00	11.47	B
ATOM	2562	O	TYR	B	80	57.025	56.341	45.975	1.00	12.62	B
ATOM	2563	N	GLY	B	81	56.354	58.016	44.618	1.00	11.77	B
ATOM	2564	CA	GLY	B	81	57.343	58.963	45.114	1.00	13.08	B
ATOM	2565	C	GLY	B	81	58.785	58.763	44.684	1.00	14.28	B
ATOM	2566	O	GLY	B	81	59.702	59.201	45.381	1.00	16.40	B
ATOM	2567	N	LYS	B	82	58.995	58.121	43.540	1.00	12.68	B
ATOM	2568	CA	LYS	B	82	60.344	57.867	43.036	1.00	13.74	B
ATOM	2569	CB	LYS	B	82	60.338	56.557	42.236	1.00	14.63	B
ATOM	2570	CG	LYS	B	82	59.824	55.346	43.003	1.00	18.22	B
ATOM	2571	CD	LYS	B	82	60.734	54.978	44.159	1.00	21.14	B
ATOM	2572	CE	LYS	B	82	60.223	53.738	44.882	1.00	23.62	B
ATOM	2573	NZ	LYS	B	82	61.113	53.339	46.009	1.00	25.94	B
ATOM	2574	C	LYS	B	82	60.849	59.056	42.224	1.00	12.88	B
ATOM	2575	O	LYS	B	82	62.050	59.190	41.982	1.00	14.84	B
ATOM	2576	N	ALA	B	83	59.924	59.907	41.794	1.00	12.38	B
ATOM	2577	CA	ALA	B	83	60.263	61.096	41.016	1.00	11.64	B
ATOM	2578	CB	ALA	B	83	60.123	60.805	39.527	1.00	12.37	B
ATOM	2579	C	ALA	B	83	59.327	62.232	41.421	1.00	10.70	B
ATOM	2580	O	ALA	B	83	58.227	61.985	41.920	1.00	11.07	B
ATOM	2581	N	ASP	B	84	59.761	63.470	41.198	1.00	10.03	B

ATOM	2582	CA	ASP	B	84	58.968	64.643	41.560	1.00	9.72	B
ATOM	2583	CB	ASP	B	84	59.898	65.733	42.102	1.00	12.11	B
ATOM	2584	CG	ASP	B	84	60.716	65.271	43.284	1.00	14.44	B
ATOM	2585	OD1	ASP	B	84	60.120	64.803	44.275	1.00	17.95	B
ATOM	2586	OD2	ASP	B	84	61.958	65.384	43.221	1.00	15.95	B
ATOM	2587	C	ASP	B	84	58.118	65.171	40.418	1.00	10.31	B
ATOM	2588	O	ASP	B	84	57.076	65.793	40.643	1.00	10.64	B
ATOM	2589	N	ILE	B	85	58.563	64.936	39.191	1.00	9.52	B
ATOM	2590	CA	ILE	B	85	57.849	65.443	38.030	1.00	9.74	B
ATOM	2591	CB	ILE	B	85	58.257	66.925	37.781	1.00	11.00	B
ATOM	2592	CG2	ILE	B	85	59.734	66.996	37.445	1.00	13.21	B
ATOM	2593	CG1	ILE	B	85	57.403	67.561	36.683	1.00	11.45	B
ATOM	2594	CD1	ILE	B	85	57.490	69.082	36.677	1.00	14.00	B
ATOM	2595	C	ILE	B	85	58.191	64.599	36.812	1.00	9.21	B
ATOM	2596	O	ILE	B	85	59.292	64.060	36.719	1.00	9.90	B
ATOM	2597	N	ALA	B	86	57.234	64.468	35.900	1.00	8.46	B
ATOM	2598	CA	ALA	B	86	57.446	63.718	34.664	1.00	8.54	B
ATOM	2599	CB	ALA	B	86	56.422	62.582	34.529	1.00	8.59	B
ATOM	2600	C	ALA	B	86	57.291	64.702	33.515	1.00	8.28	B
ATOM	2601	O	ALA	B	86	56.272	65.388	33.414	1.00	9.05	B
ATOM	2602	N	ILE	B	87	58.318	64.795	32.676	1.00	8.75	B
ATOM	2603	CA	ILE	B	87	58.300	65.686	31.520	1.00	9.37	B
ATOM	2604	CB	ILE	B	87	59.341	66.823	31.675	1.00	9.87	B
ATOM	2605	CG2	ILE	B	87	59.286	67.753	30.470	1.00	11.56	B
ATOM	2606	CG1	ILE	B	87	59.052	67.609	32.960	1.00	9.11	B
ATOM	2607	CD1	ILE	B	87	60.022	68.736	33.238	1.00	11.51	B
ATOM	2608	C	ILE	B	87	58.612	64.810	30.311	1.00	9.80	B
ATOM	2609	O	ILE	B	87	59.768	64.458	30.053	1.00	9.23	B
ATOM	2610	N	ALA	B	88	57.563	64.462	29.572	1.00	9.10	B
ATOM	2611	CA	ALA	B	88	57.681	63.569	28.427	1.00	9.13	B
ATOM	2612	CB	ALA	B	88	57.847	62.140	28.934	1.00	11.65	B
ATOM	2613	C	ALA	B	88	56.408	63.667	27.594	1.00	8.94	B
ATOM	2614	O	ALA	B	88	55.499	64.424	27.930	1.00	8.74	B
ATOM	2615	N	PRO	B	89	56.336	62.920	26.480	1.00	8.93	B
ATOM	2616	CD	PRO	B	89	57.448	62.251	25.779	1.00	9.53	B
ATOM	2617	CA	PRO	B	89	55.127	62.960	25.649	1.00	9.58	B
ATOM	2618	CB	PRO	B	89	55.642	62.481	24.287	1.00	10.07	B
ATOM	2619	CG	PRO	B	89	56.712	61.472	24.635	1.00	9.31	B
ATOM	2620	C	PRO	B	89	54.080	62.072	26.339	1.00	8.71	B
ATOM	2621	O	PRO	B	89	53.659	61.038	25.812	1.00	9.89	B
ATOM	2622	N	LEU	B	90	53.682	62.494	27.536	1.00	8.48	B
ATOM	2623	CA	LEU	B	90	52.721	61.763	28.357	1.00	8.00	B
ATOM	2624	CB	LEU	B	90	53.138	61.902	29.822	1.00	8.24	B
ATOM	2625	CG	LEU	B	90	52.294	61.143	30.850	1.00	7.30	B
ATOM	2626	CD1	LEU	B	90	52.467	59.638	30.677	1.00	8.93	B
ATOM	2627	CD2	LEU	B	90	52.718	61.562	32.243	1.00	10.45	B
ATOM	2628	C	LEU	B	90	51.311	62.259	28.092	1.00	7.45	B
ATOM	2629	O	LEU	B	90	50.937	63.364	28.495	1.00	8.57	B
ATOM	2630	N	THR	B	91	50.519	61.427	27.433	1.00	7.15	B
ATOM	2631	CA	THR	B	91	49.161	61.794	27.089	1.00	8.89	B
ATOM	2632	CB	THR	B	91	48.597	60.775	26.103	1.00	9.01	B
ATOM	2633	OG1	THR	B	91	49.485	60.701	24.981	1.00	9.51	B
ATOM	2634	CG2	THR	B	91	47.210	61.182	25.620	1.00	10.88	B
ATOM	2635	C	THR	B	91	48.250	61.931	28.298	1.00	9.07	B
ATOM	2636	O	THR	B	91	48.247	61.096	29.204	1.00	8.09	B
ATOM	2637	N	ILE	B	92	47.489	63.016	28.312	1.00	9.29	B
ATOM	2638	CA	ILE	B	92	46.552	63.276	29.392	1.00	8.36	B
ATOM	2639	CB	ILE	B	92	46.109	64.758	29.386	1.00	8.94	B
ATOM	2640	CG2	ILE	B	92	44.990	64.984	30.399	1.00	9.48	B
ATOM	2641	CG1	ILE	B	92	47.314	65.654	29.682	1.00	9.04	B
ATOM	2642	CD1	ILE	B	92	47.030	67.131	29.538	1.00	11.48	B

ATOM	2643	C	ILE	B	92	45.344	62.371	29.186	1.00	10.25	B
ATOM	2644	O	ILE	B	92	44.636	62.484	28.183	1.00	10.43	B
ATOM	2645	N	THR	B	93	45.136	61.447	30.118	1.00	9.09	B
ATOM	2646	CA	THR	B	93	44.001	60.532	30.039	1.00	10.64	B
ATOM	2647	CB	THR	B	93	44.434	59.090	29.707	1.00	10.99	B
ATOM	2648	OG1	THR	B	93	45.168	58.543	30.810	1.00	12.28	B
ATOM	2649	CG2	THR	B	93	45.305	59.065	28.457	1.00	11.50	B
ATOM	2650	C	THR	B	93	43.288	60.513	31.382	1.00	9.94	B
ATOM	2651	O	THR	B	93	43.864	60.876	32.407	1.00	10.71	B
ATOM	2652	N	LEU	B	94	42.034	60.075	31.368	1.00	10.44	B
ATOM	2653	CA	LEU	B	94	41.226	60.019	32.576	1.00	11.79	B
ATOM	2654	CB	LEU	B	94	39.814	59.549	32.215	1.00	12.07	B
ATOM	2655	CG	LEU	B	94	38.891	59.243	33.400	1.00	12.92	B
ATOM	2656	CD1	LEU	B	94	38.623	60.506	34.198	1.00	14.90	B
ATOM	2657	CD2	LEU	B	94	37.591	58.650	32.881	1.00	16.53	B
ATOM	2658	C	LEU	B	94	41.848	59.168	33.674	1.00	10.90	B
ATOM	2659	O	LEU	B	94	41.979	59.617	34.809	1.00	11.19	B
ATOM	2660	N	VAL	B	95	42.230	57.939	33.344	1.00	11.42	B
ATOM	2661	CA	VAL	B	95	42.791	57.059	34.360	1.00	12.28	B
ATOM	2662	CB	VAL	B	95	43.048	55.630	33.813	1.00	12.96	B
ATOM	2663	CG1	VAL	B	95	41.729	54.989	33.409	1.00	16.92	B
ATOM	2664	CG2	VAL	B	95	44.007	55.673	32.640	1.00	14.82	B
ATOM	2665	C	VAL	B	95	44.064	57.613	34.984	1.00	11.38	B
ATOM	2666	O	VAL	B	95	44.313	57.404	36.168	1.00	12.07	B
ATOM	2667	N	ARG	B	96	44.868	58.326	34.199	1.00	10.76	B
ATOM	2668	CA	ARG	B	96	46.097	58.910	34.730	1.00	10.29	B
ATOM	2669	CB	ARG	B	96	47.046	59.248	33.572	1.00	9.54	B
ATOM	2670	CG	ARG	B	96	47.619	58.041	32.856	1.00	10.00	B
ATOM	2671	CD	ARG	B	96	48.438	58.469	31.655	1.00	9.38	B
ATOM	2672	NE	ARG	B	96	49.028	57.323	30.974	1.00	9.28	B
ATOM	2673	CZ	ARG	B	96	49.552	57.376	29.757	1.00	8.53	B
ATOM	2674	NH1	ARG	B	96	49.556	58.519	29.087	1.00	9.89	B
ATOM	2675	NH2	ARG	B	96	50.077	56.290	29.210	1.00	9.10	B
ATOM	2676	C	ARG	B	96	45.761	60.121	35.598	1.00	9.41	B
ATOM	2677	O	ARG	B	96	46.335	60.308	36.668	1.00	10.66	B
ATOM	2678	N	GLU	B	97	44.825	60.939	35.124	1.00	9.82	B
ATOM	2679	CA	GLU	B	97	44.404	62.141	35.842	1.00	10.05	B
ATOM	2680	CB	GLU	B	97	43.397	62.910	34.981	1.00	10.93	B
ATOM	2681	CG	GLU	B	97	42.881	64.202	35.611	1.00	12.01	B
ATOM	2682	CD	GLU	B	97	43.933	65.292	35.683	1.00	11.95	B
ATOM	2683	OE1	GLU	B	97	44.845	65.194	36.530	1.00	12.88	B
ATOM	2684	OE2	GLU	B	97	43.846	66.250	34.885	1.00	14.79	B
ATOM	2685	C	GLU	B	97	43.841	61.791	37.213	1.00	11.65	B
ATOM	2686	O	GLU	B	97	43.883	62.602	38.138	1.00	11.62	B
ATOM	2687	N	GLU	B	98	43.305	60.583	37.335	1.00	10.80	B
ATOM	2688	CA	GLU	B	98	42.726	60.137	38.594	1.00	12.25	B
ATOM	2689	CB	GLU	B	98	41.868	58.892	38.334	1.00	13.12	B
ATOM	2690	CG	GLU	B	98	40.541	59.198	37.643	1.00	14.07	B
ATOM	2691	CD	GLU	B	98	39.787	57.953	37.208	1.00	15.79	B
ATOM	2692	OE1	GLU	B	98	38.618	58.090	36.789	1.00	18.87	B
ATOM	2693	OE2	GLU	B	98	40.356	56.841	37.269	1.00	17.43	B
ATOM	2694	C	GLU	B	98	43.775	59.913	39.676	1.00	12.93	B
ATOM	2695	O	GLU	B	98	43.468	60.027	40.866	1.00	13.27	B
ATOM	2696	N	VAL	B	99	45.012	59.617	39.282	1.00	11.95	B
ATOM	2697	CA	VAL	B	99	46.048	59.346	40.276	1.00	11.57	B
ATOM	2698	CB	VAL	B	99	46.627	57.925	40.091	1.00	12.29	B
ATOM	2699	CG1	VAL	B	99	45.506	56.901	40.222	1.00	14.41	B
ATOM	2700	CG2	VAL	B	99	47.318	57.800	38.736	1.00	11.21	B
ATOM	2701	C	VAL	B	99	47.198	60.345	40.404	1.00	11.85	B
ATOM	2702	O	VAL	B	99	47.912	60.334	41.402	1.00	11.93	B
ATOM	2703	N	ILE	B	100	47.394	61.195	39.401	1.00	10.79	B

ATOM	2704	CA	ILE	B	100	48.441	62.213	39.469	1.00	9.94	B
ATOM	2705	CB	ILE	B	100	49.712	61.820	38.640	1.00	9.74	B
ATOM	2706	CG2	ILE	B	100	50.484	60.712	39.362	1.00	11.41	B
ATOM	2707	CG1	ILE	B	100	49.336	61.392	37.217	1.00	10.34	B
ATOM	2708	CD1	ILE	B	100	48.894	62.519	36.298	1.00	12.72	B
ATOM	2709	C	ILE	B	100	47.877	63.535	38.964	1.00	10.66	B
ATOM	2710	O	ILE	B	100	46.751	63.575	38.466	1.00	10.93	B
ATOM	2711	N	ASP	B	101	48.638	64.616	39.124	1.00	10.24	B
ATOM	2712	CA	ASP	B	101	48.210	65.934	38.650	1.00	11.76	B
ATOM	2713	CB	ASP	B	101	48.604	67.031	39.655	1.00	12.35	B
ATOM	2714	CG	ASP	B	101	47.795	66.994	40.940	1.00	11.56	B
ATOM	2715	OD1	ASP	B	101	46.712	66.373	40.967	1.00	13.87	B
ATOM	2716	OD2	ASP	B	101	48.255	67.614	41.925	1.00	14.17	B
ATOM	2717	C	ASP	B	101	48.845	66.195	37.285	1.00	10.88	B
ATOM	2718	O	ASP	B	101	50.017	65.872	37.068	1.00	13.39	B
ATOM	2719	N	PHE	B	102	48.070	66.775	36.371	1.00	10.57	B
ATOM	2720	CA	PHE	B	102	48.546	67.128	35.034	1.00	10.95	B
ATOM	2721	CB	PHE	B	102	47.659	66.498	33.956	1.00	10.59	B
ATOM	2722	CG	PHE	B	102	48.068	65.123	33.520	1.00	10.43	B
ATOM	2723	CD1	PHE	B	102	49.236	64.916	32.991	1.00	10.86	B
ATOM	2724	CD2	PHE	B	102	47.214	64.157	33.603	1.00	11.54	B
ATOM	2725	CE1	PHE	B	102	49.609	63.664	32.488	1.00	10.96	B
ATOM	2726	CE2	PHE	B	102	47.490	62.875	33.132	1.00	12.28	B
ATOM	2727	CZ	PHE	B	102	48.712	62.626	32.562	1.00	10.89	B
ATOM	2728	C	PHE	B	102	48.503	68.638	34.881	1.00	11.31	B
ATOM	2729	O	PHE	B	102	47.583	69.294	35.373	1.00	11.38	B
ATOM	2730	N	SER	B	103	49.488	69.185	34.182	1.00	10.15	B
ATOM	2731	CA	SER	B	103	49.504	70.606	33.882	1.00	10.78	B
ATOM	2732	CB	SER	B	103	50.916	71.025	33.479	1.00	10.95	B
ATOM	2733	OG	SER	B	103	51.238	70.473	32.201	1.00	11.20	B
ATOM	2734	C	SER	B	103	48.559	70.713	32.694	1.00	11.47	B
ATOM	2735	O	SER	B	103	48.115	69.701	32.145	1.00	11.65	B
ATOM	2736	N	LYS	B	104	48.244	71.941	32.298	1.00	12.25	B
ATOM	2737	CA	LYS	B	104	47.439	72.141	31.111	1.00	12.94	B
ATOM	2738	CB	LYS	B	104	47.125	73.633	30.960	1.00	14.44	B
ATOM	2739	CG	LYS	B	104	46.200	74.190	32.033	1.00	16.62	B
ATOM	2740	CD	LYS	B	104	44.876	73.439	32.048	1.00	15.36	B
ATOM	2741	CE	LYS	B	104	43.868	74.061	33.019	1.00	15.44	B
ATOM	2742	NZ	LYS	B	104	44.262	73.945	34.457	1.00	15.24	B
ATOM	2743	C	LYS	B	104	48.357	71.583	30.015	1.00	11.94	B
ATOM	2744	O	LYS	B	104	49.576	71.535	30.192	1.00	11.20	B
ATOM	2745	N	PRO	B	105	47.796	71.169	28.872	1.00	11.15	B
ATOM	2746	CD	PRO	B	105	46.369	71.191	28.518	1.00	13.19	B
ATOM	2747	CA	PRO	B	105	48.604	70.611	27.777	1.00	11.83	B
ATOM	2748	CB	PRO	B	105	47.554	70.259	26.718	1.00	14.56	B
ATOM	2749	CG	PRO	B	105	46.275	70.014	27.488	1.00	16.32	B
ATOM	2750	C	PRO	B	105	49.698	71.534	27.261	1.00	9.71	B
ATOM	2751	O	PRO	B	105	49.480	72.734	27.112	1.00	10.01	B
ATOM	2752	N	PHE	B	106	50.872	70.969	26.978	1.00	9.28	B
ATOM	2753	CA	PHE	B	106	51.961	71.764	26.423	1.00	9.25	B
ATOM	2754	CB	PHE	B	106	53.271	71.499	27.189	1.00	8.75	B
ATOM	2755	CG	PHE	B	106	53.781	70.080	27.104	1.00	8.48	B
ATOM	2756	CD1	PHE	B	106	54.389	69.661	26.034	1.00	8.53	B
ATOM	2757	CD2	PHE	B	106	53.661	69.290	28.130	1.00	8.74	B
ATOM	2758	CE1	PHE	B	106	54.941	68.365	25.944	1.00	8.18	B
ATOM	2759	CE2	PHE	B	106	54.176	67.980	28.138	1.00	9.15	B
ATOM	2760	CZ	PHE	B	106	54.830	67.513	27.021	1.00	8.81	B
ATOM	2761	C	PHE	B	106	52.060	71.513	24.920	1.00	8.84	B
ATOM	2762	O	PHE	B	106	52.751	72.238	24.207	1.00	10.20	B
ATOM	2763	N	MET	B	107	51.349	70.499	24.437	1.00	8.41	B
ATOM	2764	CA	MET	B	107	51.357	70.156	23.019	1.00	9.63	B

ATOM	2765	CB	MET	B	107	52.612	69.329	22.702	1.00	12.06	B
ATOM	2766	CG	MET	B	107	52.735	68.894	21.240	1.00	13.02	B
ATOM	2767	SD	MET	B	107	54.220	67.912	20.886	1.00	14.69	B
ATOM	2768	CE	MET	B	107	55.453	69.181	20.827	1.00	16.10	B
ATOM	2769	C	MET	B	107	50.074	69.407	22.689	1.00	9.16	B
ATOM	2770	O	MET	B	107	49.612	68.580	23.477	1.00	8.38	B
ATOM	2771	N	SER	B	108	49.509	69.688	21.522	1.00	9.03	B
ATOM	2772	CA	SER	B	108	48.289	69.020	21.085	1.00	11.10	B
ATOM	2773	CB	SER	B	108	47.425	70.011	20.314	1.00	13.63	B
ATOM	2774	OG	SER	B	108	48.083	70.392	19.120	1.00	14.86	B
ATOM	2775	C	SER	B	108	48.640	67.805	20.234	1.00	10.23	B
ATOM	2776	O	SER	B	108	49.702	67.744	19.614	1.00	10.94	B
ATOM	2777	N	LEU	B	109	47.739	66.832	20.215	1.00	11.38	B
ATOM	2778	CA	LEU	B	109	47.932	65.645	19.397	1.00	10.10	B
ATOM	2779	CB	LEU	B	109	49.071	64.789	19.953	1.00	11.95	B
ATOM	2780	CG	LEU	B	109	48.706	63.945	21.173	1.00	15.12	B
ATOM	2781	CD1	LEU	B	109	49.597	62.739	21.219	1.00	19.71	B
ATOM	2782	CD2	LEU	B	109	48.824	64.759	22.437	1.00	14.94	B
ATOM	2783	C	LEU	B	109	46.631	64.872	19.325	1.00	9.73	B
ATOM	2784	O	LEU	B	109	45.696	65.114	20.088	1.00	10.33	B
ATOM	2785	N	GLY	B	110	46.593	63.932	18.393	1.00	9.90	B
ATOM	2786	CA	GLY	B	110	45.441	63.075	18.220	1.00	9.38	B
ATOM	2787	C	GLY	B	110	45.945	61.804	17.577	1.00	9.48	B
ATOM	2788	O	GLY	B	110	46.981	61.824	16.912	1.00	9.14	B
ATOM	2789	N	ILE	B	111	45.246	60.694	17.787	1.00	9.65	B
ATOM	2790	CA	ILE	B	111	45.655	59.443	17.166	1.00	9.35	B
ATOM	2791	CB	ILE	B	111	44.767	58.279	17.643	1.00	9.94	B
ATOM	2792	CG2	ILE	B	111	45.057	57.020	16.831	1.00	10.66	B
ATOM	2793	CG1	ILE	B	111	45.028	58.033	19.130	1.00	10.22	B
ATOM	2794	CD1	ILE	B	111	44.019	57.120	19.792	1.00	10.21	B
ATOM	2795	C	ILE	B	111	45.512	59.671	15.666	1.00	9.48	B
ATOM	2796	O	ILE	B	111	44.561	60.313	15.212	1.00	9.88	B
ATOM	2797	N	SER	B	112	46.475	59.164	14.905	1.00	9.02	B
ATOM	2798	CA	SER	B	112	46.490	59.360	13.462	1.00	9.29	B
ATOM	2799	CB	SER	B	112	47.377	60.566	13.145	1.00	9.53	B
ATOM	2800	OG	SER	B	112	48.730	60.281	13.466	1.00	10.83	B
ATOM	2801	C	SER	B	112	46.965	58.115	12.745	1.00	9.10	B
ATOM	2802	O	SER	B	112	47.467	57.177	13.360	1.00	9.87	B
ATOM	2803	N	ILE	B	113	46.831	58.143	11.425	1.00	9.61	B
ATOM	2804	CA	ILE	B	113	47.237	57.036	10.573	1.00	10.86	B
ATOM	2805	CB	ILE	B	113	46.128	56.682	9.556	1.00	10.47	B
ATOM	2806	CG2	ILE	B	113	46.583	55.521	8.678	1.00	12.50	B
ATOM	2807	CG1	ILE	B	113	44.829	56.346	10.290	1.00	10.99	B
ATOM	2808	CD1	ILE	B	113	43.621	56.260	9.385	1.00	11.97	B
ATOM	2809	C	ILE	B	113	48.500	57.360	9.779	1.00	9.78	B
ATOM	2810	O	ILE	B	113	48.582	58.403	9.126	1.00	10.59	B
ATOM	2811	N	MET	B	114	49.483	56.468	9.852	1.00	10.31	B
ATOM	2812	CA	MET	B	114	50.712	56.611	9.079	1.00	10.19	B
ATOM	2813	CB	MET	B	114	51.952	56.472	9.968	1.00	10.87	B
ATOM	2814	CG	MET	B	114	53.248	56.420	9.141	1.00	10.87	B
ATOM	2815	SD	MET	B	114	54.716	55.935	10.065	1.00	12.20	B
ATOM	2816	CE	MET	B	114	54.960	57.401	11.082	1.00	13.18	B
ATOM	2817	C	MET	B	114	50.679	55.522	8.021	1.00	11.79	B
ATOM	2818	O	MET	B	114	50.500	54.345	8.341	1.00	10.71	B
ATOM	2819	N	ILE	B	115	50.848	55.916	6.764	1.00	11.46	B
ATOM	2820	CA	ILE	B	115	50.869	54.964	5.664	1.00	11.48	B
ATOM	2821	CB	ILE	B	115	49.708	55.182	4.658	1.00	12.30	B
ATOM	2822	CG2	ILE	B	115	48.376	54.889	5.317	1.00	12.90	B
ATOM	2823	CG1	ILE	B	115	49.768	56.606	4.090	1.00	13.44	B
ATOM	2824	CD1	ILE	B	115	48.838	56.840	2.906	1.00	17.65	B
ATOM	2825	C	ILE	B	115	52.150	55.147	4.873	1.00	11.42	B

ATOM	2826	O	ILE	B	115	52.814	56.183	4.966	1.00	12.08	B
ATOM	2827	N	LYS	B	116	52.502	54.125	4.104	1.00	13.24	B
ATOM	2828	CA	LYS	B	116	53.655	54.213	3.227	1.00	10.86	B
ATOM	2829	CB	LYS	B	116	54.161	52.812	2.879	1.00	12.45	B
ATOM	2830	CG	LYS	B	116	55.410	52.821	2.009	1.00	13.34	B
ATOM	2831	CD	LYS	B	116	55.911	51.416	1.723	1.00	16.54	B
ATOM	2832	CE	LYS	B	116	57.216	51.446	0.938	1.00	18.02	B
ATOM	2833	NZ	LYS	B	116	57.032	51.944	-0.453	1.00	19.21	B
ATOM	2834	C	LYS	B	116	53.041	54.945	2.040	1.00	11.09	B
ATOM	2835	O	LYS	B	116	51.917	54.638	1.644	1.00	11.68	B
ATOM	2836	N	LYS	B	117	53.755	55.914	1.482	1.00	11.23	B
ATOM	2837	CA	LYS	B	117	53.224	56.665	0.349	1.00	11.74	B
ATOM	2838	CB	LYS	B	117	54.313	57.586	-0.209	1.00	12.60	B
ATOM	2839	CG	LYS	B	117	54.610	58.789	0.672	1.00	13.79	B
ATOM	2840	CD	LYS	B	117	55.636	59.715	0.031	1.00	13.40	B
ATOM	2841	CE	LYS	B	117	55.903	60.935	0.904	1.00	15.47	B
ATOM	2842	NZ	LYS	B	117	56.912	61.846	0.294	1.00	15.56	B
ATOM	2843	C	LYS	B	117	52.633	55.741	-0.705	1.00	11.47	B
ATOM	2844	O	LYS	B	117	53.233	54.725	-1.067	1.00	11.50	B
ATOM	2845	N	GLY	B	118	51.447	56.095	-1.187	1.00	12.24	B
ATOM	2846	CA	GLY	B	118	50.801	55.294	-2.212	1.00	13.17	B
ATOM	2847	C	GLY	B	118	49.736	54.336	-1.709	1.00	14.01	B
ATOM	2848	O	GLY	B	118	48.956	53.802	-2.499	1.00	15.21	B
ATOM	2849	N	THR	B	119	49.698	54.108	-0.400	1.00	13.30	B
ATOM	2850	CA	THR	B	119	48.702	53.210	0.176	1.00	13.36	B
ATOM	2851	CB	THR	B	119	48.958	52.999	1.676	1.00	13.62	B
ATOM	2852	OG1	THR	B	119	50.257	52.426	1.854	1.00	13.79	B
ATOM	2853	CG2	THR	B	119	47.920	52.059	2.272	1.00	14.41	B
ATOM	2854	C	THR	B	119	47.308	53.801	-0.022	1.00	13.25	B
ATOM	2855	O	THR	B	119	47.061	54.957	0.315	1.00	13.63	B
ATOM	2856	N	PRO	B	120	46.376	53.008	-0.578	1.00	15.18	B
ATOM	2857	CD	PRO	B	120	46.588	51.676	-1.171	1.00	14.18	B
ATOM	2858	CA	PRO	B	120	45.008	53.472	-0.820	1.00	15.67	B
ATOM	2859	CB	PRO	B	120	44.527	52.508	-1.904	1.00	16.05	B
ATOM	2860	CG	PRO	B	120	45.117	51.200	-1.471	1.00	16.26	B
ATOM	2861	C	PRO	B	120	44.141	53.538	0.435	1.00	15.82	B
ATOM	2862	O	PRO	B	120	43.130	52.843	0.541	1.00	17.43	B
ATOM	2863	N	ILE	B	121	44.544	54.391	1.372	1.00	15.76	B
ATOM	2864	CA	ILE	B	121	43.828	54.587	2.632	1.00	14.92	B
ATOM	2865	CB	ILE	B	121	44.529	53.848	3.796	1.00	14.97	B
ATOM	2866	CG2	ILE	B	121	43.962	54.318	5.131	1.00	12.68	B
ATOM	2867	CG1	ILE	B	121	44.370	52.334	3.634	1.00	14.33	B
ATOM	2868	CD1	ILE	B	121	42.945	51.832	3.803	1.00	15.40	B
ATOM	2869	C	ILE	B	121	43.800	56.082	2.945	1.00	15.76	B
ATOM	2870	O	ILE	B	121	44.832	56.750	2.885	1.00	16.49	B
ATOM	2871	N	GLU	B	122	42.625	56.604	3.284	1.00	18.35	B
ATOM	2872	CA	GLU	B	122	42.489	58.025	3.581	1.00	20.17	B
ATOM	2873	CB	GLU	B	122	41.780	58.710	2.406	1.00	23.24	B
ATOM	2874	CG	GLU	B	122	42.475	58.553	1.066	1.00	29.97	B
ATOM	2875	CD	GLU	B	122	41.732	59.255	-0.054	1.00	34.16	B
ATOM	2876	OE1	GLU	B	122	40.546	58.930	-0.277	1.00	37.06	B
ATOM	2877	OE2	GLU	B	122	42.332	60.131	-0.712	1.00	37.63	B
ATOM	2878	C	GLU	B	122	41.787	58.303	4.905	1.00	19.62	B
ATOM	2879	O	GLU	B	122	41.633	59.463	5.287	1.00	20.59	B
ATOM	2880	N	SER	B	123	41.362	57.257	5.609	1.00	17.88	B
ATOM	2881	CA	SER	B	123	40.658	57.453	6.874	1.00	16.36	B
ATOM	2882	CB	SER	B	123	39.255	57.981	6.575	1.00	16.51	B
ATOM	2883	OG	SER	B	123	38.469	56.965	5.970	1.00	19.10	B
ATOM	2884	C	SER	B	123	40.604	56.182	7.707	1.00	14.92	B
ATOM	2885	O	SER	B	123	40.928	55.096	7.230	1.00	13.22	B
ATOM	2886	N	ALA	B	124	40.183	56.330	8.960	1.00	14.58	B

ATOM	2887	CA	ALA	B	124	40.047	55.186	9.852	1.00	14.74	B
ATOM	2888	CB	ALA	B	124	39.681	55.653	11.253	1.00	14.54	B
ATOM	2889	C	ALA	B	124	38.948	54.287	9.289	1.00	14.66	B
ATOM	2890	O	ALA	B	124	39.046	53.063	9.342	1.00	15.39	B
ATOM	2891	N	ALA	B	125	37.900	54.903	8.749	1.00	14.87	B
ATOM	2892	CA	ALA	B	125	36.803	54.146	8.160	1.00	14.63	B
ATOM	2893	CB	ALA	B	125	35.747	55.092	7.603	1.00	16.21	B
ATOM	2894	C	ALA	B	125	37.353	53.249	7.053	1.00	14.66	B
ATOM	2895	O	ALA	B	125	36.984	52.077	6.951	1.00	15.81	B
ATOM	2896	N	ASP	B	126	38.239	53.798	6.224	1.00	15.21	B
ATOM	2897	CA	ASP	B	126	38.841	53.022	5.142	1.00	14.84	B
ATOM	2898	CB	ASP	B	126	39.836	53.890	4.359	1.00	16.41	B
ATOM	2899	CG	ASP	B	126	39.157	54.897	3.449	1.00	19.30	B
ATOM	2900	OD1	ASP	B	126	37.951	54.740	3.157	1.00	19.38	B
ATOM	2901	OD2	ASP	B	126	39.845	55.841	3.012	1.00	20.31	B
ATOM	2902	C	ASP	B	126	39.502	51.767	5.707	1.00	14.18	B
ATOM	2903	O	ASP	B	126	39.317	50.667	5.188	1.00	16.38	B
ATOM	2904	N	LEU	B	127	40.283	51.939	6.768	1.00	14.10	B
ATOM	2905	CA	LEU	B	127	40.971	50.816	7.392	1.00	14.07	B
ATOM	2906	CB	LEU	B	127	41.920	51.336	8.478	1.00	13.27	B
ATOM	2907	CG	LEU	B	127	43.217	52.037	8.074	1.00	13.45	B
ATOM	2908	CD1	LEU	B	127	43.886	52.575	9.329	1.00	13.91	B
ATOM	2909	CD2	LEU	B	127	44.141	51.071	7.345	1.00	12.03	B
ATOM	2910	C	LEU	B	127	40.001	49.782	7.944	1.00	14.19	B
ATOM	2911	O	LEU	B	127	40.156	48.588	7.704	1.00	14.70	B
ATOM	2912	N	SER	B	128	39.005	50.250	8.689	1.00	15.92	B
ATOM	2913	CA	SER	B	128	38.028	49.369	9.320	1.00	16.44	B
ATOM	2914	CB	SER	B	128	37.075	50.218	10.169	1.00	16.30	B
ATOM	2915	OG	SER	B	128	36.163	50.936	9.353	1.00	17.54	B
ATOM	2916	C	SER	B	128	37.275	48.459	8.359	1.00	17.64	B
ATOM	2917	O	SER	B	128	36.909	47.340	8.723	1.00	17.84	B
ATOM	2918	N	LYS	B	129	37.045	48.933	7.140	1.00	18.64	B
ATOM	2919	CA	LYS	B	129	36.291	48.172	6.147	1.00	21.45	B
ATOM	2920	CB	LYS	B	129	35.591	49.161	5.210	1.00	23.01	B
ATOM	2921	CG	LYS	B	129	34.696	50.170	5.905	1.00	26.51	B
ATOM	2922	CD	LYS	B	129	34.148	51.180	4.909	1.00	30.10	B
ATOM	2923	CE	LYS	B	129	33.342	52.266	5.602	1.00	32.04	B
ATOM	2924	NZ	LYS	B	129	32.858	53.291	4.635	1.00	32.54	B
ATOM	2925	C	LYS	B	129	37.096	47.135	5.374	1.00	22.41	B
ATOM	2926	O	LYS	B	129	36.567	46.508	4.456	1.00	24.11	B
ATOM	2927	N	GLN	B	130	38.361	46.938	5.731	1.00	21.03	B
ATOM	2928	CA	GLN	B	130	39.176	45.976	5.000	1.00	18.74	B
ATOM	2929	CB	GLN	B	130	39.796	46.699	3.801	1.00	18.95	B
ATOM	2930	CG	GLN	B	130	40.709	47.855	4.180	1.00	17.18	B
ATOM	2931	CD	GLN	B	130	42.095	47.392	4.572	1.00	16.68	B
ATOM	2932	OE1	GLN	B	130	42.830	46.846	3.753	1.00	15.68	B
ATOM	2933	NE2	GLN	B	130	42.459	47.605	5.831	1.00	14.42	B
ATOM	2934	C	GLN	B	130	40.203	45.264	5.873	1.00	17.60	B
ATOM	2935	O	GLN	B	130	40.355	45.572	7.057	1.00	18.74	B
ATOM	2936	N	THR	B	131	40.908	44.309	5.269	1.00	18.69	B
ATOM	2937	CA	THR	B	131	41.926	43.533	5.968	1.00	18.81	B
ATOM	2938	CB	THR	B	131	41.385	42.152	6.393	1.00	19.46	B
ATOM	2939	OG1	THR	B	131	40.921	41.444	5.237	1.00	19.99	B
ATOM	2940	CG2	THR	B	131	40.239	42.310	7.384	1.00	18.92	B
ATOM	2941	C	THR	B	131	43.178	43.317	5.118	1.00	19.13	B
ATOM	2942	O	THR	B	131	44.192	42.835	5.619	1.00	19.35	B
ATOM	2943	N	GLU	B	132	43.101	43.667	3.836	1.00	19.48	B
ATOM	2944	CA	GLU	B	132	44.236	43.516	2.923	1.00	19.54	B
ATOM	2945	CB	GLU	B	132	43.817	43.982	1.524	1.00	21.53	B
ATOM	2946	CG	GLU	B	132	44.962	44.077	0.523	1.00	29.35	B
ATOM	2947	CD	GLU	B	132	45.722	42.774	0.370	1.00	33.86	B

ATOM	2948	OE1	GLU	B	132	45.088	41.748	0.047	1.00	36.49	B
ATOM	2949	OE2	GLU	B	132	46.956	42.776	0.570	1.00	37.14	B
ATOM	2950	C	GLU	B	132	45.430	44.285	3.476	1.00	17.61	B
ATOM	2951	O	GLU	B	132	46.560	43.791	3.494	1.00	17.21	B
ATOM	2952	N	ILE	B	133	45.166	45.508	3.913	1.00	15.23	B
ATOM	2953	CA	ILE	B	133	46.191	46.355	4.493	1.00	14.15	B
ATOM	2954	CB	ILE	B	133	45.970	47.829	4.103	1.00	14.40	B
ATOM	2955	CG2	ILE	B	133	47.019	48.710	4.762	1.00	14.60	B
ATOM	2956	CG1	ILE	B	133	46.020	47.970	2.580	1.00	16.04	B
ATOM	2957	CD1	ILE	B	133	45.624	49.339	2.071	1.00	16.35	B
ATOM	2958	C	ILE	B	133	46.052	46.193	6.002	1.00	12.86	B
ATOM	2959	O	ILE	B	133	45.075	46.649	6.596	1.00	14.16	B
ATOM	2960	N	ALA	B	134	47.014	45.515	6.614	1.00	11.59	B
ATOM	2961	CA	ALA	B	134	46.981	45.294	8.055	1.00	12.05	B
ATOM	2962	CB	ALA	B	134	48.019	44.256	8.447	1.00	11.73	B
ATOM	2963	C	ALA	B	134	47.262	46.608	8.762	1.00	11.57	B
ATOM	2964	O	ALA	B	134	47.892	47.500	8.195	1.00	11.94	B
ATOM	2965	N	TYR	B	135	46.799	46.734	10.000	1.00	11.30	B
ATOM	2966	CA	TYR	B	135	47.032	47.959	10.750	1.00	10.32	B
ATOM	2967	CB	TYR	B	135	45.987	49.012	10.353	1.00	10.24	B
ATOM	2968	CG	TYR	B	135	44.547	48.604	10.580	1.00	10.46	B
ATOM	2969	CD1	TYR	B	135	43.901	48.892	11.782	1.00	12.70	B
ATOM	2970	CE1	TYR	B	135	42.569	48.538	11.985	1.00	11.96	B
ATOM	2971	CD2	TYR	B	135	43.825	47.947	9.585	1.00	11.79	B
ATOM	2972	CE2	TYR	B	135	42.493	47.588	9.779	1.00	11.82	B
ATOM	2973	CZ	TYR	B	135	41.873	47.889	10.979	1.00	11.81	B
ATOM	2974	OH	TYR	B	135	40.556	47.545	11.174	1.00	11.82	B
ATOM	2975	C	TYR	B	135	47.071	47.660	12.236	1.00	10.77	B
ATOM	2976	O	TYR	B	135	46.371	46.769	12.711	1.00	10.80	B
ATOM	2977	N	GLY	B	136	47.894	48.407	12.966	1.00	10.64	B
ATOM	2978	CA	GLY	B	136	48.011	48.187	14.393	1.00	10.44	B
ATOM	2979	C	GLY	B	136	48.539	49.378	15.170	1.00	11.38	B
ATOM	2980	O	GLY	B	136	48.744	50.469	14.623	1.00	10.73	B
ATOM	2981	N	THR	B	137	48.771	49.150	16.457	1.00	11.87	B
ATOM	2982	CA	THR	B	137	49.256	50.173	17.376	1.00	12.05	B
ATOM	2983	CB	THR	B	137	48.162	50.568	18.389	1.00	14.38	B
ATOM	2984	OG1	THR	B	137	47.931	49.465	19.279	1.00	14.95	B
ATOM	2985	CG2	THR	B	137	46.855	50.908	17.685	1.00	14.15	B
ATOM	2986	C	THR	B	137	50.414	49.623	18.201	1.00	12.31	B
ATOM	2987	O	THR	B	137	50.849	48.483	18.015	1.00	11.64	B
ATOM	2988	N	LEU	B	138	50.911	50.446	19.118	1.00	12.97	B
ATOM	2989	CA	LEU	B	138	51.967	50.018	20.019	1.00	13.12	B
ATOM	2990	CB	LEU	B	138	52.521	51.230	20.768	1.00	13.27	B
ATOM	2991	CG	LEU	B	138	53.491	52.127	20.004	1.00	14.13	B
ATOM	2992	CD1	LEU	B	138	53.699	53.428	20.771	1.00	14.57	B
ATOM	2993	CD2	LEU	B	138	54.806	51.390	19.798	1.00	15.37	B
ATOM	2994	C	LEU	B	138	51.309	48.994	20.938	1.00	15.45	B
ATOM	2995	O	LEU	B	138	50.087	49.008	21.116	1.00	15.27	B
ATOM	2996	N	ASP	B	139	52.115	48.113	21.523	1.00	16.69	B
ATOM	2997	CA	ASP	B	139	51.596	47.074	22.410	1.00	20.52	B
ATOM	2998	CB	ASP	B	139	52.621	45.943	22.503	1.00	24.45	B
ATOM	2999	CG	ASP	B	139	53.920	46.390	23.137	1.00	30.93	B
ATOM	3000	OD1	ASP	B	139	54.543	47.337	22.611	1.00	35.31	B
ATOM	3001	OD2	ASP	B	139	54.318	45.794	24.160	1.00	36.08	B
ATOM	3002	C	ASP	B	139	51.200	47.629	23.773	1.00	20.31	B
ATOM	3003	O	ASP	B	139	50.639	46.912	24.604	1.00	20.48	B
ATOM	3004	N	SER	B	140	51.505	48.900	24.008	1.00	18.89	B
ATOM	3005	CA	SER	B	140	51.163	49.553	25.266	1.00	18.19	B
ATOM	3006	CB	SER	B	140	52.215	49.208	26.325	1.00	20.09	B
ATOM	3007	OG	SER	B	140	53.475	49.758	25.990	1.00	24.92	B
ATOM	3008	C	SER	B	140	51.048	51.046	24.996	1.00	17.29	B

ATOM	3009	O	SER	B	140	51.628	51.551	24.038	1.00	18.70	B
ATOM	3010	N	GLY	B	141	50.299	51.752	25.835	1.00	15.40	B
ATOM	3011	CA	GLY	B	141	50.142	53.180	25.638	1.00	13.91	B
ATOM	3012	C	GLY	B	141	48.694	53.598	25.478	1.00	13.36	B
ATOM	3013	O	GLY	B	141	47.800	52.758	25.365	1.00	13.55	B
ATOM	3014	N	SER	B	142	48.468	54.905	25.437	1.00	10.87	B
ATOM	3015	CA	SER	B	142	47.123	55.452	25.328	1.00	10.24	B
ATOM	3016	CB	SER	B	142	47.177	56.953	25.615	1.00	12.05	B
ATOM	3017	OG	SER	B	142	47.796	57.203	26.862	1.00	18.50	B
ATOM	3018	C	SER	B	142	46.408	55.141	24.021	1.00	10.17	B
ATOM	3019	O	SER	B	142	45.182	55.122	23.980	1.00	10.97	B
ATOM	3020	N	THR	B	143	47.152	54.911	22.946	1.00	9.32	B
ATOM	3021	CA	THR	B	143	46.499	54.606	21.684	1.00	9.97	B
ATOM	3022	CB	THR	B	143	47.488	54.685	20.518	1.00	9.07	B
ATOM	3023	OG1	THR	B	143	47.987	56.024	20.423	1.00	10.01	B
ATOM	3024	CG2	THR	B	143	46.807	54.318	19.213	1.00	10.12	B
ATOM	3025	C	THR	B	143	45.858	53.222	21.743	1.00	10.20	B
ATOM	3026	O	THR	B	143	44.717	53.046	21.324	1.00	11.59	B
ATOM	3027	N	LYS	B	144	46.589	52.244	22.268	1.00	10.97	B
ATOM	3028	CA	LYS	B	144	46.046	50.899	22.382	1.00	12.59	B
ATOM	3029	CB	LYS	B	144	47.135	49.953	22.892	1.00	14.35	B
ATOM	3030	CG	LYS	B	144	46.688	48.500	22.991	1.00	17.17	B
ATOM	3031	CD	LYS	B	144	47.786	47.635	23.588	1.00	21.73	B
ATOM	3032	CE	LYS	B	144	47.327	46.200	23.777	1.00	23.63	B
ATOM	3033	NZ	LYS	B	144	48.380	45.367	24.418	1.00	25.69	B
ATOM	3034	C	LYS	B	144	44.824	50.955	23.293	1.00	12.47	B
ATOM	3035	O	LYS	B	144	43.800	50.339	23.005	1.00	13.35	B
ATOM	3036	N	GLU	B	145	44.934	51.703	24.388	1.00	13.84	B
ATOM	3037	CA	GLU	B	145	43.829	51.833	25.334	1.00	13.52	B
ATOM	3038	CB	GLU	B	145	44.314	52.574	26.584	1.00	17.01	B
ATOM	3039	CG	GLU	B	145	45.335	51.804	27.403	1.00	22.59	B
ATOM	3040	CD	GLU	B	145	44.878	50.393	27.716	1.00	26.96	B
ATOM	3041	OE1	GLU	B	145	43.740	50.229	28.203	1.00	28.77	B
ATOM	3042	OE2	GLU	B	145	45.661	49.447	27.480	1.00	30.33	B
ATOM	3043	C	GLU	B	145	42.624	52.498	24.683	1.00	12.56	B
ATOM	3044	O	GLU	B	145	41.481	52.136	24.969	1.00	12.58	B
ATOM	3045	N	PHE	B	146	42.877	53.474	23.815	1.00	12.47	B
ATOM	3046	CA	PHE	B	146	41.799	54.171	23.124	1.00	12.35	B
ATOM	3047	CB	PHE	B	146	42.381	55.212	22.160	1.00	11.86	B
ATOM	3048	CG	PHE	B	146	41.356	55.817	21.234	1.00	12.49	B
ATOM	3049	CD1	PHE	B	146	40.678	56.851	21.611	1.00	13.03	B
ATOM	3050	CD2	PHE	B	146	41.148	55.295	20.067	1.00	13.25	B
ATOM	3051	CE1	PHE	B	146	39.709	57.446	20.797	1.00	14.59	B
ATOM	3052	CE2	PHE	B	146	40.198	55.816	19.175	1.00	14.19	B
ATOM	3053	CZ	PHE	B	146	39.466	56.917	19.554	1.00	14.18	B
ATOM	3054	C	PHE	B	146	40.944	53.148	22.399	1.00	11.89	B
ATOM	3055	O	PHE	B	146	39.721	53.133	22.533	1.00	13.17	B
ATOM	3056	N	PHE	B	147	41.602	52.292	21.626	1.00	10.83	B
ATOM	3057	CA	PHE	B	147	40.898	51.277	20.861	1.00	12.64	B
ATOM	3058	CB	PHE	B	147	41.865	50.681	19.831	1.00	10.75	B
ATOM	3059	CG	PHE	B	147	42.100	51.573	18.643	1.00	10.57	B
ATOM	3060	CD1	PHE	B	147	41.169	51.718	17.754	1.00	10.12	B
ATOM	3061	CD2	PHE	B	147	43.223	52.209	18.518	1.00	9.16	B
ATOM	3062	CE1	PHE	B	147	41.320	52.549	16.641	1.00	11.01	B
ATOM	3063	CE2	PHE	B	147	43.473	53.069	17.438	1.00	10.93	B
ATOM	3064	CZ	PHE	B	147	42.500	53.239	16.483	1.00	10.78	B
ATOM	3065	C	PHE	B	147	40.233	50.239	21.752	1.00	13.03	B
ATOM	3066	O	PHE	B	147	39.075	49.893	21.538	1.00	13.65	B
ATOM	3067	N	ARG	B	148	40.952	49.761	22.760	1.00	13.08	B
ATOM	3068	CA	ARG	B	148	40.400	48.755	23.658	1.00	14.29	B
ATOM	3069	CB	ARG	B	148	41.491	48.312	24.641	1.00	14.69	B

ATOM	3070	CG	ARG	B	148	41.017	47.284	25.665	1.00	18.17	B
ATOM	3071	CD	ARG	B	148	42.129	46.894	26.629	1.00	22.36	B
ATOM	3072	NE	ARG	B	148	43.229	46.208	25.957	1.00	25.91	B
ATOM	3073	CZ	ARG	B	148	44.326	45.772	26.570	1.00	27.70	B
ATOM	3074	NH1	ARG	B	148	44.475	45.949	27.876	1.00	27.74	B
ATOM	3075	NH2	ARG	B	148	45.275	45.154	25.878	1.00	26.51	B
ATOM	3076	C	ARG	B	148	39.126	49.217	24.366	1.00	15.76	B
ATOM	3077	O	ARG	B	148	38.210	48.419	24.566	1.00	16.77	B
ATOM	3078	N	ARG	B	149	39.052	50.494	24.736	1.00	15.90	B
ATOM	3079	CA	ARG	B	149	37.880	50.992	25.458	1.00	17.70	B
ATOM	3080	CB	ARG	B	149	38.350	51.867	26.625	1.00	20.41	B
ATOM	3081	CG	ARG	B	149	39.513	51.316	27.425	1.00	25.96	B
ATOM	3082	CD	ARG	B	149	39.611	52.011	28.777	1.00	30.05	B
ATOM	3083	NE	ARG	B	149	39.203	53.414	28.720	1.00	33.23	B
ATOM	3084	CZ	ARG	B	149	39.840	54.363	28.039	1.00	34.57	B
ATOM	3085	NH1	ARG	B	149	40.933	54.072	27.344	1.00	35.30	B
ATOM	3086	NH2	ARG	B	149	39.379	55.608	28.052	1.00	34.31	B
ATOM	3087	C	ARG	B	149	36.837	51.717	24.614	1.00	16.79	B
ATOM	3088	O	ARG	B	149	35.791	52.110	25.135	1.00	17.75	B
ATOM	3089	N	SER	B	150	37.093	51.898	23.325	1.00	16.03	B
ATOM	3090	CA	SER	B	150	36.143	52.625	22.491	1.00	16.26	B
ATOM	3091	CB	SER	B	150	36.792	52.953	21.145	1.00	16.56	B
ATOM	3092	OG	SER	B	150	35.916	53.744	20.358	1.00	16.88	B
ATOM	3093	C	SER	B	150	34.797	51.932	22.318	1.00	17.00	B
ATOM	3094	O	SER	B	150	34.717	50.705	22.226	1.00	17.43	B
ATOM	3095	N	ALA	B	151	33.744	52.746	22.270	1.00	16.82	B
ATOM	3096	CA	ALA	B	151	32.379	52.272	22.073	1.00	17.70	B
ATOM	3097	CB	ALA	B	151	31.475	52.764	23.209	1.00	18.36	B
ATOM	3098	C	ALA	B	151	31.890	52.816	20.730	1.00	18.27	B
ATOM	3099	O	ALA	B	151	30.736	52.618	20.345	1.00	20.02	B
ATOM	3100	N	ILE	B	152	32.780	53.518	20.029	1.00	17.82	B
ATOM	3101	CA	ILE	B	152	32.472	54.083	18.716	1.00	17.05	B
ATOM	3102	CB	ILE	B	152	33.450	55.229	18.363	1.00	17.75	B
ATOM	3103	CG2	ILE	B	152	33.186	55.730	16.949	1.00	17.27	B
ATOM	3104	CG1	ILE	B	152	33.301	56.367	19.379	1.00	19.71	B
ATOM	3105	CD1	ILE	B	152	34.204	57.559	19.120	1.00	23.70	B
ATOM	3106	C	ILE	B	152	32.599	52.960	17.683	1.00	16.26	B
ATOM	3107	O	ILE	B	152	33.642	52.317	17.582	1.00	16.10	B
ATOM	3108	N	ALA	B	153	31.537	52.732	16.918	1.00	15.92	B
ATOM	3109	CA	ALA	B	153	31.502	51.659	15.924	1.00	15.10	B
ATOM	3110	CB	ALA	B	153	30.302	51.848	15.004	1.00	15.55	B
ATOM	3111	C	ALA	B	153	32.763	51.445	15.088	1.00	13.13	B
ATOM	3112	O	ALA	B	153	33.301	50.334	15.037	1.00	12.87	B
ATOM	3113	N	VAL	B	154	33.237	52.491	14.422	1.00	13.30	B
ATOM	3114	CA	VAL	B	154	34.427	52.346	13.593	1.00	13.40	B
ATOM	3115	CB	VAL	B	154	34.762	53.660	12.843	1.00	14.79	B
ATOM	3116	CG1	VAL	B	154	36.114	53.540	12.150	1.00	15.68	B
ATOM	3117	CG2	VAL	B	154	33.682	53.955	11.818	1.00	16.59	B
ATOM	3118	C	VAL	B	154	35.646	51.914	14.402	1.00	11.56	B
ATOM	3119	O	VAL	B	154	36.395	51.027	13.984	1.00	12.09	B
ATOM	3120	N	PHE	B	155	35.831	52.519	15.572	1.00	11.82	B
ATOM	3121	CA	PHE	B	155	36.986	52.203	16.403	1.00	12.53	B
ATOM	3122	CB	PHE	B	155	37.251	53.361	17.377	1.00	12.92	B
ATOM	3123	CG	PHE	B	155	37.352	54.714	16.714	1.00	13.23	B
ATOM	3124	CD1	PHE	B	155	37.914	54.839	15.552	1.00	13.45	B
ATOM	3125	CD2	PHE	B	155	36.884	55.756	17.320	1.00	13.49	B
ATOM	3126	CE1	PHE	B	155	38.038	56.083	14.914	1.00	13.54	B
ATOM	3127	CE2	PHE	B	155	36.959	57.038	16.770	1.00	14.37	B
ATOM	3128	CZ	PHE	B	155	37.547	57.201	15.543	1.00	13.87	B
ATOM	3129	C	PHE	B	155	36.894	50.850	17.102	1.00	13.04	B
ATOM	3130	O	PHE	B	155	37.905	50.151	17.219	1.00	12.48	B

ATOM	3131	N	ASP	B	156	35.712	50.467	17.586	1.00	13.73	B
ATOM	3132	CA	ASP	B	156	35.623	49.170	18.249	1.00	14.18	B
ATOM	3133	CB	ASP	B	156	34.350	49.070	19.118	1.00	17.34	B
ATOM	3134	CG	ASP	B	156	33.076	49.316	18.349	1.00	20.27	B
ATOM	3135	OD1	ASP	B	156	32.889	48.711	17.276	1.00	21.62	B
ATOM	3136	OD2	ASP	B	156	32.243	50.109	18.841	1.00	22.52	B
ATOM	3137	C	ASP	B	156	35.788	48.054	17.221	1.00	13.30	B
ATOM	3138	O	ASP	B	156	36.299	46.983	17.549	1.00	13.86	B
ATOM	3139	N	LYS	B	157	35.382	48.299	15.978	1.00	12.32	B
ATOM	3140	CA	LYS	B	157	35.564	47.294	14.938	1.00	13.15	B
ATOM	3141	CB	LYS	B	157	34.775	47.679	13.684	1.00	14.71	B
ATOM	3142	CG	LYS	B	157	34.974	46.697	12.541	1.00	16.66	B
ATOM	3143	CD	LYS	B	157	33.986	46.924	11.409	1.00	20.89	B
ATOM	3144	CE	LYS	B	157	34.159	45.872	10.321	1.00	22.42	B
ATOM	3145	NZ	LYS	B	157	33.183	46.041	9.211	1.00	26.26	B
ATOM	3146	C	LYS	B	157	37.067	47.166	14.681	1.00	11.75	B
ATOM	3147	O	LYS	B	157	37.583	46.070	14.477	1.00	12.82	B
ATOM	3148	N	MET	B	158	37.769	48.298	14.692	1.00	11.60	B
ATOM	3149	CA	MET	B	158	39.209	48.291	14.475	1.00	11.34	B
ATOM	3150	CB	MET	B	158	39.707	49.734	14.344	1.00	10.92	B
ATOM	3151	CG	MET	B	158	39.355	50.389	13.013	1.00	10.61	B
ATOM	3152	SD	MET	B	158	39.778	52.145	12.967	1.00	11.68	B
ATOM	3153	CE	MET	B	158	41.562	52.071	12.823	1.00	11.70	B
ATOM	3154	C	MET	B	158	39.907	47.506	15.579	1.00	11.19	B
ATOM	3155	O	MET	B	158	40.836	46.749	15.309	1.00	10.94	B
ATOM	3156	N	TRP	B	159	39.455	47.675	16.817	1.00	11.18	B
ATOM	3157	CA	TRP	B	159	40.056	46.966	17.943	1.00	11.28	B
ATOM	3158	CB	TRP	B	159	39.478	47.492	19.259	1.00	10.97	B
ATOM	3159	CG	TRP	B	159	39.968	46.698	20.436	1.00	12.16	B
ATOM	3160	CD2	TRP	B	159	41.328	46.562	20.866	1.00	13.67	B
ATOM	3161	CE2	TRP	B	159	41.332	45.679	21.968	1.00	14.30	B
ATOM	3162	CE3	TRP	B	159	42.545	47.101	20.425	1.00	14.40	B
ATOM	3163	CD1	TRP	B	159	39.221	45.915	21.274	1.00	13.44	B
ATOM	3164	NE1	TRP	B	159	40.035	45.300	22.197	1.00	14.53	B
ATOM	3165	CZ2	TRP	B	159	42.508	45.320	22.637	1.00	16.70	B
ATOM	3166	CZ3	TRP	B	159	43.716	46.744	21.092	1.00	15.71	B
ATOM	3167	CH2	TRP	B	159	43.687	45.861	22.185	1.00	16.50	B
ATOM	3168	C	TRP	B	159	39.865	45.465	17.806	1.00	11.68	B
ATOM	3169	O	TRP	B	159	40.800	44.688	17.998	1.00	11.26	B
ATOM	3170	N	THR	B	160	38.642	45.062	17.487	1.00	12.22	B
ATOM	3171	CA	THR	B	160	38.339	43.646	17.334	1.00	11.26	B
ATOM	3172	CB	THR	B	160	36.858	43.441	16.993	1.00	13.83	B
ATOM	3173	OG1	THR	B	160	36.063	43.862	18.110	1.00	16.23	B
ATOM	3174	CG2	THR	B	160	36.571	41.978	16.688	1.00	15.16	B
ATOM	3175	C	THR	B	160	39.223	43.048	16.246	1.00	10.15	B
ATOM	3176	O	THR	B	160	39.730	41.937	16.394	1.00	10.71	B
ATOM	3177	N	TYR	B	161	39.408	43.790	15.157	1.00	11.18	B
ATOM	3178	CA	TYR	B	161	40.261	43.332	14.067	1.00	11.24	B
ATOM	3179	CB	TYR	B	161	40.176	44.301	12.880	1.00	10.21	B
ATOM	3180	CG	TYR	B	161	41.426	44.244	12.029	1.00	11.28	B
ATOM	3181	CD1	TYR	B	161	41.574	43.286	11.027	1.00	11.96	B
ATOM	3182	CE1	TYR	B	161	42.774	43.152	10.330	1.00	12.51	B
ATOM	3183	CD2	TYR	B	161	42.511	45.076	12.306	1.00	10.43	B
ATOM	3184	CE2	TYR	B	161	43.710	44.950	11.619	1.00	12.75	B
ATOM	3185	CZ	TYR	B	161	43.839	43.984	10.635	1.00	12.24	B
ATOM	3186	OH	TYR	B	161	45.046	43.836	9.993	1.00	15.00	B
ATOM	3187	C	TYR	B	161	41.696	43.195	14.567	1.00	11.23	B
ATOM	3188	O	TYR	B	161	42.354	42.180	14.334	1.00	11.92	B
ATOM	3189	N	MET	B	162	42.182	44.229	15.249	1.00	11.29	B
ATOM	3190	CA	MET	B	162	43.552	44.231	15.754	1.00	11.30	B
ATOM	3191	CB	MET	B	162	43.849	45.563	16.442	1.00	13.62	B

ATOM	3192	CG	MET	B	162	44.043	46.742	15.531	1.00	12.58	B
ATOM	3193	SD	MET	B	162	44.548	48.154	16.533	1.00	18.19	B
ATOM	3194	CE	MET	B	162	43.054	49.101	16.546	1.00	20.27	B
ATOM	3195	C	MET	B	162	43.851	43.072	16.679	1.00	12.13	B
ATOM	3196	O	MET	B	162	44.889	42.423	16.560	1.00	12.09	B
ATOM	3197	N	ARG	B	163	42.943	42.820	17.614	1.00	11.82	B
ATOM	3198	CA	ARG	B	163	43.153	41.759	18.582	1.00	13.21	B
ATOM	3199	CB	ARG	B	163	42.128	41.911	19.710	1.00	16.98	B
ATOM	3200	CG	ARG	B	163	42.556	41.238	20.999	1.00	20.62	B
ATOM	3201	CD	ARG	B	163	41.505	41.347	22.087	1.00	24.44	B
ATOM	3202	NE	ARG	B	163	42.003	40.782	23.337	1.00	27.50	B
ATOM	3203	CZ	ARG	B	163	41.245	40.491	24.387	1.00	28.64	B
ATOM	3204	NH1	ARG	B	163	39.938	40.711	24.348	1.00	28.24	B
ATOM	3205	NH2	ARG	B	163	41.797	39.977	25.478	1.00	29.63	B
ATOM	3206	C	ARG	B	163	43.142	40.376	17.947	1.00	12.18	B
ATOM	3207	O	ARG	B	163	43.786	39.459	18.454	1.00	12.88	B
ATOM	3208	N	SER	B	164	42.435	40.226	16.831	1.00	10.89	B
ATOM	3209	CA	SER	B	164	42.333	38.925	16.173	1.00	11.71	B
ATOM	3210	CB	SER	B	164	40.853	38.625	15.918	1.00	12.69	B
ATOM	3211	OG	SER	B	164	40.312	39.503	14.945	1.00	14.22	B
ATOM	3212	C	SER	B	164	43.176	38.762	14.907	1.00	11.81	B
ATOM	3213	O	SER	B	164	43.220	37.674	14.330	1.00	12.97	B
ATOM	3214	N	ALA	B	165	43.849	39.824	14.478	1.00	12.37	B
ATOM	3215	CA	ALA	B	165	44.662	39.768	13.267	1.00	11.61	B
ATOM	3216	CB	ALA	B	165	45.026	41.184	12.826	1.00	12.88	B
ATOM	3217	C	ALA	B	165	45.931	38.923	13.391	1.00	12.82	B
ATOM	3218	O	ALA	B	165	46.588	38.921	14.428	1.00	12.59	B
ATOM	3219	N	GLU	B	166	46.267	38.213	12.314	1.00	13.40	B
ATOM	3220	CA	GLU	B	166	47.460	37.370	12.265	1.00	14.47	B
ATOM	3221	CB	GLU	B	166	47.061	35.898	12.407	1.00	13.75	B
ATOM	3222	CG	GLU	B	166	46.338	35.546	13.692	1.00	13.66	B
ATOM	3223	CD	GLU	B	166	46.229	34.045	13.885	1.00	12.43	B
ATOM	3224	OE1	GLU	B	166	45.542	33.383	13.078	1.00	14.72	B
ATOM	3225	OE2	GLU	B	166	46.844	33.530	14.838	1.00	15.12	B
ATOM	3226	C	GLU	B	166	48.198	37.628	10.955	1.00	15.00	B
ATOM	3227	O	GLU	B	166	47.583	37.638	9.887	1.00	17.00	B
ATOM	3228	N	PRO	B	167	49.523	37.850	11.017	1.00	14.83	B
ATOM	3229	CD	PRO	B	167	50.360	37.853	9.807	1.00	16.26	B
ATOM	3230	CA	PRO	B	167	50.364	37.879	12.220	1.00	13.45	B
ATOM	3231	CB	PRO	B	167	51.789	37.889	11.643	1.00	14.40	B
ATOM	3232	CG	PRO	B	167	51.666	37.159	10.327	1.00	18.88	B
ATOM	3233	C	PRO	B	167	50.008	39.094	13.071	1.00	13.13	B
ATOM	3234	O	PRO	B	167	49.294	39.990	12.614	1.00	13.35	B
ATOM	3235	N	SER	B	168	50.511	39.129	14.301	1.00	13.08	B
ATOM	3236	CA	SER	B	168	50.230	40.240	15.203	1.00	12.23	B
ATOM	3237	CB	SER	B	168	51.048	40.081	16.481	1.00	14.03	B
ATOM	3238	OG	SER	B	168	50.885	41.230	17.293	1.00	14.91	B
ATOM	3239	C	SER	B	168	50.487	41.578	14.528	1.00	11.20	B
ATOM	3240	O	SER	B	168	51.514	41.770	13.873	1.00	12.75	B
ATOM	3241	N	VAL	B	169	49.554	42.506	14.708	1.00	10.70	B
ATOM	3242	CA	VAL	B	169	49.676	43.839	14.128	1.00	11.80	B
ATOM	3243	CB	VAL	B	169	48.309	44.362	13.619	1.00	12.79	B
ATOM	3244	CG1	VAL	B	169	47.828	43.496	12.459	1.00	13.33	B
ATOM	3245	CG2	VAL	B	169	47.289	44.371	14.755	1.00	12.38	B
ATOM	3246	C	VAL	B	169	50.244	44.841	15.126	1.00	11.83	B
ATOM	3247	O	VAL	B	169	50.406	46.020	14.809	1.00	12.00	B
ATOM	3248	N	PHE	B	170	50.558	44.370	16.328	1.00	10.85	B
ATOM	3249	CA	PHE	B	170	51.108	45.237	17.363	1.00	12.02	B
ATOM	3250	CB	PHE	B	170	50.653	44.728	18.737	1.00	11.90	B
ATOM	3251	CG	PHE	B	170	49.163	44.770	18.935	1.00	12.25	B
ATOM	3252	CD1	PHE	B	170	48.561	45.905	19.094	1.00	12.64	B

ATOM	3253	CD2	PHE	B	170	48.480	43.669	18.920	1.00	12.85	B
ATOM	3254	CE1	PHE	B	170	47.169	45.996	19.251	1.00	12.78	B
ATOM	3255	CE2	PHE	B	170	47.088	43.652	19.068	1.00	14.94	B
ATOM	3256	CZ	PHE	B	170	46.423	44.843	19.236	1.00	14.35	B
ATOM	3257	C	PHE	B	170	52.623	45.335	17.238	1.00	12.05	B
ATOM	3258	O	PHE	B	170	53.282	44.396	16.787	1.00	14.89	B
ATOM	3259	N	VAL	B	171	53.168	46.482	17.633	1.00	12.21	B
ATOM	3260	CA	VAL	B	171	54.610	46.715	17.597	1.00	13.01	B
ATOM	3261	CB	VAL	B	171	54.996	47.764	16.522	1.00	13.51	B
ATOM	3262	CG1	VAL	B	171	54.606	47.252	15.143	1.00	14.10	B
ATOM	3263	CG2	VAL	B	171	54.317	49.093	16.808	1.00	14.18	B
ATOM	3264	C	VAL	B	171	55.065	47.178	18.979	1.00	13.79	B
ATOM	3265	O	VAL	B	171	54.265	47.699	19.754	1.00	13.72	B
ATOM	3266	N	ALA	B	172	56.345	46.986	19.283	1.00	15.08	B
ATOM	3267	CA	ALA	B	172	56.881	47.343	20.592	1.00	14.94	B
ATOM	3268	CB	ALA	B	172	58.007	46.384	20.960	1.00	16.72	B
ATOM	3269	C	ALA	B	172	57.366	48.776	20.744	1.00	15.27	B
ATOM	3270	O	ALA	B	172	57.327	49.332	21.842	1.00	14.95	B
ATOM	3271	N	THR	B	173	57.826	49.373	19.651	1.00	14.44	B
ATOM	3272	CA	THR	B	173	58.341	50.736	19.698	1.00	14.47	B
ATOM	3273	CB	THR	B	173	59.871	50.743	19.713	1.00	14.68	B
ATOM	3274	OG1	THR	B	173	60.345	50.242	18.457	1.00	15.72	B
ATOM	3275	CG2	THR	B	173	60.404	49.868	20.835	1.00	14.59	B
ATOM	3276	C	THR	B	173	57.909	51.529	18.476	1.00	13.61	B
ATOM	3277	O	THR	B	173	57.500	50.960	17.463	1.00	13.63	B
ATOM	3278	N	THR	B	174	58.023	52.849	18.570	1.00	12.92	B
ATOM	3279	CA	THR	B	174	57.667	53.716	17.461	1.00	13.32	B
ATOM	3280	CB	THR	B	174	57.910	55.192	17.821	1.00	12.58	B
ATOM	3281	OG1	THR	B	174	57.062	55.556	18.916	1.00	13.66	B
ATOM	3282	CG2	THR	B	174	57.601	56.095	16.632	1.00	12.16	B
ATOM	3283	C	THR	B	174	58.507	53.342	16.244	1.00	13.99	B
ATOM	3284	O	THR	B	174	57.984	53.199	15.140	1.00	12.99	B
ATOM	3285	N	ALA	B	175	59.808	53.165	16.456	1.00	13.92	B
ATOM	3286	CA	ALA	B	175	60.710	52.803	15.368	1.00	15.41	B
ATOM	3287	CB	ALA	B	175	62.135	52.681	15.894	1.00	15.77	B
ATOM	3288	C	ALA	B	175	60.284	51.499	14.696	1.00	14.93	B
ATOM	3289	O	ALA	B	175	60.398	51.354	13.481	1.00	15.03	B
ATOM	3290	N	GLU	B	176	59.789	50.552	15.488	1.00	13.48	B
ATOM	3291	CA	GLU	B	176	59.345	49.267	14.953	1.00	14.93	B
ATOM	3292	CB	GLU	B	176	59.061	48.314	16.117	1.00	16.39	B
ATOM	3293	CG	GLU	B	176	58.774	46.884	15.701	1.00	21.24	B
ATOM	3294	CD	GLU	B	176	58.344	46.020	16.870	1.00	23.16	B
ATOM	3295	OE1	GLU	B	176	58.988	46.099	17.938	1.00	26.24	B
ATOM	3296	OE2	GLU	B	176	57.368	45.256	16.721	1.00	25.11	B
ATOM	3297	C	GLU	B	176	58.131	49.476	14.051	1.00	13.37	B
ATOM	3298	O	GLU	B	176	58.021	48.867	12.984	1.00	13.90	B
ATOM	3299	N	GLY	B	177	57.210	50.327	14.494	1.00	11.77	B
ATOM	3300	CA	GLY	B	177	56.023	50.604	13.707	1.00	11.87	B
ATOM	3301	C	GLY	B	177	56.386	51.275	12.397	1.00	11.77	B
ATOM	3302	O	GLY	B	177	55.859	50.920	11.342	1.00	11.59	B
ATOM	3303	N	VAL	B	178	57.298	52.240	12.467	1.00	12.02	B
ATOM	3304	CA	VAL	B	178	57.734	52.967	11.280	1.00	11.85	B
ATOM	3305	CB	VAL	B	178	58.676	54.134	11.661	1.00	13.33	B
ATOM	3306	CG1	VAL	B	178	59.278	54.754	10.408	1.00	12.69	B
ATOM	3307	CG2	VAL	B	178	57.908	55.184	12.449	1.00	14.50	B
ATOM	3308	C	VAL	B	178	58.448	52.028	10.308	1.00	11.37	B
ATOM	3309	O	VAL	B	178	58.199	52.068	9.104	1.00	11.74	B
ATOM	3310	N	ALA	B	179	59.329	51.179	10.831	1.00	11.93	B
ATOM	3311	CA	ALA	B	179	60.050	50.231	9.987	1.00	12.51	B
ATOM	3312	CB	ALA	B	179	61.048	49.435	10.824	1.00	13.53	B
ATOM	3313	C	ALA	B	179	59.070	49.283	9.304	1.00	13.12	B

ATOM	3314	O	ALA	B	179	59.230	48.952	8.129	1.00	13.52	B
ATOM	3315	N	ARG	B	180	58.047	48.850	10.038	1.00	12.34	B
ATOM	3316	CA	ARG	B	180	57.060	47.936	9.477	1.00	11.65	B
ATOM	3317	CB	ARG	B	180	56.143	47.429	10.590	1.00	12.34	B
ATOM	3318	CG	ARG	B	180	55.216	46.324	10.142	1.00	12.89	B
ATOM	3319	CD	ARG	B	180	54.600	45.637	11.340	1.00	13.42	B
ATOM	3320	NE	ARG	B	180	53.642	44.618	10.932	1.00	14.57	B
ATOM	3321	CZ	ARG	B	180	52.972	43.849	11.781	1.00	13.41	B
ATOM	3322	NH1	ARG	B	180	53.167	43.981	13.086	1.00	14.58	B
ATOM	3323	NH2	ARG	B	180	52.092	42.967	11.326	1.00	15.45	B
ATOM	3324	C	ARG	B	180	56.313	48.602	8.333	1.00	11.18	B
ATOM	3325	O	ARG	B	180	56.050	47.981	7.305	1.00	12.37	B
ATOM	3326	N	VAL	B	181	55.962	49.870	8.510	1.00	10.42	B
ATOM	3327	CA	VAL	B	181	55.274	50.597	7.450	1.00	11.21	B
ATOM	3328	CB	VAL	B	181	54.931	52.040	7.895	1.00	11.89	B

ATOM	3329	CG1	VAL	B	181	54.495	52.876	6.696	1.00	12.20	B
ATOM	3330	CG2	VAL	B	181	53.826	52.009	8.946	1.00	12.54	B
ATOM	3331	C	VAL	B	181	56.176	50.663	6.211	1.00	11.72	B
ATOM	3332	O	VAL	B	181	55.755	50.346	5.098	1.00	11.91	B
ATOM	3333	N	ARG	B	182	57.427	51.051	6.426	1.00	12.96	B
ATOM	3334	CA	ARG	B	182	58.391	51.198	5.342	1.00	13.16	B
ATOM	3335	CB	ARG	B	182	59.645	51.882	5.889	1.00	14.59	B
ATOM	3336	CG	ARG	B	182	59.443	53.341	6.247	1.00	13.75	B
ATOM	3337	CD	ARG	B	182	60.707	53.964	6.811	1.00	14.39	B
ATOM	3338	NE	ARG	B	182	60.590	55.415	6.901	1.00	14.11	B
ATOM	3339	CZ	ARG	B	182	61.274	56.170	7.756	1.00	14.96	B
ATOM	3340	NH1	ARG	B	182	62.126	55.613	8.604	1.00	14.64	B
ATOM	3341	NH2	ARG	B	182	61.105	57.484	7.762	1.00	16.39	B
ATOM	3342	C	ARG	B	182	58.728	49.920	4.593	1.00	13.56	B
ATOM	3343	O	ARG	B	182	59.000	49.966	3.394	1.00	15.12	B
ATOM	3344	N	ALA	B	183	58.710	48.786	5.285	1.00	13.23	B
ATOM	3345	CA	ALA	B	183	59.071	47.524	4.650	1.00	14.60	B
ATOM	3346	CB	ALA	B	183	60.033	46.766	5.559	1.00	15.58	B
ATOM	3347	C	ALA	B	183	57.923	46.609	4.246	1.00	15.34	B
ATOM	3348	O	ALA	B	183	58.162	45.524	3.718	1.00	17.94	B
ATOM	3349	N	SER	B	184	56.684	47.038	4.461	1.00	15.42	B
ATOM	3350	CA	SER	B	184	55.542	46.187	4.134	1.00	15.22	B
ATOM	3351	CB	SER	B	184	54.556	46.222	5.307	1.00	15.25	B
ATOM	3352	OG	SER	B	184	55.158	45.671	6.468	1.00	15.24	B
ATOM	3353	C	SER	B	184	54.886	46.457	2.785	1.00	14.80	B
ATOM	3354	O	SER	B	184	53.788	45.972	2.520	1.00	14.65	B
ATOM	3355	N	ALA	B	185	55.561	47.225	1.935	1.00	15.93	B
ATOM	3356	CA	ALA	B	185	55.062	47.533	0.597	1.00	16.07	B
ATOM	3357	CB	ALA	B	185	55.203	46.307	-0.302	1.00	16.51	B
ATOM	3358	C	ALA	B	185	53.619	48.022	0.579	1.00	16.96	B
ATOM	3359	O	ALA	B	185	52.847	47.673	-0.320	1.00	18.07	B
ATOM	3360	N	GLY	B	186	53.262	48.831	1.572	1.00	16.20	B
ATOM	3361	CA	GLY	B	186	51.918	49.370	1.645	1.00	15.49	B
ATOM	3362	C	GLY	B	186	50.886	48.450	2.269	1.00	13.47	B
ATOM	3363	O	GLY	B	186	49.697	48.771	2.260	1.00	15.31	B
ATOM	3364	N	LYS	B	187	51.325	47.317	2.814	1.00	13.66	B
ATOM	3365	CA	LYS	B	187	50.403	46.366	3.428	1.00	13.11	B
ATOM	3366	CB	LYS	B	187	50.801	44.941	3.025	1.00	15.45	B
ATOM	3367	CG	LYS	B	187	50.827	44.701	1.525	1.00	16.91	B
ATOM	3368	CD	LYS	B	187	49.471	44.942	0.885	1.00	19.00	B
ATOM	3369	CE	LYS	B	187	49.525	44.665	-0.611	1.00	21.36	B

ATOM	3370	NZ	LYS	B	187	48.215	44.906	-1.274	1.00	22.80	B
ATOM	3371	C	LYS	B	187	50.281	46.538	4.939	1.00	12.81	B
ATOM	3372	O	LYS	B	187	49.689	45.698	5.608	1.00	12.65	B
ATOM	3373	N	TYR	B	188	50.853	47.609	5.483	1.00	12.17	B
ATOM	3374	CA	TYR	B	188	50.750	47.878	6.914	1.00	11.57	B
ATOM	3375	CB	TYR	B	188	51.961	47.319	7.676	1.00	11.09	B
ATOM	3376	CG	TYR	B	188	51.841	47.487	9.186	1.00	10.63	B
ATOM	3377	CD1	TYR	B	188	51.028	46.636	9.943	1.00	10.72	B
ATOM	3378	CE1	TYR	B	188	50.867	46.818	11.321	1.00	11.82	B
ATOM	3379	CD2	TYR	B	188	52.495	48.527	9.852	1.00	10.42	B
ATOM	3380	CE2	TYR	B	188	52.337	48.718	11.233	1.00	10.53	B
ATOM	3381	CZ	TYR	B	188	51.523	47.860	11.958	1.00	9.62	B
ATOM	3382	OH	TYR	B	188	51.377	48.051	13.316	1.00	10.96	B
ATOM	3383	C	TYR	B	188	50.600	49.371	7.141	1.00	10.17	B
ATOM	3384	O	TYR	B	188	51.349	50.169	6.577	1.00	12.88	B
ATOM	3385	N	ALA	B	189	49.623	49.737	7.962	1.00	10.30	B
ATOM	3386	CA	ALA	B	189	49.384	51.130	8.327	1.00	11.13	B
ATOM	3387	CB	ALA	B	189	47.984	51.562	7.928	1.00	12.49	B
ATOM	3388	C	ALA	B	189	49.550	51.164	9.844	1.00	10.34	B
ATOM	3389	O	ALA	B	189	49.112	50.245	10.545	1.00	11.00	B
ATOM	3390	N	TYR	B	190	50.175	52.219	10.352	1.00	9.97	B
ATOM	3391	CA	TYR	B	190	50.445	52.334	11.777	1.00	9.16	B
ATOM	3392	CB	TYR	B	190	51.970	52.483	11.932	1.00	10.28	B
ATOM	3393	CG	TYR	B	190	52.483	52.705	13.336	1.00	9.88	B
ATOM	3394	CD1	TYR	B	190	51.959	51.999	14.415	1.00	10.57	B
ATOM	3395	CE1	TYR	B	190	52.433	52.209	15.712	1.00	10.96	B
ATOM	3396	CD2	TYR	B	190	53.503	53.625	13.581	1.00	11.85	B
ATOM	3397	CE2	TYR	B	190	53.984	53.842	14.867	1.00	12.34	B
ATOM	3398	CZ	TYR	B	190	53.443	53.137	15.927	1.00	12.44	B
ATOM	3399	OH	TYR	B	190	53.887	53.392	17.206	1.00	15.74	B
ATOM	3400	C	TYR	B	190	49.635	53.443	12.442	1.00	9.62	B
ATOM	3401	O	TYR	B	190	49.608	54.576	11.963	1.00	10.03	B
ATOM	3402	N	LEU	B	191	48.965	53.105	13.543	1.00	9.49	B
ATOM	3403	CA	LEU	B	191	48.167	54.070	14.296	1.00	9.49	B
ATOM	3404	CB	LEU	B	191	46.900	53.382	14.815	1.00	10.49	B
ATOM	3405	CG	LEU	B	191	45.817	53.104	13.771	1.00	13.15	B
ATOM	3406	CD1	LEU	B	191	44.943	51.951	14.230	1.00	16.03	B
ATOM	3407	CD2	LEU	B	191	44.996	54.368	13.532	1.00	13.37	B
ATOM	3408	C	LEU	B	191	49.049	54.615	15.405	1.00	9.27	B
ATOM	3409	O	LEU	B	191	49.453	53.873	16.303	1.00	9.67	B
ATOM	3410	N	LEU	B	192	49.345	55.911	15.339	1.00	9.51	B
ATOM	3411	CA	LEU	B	192	50.213	56.544	16.326	1.00	8.61	B
ATOM	3412	CB	LEU	B	192	51.672	56.423	15.866	1.00	9.70	B
ATOM	3413	CG	LEU	B	192	52.141	57.440	14.815	1.00	10.24	B
ATOM	3414	CD1	LEU	B	192	53.640	57.295	14.607	1.00	10.76	B
ATOM	3415	CD2	LEU	B	192	51.398	57.241	13.497	1.00	10.44	B
ATOM	3416	C	LEU	B	192	49.792	57.994	16.532	1.00	8.70	B
ATOM	3417	O	LEU	B	192	48.979	58.535	15.779	1.00	8.53	B
ATOM	3418	N	GLU	B	193	50.364	58.633	17.543	1.00	9.07	B
ATOM	3419	CA	GLU	B	193	50.020	60.018	17.817	1.00	8.43	B
ATOM	3420	CB	GLU	B	193	50.518	60.365	19.221	1.00	8.06	B
ATOM	3421	CG	GLU	B	193	49.851	59.448	20.244	1.00	8.82	B
ATOM	3422	CD	GLU	B	193	50.226	59.724	21.680	1.00	8.07	B
ATOM	3423	OE1	GLU	B	193	51.381	60.107	21.946	1.00	8.83	B
ATOM	3424	OE2	GLU	B	193	49.350	59.529	22.546	1.00	9.84	B
ATOM	3425	C	GLU	B	193	50.519	60.919	16.688	1.00	8.17	B
ATOM	3426	O	GLU	B	193	51.614	60.729	16.151	1.00	8.73	B
ATOM	3427	N	SER	B	194	49.687	61.893	16.328	1.00	8.44	B
ATOM	3428	CA	SER	B	194	49.968	62.821	15.232	1.00	9.11	B
ATOM	3429	CB	SER	B	194	48.824	63.834	15.147	1.00	9.75	B
ATOM	3430	OG	SER	B	194	48.684	64.552	16.361	1.00	9.27	B

ATOM	3431	C	SER	B	194	51.334	63.477	15.333	1.00	8.86	B
ATOM	3432	O	SER	B	194	51.987	63.743	14.318	1.00	9.10	B
ATOM	3433	N	THR	B	195	51.754	63.753	16.560	1.00	8.85	B
ATOM	3434	CA	THR	B	195	53.055	64.353	16.816	1.00	9.23	B
ATOM	3435	CB	THR	B	195	53.224	64.564	18.314	1.00	10.50	B
ATOM	3436	OG1	THR	B	195	52.689	63.420	18.990	1.00	10.30	B
ATOM	3437	CG2	THR	B	195	52.474	65.813	18.766	1.00	11.47	B
ATOM	3438	C	THR	B	195	54.185	63.468	16.278	1.00	10.40	B
ATOM	3439	O	THR	B	195	55.065	63.953	15.577	1.00	9.85	B
ATOM	3440	N	MET	B	196	54.174	62.176	16.604	1.00	10.06	B
ATOM	3441	CA	MET	B	196	55.215	61.276	16.101	1.00	10.48	B
ATOM	3442	CB	MET	B	196	55.136	59.909	16.796	1.00	10.02	B
ATOM	3443	CG	MET	B	196	55.727	59.866	18.184	1.00	11.31	B
ATOM	3444	SD	MET	B	196	54.694	60.705	19.367	1.00	11.81	B
ATOM	3445	CE	MET	B	196	55.074	59.782	20.855	1.00	13.94	B
ATOM	3446	C	MET	B	196	55.084	61.135	14.595	1.00	9.86	B
ATOM	3447	O	MET	B	196	56.087	61.070	13.881	1.00	10.95	B
ATOM	3448	N	ASN	B	197	53.844	61.075	14.119	1.00	9.10	B
ATOM	3449	CA	ASN	B	197	53.567	60.924	12.694	1.00	9.87	B
ATOM	3450	CB	ASN	B	197	52.046	60.840	12.500	1.00	9.27	B
ATOM	3451	CG	ASN	B	197	51.647	60.155	11.201	1.00	12.08	B
ATOM	3452	OD1	ASN	B	197	52.465	59.953	10.304	1.00	11.55	B
ATOM	3453	ND2	ASN	B	197	50.375	59.802	11.095	1.00	9.98	B
ATOM	3454	C	ASN	B	197	54.209	62.081	11.927	1.00	10.21	B
ATOM	3455	O	ASN	B	197	54.915	61.869	10.934	1.00	10.46	B
ATOM	3456	N	GLU	B	198	53.960	63.303	12.393	1.00	10.61	B
ATOM	3457	CA	GLU	B	198	54.495	64.515	11.763	1.00	10.80	B
ATOM	3458	CB	GLU	B	198	53.880	65.740	12.447	1.00	13.24	B
ATOM	3459	CG	GLU	B	198	52.385	65.875	12.258	1.00	15.36	B
ATOM	3460	CD	GLU	B	198	51.732	66.735	13.327	1.00	18.47	B
ATOM	3461	OE1	GLU	B	198	50.503	66.941	13.247	1.00	21.12	B
ATOM	3462	OE2	GLU	B	198	52.440	67.200	14.249	1.00	19.03	B
ATOM	3463	C	GLU	B	198	56.016	64.538	11.787	1.00	10.81	B
ATOM	3464	O	GLU	B	198	56.656	64.981	10.828	1.00	12.73	B
ATOM	3465	N	TYR	B	199	56.596	64.078	12.889	1.00	11.33	B
ATOM	3466	CA	TYR	B	199	58.044	64.048	13.032	1.00	12.01	B
ATOM	3467	CB	TYR	B	199	58.391	63.624	14.457	1.00	12.78	B
ATOM	3468	CG	TYR	B	199	59.826	63.191	14.619	1.00	12.16	B
ATOM	3469	CD1	TYR	B	199	60.868	64.117	14.563	1.00	14.08	B
ATOM	3470	CE1	TYR	B	199	62.199	63.710	14.694	1.00	14.94	B
ATOM	3471	CD2	TYR	B	199	60.145	61.848	14.812	1.00	13.76	B
ATOM	3472	CE2	TYR	B	199	61.467	61.432	14.943	1.00	15.28	B
ATOM	3473	CZ	TYR	B	199	62.486	62.367	14.883	1.00	15.02	B
ATOM	3474	OH	TYR	B	199	63.790	61.949	15.007	1.00	17.71	B
ATOM	3475	C	TYR	B	199	58.657	63.129	11.980	1.00	11.96	B
ATOM	3476	O	TYR	B	199	59.571	63.519	11.254	1.00	12.45	B
ATOM	3477	N	ILE	B	200	58.148	61.905	11.910	1.00	11.56	B
ATOM	3478	CA	ILE	B	200	58.638	60.909	10.962	1.00	11.82	B
ATOM	3479	CB	ILE	B	200	57.940	59.547	11.205	1.00	12.48	B
ATOM	3480	CG2	ILE	B	200	58.368	58.541	10.147	1.00	12.77	B
ATOM	3481	CG1	ILE	B	200	58.273	59.021	12.609	1.00	13.25	B
ATOM	3482	CD1	ILE	B	200	59.733	58.644	12.819	1.00	13.40	B
ATOM	3483	C	ILE	B	200	58.428	61.329	9.502	1.00	12.47	B
ATOM	3484	O	ILE	B	200	59.240	61.005	8.632	1.00	13.01	B
ATOM	3485	N	GLU	B	201	57.344	62.051	9.240	1.00	11.53	B
ATOM	3486	CA	GLU	B	201	57.036	62.508	7.890	1.00	14.28	B
ATOM	3487	CB	GLU	B	201	55.673	63.197	7.905	1.00	14.24	B
ATOM	3488	CG	GLU	B	201	55.102	63.502	6.535	1.00	19.66	B
ATOM	3489	CD	GLU	B	201	53.701	64.075	6.616	1.00	21.29	B
ATOM	3490	OE1	GLU	B	201	53.544	65.193	7.151	1.00	25.24	B
ATOM	3491	OE2	GLU	B	201	52.756	63.406	6.152	1.00	25.00	B

ATOM	3492	C	GLU	B	201	58.144	63.403	7.348	1.00	15.97	B
ATOM	3493	O	GLU	B	201	58.273	63.570	6.133	1.00	16.88	B
ATOM	3494	N	GLN	B	202	58.939	63.980	8.245	1.00	15.22	B
ATOM	3495	CA	GLN	B	202	60.029	64.864	7.844	1.00	18.83	B
ATOM	3496	CB	GLN	B	202	59.961	66.150	8.677	1.00	19.32	B
ATOM	3497	CG	GLN	B	202	58.627	66.882	8.602	1.00	24.25	B
ATOM	3498	CD	GLN	B	202	58.205	67.193	7.178	1.00	27.58	B
ATOM	3499	OE1	GLN	B	202	58.957	67.795	6.411	1.00	31.06	B
ATOM	3500	NE2	GLN	B	202	56.992	66.787	6.819	1.00	29.66	B
ATOM	3501	C	GLN	B	202	61.379	64.164	7.952	1.00	18.85	B
ATOM	3502	O	GLN	B	202	62.423	64.816	7.925	1.00	21.64	B
ATOM	3503	N	ARG	B	203	61.361	62.841	8.070	1.00	19.16	B
ATOM	3504	CA	ARG	B	203	62.594	62.069	8.183	1.00	19.65	B
ATOM	3505	CB	ARG	B	203	62.526	61.193	9.441	1.00	20.67	B
ATOM	3506	CG	ARG	B	203	62.292	61.956	10.734	1.00	22.05	B
ATOM	3507	CD	ARG	B	203	63.531	62.718	11.174	1.00	24.79	B
ATOM	3508	NE	ARG	B	203	64.605	61.819	11.589	1.00	25.67	B
ATOM	3509	CZ	ARG	B	203	65.771	62.226	12.079	1.00	26.71	B
ATOM	3510	NH1	ARG	B	203	66.018	63.522	12.215	1.00	26.28	B
ATOM	3511	NH2	ARG	B	203	66.691	61.338	12.435	1.00	26.10	B
ATOM	3512	C	ARG	B	203	62.822	61.249	6.917	1.00	19.60	B
ATOM	3513	O	ARG	B	203	61.880	60.713	6.335	1.00	17.46	B
ATOM	3514	N	LYS	B	204	64.077	61.156	6.491	1.00	20.33	B
ATOM	3515	CA	LYS	B	204	64.415	60.370	5.312	1.00	21.37	B
ATOM	3516	CB	LYS	B	204	65.896	60.578	4.975	1.00	21.77	B
ATOM	3517	CG	LYS	B	204	66.243	61.991	4.525	1.00	25.46	B
ATOM	3518	CD	LYS	B	204	67.752	62.222	4.512	1.00	28.33	B
ATOM	3519	CE	LYS	B	204	68.468	61.239	3.600	1.00	29.88	B
ATOM	3520	NZ	LYS	B	204	69.950	61.384	3.686	1.00	31.44	B
ATOM	3521	C	LYS	B	204	64.068	58.928	5.664	1.00	21.04	B
ATOM	3522	O	LYS	B	204	64.127	58.541	6.831	1.00	22.46	B
ATOM	3523	N	PRO	B	205	63.735	58.101	4.662	1.00	20.47	B
ATOM	3524	CD	PRO	B	205	63.604	56.655	4.915	1.00	20.59	B
ATOM	3525	CA	PRO	B	205	63.652	58.378	3.225	1.00	20.46	B
ATOM	3526	CB	PRO	B	205	63.880	56.996	2.620	1.00	21.06	B
ATOM	3527	CG	PRO	B	205	63.090	56.109	3.530	1.00	22.08	B
ATOM	3528	C	PRO	B	205	62.396	59.099	2.725	1.00	19.52	B
ATOM	3529	O	PRO	B	205	62.064	59.011	1.543	1.00	19.08	B
ATOM	3530	N	CYS	B	206	61.690	59.799	3.608	1.00	17.99	B
ATOM	3531	CA	CYS	B	206	60.504	60.544	3.190	1.00	16.87	B
ATOM	3532	C	CYS	B	206	59.509	59.659	2.453	1.00	15.84	B
ATOM	3533	O	CYS	B	206	58.973	60.055	1.418	1.00	15.47	B
ATOM	3534	CB	CYS	B	206	60.955	61.721	2.326	1.00	19.04	B
ATOM	3535	SG	CYS	B	206	62.275	62.714	3.076	1.00	20.10	B
ATOM	3536	N	ASP	B	207	59.245	58.472	2.988	1.00	15.12	B
ATOM	3537	CA	ASP	B	207	58.332	57.545	2.336	1.00	14.66	B
ATOM	3538	CB	ASP	B	207	59.096	56.256	2.019	1.00	15.55	B
ATOM	3539	CG	ASP	B	207	59.615	55.567	3.266	1.00	15.30	B
ATOM	3540	OD1	ASP	B	207	59.661	56.220	4.330	1.00	17.08	B
ATOM	3541	OD2	ASP	B	207	59.989	54.377	3.182	1.00	18.19	B
ATOM	3542	C	ASP	B	207	57.061	57.298	3.135	1.00	14.35	B
ATOM	3543	O	ASP	B	207	56.287	56.400	2.811	1.00	13.73	B
ATOM	3544	N	THR	B	208	56.845	58.088	4.181	1.00	14.62	B
ATOM	3545	CA	THR	B	208	55.645	57.925	4.992	1.00	13.43	B
ATOM	3546	CB	THR	B	208	55.978	57.704	6.485	1.00	13.85	B
ATOM	3547	OG1	THR	B	208	56.642	58.860	7.008	1.00	15.61	B
ATOM	3548	CG2	THR	B	208	56.869	56.483	6.657	1.00	15.09	B
ATOM	3549	C	THR	B	208	54.765	59.159	4.871	1.00	13.60	B
ATOM	3550	O	THR	B	208	55.221	60.228	4.458	1.00	14.47	B
ATOM	3551	N	MET	B	209	53.498	59.009	5.234	1.00	13.97	B
ATOM	3552	CA	MET	B	209	52.569	60.118	5.156	1.00	14.24	B

ATOM	3553	CB	MET	B	209	52.053	60.224	3.720	1.00	15.73	B
ATOM	3554	CG	MET	B	209	50.998	61.291	3.526	1.00	18.55	B
ATOM	3555	SD	MET	B	209	50.531	61.480	1.800	1.00	24.13	B
ATOM	3556	CE	MET	B	209	49.421	60.119	1.585	1.00	24.81	B
ATOM	3557	C	MET	B	209	51.445	59.977	6.168	1.00	13.47	B
ATOM	3558	O	MET	B	209	50.973	58.873	6.439	1.00	13.39	B
ATOM	3559	N	LYS	B	210	51.029	61.107	6.728	1.00	14.58	B
ATOM	3560	CA	LYS	B	210	49.925	61.135	7.677	1.00	15.13	B
ATOM	3561	CB	LYS	B	210	50.163	62.239	8.713	1.00	15.35	B
ATOM	3562	CG	LYS	B	210	48.994	62.449	9.660	1.00	17.22	B
ATOM	3563	CD	LYS	B	210	49.267	63.588	10.630	1.00	20.64	B
ATOM	3564	CE	LYS	B	210	48.098	63.805	11.570	1.00	21.70	B
ATOM	3565	NZ	LYS	B	210	48.312	64.990	12.443	1.00	25.64	B
ATOM	3566	C	LYS	B	210	48.679	61.367	6.832	1.00	15.45	B
ATOM	3567	O	LYS	B	210	48.629	62.316	6.047	1.00	16.38	B
ATOM	3568	N	VAL	B	211	47.676	60.508	6.984	1.00	14.47	B
ATOM	3569	CA	VAL	B	211	46.447	60.646	6.209	1.00	16.16	B
ATOM	3570	CB	VAL	B	211	46.308	59.517	5.161	1.00	15.70	B
ATOM	3571	CG1	VAL	B	211	47.420	59.623	4.134	1.00	18.13	B
ATOM	3572	CG2	VAL	B	211	46.347	58.158	5.847	1.00	16.74	B
ATOM	3573	C	VAL	B	211	45.191	60.655	7.068	1.00	17.02	B
ATOM	3574	O	VAL	B	211	45.155	60.059	8.147	1.00	15.85	B
ATOM	3575	N	GLY	B	212	44.160	61.332	6.569	1.00	18.91	B
ATOM	3576	CA	GLY	B	212	42.902	61.420	7.285	1.00	19.63	B
ATOM	3577	C	GLY	B	212	42.989	62.341	8.483	1.00	18.48	B
ATOM	3578	O	GLY	B	212	44.077	62.764	8.877	1.00	20.50	B
ATOM	3579	N	GLY	B	213	41.839	62.670	9.059	1.00	18.28	B
ATOM	3580	CA	GLY	B	213	41.837	63.530	10.224	1.00	17.13	B
ATOM	3581	C	GLY	B	213	42.213	62.700	11.433	1.00	15.25	B
ATOM	3582	O	GLY	B	213	42.205	61.465	11.373	1.00	17.51	B
ATOM	3583	N	ASN	B	214	42.560	63.362	12.530	1.00	14.08	B
ATOM	3584	CA	ASN	B	214	42.914	62.635	13.738	1.00	12.59	B
ATOM	3585	CB	ASN	B	214	43.539	63.594	14.754	1.00	13.59	B
ATOM	3586	CG	ASN	B	214	44.882	64.128	14.304	1.00	14.04	B
ATOM	3587	OD1	ASN	B	214	45.520	63.570	13.410	1.00	15.39	B
ATOM	3588	ND2	ASN	B	214	45.328	65.205	14.938	1.00	15.44	B
ATOM	3589	C	ASN	B	214	41.662	61.945	14.260	1.00	12.51	B
ATOM	3590	O	ASN	B	214	40.545	62.434	14.070	1.00	13.98	B
ATOM	3591	N	LEU	B	215	41.853	60.811	14.922	1.00	11.43	B
ATOM	3592	CA	LEU	B	215	40.736	60.052	15.471	1.00	10.90	B
ATOM	3593	CB	LEU	B	215	41.146	58.586	15.635	1.00	11.99	B
ATOM	3594	CG	LEU	B	215	41.241	57.742	14.361	1.00	12.59	B
ATOM	3595	CD1	LEU	B	215	42.292	58.306	13.416	1.00	16.18	B
ATOM	3596	CD2	LEU	B	215	41.581	56.316	14.744	1.00	13.71	B
ATOM	3597	C	LEU	B	215	40.223	60.670	16.765	1.00	10.91	B
ATOM	3598	O	LEU	B	215	39.087	60.410	17.165	1.00	12.75	B
ATOM	3599	N	ASP	B	216	41.066	61.453	17.437	1.00	10.37	B
ATOM	3600	CA	ASP	B	216	40.678	62.123	18.673	1.00	9.90	B
ATOM	3601	CB	ASP	B	216	40.772	61.151	19.873	1.00	9.05	B
ATOM	3602	CG	ASP	B	216	42.194	60.733	20.221	1.00	9.75	B
ATOM	3603	OD1	ASP	B	216	43.159	61.145	19.546	1.00	9.43	B
ATOM	3604	OD2	ASP	B	216	42.342	59.975	21.208	1.00	9.63	B
ATOM	3605	C	ASP	B	216	41.484	63.405	18.826	1.00	9.20	B
ATOM	3606	O	ASP	B	216	42.306	63.728	17.968	1.00	10.98	B
ATOM	3607	N	SER	B	217	41.222	64.143	19.903	1.00	9.88	B
ATOM	3608	CA	SER	B	217	41.899	65.409	20.174	1.00	9.92	B
ATOM	3609	CB	SER	B	217	40.987	66.560	19.746	1.00	12.87	B
ATOM	3610	OG	SER	B	217	40.715	66.507	18.361	1.00	20.77	B
ATOM	3611	C	SER	B	217	42.271	65.483	21.645	1.00	10.98	B
ATOM	3612	O	SER	B	217	41.398	65.520	22.511	1.00	12.32	B
ATOM	3613	N	LYS	B	218	43.567	65.524	21.928	1.00	11.11	B

ATOM	3614	CA	LYS	B	218	44.037	65.574	23.302	1.00	9.81	B
ATOM	3615	CB	LYS	B	218	44.082	64.143	23.854	1.00	11.05	B
ATOM	3616	CG	LYS	B	218	44.895	63.171	23.013	1.00	11.12	B
ATOM	3617	CD	LYS	B	218	44.435	61.740	23.254	1.00	9.73	B
ATOM	3618	CE	LYS	B	218	45.266	60.748	22.453	1.00	9.17	B
ATOM	3619	NZ	LYS	B	218	44.647	59.391	22.476	1.00	8.65	B
ATOM	3620	C	LYS	B	218	45.366	66.306	23.376	1.00	9.32	B
ATOM	3621	O	LYS	B	218	45.705	67.084	22.486	1.00	8.84	B
ATOM	3622	N	GLY	B	219	46.116	66.069	24.445	1.00	9.27	B
ATOM	3623	CA	GLY	B	219	47.398	66.735	24.585	1.00	8.98	B
ATOM	3624	C	GLY	B	219	48.316	66.051	25.573	1.00	8.88	B
ATOM	3625	O	GLY	B	219	47.897	65.140	26.292	1.00	9.06	B
ATOM	3626	N	TYR	B	220	49.578	66.473	25.574	1.00	7.83	B
ATOM	3627	CA	TYR	B	220	50.574	65.962	26.507	1.00	8.61	B
ATOM	3628	CB	TYR	B	220	51.961	65.899	25.871	1.00	8.83	B
ATOM	3629	CG	TYR	B	220	52.107	64.983	24.697	1.00	9.25	B
ATOM	3630	CD1	TYR	B	220	51.520	63.719	24.690	1.00	9.06	B
ATOM	3631	CE1	TYR	B	220	51.708	62.850	23.625	1.00	8.63	B
ATOM	3632	CD2	TYR	B	220	52.883	65.359	23.607	1.00	8.80	B
ATOM	3633	CE2	TYR	B	220	53.079	64.501	22.540	1.00	8.78	B
ATOM	3634	CZ	TYR	B	220	52.491	63.251	22.554	1.00	8.54	B
ATOM	3635	OH	TYR	B	220	52.691	62.403	21.491	1.00	9.33	B
ATOM	3636	C	TYR	B	220	50.597	66.928	27.670	1.00	7.92	B
ATOM	3637	O	TYR	B	220	50.487	68.145	27.478	1.00	8.32	B
ATOM	3638	N	GLY	B	221	50.770	66.391	28.869	1.00	8.36	B
ATOM	3639	CA	GLY	B	221	50.840	67.239	30.039	1.00	9.29	B
ATOM	3640	C	GLY	B	221	52.001	66.867	30.936	1.00	8.00	B
ATOM	3641	O	GLY	B	221	52.469	65.727	30.916	1.00	8.77	B
ATOM	3642	N	ILE	B	222	52.495	67.840	31.693	1.00	8.57	B
ATOM	3643	CA	ILE	B	222	53.565	67.590	32.646	1.00	8.46	B
ATOM	3644	CB	ILE	B	222	54.310	68.895	33.010	1.00	8.80	B
ATOM	3645	CG2	ILE	B	222	55.246	68.652	34.190	1.00	11.10	B
ATOM	3646	CG1	ILE	B	222	55.082	69.402	31.785	1.00	12.64	B
ATOM	3647	CD1	ILE	B	222	55.892	70.668	32.024	1.00	14.32	B
ATOM	3648	C	ILE	B	222	52.848	67.016	33.872	1.00	8.77	B
ATOM	3649	O	ILE	B	222	51.804	67.531	34.285	1.00	10.76	B
ATOM	3650	N	ALA	B	223	53.390	65.951	34.450	1.00	9.70	B
ATOM	3651	CA	ALA	B	223	52.745	65.321	35.596	1.00	9.37	B
ATOM	3652	CB	ALA	B	223	52.454	63.852	35.284	1.00	9.67	B
ATOM	3653	C	ALA	B	223	53.536	65.428	36.889	1.00	9.44	B
ATOM	3654	O	ALA	B	223	54.764	65.406	36.890	1.00	8.84	B
ATOM	3655	N	THR	B	224	52.802	65.546	37.990	1.00	9.86	B
ATOM	3656	CA	THR	B	224	53.384	65.630	39.322	1.00	10.14	B
ATOM	3657	CB	THR	B	224	53.408	67.088	39.846	1.00	10.69	B
ATOM	3658	OG1	THR	B	224	52.133	67.698	39.623	1.00	12.13	B
ATOM	3659	CG2	THR	B	224	54.491	67.895	39.153	1.00	10.75	B
ATOM	3660	C	THR	B	224	52.507	64.796	40.252	1.00	10.82	B
ATOM	3661	O	THR	B	224	51.354	64.513	39.937	1.00	11.22	B
ATOM	3662	N	PRO	B	225	53.049	64.370	41.403	1.00	11.54	B
ATOM	3663	CD	PRO	B	225	54.399	64.568	41.953	1.00	12.42	B
ATOM	3664	CA	PRO	B	225	52.216	63.576	42.312	1.00	12.84	B
ATOM	3665	CB	PRO	B	225	53.217	63.129	43.380	1.00	13.64	B
ATOM	3666	CG	PRO	B	225	54.171	64.288	43.486	1.00	17.80	B
ATOM	3667	C	PRO	B	225	51.063	64.440	42.812	1.00	14.09	B
ATOM	3668	O	PRO	B	225	51.195	65.658	42.906	1.00	14.20	B
ATOM	3669	N	LYS	B	226	49.931	63.816	43.119	1.00	15.70	B
ATOM	3670	CA	LYS	B	226	48.783	64.565	43.612	1.00	19.44	B
ATOM	3671	CB	LYS	B	226	47.619	63.607	43.874	1.00	20.33	B
ATOM	3672	CG	LYS	B	226	46.650	63.471	42.723	1.00	22.92	B
ATOM	3673	CD	LYS	B	226	45.386	62.769	43.184	1.00	24.41	B
ATOM	3674	CE	LYS	B	226	44.326	62.765	42.102	1.00	25.95	B

ATOM	3675	NZ	LYS	B	226	43.062	62.157	42.594	1.00	27.19	B
ATOM	3676	C	LYS	B	226	49.154	65.371	44.845	1.00	20.40	B
ATOM	3677	O	LYS	B	226	49.795	64.861	45.765	1.00	20.12	B
ATOM	3678	N	GLY	B	227	48.751	66.637	44.856	1.00	21.76	B
ATOM	3679	CA	GLY	B	227	49.034	67.493	45.992	1.00	22.87	B
ATOM	3680	C	GLY	B	227	50.411	68.126	45.994	1.00	23.69	B
ATOM	3681	O	GLY	B	227	50.720	68.932	46.871	1.00	24.90	B
ATOM	3682	N	SER	B	228	51.243	67.767	45.020	1.00	23.21	B
ATOM	3683	CA	SER	B	228	52.591	68.318	44.926	1.00	24.09	B
ATOM	3684	CB	SER	B	228	53.279	67.758	43.678	1.00	23.78	B
ATOM	3685	OG	SER	B	228	54.504	68.431	43.442	1.00	24.30	B
ATOM	3686	C	SER	B	228	52.570	69.839	44.942	1.00	24.66	B
ATOM	3687	O	SER	B	228	51.767	70.466	44.254	1.00	24.48	B
ATOM	3688	N	SER	B	229	53.470	70.428	45.721	1.00	25.30	B
ATOM	3689	CA	SER	B	229	53.561	71.879	45.828	1.00	25.59	B
ATOM	3690	CB	SER	B	229	54.252	72.236	47.146	1.00	25.94	B
ATOM	3691	OG	SER	B	229	55.577	71.737	47.170	1.00	28.01	B
ATOM	3692	C	SER	B	229	54.278	72.456	44.613	1.00	24.69	B
ATOM	3693	O	SER	B	229	54.496	73.664	44.528	1.00	25.48	B
ATOM	3694	N	LEU	B	230	54.651	71.587	43.678	1.00	22.34	B
ATOM	3695	CA	LEU	B	230	55.346	72.009	42.468	1.00	21.30	B
ATOM	3696	CB	LEU	B	230	56.461	71.002	42.157	1.00	23.11	B
ATOM	3697	CG	LEU	B	230	57.896	71.524	42.050	1.00	25.25	B
ATOM	3698	CD1	LEU	B	230	57.978	72.580	40.962	1.00	24.39	B
ATOM	3699	CD2	LEU	B	230	58.338	72.097	43.387	1.00	27.73	B
ATOM	3700	C	LEU	B	230	54.340	72.143	41.333	1.00	19.83	B
ATOM	3701	O	LEU	B	230	54.577	72.858	40.359	1.00	19.58	B
ATOM	3702	N	GLY	B	231	53.212	71.455	41.479	1.00	18.69	B
ATOM	3703	CA	GLY	B	231	52.177	71.473	40.461	1.00	18.22	B
ATOM	3704	C	GLY	B	231	51.704	72.832	39.981	1.00	17.36	B
ATOM	3705	O	GLY	B	231	51.672	73.084	38.778	1.00	16.54	B
ATOM	3706	N	ASN	B	232	51.332	73.711	40.907	1.00	17.32	B
ATOM	3707	CA	ASN	B	232	50.844	75.033	40.534	1.00	18.12	B
ATOM	3708	CB	ASN	B	232	50.409	75.789	41.792	1.00	19.85	B
ATOM	3709	CG	ASN	B	232	49.897	77.181	41.479	1.00	21.52	B
ATOM	3710	OD1	ASN	B	232	48.916	77.345	40.751	1.00	22.55	B
ATOM	3711	ND2	ASN	B	232	50.561	78.194	42.025	1.00	22.41	B
ATOM	3712	C	ASN	B	232	51.861	75.814	39.710	1.00	16.03	B
ATOM	3713	O	ASN	B	232	51.540	76.321	38.635	1.00	14.82	B
ATOM	3714	N	ALA	B	233	53.083	75.917	40.223	1.00	16.42	B
ATOM	3715	CA	ALA	B	233	54.139	76.650	39.536	1.00	15.32	B
ATOM	3716	CB	ALA	B	233	55.423	76.610	40.355	1.00	16.83	B
ATOM	3717	C	ALA	B	233	54.391	76.089	38.140	1.00	13.41	B
ATOM	3718	O	ALA	B	233	54.495	76.838	37.171	1.00	13.67	B
ATOM	3719	N	VAL	B	234	54.489	74.769	38.043	1.00	13.56	B
ATOM	3720	CA	VAL	B	234	54.732	74.124	36.760	1.00	13.50	B
ATOM	3721	CB	VAL	B	234	54.857	72.597	36.933	1.00	15.11	B
ATOM	3722	CG1	VAL	B	234	54.762	71.899	35.585	1.00	15.97	B
ATOM	3723	CG2	VAL	B	234	56.181	72.272	37.602	1.00	15.87	B
ATOM	3724	C	VAL	B	234	53.635	74.445	35.753	1.00	13.01	B
ATOM	3725	O	VAL	B	234	53.917	74.715	34.586	1.00	12.10	B
ATOM	3726	N	ASN	B	235	52.382	74.427	36.199	1.00	12.91	B
ATOM	3727	CA	ASN	B	235	51.275	74.729	35.303	1.00	12.22	B
ATOM	3728	CB	ASN	B	235	49.948	74.416	35.998	1.00	12.94	B
ATOM	3729	CG	ASN	B	235	48.758	74.628	35.086	1.00	12.76	B
ATOM	3730	OD1	ASN	B	235	48.660	74.013	34.025	1.00	12.94	B
ATOM	3731	ND2	ASN	B	235	47.849	75.512	35.488	1.00	13.11	B
ATOM	3732	C	ASN	B	235	51.356	76.175	34.820	1.00	12.14	B
ATOM	3733	O	ASN	B	235	51.184	76.449	33.634	1.00	12.71	B
ATOM	3734	N	LEU	B	236	51.607	77.102	35.741	1.00	12.49	B
ATOM	3735	CA	LEU	B	236	51.708	78.505	35.364	1.00	11.62	B

ATOM	3736	CB	LEU	B	236	51.878	79.369	36.618	1.00	13.06	B
ATOM	3737	CG	LEU	B	236	50.698	79.361	37.594	1.00	14.67	B
ATOM	3738	CD1	LEU	B	236	50.983	80.306	38.747	1.00	16.14	B
ATOM	3739	CD2	LEU	B	236	49.426	79.778	36.872	1.00	16.50	B
ATOM	3740	C	LEU	B	236	52.841	78.678	34.367	1.00	11.05	B
ATOM	3741	O	LEU	B	236	52.729	79.461	33.433	1.00	10.82	B
ATOM	3742	N	ALA	B	237	53.931	77.942	34.563	1.00	10.62	B
ATOM	3743	CA	ALA	B	237	55.071	78.039	33.658	1.00	11.05	B
ATOM	3744	CB	ALA	B	237	56.226	77.198	34.174	1.00	11.84	B
ATOM	3745	C	ALA	B	237	54.670	77.585	32.257	1.00	8.78	B
ATOM	3746	O	ALA	B	237	55.036	78.210	31.261	1.00	10.25	B
ATOM	3747	N	VAL	B	238	53.916	76.493	32.175	1.00	8.92	B
ATOM	3748	CA	VAL	B	238	53.468	75.998	30.882	1.00	9.79	B
ATOM	3749	CB	VAL	B	238	52.646	74.697	31.038	1.00	8.65	B
ATOM	3750	CG1	VAL	B	238	51.961	74.350	29.726	1.00	11.53	B
ATOM	3751	CG2	VAL	B	238	53.563	73.557	31.469	1.00	10.18	B
ATOM	3752	C	VAL	B	238	52.615	77.059	30.188	1.00	9.93	B
ATOM	3753	O	VAL	B	238	52.772	77.318	28.992	1.00	9.81	B
ATOM	3754	N	LEU	B	239	51.713	77.684	30.940	1.00	10.23	B
ATOM	3755	CA	LEU	B	239	50.861	78.704	30.351	1.00	9.82	B
ATOM	3756	CB	LEU	B	239	49.767	79.092	31.349	1.00	12.39	B
ATOM	3757	CG	LEU	B	239	48.681	78.022	31.517	1.00	13.67	B
ATOM	3758	CD1	LEU	B	239	47.624	78.512	32.492	1.00	14.95	B
ATOM	3759	CD2	LEU	B	239	48.046	77.710	30.169	1.00	16.99	B
ATOM	3760	C	LEU	B	239	51.683	79.887	29.853	1.00	9.15	B
ATOM	3761	O	LEU	B	239	51.403	80.427	28.786	1.00	9.90	B
ATOM	3762	N	LYS	B	240	52.700	80.287	30.611	1.00	11.16	B
ATOM	3763	CA	LYS	B	240	53.535	81.405	30.184	1.00	10.48	B
ATOM	3764	CB	LYS	B	240	54.473	81.823	31.317	1.00	12.71	B
ATOM	3765	CG	LYS	B	240	55.399	82.972	30.928	1.00	14.68	B
ATOM	3766	CD	LYS	B	240	56.197	83.484	32.115	1.00	20.09	B
ATOM	3767	CE	LYS	B	240	55.297	84.164	33.136	1.00	22.68	B
ATOM	3768	NZ	LYS	B	240	56.076	84.727	34.276	1.00	24.21	B
ATOM	3769	C	LYS	B	240	54.279	81.045	28.905	1.00	10.44	B
ATOM	3770	O	LYS	B	240	54.281	81.819	27.949	1.00	11.84	B
ATOM	3771	N	LEU	B	241	54.909	79.871	28.884	1.00	10.42	B
ATOM	3772	CA	LEU	B	241	55.649	79.440	27.698	1.00	10.58	B
ATOM	3773	CB	LEU	B	241	56.324	78.091	27.976	1.00	10.58	B
ATOM	3774	CG	LEU	B	241	57.391	78.072	29.078	1.00	10.95	B
ATOM	3775	CD1	LEU	B	241	57.857	76.646	29.303	1.00	11.46	B
ATOM	3776	CD2	LEU	B	241	58.559	78.971	28.691	1.00	12.35	B
ATOM	3777	C	LEU	B	241	54.717	79.409	26.493	1.00	10.01	B
ATOM	3778	O	LEU	B	241	55.105	79.781	25.387	1.00	11.26	B
ATOM	3779	N	SER	B	242	53.485	78.958	26.712	1.00	9.61	B
ATOM	3780	CA	SER	B	242	52.489	78.907	25.652	1.00	10.02	B
ATOM	3781	CB	SER	B	242	51.216	78.249	26.186	1.00	9.83	B
ATOM	3782	OG	SER	B	242	50.149	78.410	25.262	1.00	11.46	B
ATOM	3783	C	SER	B	242	52.217	80.307	25.121	1.00	9.68	B
ATOM	3784	O	SER	B	242	52.314	80.558	23.921	1.00	10.65	B
ATOM	3785	N	GLU	B	243	51.870	81.212	26.032	1.00	10.68	B
ATOM	3786	CA	GLU	B	243	51.541	82.582	25.666	1.00	12.37	B
ATOM	3787	CB	GLU	B	243	50.899	83.274	26.876	1.00	12.07	B
ATOM	3788	CG	GLU	B	243	49.549	82.660	27.240	1.00	12.41	B
ATOM	3789	CD	GLU	B	243	48.811	83.390	28.345	1.00	12.64	B
ATOM	3790	OE1	GLU	B	243	49.314	84.415	28.855	1.00	14.32	B
ATOM	3791	OE2	GLU	B	243	47.710	82.925	28.704	1.00	13.44	B
ATOM	3792	C	GLU	B	243	52.694	83.364	25.054	1.00	11.58	B
ATOM	3793	O	GLU	B	243	52.460	84.308	24.295	1.00	13.14	B
ATOM	3794	N	GLN	B	244	53.927	82.974	25.367	1.00	12.52	B
ATOM	3795	CA	GLN	B	244	55.107	83.650	24.830	1.00	12.54	B
ATOM	3796	CB	GLN	B	244	56.275	83.506	25.811	1.00	15.35	B

ATOM	3797	CG	GLN	B	244	56.078	84.191	27.149	1.00	19.99	B
ATOM	3798	CD	GLN	B	244	57.242	83.953	28.095	1.00	24.17	B
ATOM	3799	OE1	GLN	B	244	57.579	82.809	28.409	1.00	28.41	B
ATOM	3800	NE2	GLN	B	244	57.860	85.032	28.555	1.00	26.83	B
ATOM	3801	C	GLN	B	244	55.457	83.116	23.450	1.00	12.24	B
ATOM	3802	O	GLN	B	244	56.320	83.672	22.769	1.00	13.81	B
ATOM	3803	N	GLY	B	245	54.795	82.038	23.043	1.00	12.05	B
ATOM	3804	CA	GLY	B	245	55.061	81.440	21.745	1.00	12.13	B
ATOM	3805	C	GLY	B	245	56.273	80.523	21.751	1.00	10.48	B
ATOM	3806	O	GLY	B	245	56.667	79.992	20.710	1.00	11.40	B
ATOM	3807	N	LEU	B	246	56.850	80.316	22.929	1.00	10.40	B
ATOM	3808	CA	LEU	B	246	58.035	79.473	23.072	1.00	11.35	B
ATOM	3809	CB	LEU	B	246	58.634	79.705	24.461	1.00	12.45	B
ATOM	3810	CG	LEU	B	246	59.258	81.086	24.690	1.00	15.77	B
ATOM	3811	CD1	LEU	B	246	59.700	81.221	26.139	1.00	19.66	B
ATOM	3812	CD2	LEU	B	246	60.440	81.273	23.750	1.00	17.98	B
ATOM	3813	C	LEU	B	246	57.770	77.999	22.771	1.00	10.58	B
ATOM	3814	O	LEU	B	246	58.653	77.292	22.283	1.00	11.68	B
ATOM	3815	N	LEU	B	247	56.566	77.521	23.063	1.00	10.70	B
ATOM	3816	CA	LEU	B	247	56.247	76.127	22.787	1.00	10.56	B
ATOM	3817	CB	LEU	B	247	54.971	75.736	23.539	1.00	12.11	B
ATOM	3818	CG	LEU	B	247	55.059	75.852	25.063	1.00	11.27	B
ATOM	3819	CD1	LEU	B	247	53.732	75.415	25.671	1.00	11.53	B
ATOM	3820	CD2	LEU	B	247	56.198	74.997	25.601	1.00	13.61	B
ATOM	3821	C	LEU	B	247	56.161	75.934	21.277	1.00	10.81	B
ATOM	3822	O	LEU	B	247	56.552	74.891	20.760	1.00	10.76	B
ATOM	3823	N	ASP	B	248	55.654	76.938	20.565	1.00	10.50	B
ATOM	3824	CA	ASP	B	248	55.564	76.843	19.112	1.00	12.17	B
ATOM	3825	CB	ASP	B	248	54.736	78.007	18.552	1.00	12.81	B
ATOM	3826	CG	ASP	B	248	53.288	77.971	18.998	1.00	14.09	B
ATOM	3827	OD1	ASP	B	248	52.693	76.873	19.027	1.00	16.17	B
ATOM	3828	OD2	ASP	B	248	52.737	79.050	19.302	1.00	17.55	B
ATOM	3829	C	ASP	B	248	56.979	76.806	18.537	1.00	12.32	B
ATOM	3830	O	ASP	B	248	57.263	76.046	17.608	1.00	13.88	B
ATOM	3831	N	LYS	B	249	57.862	77.631	19.091	1.00	12.62	B
ATOM	3832	CA	LYS	B	249	59.243	77.686	18.628	1.00	13.25	B
ATOM	3833	CB	LYS	B	249	59.971	78.828	19.343	1.00	15.24	B
ATOM	3834	CG	LYS	B	249	61.402	79.036	18.878	1.00	21.15	B
ATOM	3835	CD	LYS	B	249	62.062	80.194	19.609	1.00	23.46	B
ATOM	3836	CE	LYS	B	249	63.487	80.412	19.123	1.00	25.24	B
ATOM	3837	NZ	LYS	B	249	63.529	80.703	17.659	1.00	27.50	B
ATOM	3838	C	LYS	B	249	59.922	76.337	18.830	1.00	11.89	B
ATOM	3839	O	LYS	B	249	60.638	75.860	17.948	1.00	11.35	B
ATOM	3840	N	LEU	B	250	59.696	75.727	19.990	1.00	11.05	B
ATOM	3841	CA	LEU	B	250	60.292	74.434	20.296	1.00	12.56	B
ATOM	3842	CB	LEU	B	250	60.072	74.106	21.776	1.00	14.40	B
ATOM	3843	CG	LEU	B	250	60.913	74.904	22.777	1.00	15.38	B
ATOM	3844	CD1	LEU	B	250	60.628	74.408	24.188	1.00	18.75	B
ATOM	3845	CD2	LEU	B	250	62.391	74.745	22.451	1.00	19.61	B
ATOM	3846	C	LEU	B	250	59.791	73.343	19.358	1.00	10.20	B
ATOM	3847	O	LEU	B	250	60.569	72.483	18.944	1.00	11.44	B
ATOM	3848	N	LYS	B	251	58.504	73.360	19.009	1.00	10.95	B
ATOM	3849	CA	LYS	B	251	58.017	72.330	18.097	1.00	12.43	B
ATOM	3850	CB	LYS	B	251	56.485	72.312	18.023	1.00	13.29	B
ATOM	3851	CG	LYS	B	251	55.996	71.181	17.113	1.00	16.55	B
ATOM	3852	CD	LYS	B	251	54.490	71.004	17.085	1.00	17.86	B
ATOM	3853	CE	LYS	B	251	54.135	69.736	16.308	1.00	19.60	B
ATOM	3854	NZ	LYS	B	251	52.675	69.544	16.140	1.00	20.85	B
ATOM	3855	C	LYS	B	251	58.654	72.517	16.726	1.00	11.79	B
ATOM	3856	O	LYS	B	251	59.086	71.549	16.105	1.00	11.81	B
ATOM	3857	N	ASN	B	252	58.713	73.759	16.250	1.00	11.81	B

ATOM	3858	CA	ASN	B	252	59.316	74.021	14.946	1.00	13.39	B
ATOM	3859	CB	ASN	B	252	59.170	75.502	14.585	1.00	16.26	B
ATOM	3860	CG	ASN	B	252	57.746	75.882	14.262	1.00	19.99	B
ATOM	3861	OD1	ASN	B	252	57.000	75.092	13.684	1.00	23.83	B
ATOM	3862	ND2	ASN	B	252	57.363	77.103	14.614	1.00	22.55	B
ATOM	3863	C	ASN	B	252	60.764	73.564	14.941	1.00	13.53	B
ATOM	3864	O	ASN	B	252	61.230	72.966	13.974	1.00	13.33	B
ATOM	3865	N	LYS	B	253	61.471	73.844	16.029	1.00	12.13	B
ATOM	3866	CA	LYS	B	253	62.872	73.461	16.147	1.00	13.00	B
ATOM	3867	CB	LYS	B	253	63.413	73.951	17.495	1.00	14.25	B
ATOM	3868	CG	LYS	B	253	64.812	73.439	17.823	1.00	13.83	B
ATOM	3869	CD	LYS	B	253	65.278	73.913	19.192	1.00	14.51	B
ATOM	3870	CE	LYS	B	253	66.663	73.377	19.522	1.00	17.96	B
ATOM	3871	NZ	LYS	B	253	67.083	73.685	20.922	1.00	20.12	B
ATOM	3872	C	LYS	B	253	63.098	71.966	15.954	1.00	12.93	B
ATOM	3873	O	LYS	B	253	63.931	71.555	15.139	1.00	13.54	B
ATOM	3874	N	TRP	B	254	62.350	71.154	16.696	1.00	11.94	B
ATOM	3875	CA	TRP	B	254	62.516	69.709	16.654	1.00	12.21	B
ATOM	3876	CB	TRP	B	254	62.240	69.165	18.063	1.00	12.24	B
ATOM	3877	CG	TRP	B	254	63.252	69.634	19.062	1.00	10.70	B
ATOM	3878	CD2	TRP	B	254	64.591	69.148	19.204	1.00	9.88	B
ATOM	3879	CE2	TRP	B	254	65.213	69.920	20.210	1.00	10.80	B
ATOM	3880	CE3	TRP	B	254	65.327	68.137	18.573	1.00	10.93	B
ATOM	3881	CD1	TRP	B	254	63.116	70.653	19.965	1.00	10.24	B
ATOM	3882	NE1	TRP	B	254	64.292	70.831	20.659	1.00	10.60	B
ATOM	3883	CZ2	TRP	B	254	66.540	69.711	20.600	1.00	10.82	B
ATOM	3884	CZ3	TRP	B	254	66.647	67.929	18.960	1.00	11.90	B
ATOM	3885	CH2	TRP	B	254	67.238	68.713	19.965	1.00	10.73	B
ATOM	3886	C	TRP	B	254	61.752	68.957	15.571	1.00	10.95	B
ATOM	3887	O	TRP	B	254	62.073	67.801	15.287	1.00	12.40	B
ATOM	3888	N	TRP	B	255	60.765	69.598	14.957	1.00	11.38	B
ATOM	3889	CA	TRP	B	255	59.962	68.952	13.923	1.00	13.10	B
ATOM	3890	CB	TRP	B	255	58.475	69.182	14.224	1.00	12.80	B
ATOM	3891	CG	TRP	B	255	57.813	68.115	15.019	1.00	10.68	B
ATOM	3892	CD2	TRP	B	255	57.957	67.882	16.420	1.00	9.63	B
ATOM	3893	CE2	TRP	B	255	57.149	66.771	16.742	1.00	10.00	B
ATOM	3894	CE3	TRP	B	255	58.693	68.505	17.437	1.00	10.25	B
ATOM	3895	CD1	TRP	B	255	56.947	67.167	14.556	1.00	11.48	B
ATOM	3896	NE1	TRP	B	255	56.543	66.355	15.586	1.00	10.11	B
ATOM	3897	CZ2	TRP	B	255	57.054	66.265	18.041	1.00	10.61	B
ATOM	3898	CZ3	TRP	B	255	58.598	68.002	18.732	1.00	10.77	B
ATOM	3899	CH2	TRP	B	255	57.783	66.890	19.021	1.00	11.15	B
ATOM	3900	C	TRP	B	255	60.289	69.392	12.505	1.00	14.72	B
ATOM	3901	O	TRP	B	255	60.491	68.560	11.620	1.00	15.12	B
ATOM	3902	N	TYR	B	256	60.349	70.702	12.295	1.00	17.10	B
ATOM	3903	CA	TYR	B	256	60.544	71.233	10.954	1.00	19.22	B
ATOM	3904	CB	TYR	B	256	59.340	72.129	10.666	1.00	19.05	B
ATOM	3905	CG	TYR	B	256	58.030	71.468	11.035	1.00	19.92	B
ATOM	3906	CD1	TYR	B	256	57.599	70.317	10.378	1.00	22.52	B
ATOM	3907	CE1	TYR	B	256	56.415	69.677	10.746	1.00	21.25	B
ATOM	3908	CD2	TYR	B	256	57.242	71.968	12.071	1.00	20.19	B
ATOM	3909	CE2	TYR	B	256	56.059	71.336	12.446	1.00	22.92	B
ATOM	3910	CZ	TYR	B	256	55.653	70.191	11.779	1.00	22.06	B
ATOM	3911	OH	TYR	B	256	54.491	69.554	12.153	1.00	24.67	B
ATOM	3912	C	TYR	B	256	61.871	71.894	10.609	1.00	21.40	B
ATOM	3913	O	TYR	B	256	62.350	71.749	9.482	1.00	22.61	B
ATOM	3914	N	ASP	B	257	62.464	72.623	11.547	1.00	23.95	B
ATOM	3915	CA	ASP	B	257	63.732	73.290	11.266	1.00	27.44	B
ATOM	3916	CB	ASP	B	257	64.165	74.112	12.487	1.00	27.78	B
ATOM	3917	CG	ASP	B	257	63.211	75.254	12.789	1.00	29.85	B
ATOM	3918	OD1	ASP	B	257	62.565	75.759	11.846	1.00	32.11	B

ATOM	3919	OD2	ASP	B	257	63.118	75.659	13.966	1.00	31.30	B
ATOM	3920	C	ASP	B	257	64.784	72.285	10.812	1.00	29.29	B
ATOM	3921	O	ASP	B	257	65.688	72.622	10.047	1.00	30.78	B
ATOM	3922	N	GLY	B	258	64.659	71.050	11.283	1.00	31.43	B
ATOM	3923	CA	GLY	B	258	65.605	70.017	10.904	1.00	32.34	B
ATOM	3924	C	GLY	B	258	65.005	69.063	9.891	1.00	33.02	B
ATOM	3925	O	GLY	B	258	65.565	68.000	9.619	1.00	33.65	B
ATOM	3926	N	GLY	B	259	63.860	69.445	9.332	1.00	33.63	B
ATOM	3927	CA	GLY	B	259	63.195	68.610	8.348	1.00	33.47	B
ATOM	3928	C	GLY	B	259	64.149	68.089	7.291	1.00	34.04	B
ATOM	3929	O	GLY	B	259	65.116	68.761	6.933	1.00	34.51	B
ATOM	3930	N	GLU	B	260	63.878	66.888	6.792	1.00	33.23	B
ATOM	3931	CA	GLU	B	260	64.722	66.272	5.775	1.00	32.24	B
ATOM	3932	CB	GLU	B	260	65.348	65.000	6.355	1.00	31.96	B
ATOM	3933	CG	GLU	B	260	66.243	65.236	7.560	1.00	32.09	B
ATOM	3934	CD	GLU	B	260	66.683	63.943	8.220	1.00	32.53	B
ATOM	3935	OE1	GLU	B	260	67.511	64.000	9.154	1.00	33.55	B
ATOM	3936	OE2	GLU	B	260	66.196	62.868	7.808	1.00	32.24	B
ATOM	3937	C	GLU	B	260	63.916	66.009	4.512	1.00	31.67	B
ATOM	3938	O	GLU	B	260	64.439	65.473	3.534	1.00	32.39	B
ATOM	3939	N	CYS	B	261	62.643	66.388	4.534	1.00	31.23	B
ATOM	3940	CA	CYS	B	261	61.765	66.175	3.391	1.00	31.10	B
ATOM	3941	CB	CYS	B	261	60.671	65.181	3.789	1.00	28.33	B
ATOM	3942	SG	CYS	B	261	61.295	63.662	4.576	1.00	22.63	B
ATOM	3943	C	CYS	B	261	61.212	67.499	2.882	1.00	33.06	B
ATOM	3944	OT1	CYS	B	261	61.395	67.786	1.682	1.00	34.09	B
ATOM	3945	OT2	CYS	B	261	60.596	68.229	3.687	1.00	34.77	B
ATOM	3946	N	KAI	C	999	36.732	83.699	24.381	1.00	8.97	C
ATOM	3947	CD	KAI	C	999	35.356	84.162	23.978	1.00	11.13	C
ATOM	3948	CD1	KAI	C	999	33.448	86.124	23.049	1.00	11.15	C
ATOM	3949	CD2	KAI	C	999	34.433	88.083	24.099	1.00	10.37	C
ATOM	3950	CA	KAI	C	999	37.571	84.834	24.580	1.00	9.63	C
ATOM	3951	CB	KAI	C	999	36.895	86.049	23.967	1.00	9.40	C
ATOM	3952	CB1	KAI	C	999	37.007	86.149	22.439	1.00	9.89	C
ATOM	3953	CG	KAI	C	999	35.496	85.730	24.227	1.00	10.71	C
ATOM	3954	CG1	KAI	C	999	38.226	86.898	21.921	1.00	11.01	C
ATOM	3955	CG2	KAI	C	999	34.361	86.658	23.754	1.00	9.12	C
ATOM	3956	C	KAI	C	999	37.920	85.004	26.067	1.00	9.43	C
ATOM	3957	O	KAI	C	999	37.684	84.018	26.801	1.00	9.25	C
ATOM	3958	OD1	KAI	C	999	38.397	86.868	20.684	1.00	11.02	C
ATOM	3959	OD2	KAI	C	999	38.955	87.487	22.751	1.00	11.20	C
ATOM	3960	OT	KAI	C	999	38.417	86.102	26.400	1.00	9.41	C
ATOM	3961	N1	LY3	E	888	50.824	75.300	24.218	0.50	14.69	E
ATOM	3962	C2	LY3	E	888	49.837	74.767	24.101	0.50	12.99	E
ATOM	3963	C3	LY3	E	888	48.551	74.064	23.955	0.50	14.06	E
ATOM	3964	C4	LY3	E	888	47.446	74.389	24.833	0.50	11.93	E
ATOM	3965	C5	LY3	E	888	46.201	73.657	24.724	0.50	11.26	E
ATOM	3966	C6	LY3	E	888	46.065	72.599	23.727	0.50	9.88	E
ATOM	3967	C7	LY3	E	888	47.174	72.297	22.862	0.50	12.86	E
ATOM	3968	C8	LY3	E	888	48.410	73.022	22.968	0.50	13.14	E
ATOM	3969	C9	LY3	E	888	44.688	71.853	23.704	0.50	9.90	E
ATOM	3970	C10	LY3	E	888	43.409	72.534	23.750	0.50	8.29	E
ATOM	3971	C11	LY3	E	888	42.177	71.761	23.749	0.50	6.63	E
ATOM	3972	C12	LY3	E	888	42.220	70.314	23.697	0.50	8.27	E
ATOM	3973	C13	LY3	E	888	43.501	69.642	23.639	0.50	9.35	E
ATOM	3974	C14	LY3	E	888	44.721	70.401	23.646	0.50	9.41	E
ATOM	3975	C15	LY3	E	888	40.937	69.538	23.732	0.50	6.94	E
ATOM	3976	C16	LY3	E	888	40.519	69.153	22.327	0.50	9.61	E
ATOM	3977	C17	LY3	E	888	41.080	68.279	24.574	0.50	9.87	E
ATOM	3978	N18	LY3	E	888	41.562	68.515	25.961	0.50	9.17	E
ATOM	3979	S19	LY3	E	888	42.499	67.367	26.745	0.50	8.97	E

ATOM	3980	O20	LY3	E	888	43.612	67.035	25.887	0.50	10.09	E
ATOM	3981	O21	LY3	E	888	42.912	68.015	27.994	0.50	10.41	E
ATOM	3982	C22	LY3	E	888	41.536	66.117	26.870	0.50	9.66	E
ATOM	3983	C23	LY3	E	888	42.386	65.070	27.545	0.50	14.10	E
ATOM	3984	C24	LY3	E	888	40.409	66.529	27.730	0.50	11.22	E
ATOM	3985	OH2	WAT	W	1	47.102	58.092	22.068	1.00	9.42	W
ATOM	3986	OH2	WAT	W	2	41.892	84.589	22.087	1.00	9.65	W
ATOM	3987	OH2	WAT	W	3	36.678	85.311	19.219	1.00	9.95	W
ATOM	3988	OH2	WAT	W	4	52.289	57.357	19.194	1.00	10.29	W
ATOM	3989	OH2	WAT	W	5	46.379	81.533	26.710	1.00	10.86	W
ATOM	3990	OH2	WAT	W	6	33.845	77.899	30.965	1.00	11.49	W
ATOM	3991	OH2	WAT	W	7	50.870	71.891	20.044	1.00	11.56	W
ATOM	3992	OH2	WAT	W	8	55.114	64.760	30.992	1.00	11.41	W
ATOM	3993	OH2	WAT	W	9	55.092	72.606	21.327	1.00	12.00	W
ATOM	3994	OH2	WAT	W	10	48.599	82.653	23.121	1.00	12.64	W
ATOM	3995	OH2	WAT	W	11	38.122	70.791	20.060	1.00	12.16	W
ATOM	3996	OH2	WAT	W	12	40.419	60.055	23.138	1.00	12.75	W
ATOM	3997	OH2	WAT	W	13	42.595	61.145	26.695	1.00	11.43	W
ATOM	3998	OH2	WAT	W	14	37.945	60.776	21.876	1.00	11.88	W
ATOM	3999	OH2	WAT	W	15	68.135	69.797	23.658	1.00	12.94	W
ATOM	4000	OH2	WAT	W	16	33.881	70.066	21.295	1.00	12.65	W
ATOM	4001	OH2	WAT	W	17	39.517	90.174	22.369	1.00	11.67	W
ATOM	4002	OH2	WAT	W	18	20.860	72.869	23.649	1.00	14.37	W
ATOM	4003	OH2	WAT	W	19	40.816	62.182	24.797	1.00	12.94	W
ATOM	4004	OH2	WAT	W	20	50.159	61.009	42.996	1.00	14.37	W
ATOM	4005	OH2	WAT	W	21	49.483	52.474	22.361	1.00	12.62	W
ATOM	4006	OH2	WAT	W	22	41.787	101.520	16.042	1.00	12.71	W
ATOM	4007	OH2	WAT	W	23	66.949	69.772	30.438	1.00	13.34	W
ATOM	4008	OH2	WAT	W	24	47.186	41.155	16.033	1.00	12.63	W
ATOM	4009	OH2	WAT	W	25	22.033	72.872	30.430	1.00	13.42	W
ATOM	4010	OH2	WAT	W	26	38.836	81.698	42.991	1.00	14.92	W
ATOM	4011	OH2	WAT	W	27	38.981	40.210	18.711	1.00	13.28	W
ATOM	4012	OH2	WAT	W	28	45.202	83.684	25.166	1.00	13.63	W
ATOM	4013	OH2	WAT	W	29	50.995	81.871	21.899	1.00	12.75	W
ATOM	4014	OH2	WAT	W	30	51.886	68.752	36.988	1.00	14.14	W
ATOM	4015	OH2	WAT	W	31	53.804	78.573	22.322	1.00	13.21	W
ATOM	4016	OH2	WAT	W	32	37.114	73.904	36.993	1.00	13.79	W
ATOM	4017	OH2	WAT	W	33	50.186	77.511	22.712	1.00	13.81	W
ATOM	4018	OH2	WAT	W	34	49.758	96.872	9.527	1.00	14.63	W
ATOM	4019	OH2	WAT	W	35	39.170	45.814	9.527	1.00	15.33	W
ATOM	4020	OH2	WAT	W	36	35.210	64.071	22.298	1.00	13.53	W
ATOM	4021	OH2	WAT	W	37	43.727	58.990	25.122	1.00	14.75	W
ATOM	4022	OH2	WAT	W	38	38.820	65.158	22.768	1.00	13.75	W
ATOM	4023	OH2	WAT	W	39	70.814	63.704	34.074	1.00	13.03	W
ATOM	4024	OH2	WAT	W	40	46.180	87.108	37.618	1.00	15.72	W
ATOM	4025	OH2	WAT	W	41	64.124	55.179	27.857	1.00	13.51	W
ATOM	4026	OH2	WAT	W	42	48.163	80.493	24.804	1.00	13.14	W
ATOM	4027	OH2	WAT	W	43	24.858	87.455	27.843	1.00	13.24	W
ATOM	4028	OH2	WAT	W	44	42.829	55.548	37.593	1.00	15.05	W
ATOM	4029	OH2	WAT	W	45	36.635	48.648	21.536	1.00	14.77	W
ATOM	4030	OH2	WAT	W	46	43.414	105.324	17.763	1.00	15.06	W
ATOM	4031	OH2	WAT	W	47	41.508	56.892	30.417	1.00	14.57	W
ATOM	4032	OH2	WAT	W	48	49.989	102.506	18.712	1.00	14.52	W
ATOM	4033	OH2	WAT	W	49	25.983	88.936	29.899	1.00	14.36	W
ATOM	4034	OH2	WAT	W	50	54.492	56.093	18.081	1.00	12.38	W
ATOM	4035	OH2	WAT	W	51	38.480	63.295	20.839	1.00	13.21	W
ATOM	4036	OH2	WAT	W	52	34.506	86.536	18.104	1.00	13.07	W
ATOM	4037	OH2	WAT	W	53	62.976	53.766	29.878	1.00	15.14	W
ATOM	4038	OH2	WAT	W	54	52.374	94.064	21.522	1.00	15.10	W
ATOM	4039	OH2	WAT	W	55	32.437	75.719	43.086	1.00	18.07	W
ATOM	4040	OH2	WAT	W	56	45.572	37.362	17.727	1.00	14.20	W

ATOM	4041	OH2	WAT	W	57	18.811	85.476	29.350	1.00	15.28	W
ATOM	4042	OH2	WAT	W	58	44.689	74.110	20.571	1.00	13.59	W
ATOM	4043	OH2	WAT	W	59	70.181	57.203	29.405	1.00	15.34	W
ATOM	4044	OH2	WAT	W	60	50.535	79.365	20.810	1.00	14.25	W
ATOM	4045	OH2	WAT	W	61	59.364	59.220	6.177	1.00	13.93	W
ATOM	4046	OH2	WAT	W	62	18.152	78.966	34.116	1.00	13.75	W
ATOM	4047	OH2	WAT	W	63	47.480	85.774	30.437	1.00	15.69	W
ATOM	4048	OH2	WAT	W	64	52.509	73.385	21.803	1.00	12.40	W
ATOM	4049	OH2	WAT	W	65	36.499	69.305	21.796	1.00	13.29	W
ATOM	4050	OH2	WAT	W	66	56.541	66.956	43.061	1.00	19.69	W
ATOM	4051	OH2	WAT	W	67	44.592	65.330	39.631	1.00	15.23	W
ATOM	4052	OH2	WAT	W	68	43.422	66.065	16.840	1.00	16.31	W
ATOM	4053	OH2	WAT	W	69	45.595	76.658	16.838	1.00	15.43	W
ATOM	4054	OH2	WAT	W	70	52.117	76.180	21.515	1.00	15.25	W
ATOM	4055	OH2	WAT	W	71	34.389	82.628	8.611	1.00	15.39	W
ATOM	4056	OH2	WAT	W	72	43.502	56.313	25.895	1.00	13.93	W
ATOM	4057	OH2	WAT	W	73	44.383	77.298	39.674	1.00	15.09	W
ATOM	4058	OH2	WAT	W	74	31.402	80.991	4.150	1.00	16.58	W
ATOM	4059	OH2	WAT	W	75	45.484	86.340	25.866	1.00	13.07	W
ATOM	4060	OH2	WAT	W	76	29.658	83.471	6.193	1.00	16.11	W
ATOM	4061	OH2	WAT	W	77	50.842	53.536	18.587	1.00	16.64	W
ATOM	4062	OH2	WAT	W	78	52.363	98.944	13.085	1.00	16.61	W
ATOM	4063	OH2	WAT	W	79	38.066	89.045	18.567	1.00	16.20	W
ATOM	4064	OH2	WAT	W	80	44.290	68.562	20.537	1.00	13.98	W
ATOM	4065	OH2	WAT	W	81	54.651	59.977	8.635	1.00	16.03	W
ATOM	4066	OH2	WAT	W	82	36.867	66.495	21.576	1.00	15.68	W
ATOM	4067	OH2	WAT	W	83	23.603	84.009	21.786	1.00	15.33	W
ATOM	4068	OH2	WAT	W	84	54.729	50.430	-1.548	1.00	19.38	W
ATOM	4069	OH2	WAT	W	85	57.530	61.744	4.120	1.00	16.87	W
ATOM	4070	OH2	WAT	W	86	41.088	105.022	16.290	1.00	15.69	W
ATOM	4071	OH2	WAT	W	87	38.319	71.451	36.984	1.00	17.14	W
ATOM	4072	OH2	WAT	W	88	31.517	89.824	37.467	1.00	16.58	W
ATOM	4073	OH2	WAT	W	89	50.641	71.222	36.997	1.00	18.14	W
ATOM	4074	OH2	WAT	W	90	55.999	54.399	-1.005	1.00	14.41	W
ATOM	4075	OH2	WAT	W	91	48.673	35.111	15.911	1.00	17.63	W
ATOM	4076	OH2	WAT	W	92	36.357	90.765	-0.686	1.00	15.56	W
ATOM	4077	OH2	WAT	W	93	47.926	37.673	16.359	1.00	15.70	W
ATOM	4078	OH2	WAT	W	94	61.370	53.955	18.871	1.00	17.39	W
ATOM	4079	OH2	WAT	W	95	48.563	49.341	-0.111	1.00	19.51	W
ATOM	4080	OH2	WAT	W	96	57.430	52.827	37.437	1.00	15.87	W
ATOM	4081	OH2	WAT	W	97	32.940	88.241	-0.945	1.00	16.26	W
ATOM	4082	OH2	WAT	W	98	65.341	58.661	21.797	1.00	17.64	W
ATOM	4083	OH2	WAT	W	99	59.363	46.482	12.477	1.00	20.25	W
ATOM	4084	OH2	WAT	W	100	59.009	55.962	24.448	1.00	17.12	W
ATOM	4085	OH2	WAT	W	101	27.659	88.655	18.900	1.00	19.39	W
ATOM	4086	OH2	WAT	W	102	19.552	70.631	37.180	1.00	19.27	W
ATOM	4087	OH2	WAT	W	103	62.732	52.896	9.518	1.00	18.07	W
ATOM	4088	OH2	WAT	W	104	45.507	67.690	37.224	1.00	17.53	W
ATOM	4089	OH2	WAT	W	105	38.378	83.608	45.067	1.00	17.12	W
ATOM	4090	OH2	WAT	W	106	50.624	59.091	45.021	1.00	17.16	W
ATOM	4091	OH2	WAT	W	107	36.693	43.685	13.087	1.00	17.34	W
ATOM	4092	OH2	WAT	W	108	30.022	86.690	24.483	1.00	16.79	W
ATOM	4093	OH2	WAT	W	109	26.705	89.770	12.172	1.00	19.72	W
ATOM	4094	OH2	WAT	W	110	78.751	67.589	30.438	1.00	16.39	W
ATOM	4095	OH2	WAT	W	111	43.442	74.935	37.288	1.00	18.43	W
ATOM	4096	OH2	WAT	W	112	62.328	52.870	12.127	1.00	18.43	W
ATOM	4097	OH2	WAT	W	113	52.635	51.855	-0.691	1.00	15.44	W
ATOM	4098	OH2	WAT	W	114	40.454	93.344	-0.107	1.00	20.15	W
ATOM	4099	OH2	WAT	W	115	40.297	107.578	15.942	1.00	17.59	W
ATOM	4100	OH2	WAT	W	116	53.414	49.405	4.296	1.00	16.45	W
ATOM	4101	OH2	WAT	W	117	69.415	72.026	37.172	1.00	18.90	W

ATOM	4102	OH2	WAT	W	118	38.129	90.784	4.520	1.00	17.56	W
ATOM	4103	OH2	WAT	W	119	38.146	55.292	23.299	1.00	16.51	W
ATOM	4104	OH2	WAT	W	120	18.017	73.683	27.997	1.00	17.00	W
ATOM	4105	OH2	WAT	W	121	53.528	43.974	7.984	1.00	16.88	W
ATOM	4106	OH2	WAT	W	122	70.985	68.949	27.995	1.00	17.79	W
ATOM	4107	OH2	WAT	W	123	35.576	93.322	4.318	1.00	16.95	W
ATOM	4108	OH2	WAT	W	124	43.104	86.584	29.818	1.00	19.05	W
ATOM	4109	OH2	WAT	W	125	48.853	41.039	10.115	1.00	18.07	W
ATOM	4110	OH2	WAT	W	126	29.628	96.265	12.429	1.00	20.43	W
ATOM	4111	OH2	WAT	W	127	37.667	89.314	29.451	1.00	18.21	W
ATOM	4112	OH2	WAT	W	128	10.197	75.072	30.468	1.00	17.84	W
ATOM	4113	OH2	WAT	W	129	27.695	76.838	11.844	1.00	17.47	W
ATOM	4114	OH2	WAT	W	130	51.352	53.281	29.447	1.00	17.26	W
ATOM	4115	OH2	WAT	W	131	46.024	56.163	29.682	1.00	18.32	W
ATOM	4116	OH2	WAT	W	132	50.807	87.407	23.278	1.00	17.70	W
ATOM	4117	OH2	WAT	W	133	29.565	83.957	17.933	1.00	19.40	W
ATOM	4118	OH2	WAT	W	134	40.142	101.601	10.131	1.00	17.69	W
ATOM	4119	OH2	WAT	W	135	53.886	52.579	28.038	1.00	16.20	W
ATOM	4120	OH2	WAT	W	136	30.858	94.458	1.501	1.00	19.15	W
ATOM	4121	OH2	WAT	W	137	48.663	73.041	18.714	1.00	17.83	W
ATOM	4122	OH2	WAT	W	138	59.527	58.698	17.871	1.00	19.95	W
ATOM	4123	OH2	WAT	W	139	58.111	48.183	1.475	1.00	18.47	W
ATOM	4124	OH2	WAT	W	140	26.262	89.710	9.524	1.00	18.76	W
ATOM	4125	OH2	WAT	W	141	61.241	65.789	11.822	1.00	18.51	W
ATOM	4126	OH2	WAT	W	142	35.455	98.631	8.012	1.00	18.57	W
ATOM	4127	OH2	WAT	W	143	35.097	90.126	28.102	1.00	15.69	W
ATOM	4128	OH2	WAT	W	144	40.256	69.610	18.629	1.00	18.94	W
ATOM	4129	OH2	WAT	W	145	24.207	86.822	36.953	1.00	21.47	W
ATOM	4130	OH2	WAT	W	146	50.943	51.838	4.464	1.00	18.39	W
ATOM	4131	OH2	WAT	W	147	31.576	56.567	23.098	1.00	19.24	W
ATOM	4132	OH2	WAT	W	148	64.776	55.837	37.034	1.00	20.18	W
ATOM	4133	OH2	WAT	W	149	41.752	88.655	30.593	1.00	19.15	W
ATOM	4134	OH2	WAT	W	150	28.943	90.064	36.740	1.00	18.17	W
ATOM	4135	OH2	WAT	W	151	53.126	74.689	17.462	1.00	21.71	W
ATOM	4136	OH2	WAT	W	152	57.481	86.100	23.079	1.00	19.09	W
ATOM	4137	OH2	WAT	W	153	35.919	68.039	17.377	1.00	22.31	W
ATOM	4138	OH2	WAT	W	154	51.862	84.976	9.501	1.00	19.42	W
ATOM	4139	OH2	WAT	W	155	34.813	82.161	45.754	1.00	19.06	W
ATOM	4140	OH2	WAT	W	156	60.087	52.558	36.734	1.00	18.62	W
ATOM	4141	OH2	WAT	W	157	41.492	74.254	17.305	1.00	22.53	W
ATOM	4142	OH2	WAT	W	158	51.400	69.620	18.407	1.00	19.54	W
ATOM	4143	OH2	WAT	W	159	43.474	90.722	33.704	1.00	22.13	W
ATOM	4144	OH2	WAT	W	160	55.691	62.546	-2.287	1.00	19.40	W
ATOM	4145	OH2	WAT	W	161	33.174	80.145	-2.336	1.00	17.53	W
ATOM	4146	OH2	WAT	W	162	54.074	60.472	45.738	1.00	20.40	W
ATOM	4147	OH2	WAT	W	163	45.519	51.887	33.616	1.00	24.73	W
ATOM	4148	OH2	WAT	W	164	32.388	61.060	18.277	1.00	17.09	W
ATOM	4149	OH2	WAT	W	165	56.542	81.596	18.358	1.00	18.68	W
ATOM	4150	OH2	WAT	W	166	50.758	68.823	41.601	1.00	18.56	W
ATOM	4151	OH2	WAT	W	167	10.404	82.696	30.006	1.00	17.07	W
ATOM	4152	OH2	WAT	W	168	39.208	57.693	24.249	1.00	15.79	W
ATOM	4153	OH2	WAT	W	169	47.497	68.384	17.369	1.00	22.69	W
ATOM	4154	OH2	WAT	W	170	20.230	68.989	32.778	1.00	19.32	W
ATOM	4155	OH2	WAT	W	171	38.240	73.855	41.614	1.00	19.18	W
ATOM	4156	OH2	WAT	W	172	52.104	36.869	15.182	1.00	23.40	W
ATOM	4157	OH2	WAT	W	173	47.160	53.954	30.617	1.00	20.86	W
ATOM	4158	OH2	WAT	W	174	29.888	88.727	21.062	1.00	19.28	W
ATOM	4159	OH2	WAT	W	175	32.681	90.508	26.429	1.00	23.03	W
ATOM	4160	OH2	WAT	W	176	57.504	94.320	14.819	1.00	19.43	W
ATOM	4161	OH2	WAT	W	177	31.443	48.305	14.849	1.00	18.59	W
ATOM	4162	OH2	WAT	W	178	57.549	87.754	14.045	1.00	20.94	W

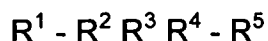
ATOM	4163	OH2	WAT	W	179	45.086	60.385	10.733	1.00	23.96	W
ATOM	4164	OH2	WAT	W	180	68.770	73.686	32.727	1.00	18.69	W
ATOM	4165	OH2	WAT	W	181	31.593	54.992	13.997	1.00	21.30	W
ATOM	4166	OH2	WAT	W	182	37.645	73.062	18.423	1.00	20.42	W
ATOM	4167	OH2	WAT	W	183	76.394	58.932	28.770	1.00	18.62	W
ATOM	4168	OH2	WAT	W	184	37.029	105.750	15.195	1.00	25.05	W
ATOM	4169	OH2	WAT	W	185	49.799	84.965	24.229	1.00	16.64	W
ATOM	4170	OH2	WAT	W	186	29.729	49.663	19.033	1.00	24.99	W
ATOM	4171	OH2	WAT	W	187	78.577	60.024	29.973	1.00	18.33	W
ATOM	4172	OH2	WAT	W	188	73.129	67.863	35.211	1.00	19.22	W
ATOM	4173	OH2	WAT	W	189	56.199	52.141	26.472	1.00	21.85	W
ATOM	4174	OH2	WAT	W	190	51.216	48.189	35.676	1.00	22.68	W
ATOM	4175	OH2	WAT	W	191	38.496	37.885	13.551	1.00	20.85	W
ATOM	4176	OH2	WAT	W	192	42.144	83.131	43.841	1.00	22.20	W
ATOM	4177	OH2	WAT	W	193	37.800	99.161	6.541	1.00	20.77	W
ATOM	4178	OH2	WAT	W	194	79.202	59.134	23.199	1.00	22.25	W
ATOM	4179	OH2	WAT	W	195	43.464	84.043	0.966	1.00	22.99	W
ATOM	4180	OH2	WAT	W	196	9.774	83.521	23.123	1.00	21.99	W
ATOM	4181	OH2	WAT	W	197	40.774	56.321	25.940	1.00	24.08	W
ATOM	4182	OH2	WAT	W	198	36.174	56.191	21.678	1.00	20.43	W
ATOM	4183	OH2	WAT	W	199	37.100	57.779	9.382	1.00	21.73	W
ATOM	4184	OH2	WAT	W	200	67.040	54.065	35.139	1.00	19.42	W
ATOM	4185	OH2	WAT	W	201	54.990	87.263	23.288	1.00	18.23	W
ATOM	4186	OH2	WAT	W	202	29.566	81.588	-1.127	1.00	24.32	W
ATOM	4187	OH2	WAT	W	203	50.482	104.877	13.543	1.00	21.51	W
ATOM	4188	OH2	WAT	W	204	33.809	75.981	8.987	1.00	21.22	W
ATOM	4189	OH2	WAT	W	205	58.446	82.817	21.143	1.00	24.77	W
ATOM	4190	OH2	WAT	W	206	33.990	55.358	23.381	1.00	19.17	W
ATOM	4191	OH2	WAT	W	207	59.100	53.954	21.096	1.00	21.68	W
ATOM	4192	OH2	WAT	W	208	43.863	75.725	43.193	1.00	25.02	W
ATOM	4193	OH2	WAT	W	209	59.257	92.897	18.903	1.00	24.44	W
ATOM	4194	OH2	WAT	W	210	15.872	74.869	35.220	1.00	18.53	W
ATOM	4195	OH2	WAT	W	211	37.990	100.485	8.868	1.00	19.08	W
ATOM	4196	OH2	WAT	W	212	44.528	104.608	10.069	1.00	28.45	W
ATOM	4197	OH2	WAT	W	213	22.020	67.110	33.698	1.00	22.25	W
ATOM	4198	OH2	WAT	W	214	45.524	58.541	0.865	1.00	24.20	W
ATOM	4199	OH2	WAT	W	215	46.880	59.443	43.760	1.00	21.51	W
ATOM	4200	OH2	WAT	W	216	44.398	37.868	10.230	1.00	29.45	W
ATOM	4201	OH2	WAT	W	217	42.403	47.455	1.037	1.00	22.17	W
ATOM	4202	OH2	WAT	W	218	21.877	88.573	35.113	1.00	20.88	W
ATOM	4203	OH2	WAT	W	219	55.162	66.703	8.963	1.00	22.51	W
ATOM	4204	OH2	WAT	W	220	52.791	86.448	21.601	1.00	21.18	W
ATOM	4205	OH2	WAT	W	221	51.147	43.483	6.559	1.00	20.91	W
ATOM	4206	OH2	WAT	W	222	43.808	82.212	10.720	1.00	26.33	W
ATOM	4207	OH2	WAT	W	223	12.617	83.802	28.751	1.00	20.30	W
ATOM	4208	OH2	WAT	W	224	6.078	75.280	26.850	1.00	22.38	W
ATOM	4209	OH2	WAT	W	225	47.881	57.392	-0.792	1.00	22.09	W
ATOM	4210	OH2	WAT	W	226	50.980	42.104	8.831	1.00	19.78	W
ATOM	4211	OH2	WAT	W	227	41.154	85.258	-0.774	1.00	22.59	W
ATOM	4212	OH2	WAT	W	228	25.986	84.606	36.424	1.00	19.93	W
ATOM	4213	OH2	WAT	W	229	37.760	94.424	35.734	1.00	24.94	W
ATOM	4214	OH2	WAT	W	230	53.942	75.516	42.827	1.00	21.96	W
ATOM	4215	OH2	WAT	W	231	62.956	58.032	36.430	1.00	20.68	W
ATOM	4216	OH2	WAT	W	232	48.172	76.513	38.212	1.00	24.35	W
ATOM	4217	OH2	WAT	W	233	47.611	102.405	12.413	1.00	18.05	W
ATOM	4218	OH2	WAT	W	234	66.970	75.519	33.669	1.00	22.17	W
ATOM	4219	OH2	WAT	W	235	42.530	53.001	37.024	1.00	25.29	W
ATOM	4220	OH2	WAT	W	236	46.593	95.318	0.982	1.00	22.70	W
ATOM	4221	OH2	WAT	W	237	59.434	61.102	-1.153	1.00	23.03	W
ATOM	4222	OH2	WAT	W	238	41.428	40.251	12.333	1.00	19.70	W
ATOM	4223	OH2	WAT	W	239	30.566	59.844	21.226	1.00	24.21	W

ATOM	4224	OH2	WAT	W	240	40.963	66.286	38.250	1.00	25.23	W
ATOM	4225	OH2	WAT	W	241	35.100	102.269	13.651	1.00	23.54	W
ATOM	4226	OH2	WAT	W	242	46.138	72.116	35.284	1.00	22.17	W
ATOM	4227	OH2	WAT	W	243	59.052	47.058	31.892	1.00	23.41	W
ATOM	4228	OH2	WAT	W	244	27.083	65.207	15.974	1.00	24.57	W
ATOM	4229	OH2	WAT	W	245	49.228	51.393	44.483	1.00	25.93	W
ATOM	4230	OH2	WAT	W	246	53.883	40.364	13.609	1.00	20.63	W
ATOM	4231	OH2	WAT	W	247	19.324	82.747	33.510	1.00	19.13	W
ATOM	4232	OH2	WAT	W	248	26.043	85.533	19.642	1.00	23.45	W
ATOM	4233	OH2	WAT	W	249	35.021	67.121	42.825	1.00	22.49	W
ATOM	4234	OH2	WAT	W	250	46.735	76.516	12.252	1.00	24.05	W
ATOM	4235	OH2	WAT	W	251	82.969	67.303	26.717	1.00	22.57	W
ATOM	4236	OH2	WAT	W	252	45.209	67.018	43.177	1.00	27.94	W
ATOM	4237	OH2	WAT	W	253	55.602	79.331	37.534	1.00	24.03	W
ATOM	4238	OH2	WAT	W	254	69.676	59.919	33.683	1.00	20.99	W
ATOM	4239	OH2	WAT	W	255	64.125	59.002	14.884	1.00	25.33	W
ATOM	4240	OH2	WAT	W	256	42.314	66.230	12.402	1.00	23.88	W
ATOM	4241	OH2	WAT	W	257	33.279	63.349	37.448	1.00	22.10	W
ATOM	4242	OH2	WAT	W	258	39.649	91.675	44.503	1.00	27.13	W
ATOM	4243	OH2	WAT	W	259	50.183	77.624	17.514	1.00	28.33	W
ATOM	4244	OH2	WAT	W	260	61.881	77.494	15.876	1.00	23.81	W
ATOM	4245	OH2	WAT	W	261	62.925	57.128	19.612	1.00	21.49	W
ATOM	4246	OH2	WAT	W	262	78.761	69.710	28.537	1.00	21.54	W
ATOM	4247	OH2	WAT	W	263	43.443	78.531	26.450	1.00	51.57	W
ATOM	4248	OH2	WAT	W	264	64.436	66.462	15.185	1.00	24.50	W
ATOM	4249	OH2	WAT	W	265	29.863	95.634	31.799	1.00	22.57	W
ATOM	4250	OH2	WAT	W	266	38.733	65.028	17.513	1.00	22.79	W
ATOM	4251	OH2	WAT	W	267	42.862	70.588	35.156	1.00	23.17	W
ATOM	4252	OH2	WAT	W	268	18.772	72.838	25.393	1.00	22.19	W
ATOM	4253	OH2	WAT	W	269	73.723	64.597	19.000	1.00	31.96	W
ATOM	4254	OH2	WAT	W	270	62.723	57.662	10.545	1.00	24.92	W
ATOM	4255	OH2	WAT	W	271	57.874	62.395	44.609	1.00	21.51	W
ATOM	4256	OH2	WAT	W	272	48.768	50.303	27.819	1.00	19.31	W
ATOM	4257	OH2	WAT	W	273	29.763	86.426	47.578	1.00	28.69	W
ATOM	4258	OH2	WAT	W	274	31.100	59.737	35.193	1.00	31.03	W
ATOM	4259	OH2	WAT	W	275	57.280	52.145	23.039	1.00	31.70	W
ATOM	4260	OH2	WAT	W	276	39.141	75.601	16.301	1.00	19.15	W
ATOM	4261	OH2	WAT	W	277	40.242	92.360	27.881	1.00	21.57	W
ATOM	4262	OH2	WAT	W	278	45.848	39.924	20.297	1.00	19.61	W
ATOM	4263	OH2	WAT	W	279	37.239	92.961	30.038	1.00	35.26	W
ATOM	4264	OH2	WAT	W	280	34.443	91.256	24.199	1.00	23.25	W
ATOM	4265	OH2	WAT	W	281	32.844	98.633	13.982	1.00	25.62	W
ATOM	4266	OH2	WAT	W	282	27.691	84.905	-0.900	1.00	31.39	W
ATOM	4267	OH2	WAT	W	283	49.770	67.058	16.244	1.00	19.14	W
ATOM	4268	OH2	WAT	W	284	7.549	84.030	30.735	1.00	23.79	W
ATOM	4269	OH2	WAT	W	285	41.424	76.017	13.321	1.00	26.91	W
ATOM	4270	OH2	WAT	W	286	26.035	92.828	18.463	1.00	27.45	W
ATOM	4271	OH2	WAT	W	287	32.937	94.119	24.137	1.00	48.00	W
ATOM	4272	OH2	WAT	W	288	26.166	88.282	25.556	1.00	20.51	W
ATOM	4273	OH2	WAT	W	289	63.983	65.811	11.880	1.00	27.50	W
ATOM	4274	OH2	WAT	W	290	22.109	58.615	30.718	1.00	23.84	W
ATOM	4275	OH2	WAT	W	291	19.238	68.372	19.647	1.00	28.58	W
ATOM	4276	OH2	WAT	W	292	56.100	44.047	14.035	1.00	24.23	W
ATOM	4277	OH2	WAT	W	293	54.648	51.202	24.011	1.00	23.26	W
ATOM	4278	OH2	WAT	W	294	31.678	90.398	23.056	1.00	26.00	W
ATOM	4279	OH2	WAT	W	295	53.694	43.318	2.052	1.00	22.76	W
ATOM	4280	OH2	WAT	W	296	26.404	85.036	10.533	1.00	25.60	W
ATOM	4281	OH2	WAT	W	297	57.999	82.967	35.181	1.00	32.74	W
ATOM	4282	OH2	WAT	W	298	24.844	83.608	14.725	1.00	32.65	W
ATOM	4283	OH2	WAT	W	299	66.137	73.414	43.426	1.00	23.33	W
ATOM	4284	OH2	WAT	W	300	60.389	52.123	26.401	1.00	27.82	W

ATOM	4285	OH2	WAT	W	301	45.077	83.036	43.695	1.00	28.17	W
ATOM	4286	OH2	WAT	W	302	63.568	69.731	13.225	1.00	40.57	W
ATOM	4287	OH2	WAT	W	303	15.309	78.322	19.060	1.00	29.40	W
ATOM	4288	OH2	WAT	W	304	6.803	75.844	23.827	1.00	27.70	W
ATOM	4289	OH2	WAT	W	305	24.548	76.310	15.211	1.00	27.04	W
ATOM	4290	OH2	WAT	W	306	21.315	69.478	26.567	1.00	25.89	W
ATOM	4291	OH2	WAT	W	307	55.614	92.278	9.486	1.00	28.03	W
ATOM	4292	OH2	WAT	W	308	33.401	50.305	9.283	1.00	26.50	W
ATOM	4293	OH2	WAT	W	309	44.860	41.748	8.296	1.00	22.14	W
ATOM	4294	OH2	WAT	W	310	36.981	98.022	38.919	1.00	27.75	W
ATOM	4295	OH2	WAT	W	311	36.049	71.473	13.872	1.00	40.12	W
ATOM	4296	OH2	WAT	W	312	62.799	54.411	25.492	1.00	20.27	W
ATOM	4297	OH2	WAT	W	313	68.900	66.841	46.634	1.00	40.74	W
ATOM	4298	OH2	WAT	W	314	52.771	46.326	-2.783	1.00	27.19	W
ATOM	4299	OH2	WAT	W	315	25.076	76.838	11.881	1.00	29.09	W
ATOM	4300	OH2	WAT	W	316	37.345	55.941	35.837	1.00	31.26	W
END											

WHAT IS CLAIMED:

1. A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound or a pharmaceutically acceptable salt thereof having the structure of formula 1:

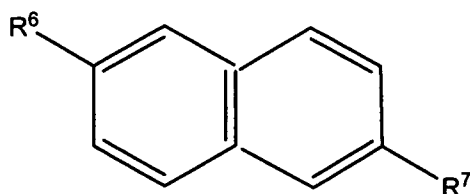


where R^1 and R^5 are the same and may be alkylaminosulfonyl, alkylaminosulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, alkylaminocarbonyl, alkylaminocarbonylalkyl, alkylaminocarboxy, alkylaminocarboxyalkyl;

where R^2 and R^4 are preferably, but not necessarily, the same, and are ring structures, optionally substituted, which may be aryl, cycloalkyl, or heterocyclyl; and

where R^3 may be a bond between R^2 and R^4 which either is shared by or joins the two rings without being shared in the rings themselves.

2. The pharmaceutical composition of claim 1 wherein $R^2 R^3 R^4$ is a naphthyl group.
3. The pharmaceutical composition of claim 1 wherein $R^2 R^3 R^4$ is a bi-aryl group.
4. A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound or a pharmaceutically acceptable salt thereof having the structure of formula 2:

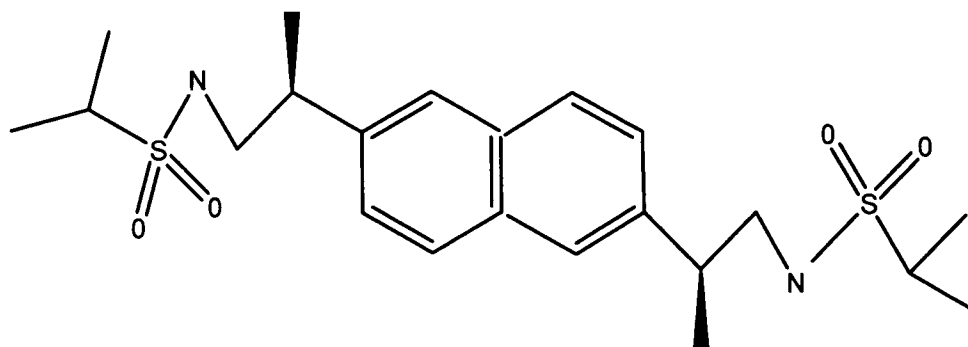


where R^6 and R^7 are the same or different and may be alkylaminosulfonyl, alkylaminosulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, alkylaminocarbonyl, alkylaminocarbonylalkyl, alkylaminocarboxy, alkylaminocarboxyalkyl.

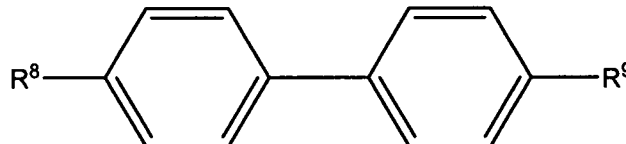
5. The pharmaceutical composition of claim 4 wherein R^6 and R^7 are the same and are both alkylaminosulfonyl groups.

6. The pharmaceutical composition of claim 4 wherein R^6 and R^7 are the same and are both alkylaminosulfonylalkyl groups.

7. The pharmaceutical composition of claim 6 wherein the compound has the structure of formula 3:



8. A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound or a pharmaceutically acceptable salt thereof having the structure of formula 4:

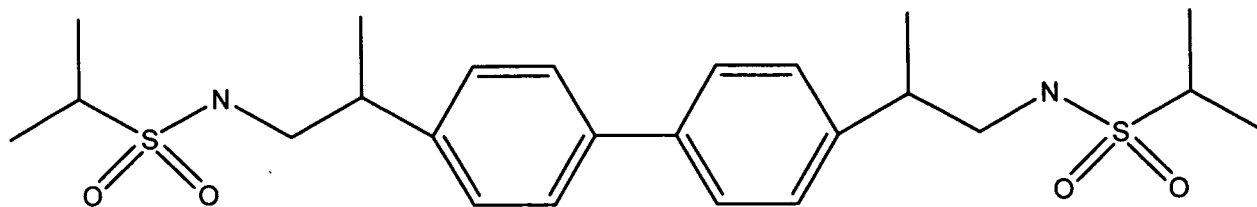


where R^8 and R^9 are the same and may be alkylaminosulfonyl, alkylaminosulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, alkylaminocarbonyl, alkylaminocarbonylalkyl, alkylaminocarboxy, alkylaminocarboxyalkyl.

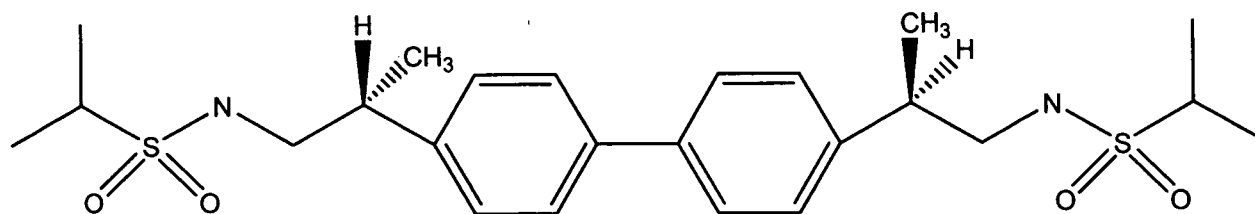
9. The pharmaceutical composition of claim 8 wherein R^8 and R^9 are both alkylaminosulfonyl groups.

10. The pharmaceutical composition of claim 8 wherein R^8 and R^9 are both alkylaminosulfonylalkyl groups.

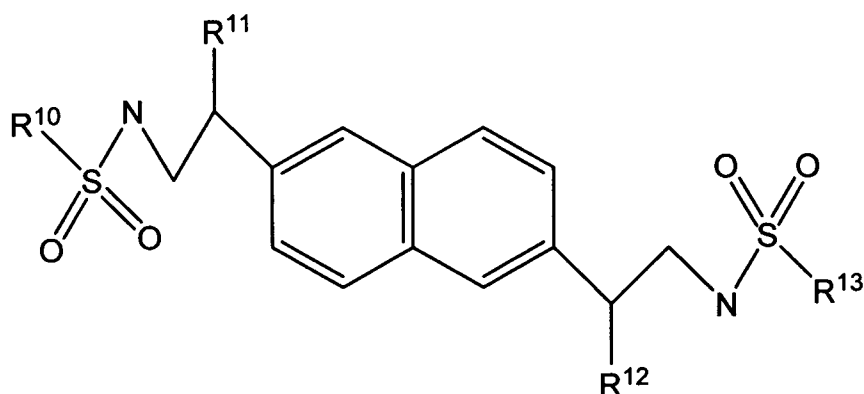
11. The pharmaceutical composition of claim 10 wherein the compound has the structure of formula 5:



12. The pharmaceutical composition of claim 8 wherein the compound has the structure of formula 6:



13. The pharmaceutical composition of claim 4 wherein the compound has the structure of formula 7:



where R^{10} and R^{13} are the same, or, if they are not, then R^{11} and R^{12} are the same, and each of R^{10} , R^{11} , R^{12} , and R^{13} may be H, methyl, ethyl, propyl, isopropyl or butyl.

14. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 1.

15. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 2.
16. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 3.
17. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 4.
18. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 5.
19. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 6.
20. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 7.
21. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 8.
22. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 9.

23. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 10.
24. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 11.
25. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 12.
26. A method of treating a disorder selected from the group consisting of anxiety and depression, comprising administering an effective amount of a pharmaceutical composition of claim 13.
27. Use of a compound of claim 1 for preparing a pharmaceutical for use in treating anxiety or depression.
28. The compound $N,N'-(2R,2'R)-2,2'-(\text{biphenyl-4,4'-diyl})\text{bis}(\text{propane-2,1-diyl})\text{dipropane-2-sulfonamide}$) or a pharmaceutically acceptable salt thereof.
29. The compound $N,N'-(2S,2'S)-2,2'-(\text{biphenyl-4,4'-diyl})\text{bis}(\text{2-fluoropropane-2,1-diyl})\text{dipropane-2-sulfonamide}$) or a pharmaceutically acceptable salt thereof.
30. The compound $N,N'-(2S,2'S)-2,2'-(\text{biphenyl-4,4'-diyl})\text{bis}(\text{2-hydroxypropane-2,1-diyl})\text{dipropane-2-sulfonamide}$ or a pharmaceutically acceptable salt thereof.
31. A pharmaceutical composition in unit dosage form comprising a compound or pharmaceutically acceptable salt thereof of claim 28, 29 or 30 in combination with a pharmaceutically acceptable carrier.
32. A method of modulating the GluR2 receptor comprising administering to a human an effective amount of a pharmaceutical composition of claim 31.

MECHANISM OF iGluR ACTIVATION AND DESENSITIZATION

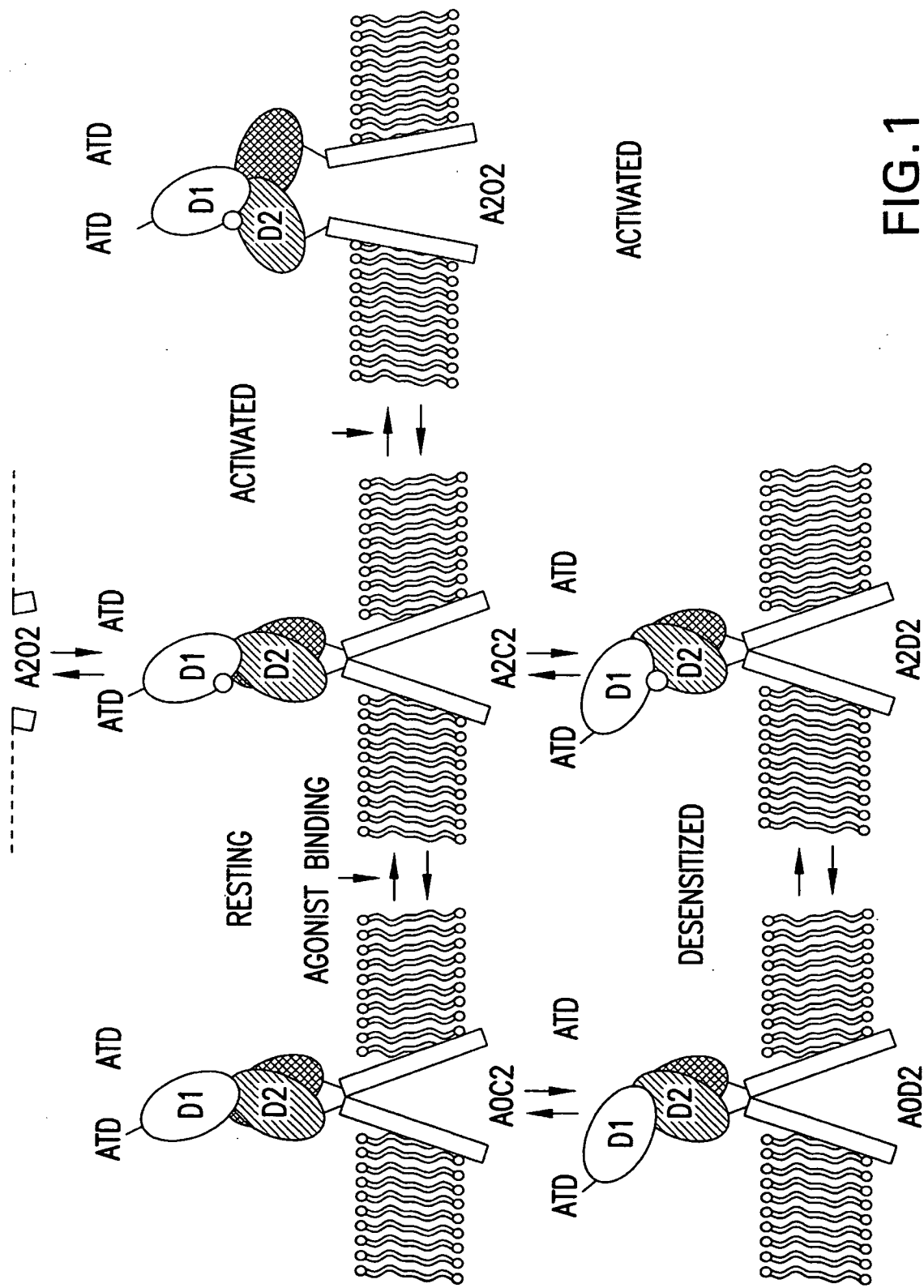
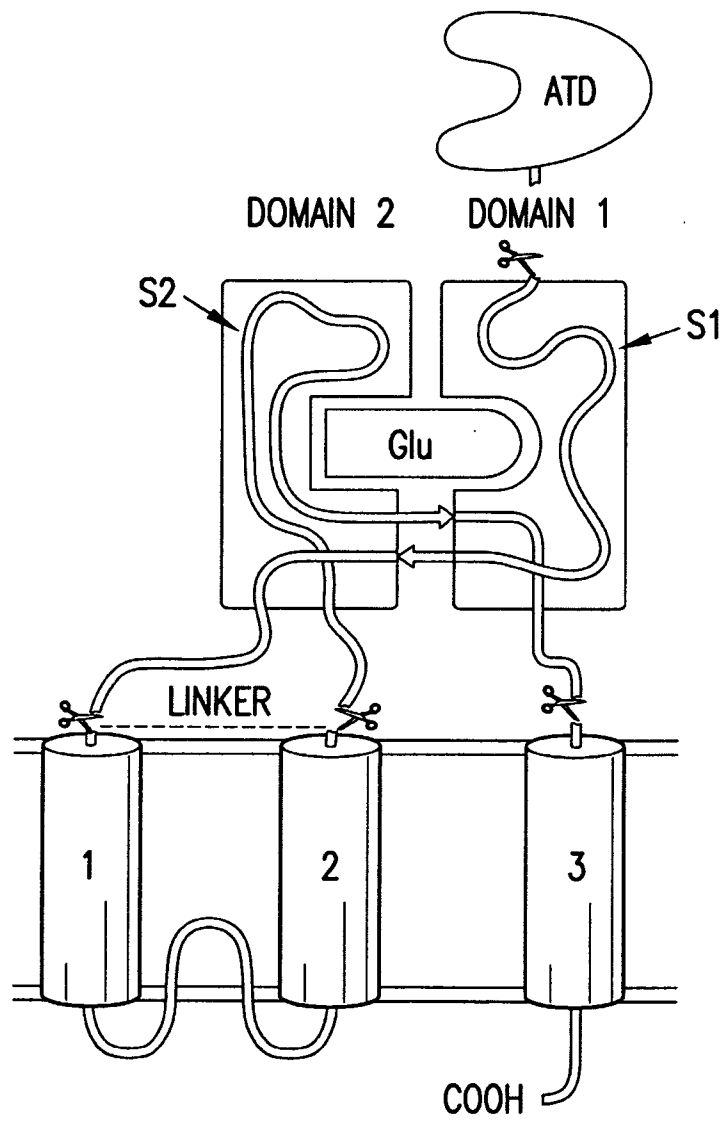


FIG.1

**FIG.2**

LY451646 POTENTIATES GLUTAMATE CURRENTS FROM DELTA ATD
GluR2 AS MEASURED BY TEVC IN OOCYTES

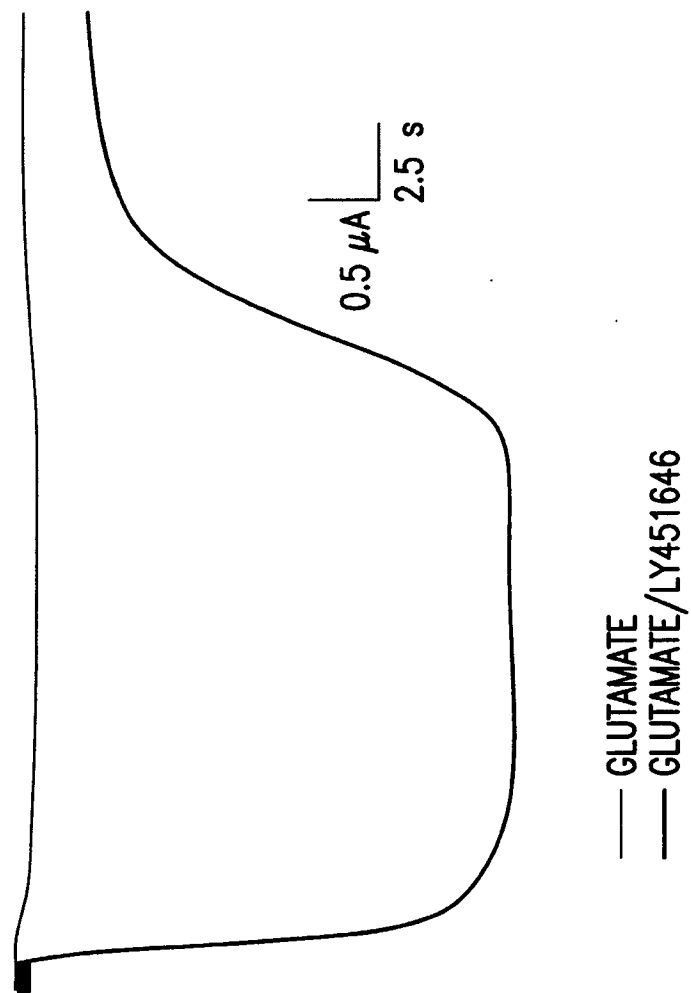


FIG.3

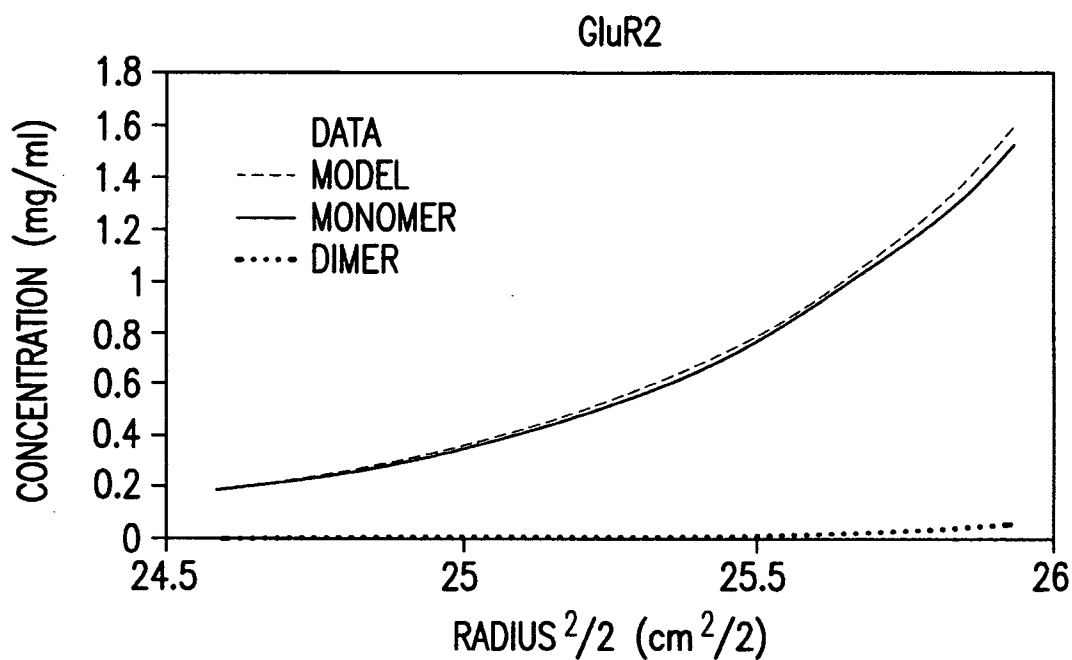


FIG.4A

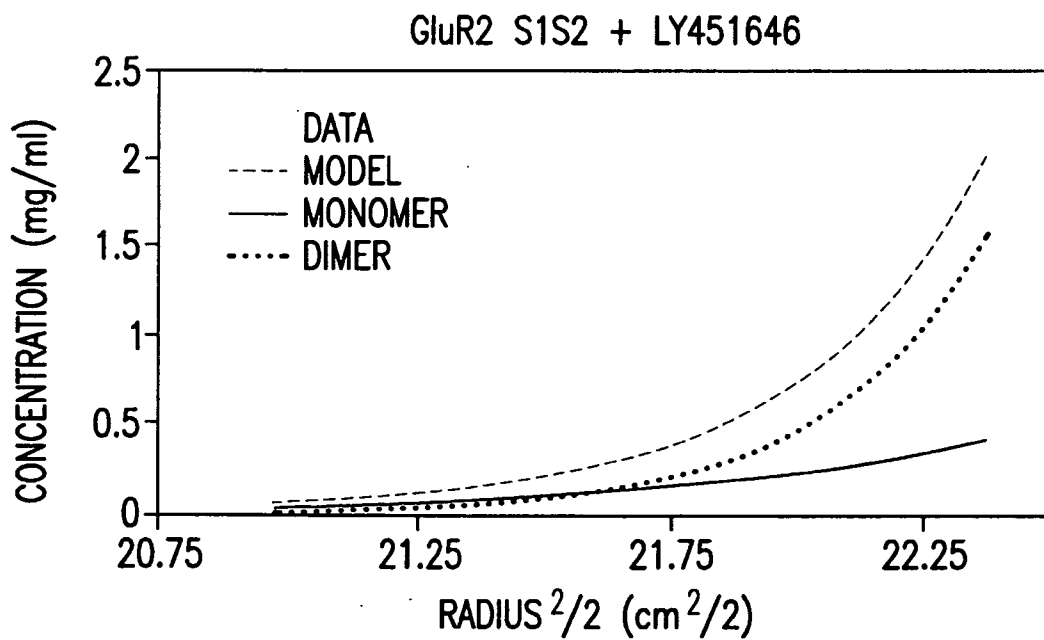


FIG.4B

DATA COLLECTION AND REFINEMENT STATISTICS								
RESOL.	REFLECTIONS #		AVERAGE	COMPLETE	R _{MERGE}	R _{WORK} ^a	R _{FREE} ^b	
(Å)	TOTAL	UNIQUE	I/SIGMA	COMPLETE -NESS (%)	(%)	(%)	(%)	(%)
30 – 1.3	410635	124011	15.7	93.6	5.3	21.3	22.8	
CRYSTALS BELONG TO SPACE GROUP P2								
UNIT CELL DIMENSION: a=59.33 Å, b=95.02 Å, c=48.64 Å; β=90.05°								

FIG.5

One Molecule of LY451646 Binds in the Dimer Interface

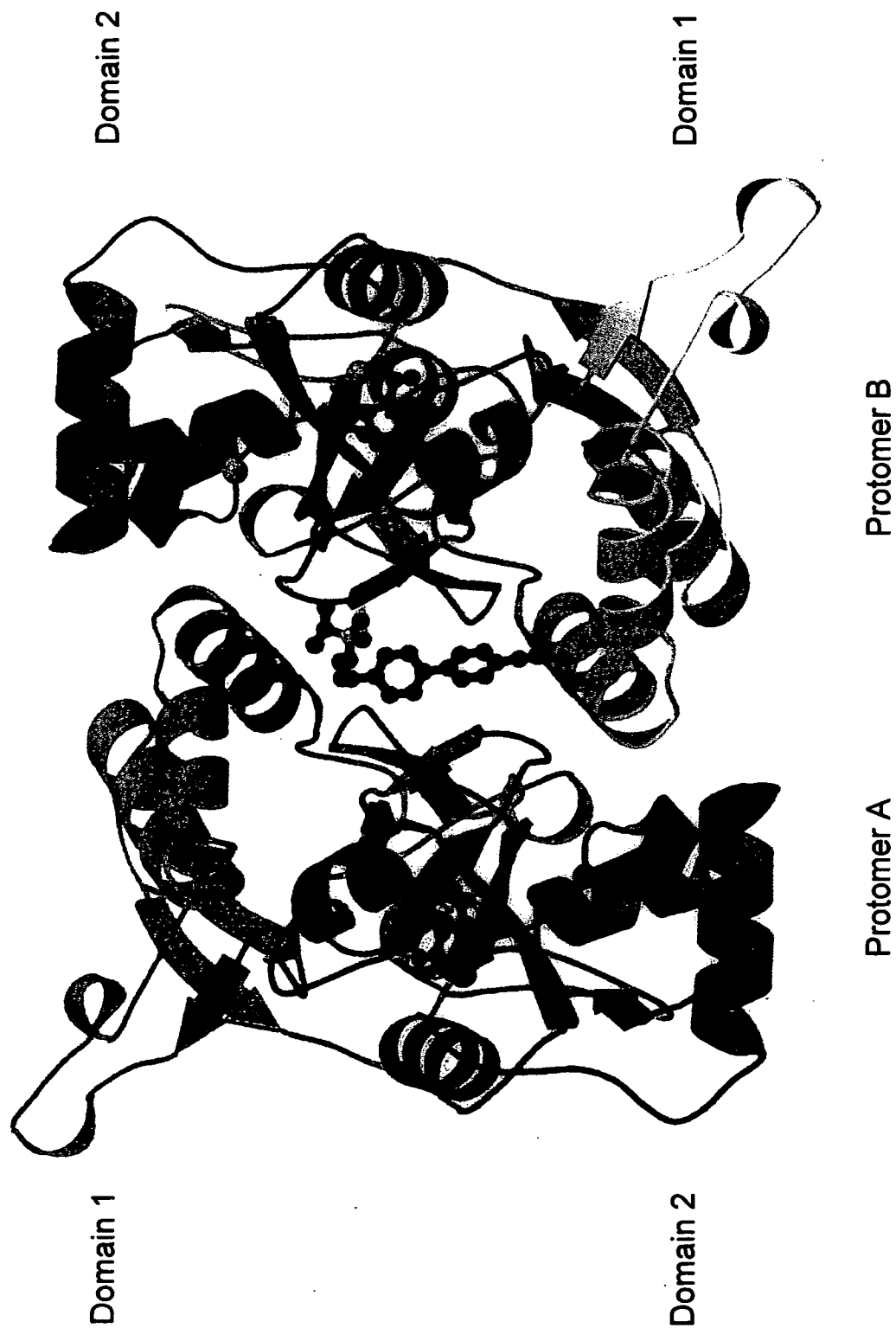


FIG.6

LY451646 Binds Near the "Hinge" of the S1S2 "Clamshell"

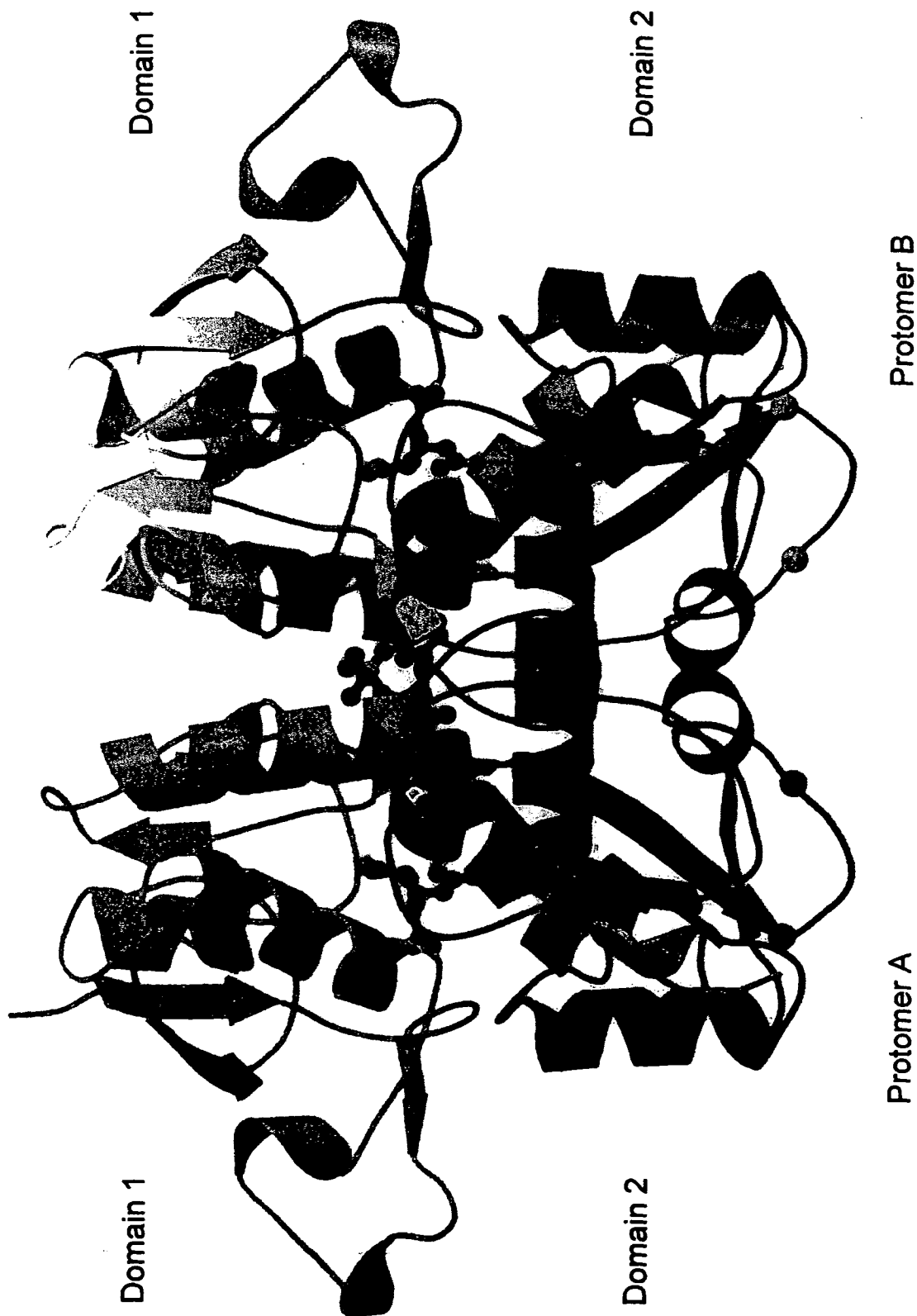


FIG.7

LY451646 Bridges Both Subunits, Making Polar and Nonpolar Contacts

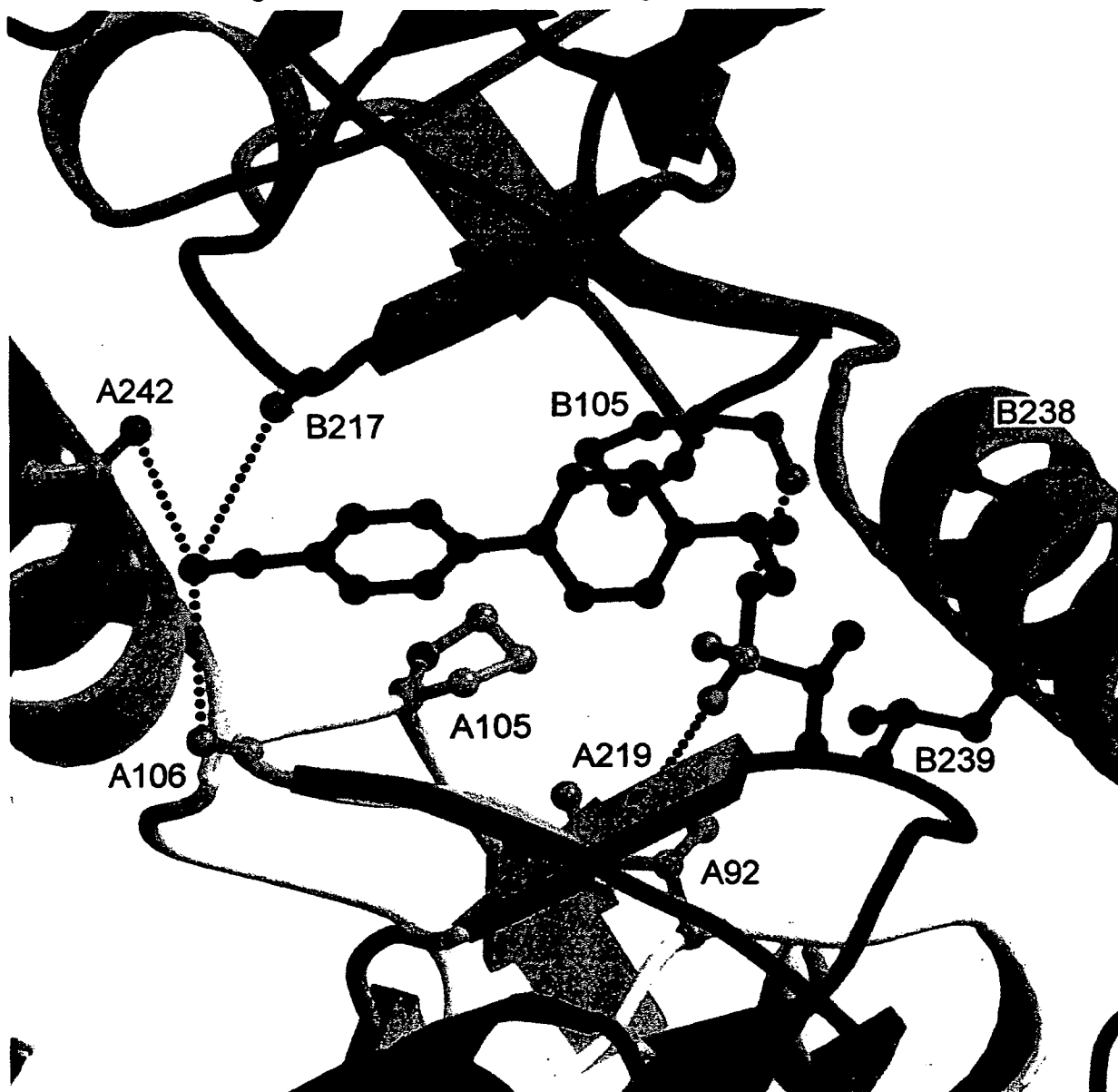
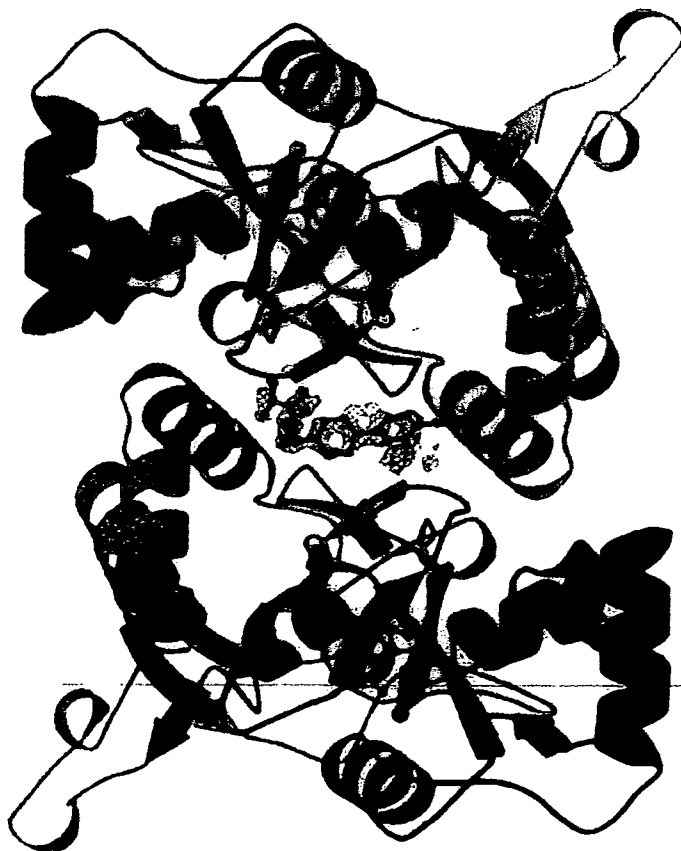


FIG.8

In the Crystal, LY451646 Equally Occupies Two
Different Orientations and the Electron Density is the
Superposition of These Two Orientations



Dimer 1

FIG. 9A

In the Crystal, LY451646 Equally Occupies Two
Different Orientations and the Electron Density is the
Superposition of These Two Orientations



Dimer 2

FIG. 9B

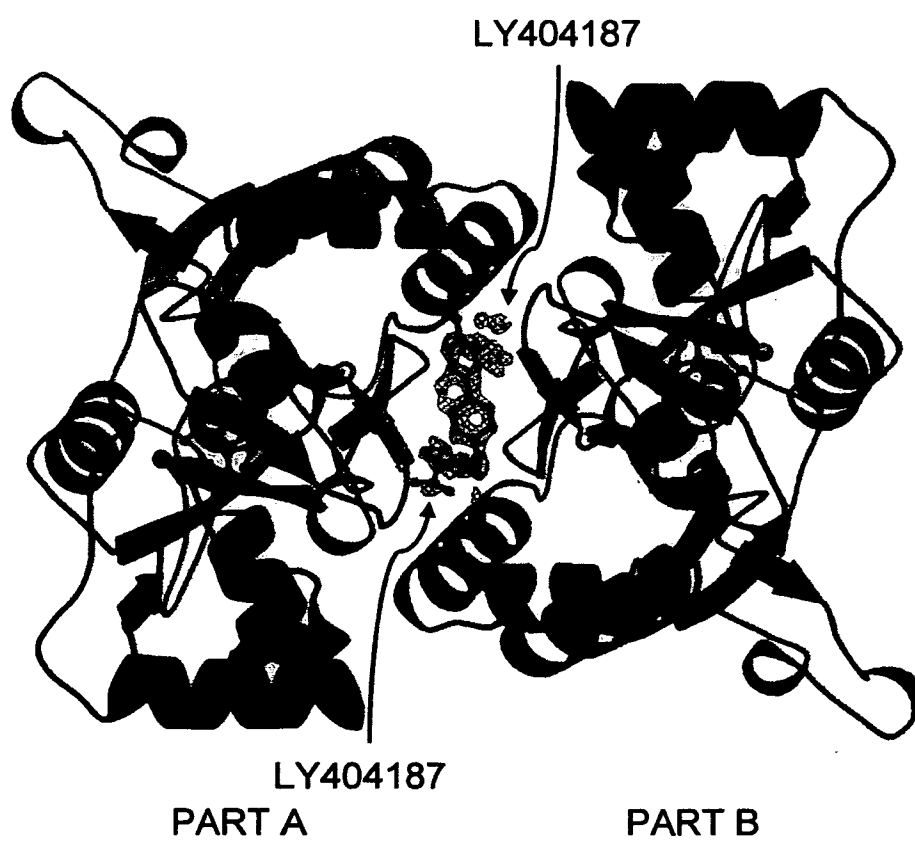
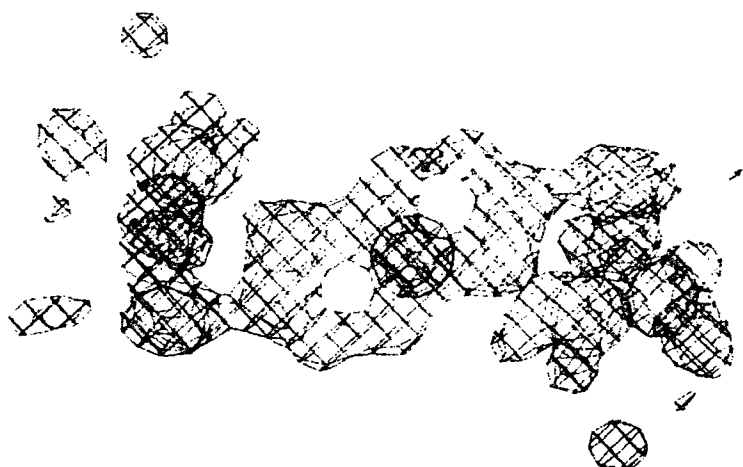


FIG.9C

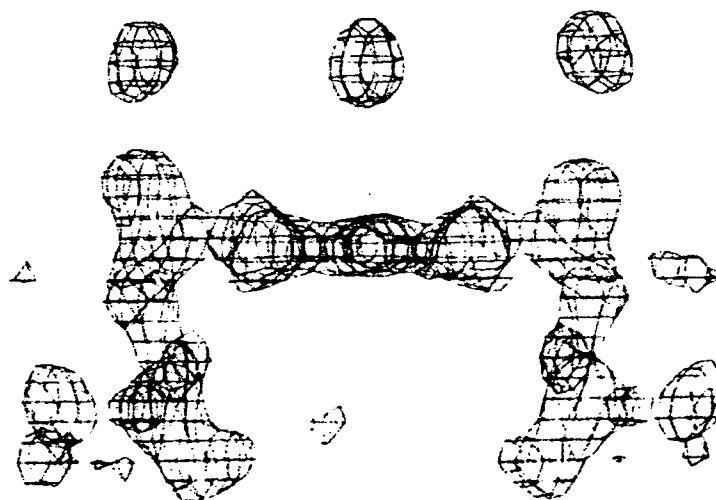
Omit map, Fo-Fc Electron Density for LY451646



View parallel to
the 2-fold axis

FIG.10A

Omit map, Fo-Fc Electron Density for LY451646



View perpendicular to
the 2-fold axis

FIG.10B

In the Crystal, the LY451646
Molecules are Disordered
Around the 2-Fold Axis

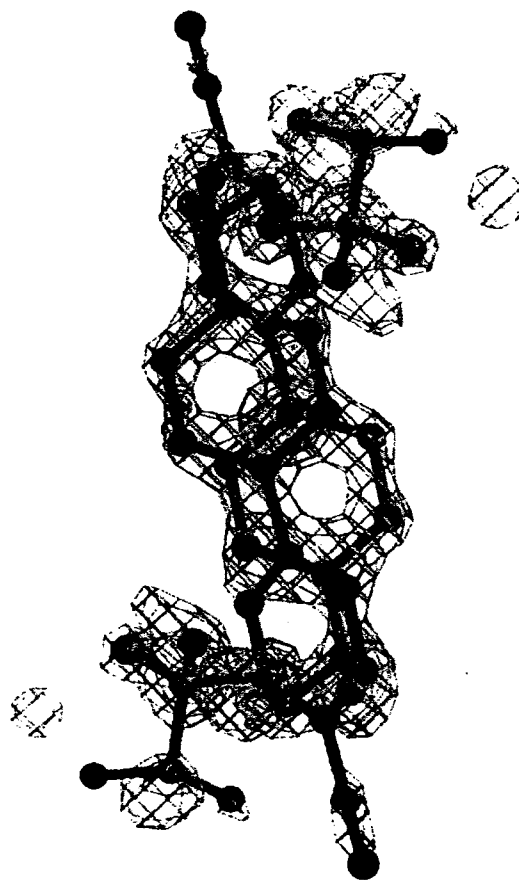


FIG.11

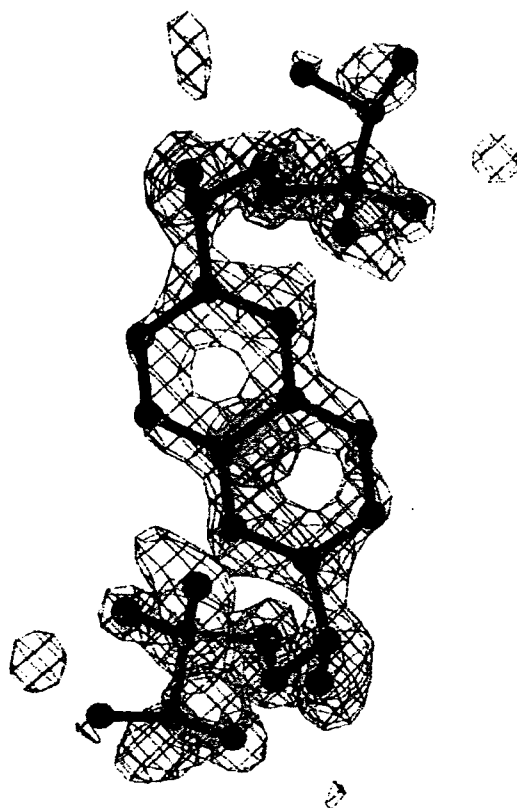


FIG.12

Fitting Density for LY451646 to a 2-Fold Symmetric
Molecule with a Naphthalene Core: View Parallel to the 2-Fold axis

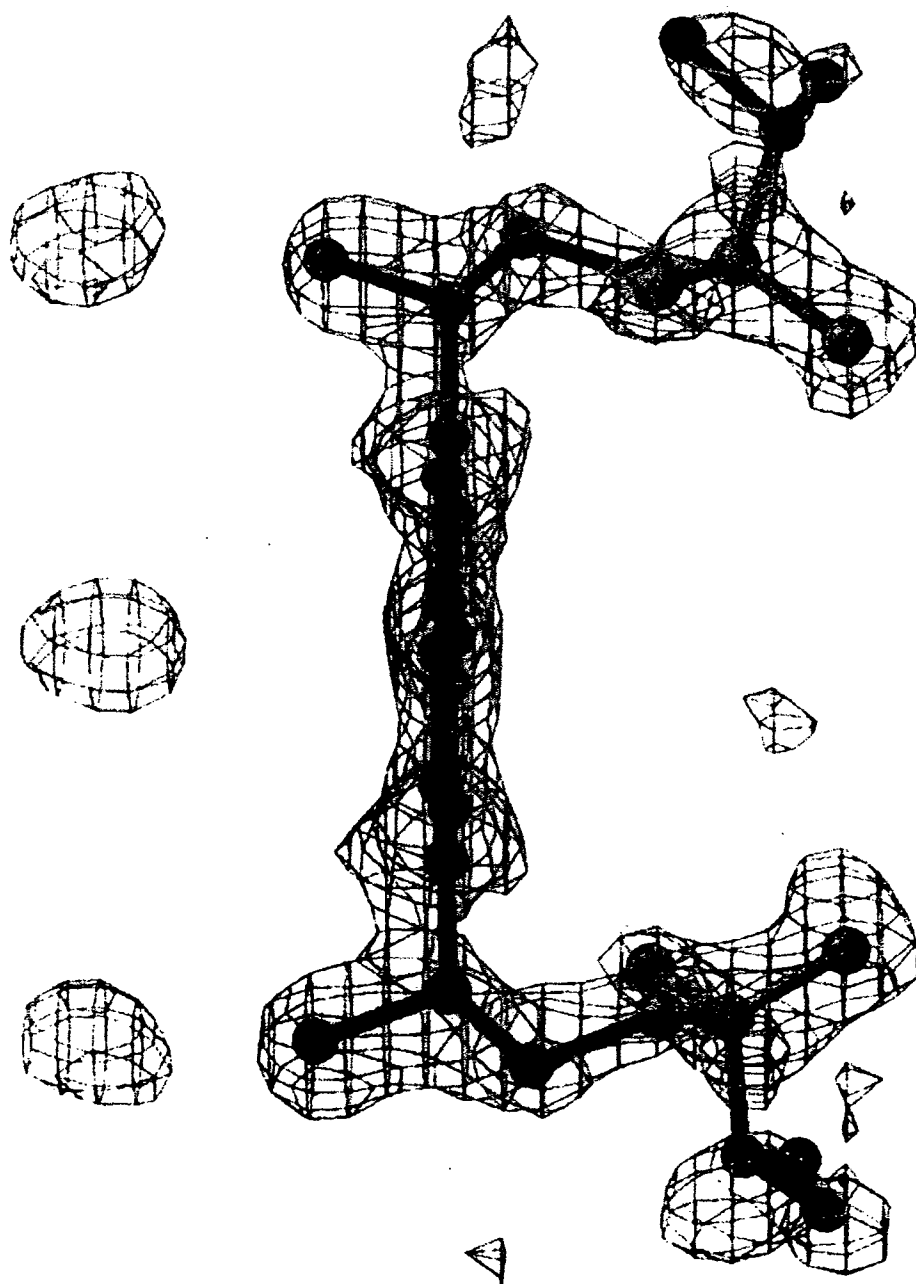
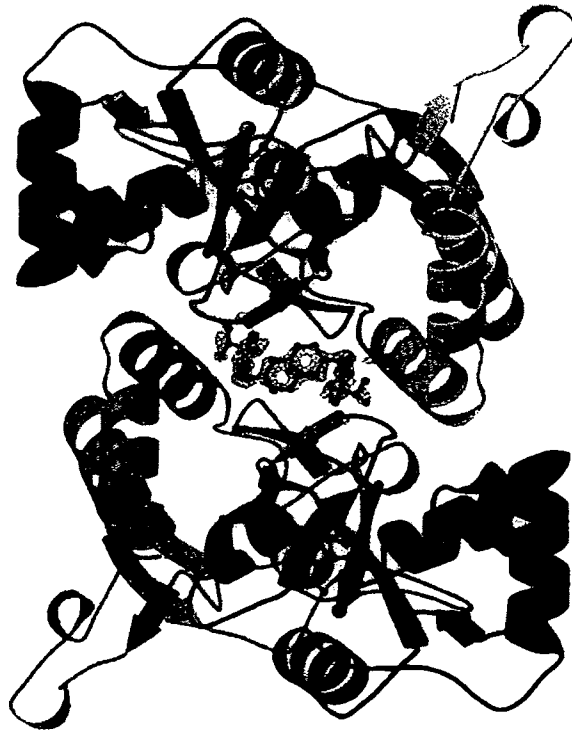


FIG.13

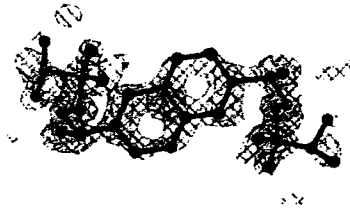
Inspection of Electron Density Immediately Suggests the Design of a Simple, Symmetric 'New' Modulator



The 'new' modulator binds 100- fold more tightly

FIG.14C

Inspection of Electron Density Immediately Suggests the Design of a Simple, Symmetric 'New' Modulator



Two-fold symmetric 'new' modulator

FIG.14B

Inspection of Electron Density Immediately Suggests the Design of a Simple, Symmetric 'New' Modulator



Two-fold disordered molecules

FIG.14A

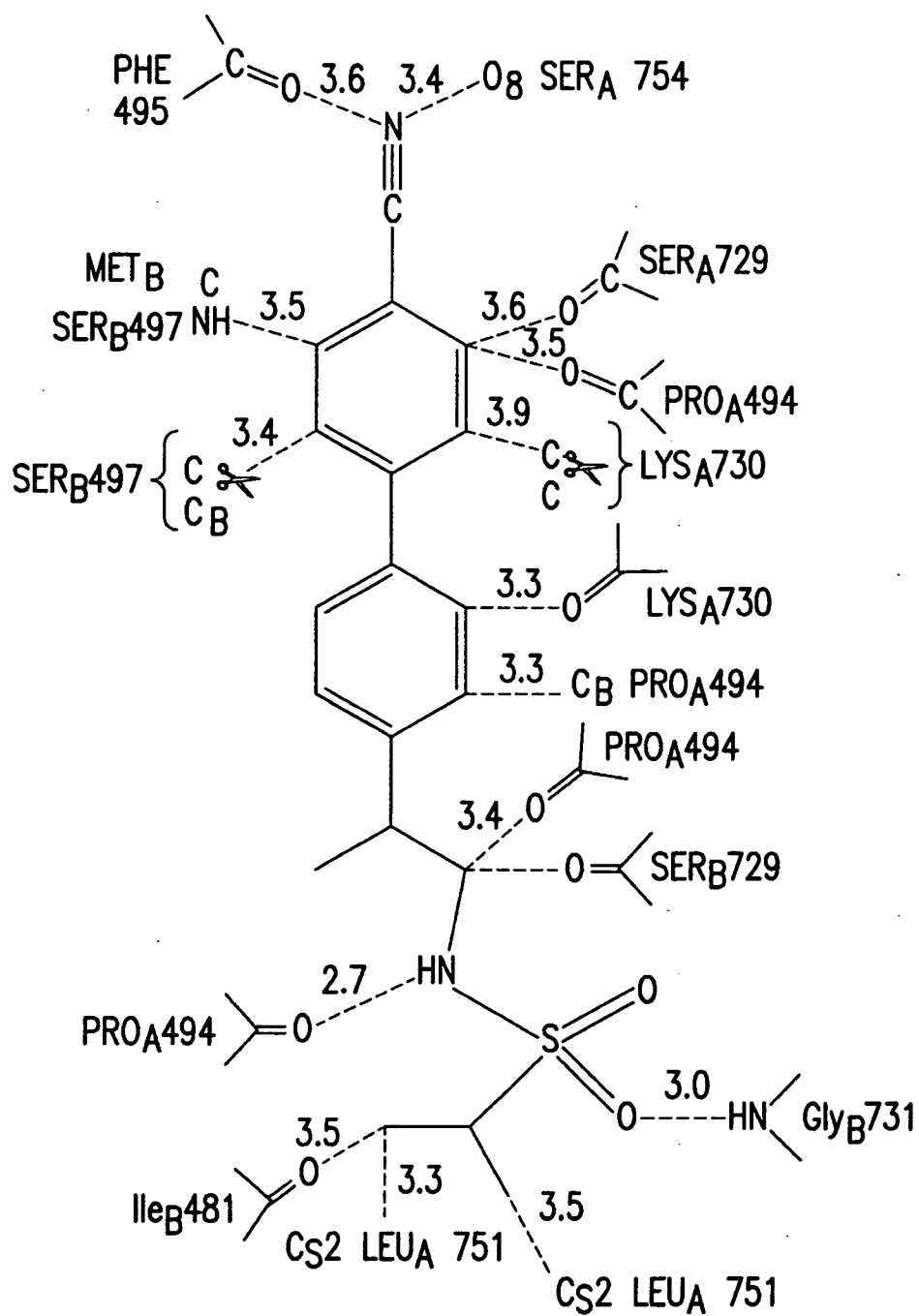


FIG. 15

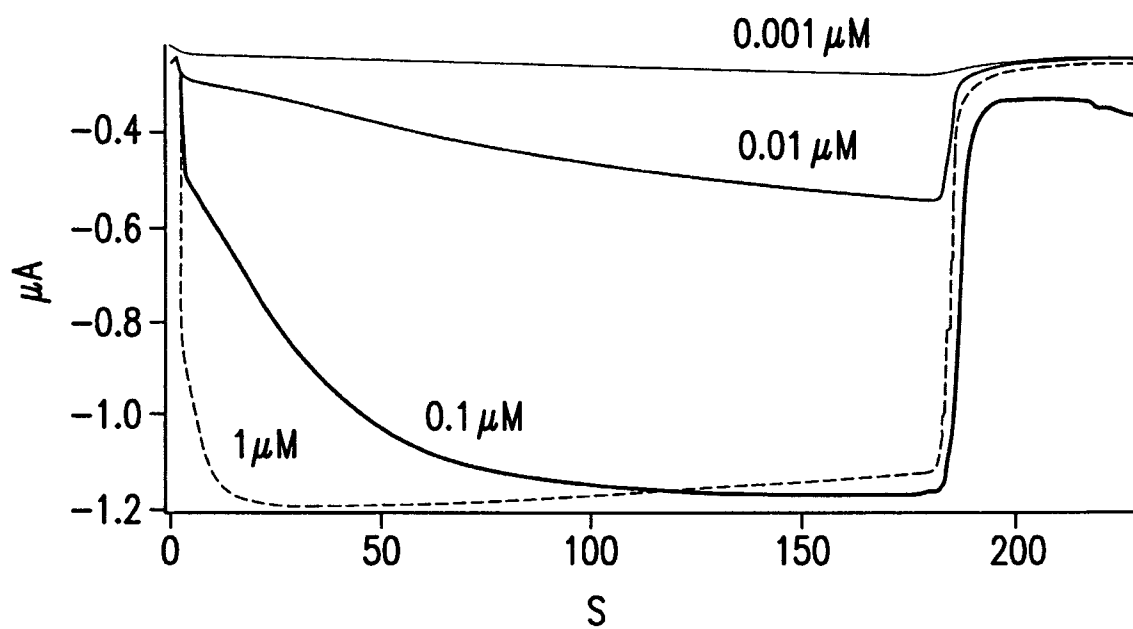


FIG. 16A

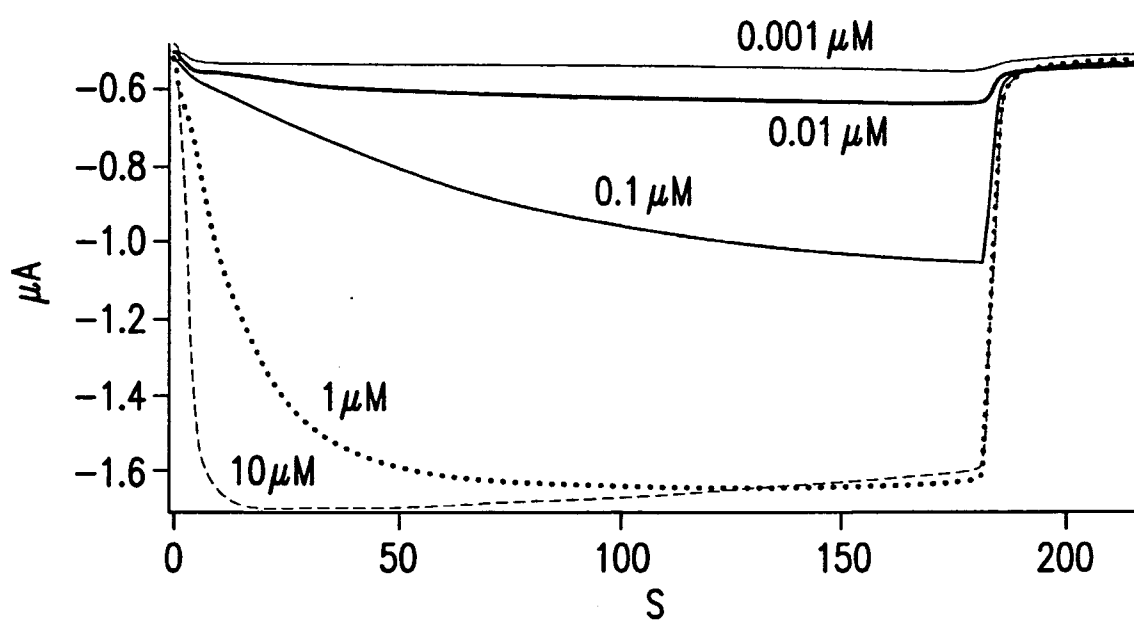


FIG. 16B

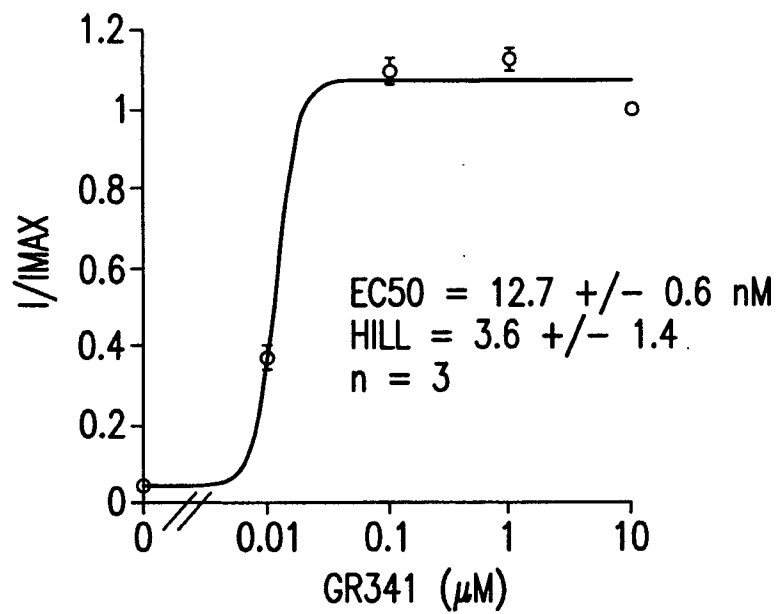


FIG.16C

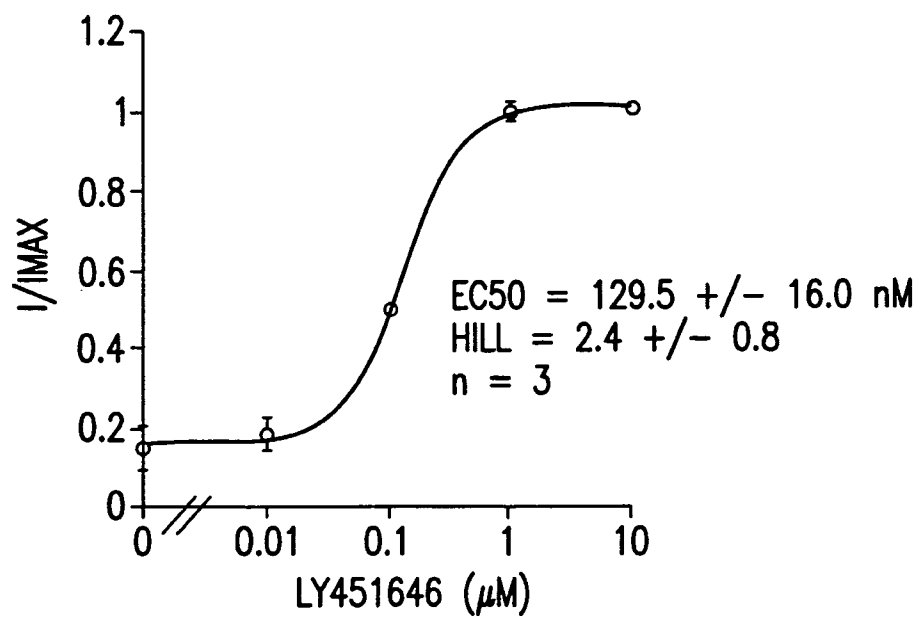


FIG.16D

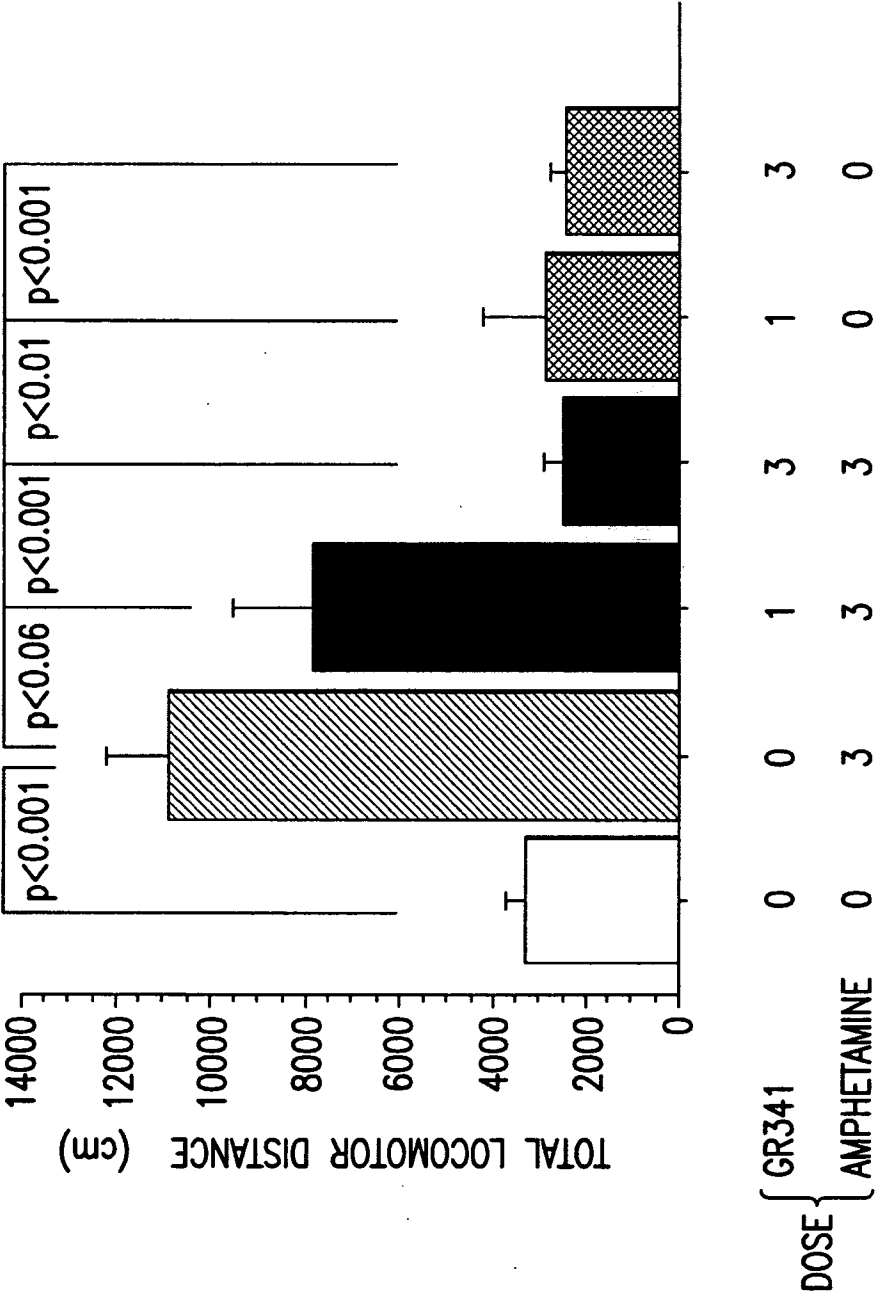


FIG.17

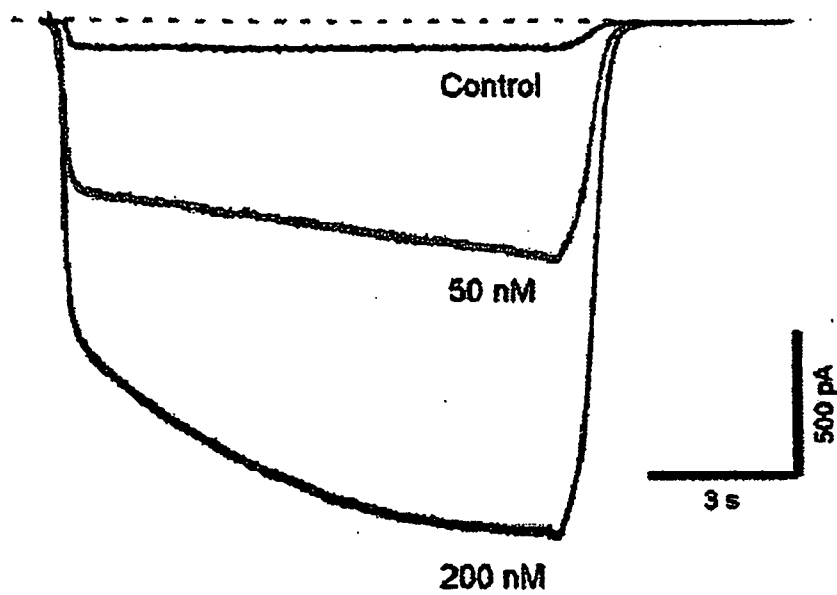


FIG. 18A

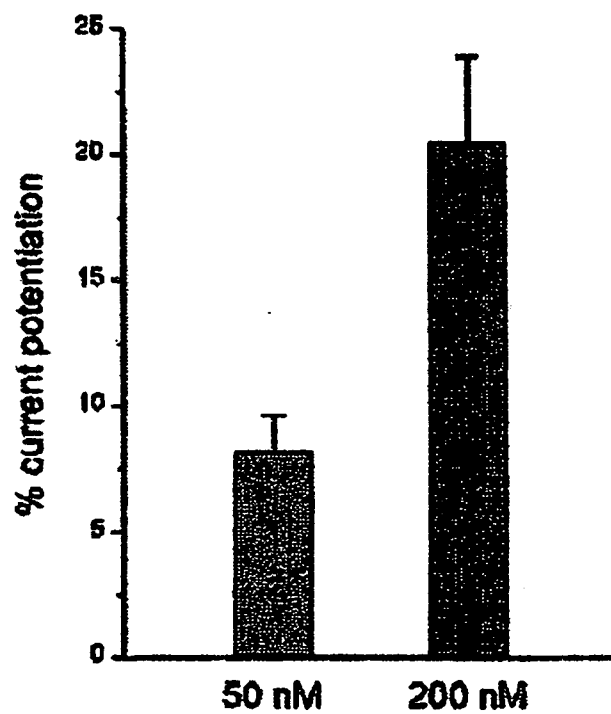


FIG. 18B

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 10/00256

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61K 31/18; A61K 31/10; C07C 303/00 (2010.01)

USPC - 514/601; 514/709; 564/80

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)

USPC - 514/601; 514/709; 564/80 (see search terms below)

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

USPC - 514/605; 564/82 (see search terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO-PubWEST(PGPB,USPT,USOC,EPAB,JPAB), Scholar Google and Google: GluR2 receptor, modulate, agonists, treatment, anxiety, depression, GluR2 receptor modulators, alkylaminosulfonyl, alkylaminosulfonylalkyl, naphthyl group, biaryl group, effective amount, administer, tablets, capsule, formulation, excipient

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2007/101116 A2 (GOUAUX et al.) 07 September 2007 (07.09.2007) pg 8-11,13	1-2, 4-7, 13-15, 17-20 and 26-27

☐ Further documents are listed in the continuation of Box C.

* 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 application or patent 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

06 May 2010 (06.05.2010)

Date of mailing of the international search report

14 MAY 2010

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 10/00256

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I+: claims 1-7, 13-20, 26-27, drawn to a pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound or a pharmaceutically acceptable salt thereof having the structure of formulae 1-2. The first invention encompasses a compound of formula 3. Should an additional fee(s) be paid, Applicant is invited to elect a specific definitions of R10-R13 substitutions of formula 7. The exact claims searched will depend on the specifically elected definitions of R10-R13 substitutions of formula 7.
[NOTE: Claims 3 and 16 were excluded from Group I, because they are drawn to a non-elected subject matter.]

Group II+, claims 8-12, 21-25, 28-32, drawn to a pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound or a pharmaceutically acceptable salt thereof having the structure of formulae 1, 4. Should an additional fee(s) be paid, Applicant is invited to elect a specific compound of formula 4, i.e. the compound of claim 11, or the compound of claims 12 and 28, etc. The exact claims searched will depend on the specifically elected compound(s).

***** SEE SUPPLEMENTAL BOX *****

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
claims 1-2, 4-7, 13-15, 17-20, 26-27, restricted to the compound of formula 3

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

***** Supplemental Box *****

In continuation of Box III: LOU:

The inventions listed as Groups I+ and II+ do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The inventions of Groups I+ and II+ share the technical feature of a pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound or a pharmaceutically acceptable salt thereof having the structure of formula 1. However, this shared technical feature is obvious over the prior art of US 2007/0293573 A1 to GOUAUX, et al. that discloses said compound of formula 1 (claims 1, 4, 8), and further discloses that said compound may be used for preparing a pharmaceutical composition (para [0066]-[0067]). As said pharmaceutical composition was obvious at the time of the invention, there is no a special technical feature that would otherwise unify the groups.

The special technical feature of the inventions listed as Group I+ is the specific compound of formula 2 recited therein. The inventions do not share a special technical feature, because GOUAUX, et al. discloses a compound of formula 2, i.e. the common structural core of the compounds of Group I+ (para [0051], and further discloses the compound of formula 3 (para [0052]). Without a shared special technical feature, the inventions lack unity with one another.

The special technical feature of the inventions listed as Group II+ is the specific compound of formula 4 recited therein. The inventions do not share a special technical feature, because GOUAUX, et al. discloses a compound of formula 2, i.e. the common structural core of the compounds of Group I+ (para [0053], and further discloses the compound of formula 3 (para [0054]). Without a shared special technical feature, the inventions lack unity with one another.

According to PCT Rule 13.2, unity of invention exists only when there is a shared same or corresponding special technical feature is a contribution over the prior art.