```
HEADER    HYDROLASE                               02-APR-07   2PE4
TITLE     STRUCTURE OF HUMAN HYALURONIDASE 1, A HYALURONAN HYDROLYZING ENZYME
TITLE    2 INVOLVED IN TUMOR GROWTH AND ANGIOGENESIS
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: HYALURONIDASE-1;
COMPND   3 CHAIN: A;
COMPND   4 SYNONYM: HYAL-1, HYALURONOGLUCOSAMINIDASE-1, LUCA-1;
COMPND   5 EC: 3.2.1.35;
COMPND   6 ENGINEERED: YES
SOURCE    MOL_ID: 1;
SOURCE   2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE   3 ORGANISM_COMMON: HUMAN;
SOURCE   4 ORGANISM_TAXID: 9606;
SOURCE   5 GENE: HYAL1, LUCA1;
SOURCE   6 EXPRESSION_SYSTEM: DROSOPHILA MELANOGASTER;
SOURCE   7 EXPRESSION_SYSTEM_COMMON: FRUIT FLY;
SOURCE   8 EXPRESSION_SYSTEM_TAXID: 7227;
SOURCE   9 EXPRESSION_SYSTEM_STRAIN: SCHNEIDER 2 CELLS;
SOURCE  10 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE  11 EXPRESSION_SYSTEM_PLASMID: PMT/BIP/HYAL1ISO1
KEYWDS    HYALURONIDASE, HYALURONAN, EGF-LIKE DOMAIN, HYDROLASE
EXPDTA    X-RAY DIFFRACTION
AUTHOR    K.L.CHAO,O.HERZBERG
REVDAT   7   30-OCT-24 2PE4    1       REMARK
REVDAT   6   30-AUG-23 2PE4    1       HETSYN
REVDAT   5   29-JUL-20 2PE4    1       COMPND REMARK SEQADV HETNAM
REVDAT   5 2                    1       LINK   SITE   ATOM
REVDAT   4   18-OCT-17 2PE4    1       REMARK
REVDAT   3   13-JUL-11 2PE4    1       VERSN
REVDAT   2   24-FEB-09 2PE4    1       VERSN
REVDAT   1   12-JUN-07 2PE4    0
JRNL        AUTH   K.L.CHAO,L.MUTHUKUMAR,O.HERZBERG
JRNL        TITL   STRUCTURE OF HUMAN HYALURONIDASE-1, A HYALURONAN HYDROLYZING
JRNL        TITL 2 ENZYME INVOLVED IN TUMOR GROWTH AND ANGIOGENESIS
JRNL        REF    BIOCHEMISTRY                  V.  46  6911 2007
JRNL        REFN                   ISSN 0006-2960
JRNL        PMID   17503783
JRNL        DOI    10.1021/BI700382G
REMARK   2
REMARK   2 RESOLUTION.    2.00 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : REFMAC
REMARK   3   AUTHORS     : MURSHUDOV,SKUBAK,LEBEDEV,PANNU,STEINER,
REMARK   3               : NICHOLLS,WINN,LONG,VAGIN
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.00
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 30.65
REMARK   3   DATA CUTOFF            (SIGMA(F)) : 0.000
```


Halozyme EX2180
Merck v. Halozyme
PGR2025-00050

```
REMARK   3   COMPLETENESS FOR RANGE        (%) : NULL
REMARK   3   NUMBER OF REFLECTIONS             : 32231
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION  : RANDOM
REMARK   3   R VALUE     (WORKING + TEST SET) : 0.190
REMARK   3   R VALUE           (WORKING SET) : 0.190
REMARK   3   FREE R VALUE                     : 0.230
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : NULL
REMARK   3   FREE R VALUE TEST SET COUNT      : NULL
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   PROTEIN ATOMS            : 3284
REMARK   3   NUCLEIC ACID ATOMS       : 0
REMARK   3   HETEROGEN ATOMS          : 134
REMARK   3   SOLVENT ATOMS            : 335
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) : 37.02
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) : NULL
REMARK   3    B22 (A**2) : NULL
REMARK   3    B33 (A**2) : NULL
REMARK   3    B12 (A**2) : NULL
REMARK   3    B13 (A**2) : NULL
REMARK   3    B23 (A**2) : NULL
REMARK   3
REMARK   3  ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3   ESU BASED ON R VALUE                            (A): NULL
REMARK   3   ESU BASED ON FREE R VALUE                       (A): NULL
REMARK   3   ESU BASED ON MAXIMUM LIKELIHOOD                 (A): NULL
REMARK   3   ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): NULL
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES.
REMARK   3   DISTANCE RESTRAINTS.                     RMS    SIGMA
REMARK   3    BOND LENGTH                    (A) : 0.013 ; NULL
REMARK   3    ANGLE DISTANCE                 (A) : 1.823 ; NULL
REMARK   3    INTRAPLANAR 1-4 DISTANCE       (A) : NULL  ; NULL
REMARK   3    H-BOND OR METAL COORDINATION   (A) : NULL  ; NULL
REMARK   3
REMARK   3   PLANE RESTRAINT                 (A) : NULL  ; NULL
REMARK   3   CHIRAL-CENTER RESTRAINT      (A**3) : NULL  ; NULL
REMARK   3
REMARK   3   NON-BONDED CONTACT RESTRAINTS.
REMARK   3    SINGLE TORSION                 (A) : NULL  ; NULL
REMARK   3    MULTIPLE TORSION               (A) : NULL  ; NULL
REMARK   3    H-BOND (X...Y)                 (A) : NULL  ; NULL
REMARK   3    H-BOND (X-H...Y)               (A) : NULL  ; NULL
```

```
REMARK   3
REMARK   3   CONFORMATIONAL TORSION ANGLE RESTRAINTS.
REMARK   3    SPECIFIED                (DEGREES) : NULL  ; NULL
REMARK   3    PLANAR                   (DEGREES) : NULL  ; NULL
REMARK   3    STAGGERED                (DEGREES) : NULL  ; NULL
REMARK   3    TRANSVERSE               (DEGREES) : NULL  ; NULL
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.    RMS    SIGMA
REMARK   3   MAIN-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   MAIN-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN BOND              (A**2) : NULL  ; NULL
REMARK   3   SIDE-CHAIN ANGLE             (A**2) : NULL  ; NULL
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: TLS REFINEMENT WITH 2 GROUPS
REMARK   4
REMARK   4 2PE4 COMPLIES WITH FORMAT V. 3.30, 13-JUL-11
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 25-APR-07.
REMARK 100 THE DEPOSITION ID IS D_1000042275.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 01-APR-06
REMARK 200  TEMPERATURE           (KELVIN) : 100
REMARK 200  PH                             : 4.6
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : Y
REMARK 200  RADIATION SOURCE               : APS
REMARK 200  BEAMLINE                       : 22-BM
REMARK 200  X-RAY GENERATOR MODEL          : NULL
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 1.0000
REMARK 200  MONOCHROMATOR                  : CRYOGENICALLY COOLED DOUBLE
REMARK 200                                   CRYSTAL SI (220)
REMARK 200  OPTICS                         : NULL
REMARK 200
REMARK 200  DETECTOR TYPE                  : CCD
REMARK 200  DETECTOR MANUFACTURER          : MARMOSAIC 225 MM CCD
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : D*TREK
REMARK 200  DATA SCALING SOFTWARE          : D*TREK 8.0SSI
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 47955
REMARK 200  RESOLUTION RANGE HIGH      (A) : 2.000
REMARK 200  RESOLUTION RANGE LOW       (A) : 30.650
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 99.4
REMARK 200  DATA REDUNDANCY                : 10.48
```

```
REMARK 200  R MERGE                    (I) : 0.06300
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : 14.0000
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.00
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.07
REMARK 200  COMPLETENESS FOR SHELL     (%) : 97.7
REMARK 200  DATA REDUNDANCY IN SHELL       : 8.72
REMARK 200  R MERGE FOR SHELL          (I) : 0.48800
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : 3.400
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: PHASER
REMARK 200 STARTING MODEL: PDB ENTRY 1FCU
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 66.82
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.71
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 1.5 M SODIUM CHLORIDE, 10% ETHANOL, 3%
REMARK 280  GALACTOSE, PH 4.6, VAPOR DIFFUSION, HANGING DROP, TEMPERATURE
REMARK 280  298K
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 32 2 1
REMARK 290
REMARK 290      SYMOP   SYMMETRY
REMARK 290     NNNMMM   OPERATOR
REMARK 290       1555   X,Y,Z
REMARK 290       2555   -Y,X-Y,Z+2/3
REMARK 290       3555   -X+Y,-X,Z+1/3
REMARK 290       4555   Y,X,-Z
REMARK 290       5555   X-Y,-Y,-Z+1/3
REMARK 290       6555   -X,-X+Y,-Z+2/3
REMARK 290
REMARK 290     WHERE NNN -> OPERATOR NUMBER
REMARK 290           MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290   SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290   SMTRY3   1  0.000000  0.000000  1.000000        0.00000
```

```
REMARK 290   SMTRY1   2 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   2  0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   2  0.000000  0.000000  1.000000       95.87333
REMARK 290   SMTRY1   3 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   3 -0.866025 -0.500000  0.000000        0.00000
REMARK 290   SMTRY3   3  0.000000  0.000000  1.000000       47.93667
REMARK 290   SMTRY1   4 -0.500000  0.866025  0.000000        0.00000
REMARK 290   SMTRY2   4  0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   4  0.000000  0.000000 -1.000000        0.00000
REMARK 290   SMTRY1   5  1.000000  0.000000  0.000000        0.00000
REMARK 290   SMTRY2   5  0.000000 -1.000000  0.000000        0.00000
REMARK 290   SMTRY3   5  0.000000  0.000000 -1.000000       47.93667
REMARK 290   SMTRY1   6 -0.500000 -0.866025  0.000000        0.00000
REMARK 290   SMTRY2   6 -0.866025  0.500000  0.000000        0.00000
REMARK 290   SMTRY3   6  0.000000  0.000000 -1.000000       95.87333
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 SEE REMARK 350 FOR THE AUTHOR PROVIDED AND/OR PROGRAM
REMARK 300 GENERATED ASSEMBLY INFORMATION FOR THE STRUCTURE IN
REMARK 300 THIS ENTRY. THE REMARK MAY ALSO PROVIDE INFORMATION ON
REMARK 300 BURIED SURFACE AREA.
REMARK 350
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 AUTHOR DETERMINED BIOLOGICAL UNIT: MONOMERIC
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A, B, C
REMARK 350   BIOMT1   1  1.000000  0.000000  0.000000        0.00000
REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     GLY A   437
REMARK 465     HIS A   438
REMARK 465     HIS A   439
REMARK 465     HIS A   440
REMARK 465     HIS A   441
REMARK 465     HIS A   442
REMARK 465     HIS A   443
```

```
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT
REMARK 500
REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.
REMARK 500
REMARK 500  ATM1  RES C  SSEQI   ATM2  RES C  SSEQI           DISTANCE
REMARK 500   O    HOH A  1070     O    HOH A  1193             1.81
REMARK 500   O    HOH A  1168     O    HOH A  1217             2.10
REMARK 500   O    HOH A  1155     O    HOH A  1232             2.18
REMARK 500   O    HOH A   952     O    HOH A  1219             2.19
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS
REMARK 500
REMARK 500 THE FOLLOWING ATOMS THAT ARE RELATED BY CRYSTALLOGRAPHIC
REMARK 500 SYMMETRY ARE IN CLOSE CONTACT.  AN ATOM LOCATED WITHIN 0.15
REMARK 500 ANGSTROMS OF A SYMMETRY RELATED ATOM IS ASSUMED TO BE ON A
REMARK 500 SPECIAL POSITION AND IS, THEREFORE, LISTED IN REMARK 375
REMARK 500 INSTEAD OF REMARK 500.  ATOMS WITH NON-BLANK ALTERNATE
REMARK 500 LOCATION INDICATORS ARE NOT INCLUDED IN THE CALCULATIONS.
REMARK 500
REMARK 500 DISTANCE CUTOFF:
REMARK 500 2.2 ANGSTROMS FOR CONTACTS NOT INVOLVING HYDROGEN ATOMS
REMARK 500 1.6 ANGSTROMS FOR CONTACTS INVOLVING HYDROGEN ATOMS
REMARK 500
REMARK 500  ATM1  RES C  SSEQI   ATM2  RES C  SSEQI  SSYMOP   DISTANCE
REMARK 500   OE1  GLN A   390     CB   PRO A   393     4645     1.47
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES PROTEIN: ENGH AND HUBER, 1999
REMARK 500 EXPECTED VALUES NUCLEIC ACID: CLOWNEY ET AL 1996
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500    ARG A 191   NE  -  CZ  -  NH2 ANGL. DEV. =  -4.2 DEGREES
REMARK 500    ASP A 211   CB  -  CG  -  OD1 ANGL. DEV. =   5.9 DEGREES
```

```
REMARK 500    VAL A 318   CG1 -  CB  -  CG2 ANGL. DEV. =  11.8 DEGREES
REMARK 500    ARG A 368   CD  -  NE  -  CZ  ANGL. DEV. =  11.9 DEGREES
REMARK 500    ARG A 368   NE  -  CZ  -  NH1 ANGL. DEV. =  10.1 DEGREES
REMARK 500    ARG A 368   NE  -  CZ  -  NH2 ANGL. DEV. = -11.4 DEGREES
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: TORSION ANGLES
REMARK 500
REMARK 500 TORSION ANGLES OUTSIDE THE EXPECTED RAMACHANDRAN REGIONS:
REMARK 500 (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER;
REMARK 500 SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT:(10X,I3,1X,A3,1X,A1,I4,A1,4X,F7.2,3X,F7.2)
REMARK 500
REMARK 500 EXPECTED VALUES: GJ KLEYWEGT AND TA JONES (1996). PHI/PSI-
REMARK 500 CHOLOGY: RAMACHANDRAN REVISITED. STRUCTURE 4, 1395 - 1400
REMARK 500
REMARK 500  M RES CSSEQI        PSI       PHI
REMARK 500    ASN A  37       71.23   -106.33
REMARK 500    ALA A 132      -84.16    -71.40
REMARK 500    ASP A 142     -126.04     65.55
REMARK 500    ASP A 161       63.32   -104.99
REMARK 500    ASN A 209       48.13    -94.21
REMARK 500    ASP A 211       47.52    -72.48
REMARK 500    ASN A 216       30.90    -86.48
REMARK 500    SER A 223     -109.71     10.70
REMARK 500    ASP A 301      -63.77    -25.63
REMARK 500    SER A 306      -70.35   -123.22
REMARK 500    THR A 343      -59.84   -128.68
REMARK 500    TRP A 435       54.34   -100.90
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: PLANAR GROUPS
REMARK 500
REMARK 500 PLANAR GROUPS IN THE FOLLOWING RESIDUES HAVE A TOTAL
REMARK 500 RMS DISTANCE OF ALL ATOMS FROM THE BEST-FIT PLANE
REMARK 500 BY MORE THAN AN EXPECTED VALUE OF 6*RMSD, WITH AN
REMARK 500 RMSD 0.02 ANGSTROMS, OR AT LEAST ONE ATOM HAS
REMARK 500 AN RMSD GREATER THAN THIS VALUE
REMARK 500 (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER;
REMARK 500 SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500  M RES CSSEQI        RMS     TYPE
REMARK 500    ARG A 368         0.07    SIDE CHAIN
REMARK 500
```

```
REMARK 500 REMARK: NULL
DBREF  2PE4 A   22   435  UNP    Q12794   HYAL1_HUMAN     22    435
SEQADV 2PE4 ARG A   20  UNP  Q12794              CLONING ARTIFACT
SEQADV 2PE4 SER A   21  UNP  Q12794              CLONING ARTIFACT
SEQADV 2PE4 THR A  436  UNP  Q12794              CLONING ARTIFACT
SEQADV 2PE4 GLY A  437  UNP  Q12794              CLONING ARTIFACT
SEQADV 2PE4 HIS A  438  UNP  Q12794              EXPRESSION TAG
SEQADV 2PE4 HIS A  439  UNP  Q12794              EXPRESSION TAG
SEQADV 2PE4 HIS A  440  UNP  Q12794              EXPRESSION TAG
SEQADV 2PE4 HIS A  441  UNP  Q12794              EXPRESSION TAG
SEQADV 2PE4 HIS A  442  UNP  Q12794              EXPRESSION TAG
SEQADV 2PE4 HIS A  443  UNP  Q12794              EXPRESSION TAG
SEQRES   1 A  424  ARG SER PHE ARG GLY PRO LEU LEU PRO ASN ARG PRO PHE
SEQRES   2 A  424  THR THR VAL TRP ASN ALA ASN THR GLN TRP CYS LEU GLU
SEQRES   3 A  424  ARG HIS GLY VAL ASP VAL ASP VAL SER VAL PHE ASP VAL
SEQRES   4 A  424  VAL ALA ASN PRO GLY GLN THR PHE ARG GLY PRO ASP MET
SEQRES   5 A  424  THR ILE PHE TYR SER SER GLN LEU GLY THR TYR PRO TYR
SEQRES   6 A  424  TYR THR PRO THR GLY GLU PRO VAL PHE GLY GLY LEU PRO
SEQRES   7 A  424  GLN ASN ALA SER LEU ILE ALA HIS LEU ALA ARG THR PHE
SEQRES   8 A  424  GLN ASP ILE LEU ALA ALA ILE PRO ALA PRO ASP PHE SER
SEQRES   9 A  424  GLY LEU ALA VAL ILE ASP TRP GLU ALA TRP ARG PRO ARG
SEQRES  10 A  424  TRP ALA PHE ASN TRP ASP THR LYS ASP ILE TYR ARG GLN
SEQRES  11 A  424  ARG SER ARG ALA LEU VAL GLN ALA GLN HIS PRO ASP TRP
SEQRES  12 A  424  PRO ALA PRO GLN VAL GLU ALA VAL ALA GLN ASP GLN PHE
SEQRES  13 A  424  GLN GLY ALA ALA ARG ALA TRP MET ALA GLY THR LEU GLN
SEQRES  14 A  424  LEU GLY ARG ALA LEU ARG PRO ARG GLY LEU TRP GLY PHE
SEQRES  15 A  424  TYR GLY PHE PRO ASP CYS TYR ASN TYR ASP PHE LEU SER
SEQRES  16 A  424  PRO ASN TYR THR GLY GLN CYS PRO SER GLY ILE ARG ALA
SEQRES  17 A  424  GLN ASN ASP GLN LEU GLY TRP LEU TRP GLY GLN SER ARG
SEQRES  18 A  424  ALA LEU TYR PRO SER ILE TYR MET PRO ALA VAL LEU GLU
SEQRES  19 A  424  GLY THR GLY LYS SER GLN MET TYR VAL GLN HIS ARG VAL
SEQRES  20 A  424  ALA GLU ALA PHE ARG VAL ALA VAL ALA ALA GLY ASP PRO
SEQRES  21 A  424  ASN LEU PRO VAL LEU PRO TYR VAL GLN ILE PHE TYR ASP
SEQRES  22 A  424  THR THR ASN HIS PHE LEU PRO LEU ASP GLU LEU GLU HIS
SEQRES  23 A  424  SER LEU GLY GLU SER ALA ALA GLN GLY ALA ALA GLY VAL
SEQRES  24 A  424  VAL LEU TRP VAL SER TRP GLU ASN THR ARG THR LYS GLU
SEQRES  25 A  424  SER CYS GLN ALA ILE LYS GLU TYR MET ASP THR THR LEU
SEQRES  26 A  424  GLY PRO PHE ILE LEU ASN VAL THR SER GLY ALA LEU LEU
SEQRES  27 A  424  CYS SER GLN ALA LEU CYS SER GLY HIS GLY ARG CYS VAL
SEQRES  28 A  424  ARG ARG THR SER HIS PRO LYS ALA LEU LEU LEU LEU ASN
SEQRES  29 A  424  PRO ALA SER PHE SER ILE GLN LEU THR PRO GLY GLY GLY
SEQRES  30 A  424  PRO LEU SER LEU ARG GLY ALA LEU SER LEU GLU ASP GLN
SEQRES  31 A  424  ALA GLN MET ALA VAL GLU PHE LYS CYS ARG CYS TYR PRO
SEQRES  32 A  424  GLY TRP GLN ALA PRO TRP CYS GLU ARG LYS SER MET TRP
SEQRES  33 A  424  THR GLY HIS HIS HIS HIS HIS HIS
MODRES 2PE4 ASN A   99  ASN  GLYCOSYLATION SITE
MODRES 2PE4 ASN A  350  ASN  GLYCOSYLATION SITE
HET    NAG  B   1      14
HET    NAG  B   2      14
HET    BMA  B   3      11
```

```
HET    MAN  B   4      11
HET    MAN  B   5      11
HET    MAN  B   6      11
HET    NAG  C   1      14
HET    NAG  C   2      14
HET    ACT  A 901       4
HET    ACT  A 902       4
HET    ACT  A 903       4
HET    ACT  A 904       4
HET    ACT  A 905       4
HET    ACT  A 906       4
HET    ACT  A 907       4
HET    GOL  A 601       6
HETNAM     NAG 2-ACETAMIDO-2-DEOXY-BETA-D-GLUCOPYRANOSE
HETNAM     BMA BETA-D-MANNOPYRANOSE
HETNAM     MAN ALPHA-D-MANNOPYRANOSE
HETNAM     ACT ACETATE ION
HETNAM     GOL GLYCEROL
HETSYN     NAG N-ACETYL-BETA-D-GLUCOSAMINE; 2-ACETAMIDO-2-DEOXY-BETA-
HETSYN   2 NAG  D-GLUCOSE; 2-ACETAMIDO-2-DEOXY-D-GLUCOSE; 2-ACETAMIDO-
HETSYN   3 NAG  2-DEOXY-GLUCOSE; N-ACETYL-D-GLUCOSAMINE
HETSYN     BMA BETA-D-MANNOSE; D-MANNOSE; MANNOSE
HETSYN     MAN ALPHA-D-MANNOSE; D-MANNOSE; MANNOSE
HETSYN     GOL GLYCERIN; PROPANE-1,2,3-TRIOL
FORMUL   2  NAG    4(C8 H15 N O6)
FORMUL   2  BMA    C6 H12 O6
FORMUL   2  MAN    3(C6 H12 O6)
FORMUL   4  ACT    7(C2 H3 O2 1-)
FORMUL  11  GOL    C3 H8 O3
FORMUL  12  HOH   *335(H2 O)
HELIX    1   1 ASN A   39  GLY A   48  1                                  10
HELIX    2   2 LEU A   96  ALA A  100  5                                   5
HELIX    3   3 SER A  101  ILE A  117  1                                  17
HELIX    4   4 ARG A  136  ASN A  140  5                                   5
HELIX    5   5 TRP A  141  THR A  143  5                                   3
HELIX    6   6 LYS A  144  HIS A  159  1                                  16
HELIX    7   7 PRO A  163  ARG A  194  1                                  32
HELIX    8   8 PRO A  222  GLN A  231  1                                  10
HELIX    9   9 LEU A  232  SER A  239  1                                   8
HELIX   10  10 PRO A  249  GLU A  253  5                                   5
HELIX   11  11 LYS A  257  ALA A  276  1                                  20
HELIX   12  12 PRO A  299  HIS A  305  1                                   7
HELIX   13  13 SER A  306  GLN A  313  1                                   8
HELIX   14  14 SER A  323  THR A  327  5                                   5
HELIX   15  15 THR A  329  THR A  343  1                                  15
HELIX   16  16 THR A  343  CYS A  363  1                                  21
HELIX   17  17 PRO A  393  GLY A  396  5                                   4
HELIX   18  18 SER A  405  GLU A  415  1                                  11
SHEET    1   A 4 VAL A  58  VAL A  59  0
SHEET    2   A 4 THR A  33  ASN A  37  1  N  TRP A  36   O  VAL A  58
```

```
SHEET    3   A 4 GLY A 317  TRP A 321  1  O  LEU A 320   N  VAL A  35
SHEET    4   A 4 TYR A 286  VAL A 287  1  N  VAL A 287   O  VAL A 319
SHEET    1   B 3 MET A  71  PHE A  74  0
SHEET    2   B 3 LEU A 125  ILE A 128  1  O  VAL A 127   N  PHE A  74
SHEET    3   B 3 LEU A 198  PHE A 201  1  O  GLY A 200   N  ILE A 128
SHEET    1   C 2 TYR A  84  TYR A  85  0
SHEET    2   C 2 PRO A  91  VAL A  92 -1  O  VAL A  92   N  TYR A  84
SHEET    1   D 2 GLY A 367  ARG A 371  0
SHEET    2   D 2 PHE A 416  CYS A 420 -1  O  ARG A 419   N  ARG A 368
SHEET    1   E 2 PHE A 387  LEU A 391  0
SHEET    2   E 2 LEU A 398  GLY A 402 -1  O  SER A 399   N  GLN A 390
SSBOND   1 CYS A   43    CYS A  333                          1555   1555  2.13
SSBOND   2 CYS A  207    CYS A  221                          1555   1555  2.05
SSBOND   3 CYS A  358    CYS A  369                          1555   1555  2.04
SSBOND   4 CYS A  363    CYS A  418                          1555   1555  2.08
SSBOND   5 CYS A  420    CYS A  429                          1555   1555  2.06
LINK         ND2 ASN A  99                 C1  NAG C   1     1555   1555  1.45
LINK         ND2 ASN A 350                 C1  NAG B   1     1555   1555  1.43
LINK         O4  NAG B   1                 C1  NAG B   2     1555   1555  1.43
LINK         O4  NAG B   2                 C1  BMA B   3     1555   1555  1.43
LINK         O6  BMA B   3                 C1  MAN B   4     1555   1555  1.43
LINK         O3  BMA B   3                 C1  MAN B   6     1555   1555  1.44
LINK         O3  MAN B   4                 C1  MAN B   5     1555   1555  1.45
LINK         O4  NAG C   1                 C1  NAG C   2     1555   1555  1.45
CISPEP   1 PHE A  204    PRO A  205          0        -9.08
CISPEP   2 ALA A  426    PRO A  427          0         2.03
CRYST1   92.050   92.050  143.810  90.00  90.00 120.00 P 32 2 1      6
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.010864  0.006272 -0.000001        0.00000
SCALE2      0.000000  0.012544 -0.000001        0.00000
SCALE3      0.000000  0.000000  0.006954        0.00000
ATOM      1  N   ARG A  20      24.557 -38.438  -2.219  1.00 48.18           N
ATOM      2  CA  ARG A  20      24.786 -38.383  -3.724  1.00 48.20           C
ATOM      3  C   ARG A  20      26.209 -38.780  -4.233  1.00 46.86           C
ATOM      4  O   ARG A  20      26.312 -39.492  -5.209  1.00 46.96           O
ATOM      5  CB  ARG A  20      24.328 -37.035  -4.295  1.00 48.44           C
ATOM      6  CG  ARG A  20      23.791 -37.076  -5.718  1.00 49.20           C
ATOM      7  CD  ARG A  20      23.543 -35.655  -6.309  1.00 49.60           C
ATOM      8  NE  ARG A  20      22.419 -34.974  -5.669  1.00 54.70           N
ATOM      9  CZ  ARG A  20      22.453 -33.754  -5.107  1.00 55.47           C
ATOM     10  NH1 ARG A  20      23.558 -33.001  -5.109  1.00 52.88           N
ATOM     11  NH2 ARG A  20      21.345 -33.268  -4.550  1.00 55.28           N
ATOM     12  N   SER A  21      27.281 -38.306  -3.583  1.00 45.68           N
ATOM     13  CA  SER A  21      28.663 -38.666  -3.946  1.00 43.64           C
ATOM     14  C   SER A  21      29.113 -39.741  -2.991  1.00 42.98           C
ATOM     15  O   SER A  21      28.807 -39.631  -1.810  1.00 43.65           O
ATOM     16  CB  SER A  21      29.618 -37.466  -3.846  1.00 43.49           C
ATOM     17  OG  SER A  21      29.413 -36.523  -4.890  1.00 41.49           O
```

```
ATOM     18  N   PHE A  22      29.822 -40.764  -3.483  1.00 41.35           N
ATOM     19  CA  PHE A  22      30.314 -41.886  -2.644  1.00 40.87           C
ATOM     20  C   PHE A  22      31.844 -42.145  -2.634  1.00 39.14           C
ATOM     21  O   PHE A  22      32.290 -43.097  -1.991  1.00 39.49           O
ATOM     22  CB  PHE A  22      29.550 -43.211  -2.938  1.00 41.87           C
ATOM     23  CG  PHE A  22      28.062 -43.084  -2.760  1.00 44.68           C
ATOM     24  CD1 PHE A  22      27.255 -42.664  -3.815  1.00 46.93           C
ATOM     25  CD2 PHE A  22      27.468 -43.322  -1.516  1.00 49.07           C
ATOM     26  CE1 PHE A  22      25.864 -42.500  -3.642  1.00 50.21           C
ATOM     27  CE2 PHE A  22      26.069 -43.156  -1.328  1.00 50.25           C
ATOM     28  CZ  PHE A  22      25.272 -42.759  -2.394  1.00 48.69           C
ATOM     29  N   ARG A  23      32.643 -41.310  -3.304  1.00 37.42           N
ATOM     30  CA  ARG A  23      34.124 -41.475  -3.274  1.00 35.41           C
ATOM     31  C   ARG A  23      34.682 -41.112  -1.904  1.00 33.52           C
ATOM     32  O   ARG A  23      34.218 -40.149  -1.272  1.00 32.60           O
ATOM     33  CB  ARG A  23      34.840 -40.602  -4.306  1.00 34.82           C
ATOM     34  CG  ARG A  23      34.507 -40.868  -5.769  1.00 36.72           C
ATOM     35  CD  ARG A  23      35.281 -42.023  -6.311  1.00 34.04           C
ATOM     36  NE  ARG A  23      36.701 -41.752  -6.607  1.00 32.95           N
ATOM     37  CZ  ARG A  23      37.159 -41.322  -7.785  1.00 31.45           C
ATOM     38  NH1 ARG A  23      36.320 -41.032  -8.787  1.00 29.40           N
ATOM     39  NH2 ARG A  23      38.457 -41.184  -7.965  1.00 29.81           N
ATOM     40  N   GLY A  24      35.675 -41.882  -1.462  1.00 32.45           N
ATOM     41  CA  GLY A  24      36.457 -41.533  -0.243  1.00 30.59           C
ATOM     42  C   GLY A  24      37.606 -40.711  -0.785  1.00 29.05           C
ATOM     43  O   GLY A  24      37.373 -39.795  -1.608  1.00 28.41           O
ATOM     44  N   PRO A  25      38.847 -41.123  -0.459  1.00 27.29           N
ATOM     45  CA  PRO A  25      39.988 -40.391  -0.958  1.00 26.77           C
ATOM     46  C   PRO A  25      40.026 -40.621  -2.472  1.00 27.12           C
ATOM     47  O   PRO A  25      39.678 -41.717  -2.913  1.00 27.40           O
ATOM     48  CB  PRO A  25      41.150 -41.027  -0.223  1.00 25.71           C
ATOM     49  CG  PRO A  25      40.671 -42.497   0.012  1.00 26.93           C
ATOM     50  CD  PRO A  25      39.215 -42.355   0.262  1.00 25.99           C
ATOM     51  N   LEU A  26      40.384 -39.606  -3.271  1.00 27.44           N
ATOM     52  CA  LEU A  26      40.243 -39.739  -4.739  1.00 27.91           C
ATOM     53  C   LEU A  26      41.261 -40.703  -5.290  1.00 27.85           C
ATOM     54  O   LEU A  26      40.986 -41.338  -6.288  1.00 28.26           O
ATOM     55  CB  LEU A  26      40.317 -38.409  -5.473  1.00 28.10           C
ATOM     56  CG  LEU A  26      39.195 -37.470  -5.059  1.00 29.70           C
ATOM     57  CD1 LEU A  26      39.399 -36.233  -5.857  1.00 28.47           C
ATOM     58  CD2 LEU A  26      37.846 -38.185  -5.401  1.00 30.41           C
ATOM     59  N   LEU A  27      42.404 -40.813  -4.603  1.00 26.97           N
ATOM     60  CA  LEU A  27      43.457 -41.807  -4.855  1.00 26.97           C
ATOM     61  C   LEU A  27      43.792 -42.472  -3.512  1.00 28.03           C
ATOM     62  O   LEU A  27      43.620 -41.849  -2.480  1.00 28.22           O
ATOM     63  CB  LEU A  27      44.711 -41.127  -5.451  1.00 25.97           C
ATOM     64  CG  LEU A  27      44.565 -40.636  -6.900  1.00 27.44           C
ATOM     65  CD1 LEU A  27      45.740 -39.801  -7.176  1.00 28.13           C
ATOM     66  CD2 LEU A  27      44.537 -41.855  -7.934  1.00 25.49           C
ATOM     67  N   PRO A  28      44.253 -43.745  -3.518  1.00 28.74           N
```

```
ATOM     68  CA  PRO A  28      44.600 -44.412  -2.270  1.00 28.36           C
ATOM     69  C   PRO A  28      45.519 -43.601  -1.375  1.00 28.71           C
ATOM     70  O   PRO A  28      46.501 -43.040  -1.868  1.00 29.38           O
ATOM     71  CB  PRO A  28      45.322 -45.674  -2.740  1.00 27.57           C
ATOM     72  CG  PRO A  28      44.648 -45.988  -4.064  1.00 29.32           C
ATOM     73  CD  PRO A  28      44.417 -44.642  -4.689  1.00 28.85           C
ATOM     74  N   ASN A  29      45.222 -43.558  -0.067  1.00 28.73           N
ATOM     75  CA  ASN A  29      46.080 -42.850   0.892  1.00 28.57           C
ATOM     76  C   ASN A  29      46.230 -41.390   0.548  1.00 27.55           C
ATOM     77  O   ASN A  29      47.271 -40.780   0.828  1.00 28.63           O
ATOM     78  CB  ASN A  29      47.464 -43.497   0.951  1.00 28.36           C
ATOM     79  CG  ASN A  29      47.411 -44.950   1.380  1.00 33.90           C
ATOM     80  OD1 ASN A  29      46.644 -45.316   2.269  1.00 35.47           O
ATOM     81  ND2 ASN A  29      48.228 -45.782   0.747  1.00 20.00           N
ATOM     82  N   ARG A  30      45.210 -40.814  -0.066  1.00 26.79           N
ATOM     83  CA  ARG A  30      45.295 -39.385  -0.421  1.00 26.77           C
ATOM     84  C   ARG A  30      44.019 -38.677  -0.094  1.00 25.83           C
ATOM     85  O   ARG A  30      43.202 -38.432  -0.980  1.00 26.88           O
ATOM     86  CB  ARG A  30      45.647 -39.204  -1.897  1.00 26.38           C
ATOM     87  CG  ARG A  30      47.060 -39.646  -2.250  1.00 26.12           C
ATOM     88  CD  ARG A  30      48.053 -38.606  -1.721  1.00 30.72           C
ATOM     89  NE  ARG A  30      49.424 -38.967  -2.065  1.00 28.87           N
ATOM     90  CZ  ARG A  30      50.173 -39.831  -1.375  1.00 33.17           C
ATOM     91  NH1 ARG A  30      49.713 -40.397  -0.236  1.00 31.06           N
ATOM     92  NH2 ARG A  30      51.394 -40.124  -1.833  1.00 30.36           N
ATOM     93  N   PRO A  31      43.848 -38.319   1.184  1.00 25.56           N
ATOM     94  CA  PRO A  31      42.715 -37.415   1.522  1.00 24.23           C
ATOM     95  C   PRO A  31      42.847 -36.076   0.778  1.00 24.26           C
ATOM     96  O   PRO A  31      41.838 -35.487   0.416  1.00 23.95           O
ATOM     97  CB  PRO A  31      42.837 -37.212   3.054  1.00 22.01           C
ATOM     98  CG  PRO A  31      44.279 -37.618   3.404  1.00 22.47           C
ATOM     99  CD  PRO A  31      44.677 -38.670   2.371  1.00 24.86           C
ATOM    100  N   PHE A  32      44.086 -35.658   0.509  1.00 23.56           N
ATOM    101  CA  PHE A  32      44.361 -34.418  -0.209  1.00 23.06           C
ATOM    102  C   PHE A  32      45.276 -34.814  -1.383  1.00 24.02           C
ATOM    103  O   PHE A  32      46.416 -35.254  -1.187  1.00 23.62           O
ATOM    104  CB  PHE A  32      45.084 -33.397   0.680  1.00 21.41           C
ATOM    105  CG  PHE A  32      45.301 -32.024   0.010  1.00 20.64           C
ATOM    106  CD1 PHE A  32      44.230 -31.173  -0.219  1.00 17.31           C
ATOM    107  CD2 PHE A  32      46.586 -31.589  -0.347  1.00 18.27           C
ATOM    108  CE1 PHE A  32      44.420 -29.903  -0.782  1.00 17.56           C
ATOM    109  CE2 PHE A  32      46.784 -30.326  -0.937  1.00 16.14           C
ATOM    110  CZ  PHE A  32      45.697 -29.471  -1.127  1.00 17.26           C
ATOM    111  N   THR A  33      44.732 -34.691  -2.589  1.00 24.39           N
ATOM    112  CA  THR A  33      45.358 -35.140  -3.830  1.00 25.94           C
ATOM    113  C   THR A  33      45.951 -33.883  -4.574  1.00 26.33           C
ATOM    114  O   THR A  33      45.384 -32.757  -4.480  1.00 27.87           O
ATOM    115  CB  THR A  33      44.257 -35.873  -4.667  1.00 26.05           C
ATOM    116  OG1 THR A  33      44.205 -37.265  -4.276  1.00 26.99           O
ATOM    117  CG2 THR A  33      44.608 -35.915  -6.098  1.00 32.24           C
```

```
ATOM    118  N   THR A  34      47.077 -34.005  -5.283  1.00 24.66           N
ATOM    119  CA  THR A  34      47.493 -32.829  -6.033  1.00 24.49           C
ATOM    120  C   THR A  34      47.622 -33.128  -7.521  1.00 24.22           C
ATOM    121  O   THR A  34      48.134 -34.151  -7.905  1.00 25.21           O
ATOM    122  CB  THR A  34      48.820 -32.244  -5.511  1.00 24.21           C
ATOM    123  OG1 THR A  34      49.794 -33.298  -5.561  1.00 24.23           O
ATOM    124  CG2 THR A  34      48.662 -31.729  -4.045  1.00 23.00           C
ATOM    125  N   VAL A  35      47.154 -32.204  -8.345  1.00 24.68           N
ATOM    126  CA  VAL A  35      47.255 -32.323  -9.793  1.00 24.61           C
ATOM    127  C   VAL A  35      48.114 -31.147 -10.285  1.00 24.95           C
ATOM    128  O   VAL A  35      47.745 -29.960 -10.119  1.00 24.83           O
ATOM    129  CB  VAL A  35      45.862 -32.259 -10.482  1.00 24.59           C
ATOM    130  CG1 VAL A  35      45.997 -32.380 -12.030  1.00 22.21           C
ATOM    131  CG2 VAL A  35      44.905 -33.331  -9.917  1.00 24.01           C
ATOM    132  N   TRP A  36      49.261 -31.491 -10.867  1.00 24.54           N
ATOM    133  CA  TRP A  36      50.115 -30.529 -11.527  1.00 24.36           C
ATOM    134  C   TRP A  36      49.609 -30.352 -12.971  1.00 25.20           C
ATOM    135  O   TRP A  36      49.858 -31.211 -13.841  1.00 24.00           O
ATOM    136  CB  TRP A  36      51.529 -31.073 -11.539  1.00 24.81           C
ATOM    137  CG  TRP A  36      52.619 -30.154 -12.137  1.00 24.77           C
ATOM    138  CD1 TRP A  36      53.397 -30.432 -13.206  1.00 25.29           C
ATOM    139  CD2 TRP A  36      53.051 -28.873 -11.645  1.00 25.29           C
ATOM    140  NE1 TRP A  36      54.287 -29.409 -13.431  1.00 26.26           N
ATOM    141  CE2 TRP A  36      54.103 -28.439 -12.486  1.00 25.94           C
ATOM    142  CE3 TRP A  36      52.621 -28.023 -10.592  1.00 24.39           C
ATOM    143  CZ2 TRP A  36      54.760 -27.196 -12.308  1.00 26.55           C
ATOM    144  CZ3 TRP A  36      53.258 -26.794 -10.422  1.00 22.83           C
ATOM    145  CH2 TRP A  36      54.324 -26.396 -11.262  1.00 25.20           C
ATOM    146  N   ASN A  37      48.928 -29.230 -13.221  1.00 25.43           N
ATOM    147  CA  ASN A  37      48.305 -28.938 -14.533  1.00 25.97           C
ATOM    148  C   ASN A  37      49.146 -27.856 -15.247  1.00 25.93           C
ATOM    149  O   ASN A  37      48.757 -26.690 -15.360  1.00 25.94           O
ATOM    150  CB  ASN A  37      46.861 -28.487 -14.270  1.00 25.39           C
ATOM    151  CG  ASN A  37      46.041 -28.314 -15.503  1.00 29.98           C
ATOM    152  OD1 ASN A  37      45.161 -27.448 -15.501  1.00 31.12           O
ATOM    153  ND2 ASN A  37      46.276 -29.153 -16.571  1.00 26.61           N
ATOM    154  N   ALA A  38      50.327 -28.280 -15.682  1.00 25.48           N
ATOM    155  CA  ALA A  38      51.375 -27.444 -16.195  1.00 26.26           C
ATOM    156  C   ALA A  38      52.031 -28.104 -17.416  1.00 27.29           C
ATOM    157  O   ALA A  38      52.160 -29.350 -17.480  1.00 26.94           O
ATOM    158  CB  ALA A  38      52.420 -27.188 -15.171  1.00 26.17           C
ATOM    159  N   ASN A  39      52.429 -27.265 -18.375  1.00 25.98           N
ATOM    160  CA  ASN A  39      53.198 -27.789 -19.520  1.00 27.80           C
ATOM    161  C   ASN A  39      54.683 -27.753 -19.257  1.00 28.04           C
ATOM    162  O   ASN A  39      55.454 -27.051 -19.969  1.00 29.08           O
ATOM    163  CB  ASN A  39      52.863 -27.004 -20.784  1.00 27.05           C
ATOM    164  CG  ASN A  39      53.139 -27.786 -22.046  1.00 28.18           C
ATOM    165  OD1 ASN A  39      53.772 -28.857 -22.033  1.00 25.95           O
ATOM    166  ND2 ASN A  39      52.640 -27.257 -23.154  1.00 25.80           N
ATOM    167  N   THR A  40      55.094 -28.483 -18.215  1.00 27.95           N
```

```
ATOM    168  CA  THR A  40      56.503 -28.618 -17.906  1.00 27.76           C
ATOM    169  C   THR A  40      57.219 -29.587 -18.861  1.00 28.62           C
ATOM    170  O   THR A  40      58.453 -29.557 -18.967  1.00 28.56           O
ATOM    171  CB  THR A  40      56.772 -28.914 -16.399  1.00 27.96           C
ATOM    172  OG1 THR A  40      55.817 -29.846 -15.895  1.00 26.86           O
ATOM    173  CG2 THR A  40      56.731 -27.628 -15.605  1.00 25.28           C
ATOM    174  N   GLN A  41      56.431 -30.402 -19.568  1.00 28.94           N
ATOM    175  CA  GLN A  41      56.883 -31.222 -20.684  1.00 31.05           C
ATOM    176  C   GLN A  41      57.539 -30.369 -21.780  1.00 29.13           C
ATOM    177  O   GLN A  41      58.549 -30.758 -22.348  1.00 28.35           O
ATOM    178  CB  GLN A  41      55.689 -31.984 -21.264  1.00 31.14           C
ATOM    179  CG  GLN A  41      56.001 -33.040 -22.312  1.00 35.82           C
ATOM    180  CD  GLN A  41      54.701 -33.700 -22.913  1.00 38.61           C
ATOM    181  OE1 GLN A  41      53.632 -33.836 -22.219  1.00 45.48           O
ATOM    182  NE2 GLN A  41      54.803 -34.136 -24.194  1.00 41.85           N
ATOM    183  N   TRP A  42      56.958 -29.199 -22.046  1.00 27.94           N
ATOM    184  CA  TRP A  42      57.556 -28.210 -22.934  1.00 26.61           C
ATOM    185  C   TRP A  42      58.907 -27.664 -22.404  1.00 26.76           C
ATOM    186  O   TRP A  42      59.859 -27.535 -23.172  1.00 26.25           O
ATOM    187  CB  TRP A  42      56.579 -27.077 -23.185  1.00 25.04           C
ATOM    188  CG  TRP A  42      57.152 -25.914 -23.963  1.00 27.45           C
ATOM    189  CD1 TRP A  42      57.604 -24.711 -23.459  1.00 26.57           C
ATOM    190  CD2 TRP A  42      57.311 -25.823 -25.397  1.00 26.83           C
ATOM    191  NE1 TRP A  42      58.004 -23.887 -24.485  1.00 25.93           N
ATOM    192  CE2 TRP A  42      57.837 -24.537 -25.680  1.00 26.19           C
ATOM    193  CE3 TRP A  42      57.042 -26.690 -26.455  1.00 25.73           C
ATOM    194  CZ2 TRP A  42      58.090 -24.093 -26.995  1.00 27.82           C
ATOM    195  CZ3 TRP A  42      57.308 -26.247 -27.779  1.00 26.97           C
ATOM    196  CH2 TRP A  42      57.822 -24.958 -28.027  1.00 25.96           C
ATOM    197  N   CYS A  43      58.982 -27.338 -21.111  1.00 26.34           N
ATOM    198  CA  CYS A  43      60.214 -26.889 -20.494  1.00 27.91           C
ATOM    199  C   CYS A  43      61.351 -27.852 -20.827  1.00 27.85           C
ATOM    200  O   CYS A  43      62.497 -27.445 -21.051  1.00 27.32           O
ATOM    201  CB  CYS A  43      60.052 -26.806 -18.965  1.00 28.02           C
ATOM    202  SG  CYS A  43      58.975 -25.450 -18.459  1.00 31.50           S
ATOM    203  N   LEU A  44      61.017 -29.133 -20.831  1.00 28.55           N
ATOM    204  CA  LEU A  44      62.007 -30.175 -21.025  1.00 29.56           C
ATOM    205  C   LEU A  44      62.340 -30.348 -22.524  1.00 29.29           C
ATOM    206  O   LEU A  44      63.497 -30.315 -22.894  1.00 29.16           O
ATOM    207  CB  LEU A  44      61.564 -31.503 -20.370  1.00 28.63           C
ATOM    208  CG  LEU A  44      62.579 -32.661 -20.501  1.00 30.41           C
ATOM    209  CD1 LEU A  44      63.917 -32.328 -19.853  1.00 28.27           C
ATOM    210  CD2 LEU A  44      62.048 -33.965 -19.925  1.00 30.94           C
ATOM    211  N   GLU A  45      61.313 -30.509 -23.351  1.00 29.54           N
ATOM    212  CA  GLU A  45      61.467 -30.789 -24.777  1.00 31.61           C
ATOM    213  C   GLU A  45      61.999 -29.583 -25.570  1.00 30.61           C
ATOM    214  O   GLU A  45      62.800 -29.745 -26.478  1.00 30.17           O
ATOM    215  CB  GLU A  45      60.132 -31.299 -25.374  1.00 31.32           C
ATOM    216  CG  GLU A  45      59.681 -32.631 -24.768  1.00 33.44           C
ATOM    217  CD  GLU A  45      58.409 -33.207 -25.400  1.00 35.35           C
```

```
ATOM    218  OE1 GLU A  45      57.720 -32.509 -26.217  1.00 44.91           O
ATOM    219  OE2 GLU A  45      58.088 -34.382 -25.067  1.00 37.49           O
ATOM    220  N   ARG A  46      61.560 -28.380 -25.201  1.00 29.99           N
ATOM    221  CA  ARG A  46      61.988 -27.202 -25.885  1.00 29.15           C
ATOM    222  C   ARG A  46      63.293 -26.690 -25.348  1.00 29.66           C
ATOM    223  O   ARG A  46      64.183 -26.383 -26.125  1.00 30.21           O
ATOM    224  CB  ARG A  46      60.955 -26.104 -25.828  1.00 27.64           C
ATOM    225  CG  ARG A  46      61.402 -24.869 -26.595  1.00 29.45           C
ATOM    226  CD  ARG A  46      61.357 -25.078 -28.104  1.00 28.56           C
ATOM    227  NE  ARG A  46      61.311 -23.808 -28.823  1.00 27.75           N
ATOM    228  CZ  ARG A  46      61.120 -23.680 -30.133  1.00 27.68           C
ATOM    229  NH1 ARG A  46      60.921 -24.752 -30.895  1.00 26.61           N
ATOM    230  NH2 ARG A  46      61.089 -22.469 -30.683  1.00 26.58           N
ATOM    231  N   HIS A  47      63.397 -26.581 -24.025  1.00 29.43           N
ATOM    232  CA  HIS A  47      64.506 -25.880 -23.395  1.00 29.32           C
ATOM    233  C   HIS A  47      65.494 -26.761 -22.631  1.00 29.50           C
ATOM    234  O   HIS A  47      66.472 -26.239 -22.118  1.00 29.76           O
ATOM    235  CB  HIS A  47      63.992 -24.779 -22.447  1.00 29.21           C
ATOM    236  CG  HIS A  47      63.057 -23.789 -23.079  1.00 29.08           C
ATOM    237  ND1 HIS A  47      63.427 -22.963 -24.123  1.00 30.49           N
ATOM    238  CD2 HIS A  47      61.777 -23.460 -22.779  1.00 29.10           C
ATOM    239  CE1 HIS A  47      62.400 -22.205 -24.470  1.00 29.24           C
ATOM    240  NE2 HIS A  47      61.388 -22.484 -23.670  1.00 31.68           N
ATOM    241  N   GLY A  48      65.258 -28.069 -22.533  1.00 29.55           N
ATOM    242  CA  GLY A  48      66.128 -28.955 -21.733  1.00 29.76           C
ATOM    243  C   GLY A  48      66.074 -28.715 -20.213  1.00 31.51           C
ATOM    244  O   GLY A  48      66.948 -29.184 -19.448  1.00 31.25           O
ATOM    245  N   VAL A  49      65.064 -27.981 -19.759  1.00 31.78           N
ATOM    246  CA  VAL A  49      64.900 -27.731 -18.326  1.00 32.71           C
ATOM    247  C   VAL A  49      64.003 -28.821 -17.771  1.00 33.38           C
ATOM    248  O   VAL A  49      62.835 -29.000 -18.196  1.00 33.20           O
ATOM    249  CB  VAL A  49      64.308 -26.319 -18.013  1.00 33.05           C
ATOM    250  CG1 VAL A  49      64.324 -26.075 -16.513  1.00 32.32           C
ATOM    251  CG2 VAL A  49      65.101 -25.195 -18.766  1.00 32.16           C
ATOM    252  N   ASP A  50      64.543 -29.552 -16.814  1.00 33.30           N
ATOM    253  CA  ASP A  50      63.833 -30.695 -16.283  1.00 34.31           C
ATOM    254  C   ASP A  50      63.244 -30.330 -14.925  1.00 32.79           C
ATOM    255  O   ASP A  50      63.941 -30.378 -13.929  1.00 32.75           O
ATOM    256  CB  ASP A  50      64.776 -31.907 -16.162  1.00 34.96           C
ATOM    257  CG  ASP A  50      64.046 -33.179 -15.690  1.00 38.73           C
ATOM    258  OD1 ASP A  50      62.834 -33.113 -15.350  1.00 40.34           O
ATOM    259  OD2 ASP A  50      64.687 -34.249 -15.653  1.00 41.88           O
ATOM    260  N   VAL A  51      61.961 -29.955 -14.898  1.00 32.69           N
ATOM    261  CA  VAL A  51      61.266 -29.662 -13.637  1.00 30.88           C
ATOM    262  C   VAL A  51      60.832 -30.995 -12.991  1.00 30.87           C
ATOM    263  O   VAL A  51      60.195 -31.822 -13.630  1.00 31.04           O
ATOM    264  CB  VAL A  51      60.073 -28.697 -13.839  1.00 31.29           C
ATOM    265  CG1 VAL A  51      59.334 -28.397 -12.496  1.00 28.08           C
ATOM    266  CG2 VAL A  51      60.527 -27.376 -14.554  1.00 29.99           C
ATOM    267  N   ASP A  52      61.192 -31.202 -11.734  1.00 30.43           N
```

```
ATOM    268  CA  ASP A  52      60.808 -32.417 -10.994  1.00 30.48           C
ATOM    269  C   ASP A  52      59.326 -32.336 -10.634  1.00 29.96           C
ATOM    270  O   ASP A  52      58.909 -31.426  -9.936  1.00 30.57           O
ATOM    271  CB  ASP A  52      61.667 -32.500  -9.725  1.00 30.92           C
ATOM    272  CG  ASP A  52      61.432 -33.777  -8.882  1.00 32.84           C
ATOM    273  OD1 ASP A  52      60.840 -34.777  -9.308  1.00 35.63           O
ATOM    274  OD2 ASP A  52      61.899 -33.786  -7.724  1.00 44.04           O
ATOM    275  N   VAL A  53      58.538 -33.294 -11.107  1.00 29.31           N
ATOM    276  CA  VAL A  53      57.107 -33.318 -10.901  1.00 28.46           C
ATOM    277  C   VAL A  53      56.694 -34.619 -10.165  1.00 28.50           C
ATOM    278  O   VAL A  53      55.511 -34.991 -10.139  1.00 28.08           O
ATOM    279  CB  VAL A  53      56.305 -33.148 -12.272  1.00 29.36           C
ATOM    280  CG1 VAL A  53      56.503 -31.748 -12.876  1.00 28.87           C
ATOM    281  CG2 VAL A  53      56.649 -34.244 -13.316  1.00 27.80           C
ATOM    282  N   SER A  54      57.670 -35.324  -9.600  1.00 27.75           N
ATOM    283  CA  SER A  54      57.416 -36.600  -8.915  1.00 28.03           C
ATOM    284  C   SER A  54      56.621 -36.420  -7.616  1.00 27.99           C
ATOM    285  O   SER A  54      56.013 -37.361  -7.120  1.00 29.44           O
ATOM    286  CB  SER A  54      58.745 -37.311  -8.620  1.00 28.67           C
ATOM    287  OG  SER A  54      59.596 -36.525  -7.790  1.00 28.43           O
ATOM    288  N   VAL A  55      56.618 -35.224  -7.043  1.00 27.62           N
ATOM    289  CA  VAL A  55      55.920 -35.052  -5.780  1.00 27.51           C
ATOM    290  C   VAL A  55      54.375 -35.069  -5.968  1.00 27.49           C
ATOM    291  O   VAL A  55      53.627 -35.365  -5.033  1.00 26.61           O
ATOM    292  CB  VAL A  55      56.390 -33.790  -5.049  1.00 27.71           C
ATOM    293  CG1 VAL A  55      55.755 -32.538  -5.652  1.00 26.58           C
ATOM    294  CG2 VAL A  55      56.065 -33.909  -3.592  1.00 27.26           C
ATOM    295  N   PHE A  56      53.901 -34.796  -7.184  1.00 26.22           N
ATOM    296  CA  PHE A  56      52.461 -34.707  -7.415  1.00 25.77           C
ATOM    297  C   PHE A  56      51.799 -36.073  -7.591  1.00 26.07           C
ATOM    298  O   PHE A  56      52.436 -37.003  -7.997  1.00 26.39           O
ATOM    299  CB  PHE A  56      52.217 -33.801  -8.613  1.00 25.05           C
ATOM    300  CG  PHE A  56      52.816 -32.427  -8.435  1.00 26.71           C
ATOM    301  CD1 PHE A  56      54.041 -32.095  -9.035  1.00 23.08           C
ATOM    302  CD2 PHE A  56      52.176 -31.470  -7.626  1.00 27.57           C
ATOM    303  CE1 PHE A  56      54.587 -30.851  -8.875  1.00 21.11           C
ATOM    304  CE2 PHE A  56      52.739 -30.198  -7.445  1.00 27.07           C
ATOM    305  CZ  PHE A  56      53.940 -29.891  -8.069  1.00 24.91           C
ATOM    306  N   ASP A  57      50.499 -36.165  -7.330  1.00 26.90           N
ATOM    307  CA  ASP A  57      49.786 -37.416  -7.528  1.00 25.92           C
ATOM    308  C   ASP A  57      49.475 -37.573  -9.023  1.00 25.64           C
ATOM    309  O   ASP A  57      49.485 -38.663  -9.521  1.00 23.95           O
ATOM    310  CB  ASP A  57      48.510 -37.447  -6.678  1.00 24.96           C
ATOM    311  CG  ASP A  57      48.817 -37.367  -5.188  1.00 26.75           C
ATOM    312  OD1 ASP A  57      49.572 -38.211  -4.667  1.00 31.36           O
ATOM    313  OD2 ASP A  57      48.339 -36.451  -4.528  1.00 26.73           O
ATOM    314  N   VAL A  58      49.206 -36.444  -9.700  1.00 25.84           N
ATOM    315  CA  VAL A  58      48.792 -36.411 -11.100  1.00 25.15           C
ATOM    316  C   VAL A  58      49.537 -35.272 -11.769  1.00 26.17           C
ATOM    317  O   VAL A  58      49.671 -34.153 -11.205  1.00 24.79           O
```

```
ATOM    318  CB  VAL A  58      47.215 -36.223 -11.260  1.00 25.69           C
ATOM    319  CG1 VAL A  58      46.745 -36.248 -12.729  1.00 24.08           C
ATOM    320  CG2 VAL A  58      46.459 -37.294 -10.465  1.00 24.63           C
ATOM    321  N   VAL A  59      50.051 -35.571 -12.969  1.00 27.77           N
ATOM    322  CA  VAL A  59      50.540 -34.553 -13.912  1.00 28.06           C
ATOM    323  C   VAL A  59      49.593 -34.540 -15.107  1.00 28.92           C
ATOM    324  O   VAL A  59      49.380 -35.558 -15.743  1.00 28.02           O
ATOM    325  CB  VAL A  59      51.962 -34.866 -14.420  1.00 28.73           C
ATOM    326  CG1 VAL A  59      52.380 -33.818 -15.507  1.00 27.80           C
ATOM    327  CG2 VAL A  59      52.956 -34.886 -13.233  1.00 28.94           C
ATOM    328  N   ALA A  60      49.017 -33.378 -15.402  1.00 29.19           N
ATOM    329  CA  ALA A  60      48.095 -33.287 -16.466  1.00 29.87           C
ATOM    330  C   ALA A  60      48.473 -32.087 -17.302  1.00 30.50           C
ATOM    331  O   ALA A  60      48.128 -30.958 -16.977  1.00 31.05           O
ATOM    332  CB  ALA A  60      46.654 -33.172 -15.948  1.00 28.87           C
ATOM    333  N   ASN A  61      49.121 -32.354 -18.421  1.00 30.97           N
ATOM    334  CA  ASN A  61      49.475 -31.299 -19.367  1.00 33.09           C
ATOM    335  C   ASN A  61      48.263 -30.520 -19.898  1.00 32.36           C
ATOM    336  O   ASN A  61      47.386 -31.125 -20.507  1.00 33.00           O
ATOM    337  CB  ASN A  61      50.203 -31.920 -20.566  1.00 34.22           C
ATOM    338  CG  ASN A  61      51.025 -30.922 -21.302  1.00 36.83           C
ATOM    339  OD1 ASN A  61      50.656 -29.737 -21.390  1.00 39.49           O
ATOM    340  ND2 ASN A  61      52.154 -31.374 -21.845  1.00 38.27           N
ATOM    341  N   PRO A  62      48.207 -29.185 -19.683  1.00 31.86           N
ATOM    342  CA  PRO A  62      47.097 -28.403 -20.228  1.00 32.45           C
ATOM    343  C   PRO A  62      47.120 -28.348 -21.772  1.00 32.71           C
ATOM    344  O   PRO A  62      46.102 -27.961 -22.406  1.00 32.58           O
ATOM    345  CB  PRO A  62      47.323 -26.987 -19.658  1.00 33.19           C
ATOM    346  CG  PRO A  62      48.475 -27.023 -18.839  1.00 30.43           C
ATOM    347  CD  PRO A  62      49.173 -28.336 -18.979  1.00 32.44           C
ATOM    348  N   GLY A  63      48.265 -28.742 -22.345  1.00 32.85           N
ATOM    349  CA  GLY A  63      48.450 -28.882 -23.782  1.00 34.03           C
ATOM    350  C   GLY A  63      47.799 -30.132 -24.342  1.00 35.50           C
ATOM    351  O   GLY A  63      47.670 -30.279 -25.575  1.00 34.99           O
ATOM    352  N   GLN A  64      47.339 -31.014 -23.439  1.00 36.46           N
ATOM    353  CA  GLN A  64      46.517 -32.169 -23.799  1.00 37.58           C
ATOM    354  C   GLN A  64      47.263 -33.067 -24.792  1.00 39.29           C
ATOM    355  O   GLN A  64      46.873 -33.255 -25.972  1.00 38.96           O
ATOM    356  CB  GLN A  64      45.137 -31.735 -24.337  1.00 37.31           C
ATOM    357  CG  GLN A  64      44.229 -31.078 -23.290  1.00 36.51           C
ATOM    358  CD  GLN A  64      42.999 -30.483 -23.930  1.00 37.50           C
ATOM    359  OE1 GLN A  64      43.077 -29.848 -25.004  1.00 35.79           O
ATOM    360  NE2 GLN A  64      41.844 -30.687 -23.292  1.00 34.99           N
ATOM    361  N   THR A  65      48.368 -33.593 -24.293  1.00 41.20           N
ATOM    362  CA  THR A  65      49.271 -34.413 -25.077  1.00 44.13           C
ATOM    363  C   THR A  65      48.860 -35.880 -25.026  1.00 45.67           C
ATOM    364  O   THR A  65      48.990 -36.581 -26.003  1.00 46.70           O
ATOM    365  CB  THR A  65      50.687 -34.230 -24.564  1.00 43.91           C
ATOM    366  OG1 THR A  65      50.691 -34.439 -23.139  1.00 46.98           O
ATOM    367  CG2 THR A  65      51.123 -32.818 -24.821  1.00 43.20           C
```

```
ATOM    368  N   PHE A  66      48.357 -36.341 -23.877  1.00 48.29           N
ATOM    369  CA  PHE A  66      47.853 -37.727 -23.740  1.00 49.48           C
ATOM    370  C   PHE A  66      46.457 -37.697 -23.108  1.00 49.13           C
ATOM    371  O   PHE A  66      46.114 -36.737 -22.400  1.00 49.02           O
ATOM    372  CB  PHE A  66      48.793 -38.563 -22.849  1.00 50.87           C
ATOM    373  CG  PHE A  66      50.254 -38.427 -23.189  1.00 53.77           C
ATOM    374  CD1 PHE A  66      51.097 -37.625 -22.396  1.00 56.93           C
ATOM    375  CD2 PHE A  66      50.803 -39.097 -24.306  1.00 56.32           C
ATOM    376  CE1 PHE A  66      52.488 -37.491 -22.717  1.00 58.29           C
ATOM    377  CE2 PHE A  66      52.179 -38.972 -24.634  1.00 56.82           C
ATOM    378  CZ  PHE A  66      53.017 -38.167 -23.844  1.00 55.44           C
ATOM    379  N   ARG A  67      45.666 -38.743 -23.360  1.00 48.13           N
ATOM    380  CA  ARG A  67      44.370 -38.924 -22.682  1.00 47.62           C
ATOM    381  C   ARG A  67      44.409 -39.937 -21.515  1.00 46.01           C
ATOM    382  O   ARG A  67      44.266 -41.136 -21.754  1.00 47.51           O
ATOM    383  CB  ARG A  67      43.311 -39.355 -23.684  1.00 47.50           C
ATOM    384  CG  ARG A  67      42.990 -38.258 -24.689  1.00 50.96           C
ATOM    385  CD  ARG A  67      41.622 -38.491 -25.283  1.00 54.89           C
ATOM    386  NE  ARG A  67      41.601 -39.800 -25.902  1.00 54.80           N
ATOM    387  CZ  ARG A  67      41.641 -39.992 -27.209  1.00 56.94           C
ATOM    388  NH1 ARG A  67      41.636 -38.939 -28.030  1.00 55.00           N
ATOM    389  NH2 ARG A  67      41.647 -41.241 -27.686  1.00 58.26           N
ATOM    390  N   GLY A  68      44.538 -39.461 -20.279  1.00 42.52           N
ATOM    391  CA  GLY A  68      44.754 -40.343 -19.118  1.00 39.50           C
ATOM    392  C   GLY A  68      43.560 -40.592 -18.198  1.00 37.48           C
ATOM    393  O   GLY A  68      42.483 -40.011 -18.394  1.00 36.98           O
ATOM    394  N   PRO A  69      43.738 -41.472 -17.183  1.00 35.82           N
ATOM    395  CA  PRO A  69      42.645 -41.882 -16.297  1.00 34.74           C
ATOM    396  C   PRO A  69      42.260 -40.890 -15.177  1.00 33.56           C
ATOM    397  O   PRO A  69      41.220 -41.057 -14.515  1.00 32.11           O
ATOM    398  CB  PRO A  69      43.180 -43.189 -15.678  1.00 35.33           C
ATOM    399  CG  PRO A  69      44.692 -42.972 -15.604  1.00 35.76           C
ATOM    400  CD  PRO A  69      45.015 -42.148 -16.848  1.00 35.53           C
ATOM    401  N   ASP A  70      43.077 -39.866 -14.988  1.00 31.94           N
ATOM    402  CA  ASP A  70      42.974 -39.019 -13.811  1.00 31.30           C
ATOM    403  C   ASP A  70      42.395 -37.627 -14.070  1.00 30.59           C
ATOM    404  O   ASP A  70      41.877 -37.000 -13.136  1.00 30.41           O
ATOM    405  CB  ASP A  70      44.356 -38.869 -13.173  1.00 31.88           C
ATOM    406  CG  ASP A  70      44.848 -40.147 -12.539  1.00 33.14           C
ATOM    407  OD1 ASP A  70      44.074 -40.785 -11.784  1.00 31.94           O
ATOM    408  OD2 ASP A  70      46.030 -40.490 -12.777  1.00 35.83           O
ATOM    409  N   MET A  71      42.510 -37.136 -15.311  1.00 29.37           N
ATOM    410  CA  MET A  71      41.975 -35.822 -15.652  1.00 29.28           C
ATOM    411  C   MET A  71      41.656 -35.691 -17.138  1.00 29.12           C
ATOM    412  O   MET A  71      42.490 -36.022 -17.996  1.00 28.82           O
ATOM    413  CB  MET A  71      42.893 -34.664 -15.165  1.00 28.63           C
ATOM    414  CG  MET A  71      42.294 -33.245 -15.343  1.00 28.37           C
ATOM    415  SD  MET A  71      43.403 -31.971 -14.651  1.00 32.30           S
ATOM    416  CE  MET A  71      42.380 -30.477 -14.776  1.00 27.03           C
ATOM    417  N   THR A  72      40.437 -35.215 -17.425  1.00 28.87           N
```

```
ATOM    418  CA  THR A  72      40.065 -34.662 -18.734  1.00 28.93           C
ATOM    419  C   THR A  72      39.580 -33.226 -18.533  1.00 29.60           C
ATOM    420  O   THR A  72      38.789 -32.933 -17.618  1.00 29.96           O
ATOM    421  CB  THR A  72      38.892 -35.498 -19.393  1.00 29.09           C
ATOM    422  OG1 THR A  72      39.292 -36.865 -19.449  1.00 30.70           O
ATOM    423  CG2 THR A  72      38.604 -35.078 -20.848  1.00 28.41           C
ATOM    424  N   ILE A  73      39.981 -32.352 -19.438  1.00 29.46           N
ATOM    425  CA  ILE A  73      39.570 -30.964 -19.430  1.00 29.36           C
ATOM    426  C   ILE A  73      38.834 -30.722 -20.758  1.00 27.78           C
ATOM    427  O   ILE A  73      39.309 -31.105 -21.785  1.00 27.09           O
ATOM    428  CB  ILE A  73      40.848 -30.047 -19.444  1.00 28.57           C
ATOM    429  CG1 ILE A  73      41.682 -30.222 -18.165  1.00 30.84           C
ATOM    430  CG2 ILE A  73      40.519 -28.615 -19.674  1.00 31.22           C
ATOM    431  CD1 ILE A  73      43.213 -29.722 -18.401  1.00 31.26           C
ATOM    432  N   PHE A  74      37.706 -30.033 -20.717  1.00 27.21           N
ATOM    433  CA  PHE A  74      37.069 -29.569 -21.910  1.00 27.08           C
ATOM    434  C   PHE A  74      37.113 -28.067 -21.904  1.00 27.43           C
ATOM    435  O   PHE A  74      36.392 -27.403 -21.118  1.00 27.17           O
ATOM    436  CB  PHE A  74      35.616 -30.045 -21.950  1.00 27.07           C
ATOM    437  CG  PHE A  74      35.470 -31.561 -22.040  1.00 27.92           C
ATOM    438  CD1 PHE A  74      35.262 -32.325 -20.885  1.00 25.79           C
ATOM    439  CD2 PHE A  74      35.521 -32.213 -23.294  1.00 25.36           C
ATOM    440  CE1 PHE A  74      35.114 -33.732 -20.979  1.00 28.76           C
ATOM    441  CE2 PHE A  74      35.378 -33.620 -23.406  1.00 27.15           C
ATOM    442  CZ  PHE A  74      35.169 -34.386 -22.247  1.00 25.15           C
ATOM    443  N   TYR A  75      37.968 -27.532 -22.771  1.00 26.94           N
ATOM    444  CA  TYR A  75      38.019 -26.108 -23.059  1.00 27.83           C
ATOM    445  C   TYR A  75      36.786 -25.767 -23.864  1.00 27.69           C
ATOM    446  O   TYR A  75      36.109 -26.648 -24.373  1.00 26.39           O
ATOM    447  CB  TYR A  75      39.284 -25.749 -23.839  1.00 29.51           C
ATOM    448  CG  TYR A  75      40.555 -26.003 -23.070  1.00 28.91           C
ATOM    449  CD1 TYR A  75      41.435 -27.003 -23.454  1.00 28.68           C
ATOM    450  CD2 TYR A  75      40.884 -25.214 -21.961  1.00 33.26           C
ATOM    451  CE1 TYR A  75      42.638 -27.246 -22.726  1.00 32.34           C
ATOM    452  CE2 TYR A  75      42.069 -25.444 -21.210  1.00 32.78           C
ATOM    453  CZ  TYR A  75      42.936 -26.451 -21.613  1.00 33.06           C
ATOM    454  OH  TYR A  75      44.083 -26.648 -20.898  1.00 33.56           O
ATOM    455  N   SER A  76      36.431 -24.498 -23.919  1.00 29.51           N
ATOM    456  CA  SER A  76      35.069 -24.167 -24.352  1.00 31.03           C
ATOM    457  C   SER A  76      34.808 -24.531 -25.835  1.00 33.21           C
ATOM    458  O   SER A  76      33.633 -24.627 -26.238  1.00 33.85           O
ATOM    459  CB  SER A  76      34.778 -22.689 -24.129  1.00 31.29           C
ATOM    460  OG  SER A  76      35.750 -21.860 -24.766  1.00 33.87           O
ATOM    461  N   SER A  77      35.878 -24.751 -26.625  1.00 33.22           N
ATOM    462  CA  SER A  77      35.737 -25.087 -28.044  1.00 34.69           C
ATOM    463  C   SER A  77      35.740 -26.574 -28.256  1.00 35.33           C
ATOM    464  O   SER A  77      35.649 -27.016 -29.399  1.00 35.59           O
ATOM    465  CB  SER A  77      36.870 -24.496 -28.867  1.00 34.64           C
ATOM    466  OG  SER A  77      38.077 -25.185 -28.551  1.00 39.62           O
ATOM    467  N   GLN A  78      35.821 -27.345 -27.162  1.00 34.53           N
```

```
ATOM    468  CA  GLN A  78      35.903 -28.803 -27.238  1.00 33.44           C
ATOM    469  C   GLN A  78      34.654 -29.599 -26.828  1.00 33.60           C
ATOM    470  O   GLN A  78      34.685 -30.814 -26.956  1.00 34.99           O
ATOM    471  CB  GLN A  78      37.093 -29.313 -26.385  1.00 32.96           C
ATOM    472  CG  GLN A  78      38.431 -28.668 -26.764  1.00 32.10           C
ATOM    473  CD  GLN A  78      39.601 -29.112 -25.916  1.00 32.07           C
ATOM    474  OE1 GLN A  78      39.493 -29.396 -24.709  1.00 32.84           O
ATOM    475  NE2 GLN A  78      40.744 -29.144 -26.533  1.00 30.16           N
ATOM    476  N   LEU A  79      33.609 -28.982 -26.255  1.00 32.22           N
ATOM    477  CA  LEU A  79      32.462 -29.763 -25.762  1.00 30.42           C
ATOM    478  C   LEU A  79      31.148 -29.201 -26.321  1.00 30.90           C
ATOM    479  O   LEU A  79      30.661 -28.137 -25.891  1.00 30.01           O
ATOM    480  CB  LEU A  79      32.440 -29.858 -24.226  1.00 30.59           C
ATOM    481  CG  LEU A  79      31.399 -30.800 -23.607  1.00 28.93           C
ATOM    482  CD1 LEU A  79      31.574 -32.239 -24.048  1.00 24.18           C
ATOM    483  CD2 LEU A  79      31.448 -30.733 -22.117  1.00 28.40           C
ATOM    484  N   GLY A  80      30.598 -29.926 -27.301  1.00 30.14           N
ATOM    485  CA  GLY A  80      29.491 -29.446 -28.093  1.00 29.96           C
ATOM    486  C   GLY A  80      29.753 -28.134 -28.800  1.00 30.42           C
ATOM    487  O   GLY A  80      30.828 -27.933 -29.395  1.00 30.61           O
ATOM    488  N   THR A  81      28.784 -27.231 -28.696  1.00 29.38           N
ATOM    489  CA  THR A  81      28.797 -25.987 -29.443  1.00 30.14           C
ATOM    490  C   THR A  81      28.519 -24.821 -28.533  1.00 29.97           C
ATOM    491  O   THR A  81      27.422 -24.272 -28.527  1.00 30.23           O
ATOM    492  CB  THR A  81      27.715 -25.989 -30.585  1.00 29.43           C
ATOM    493  OG1 THR A  81      26.408 -26.161 -30.019  1.00 29.17           O
ATOM    494  CG2 THR A  81      27.979 -27.107 -31.625  1.00 28.96           C
ATOM    495  N   TYR A  82      29.530 -24.416 -27.796  1.00 30.61           N
ATOM    496  CA  TYR A  82      29.401 -23.387 -26.783  1.00 30.26           C
ATOM    497  C   TYR A  82      29.261 -21.991 -27.370  1.00 30.62           C
ATOM    498  O   TYR A  82      30.138 -21.528 -28.085  1.00 30.93           O
ATOM    499  CB  TYR A  82      30.632 -23.420 -25.904  1.00 30.37           C
ATOM    500  CG  TYR A  82      30.614 -22.434 -24.759  1.00 29.75           C
ATOM    501  CD1 TYR A  82      29.686 -22.558 -23.737  1.00 27.19           C
ATOM    502  CD2 TYR A  82      31.546 -21.386 -24.694  1.00 30.97           C
ATOM    503  CE1 TYR A  82      29.682 -21.672 -22.672  1.00 26.62           C
ATOM    504  CE2 TYR A  82      31.547 -20.478 -23.611  1.00 30.57           C
ATOM    505  CZ  TYR A  82      30.606 -20.653 -22.606  1.00 28.46           C
ATOM    506  OH  TYR A  82      30.580 -19.816 -21.521  1.00 28.83           O
ATOM    507  N   PRO A  83      28.158 -21.301 -27.038  1.00 31.92           N
ATOM    508  CA  PRO A  83      27.883 -19.982 -27.602  1.00 32.08           C
ATOM    509  C   PRO A  83      28.524 -18.870 -26.801  1.00 33.81           C
ATOM    510  O   PRO A  83      28.484 -18.895 -25.561  1.00 33.82           O
ATOM    511  CB  PRO A  83      26.348 -19.893 -27.527  1.00 32.04           C
ATOM    512  CG  PRO A  83      25.922 -20.907 -26.486  1.00 31.71           C
ATOM    513  CD  PRO A  83      27.090 -21.755 -26.118  1.00 30.80           C
ATOM    514  N   TYR A  84      29.123 -17.915 -27.505  1.00 35.47           N
ATOM    515  CA  TYR A  84      29.783 -16.778 -26.882  1.00 37.55           C
ATOM    516  C   TYR A  84      29.977 -15.677 -27.899  1.00 37.99           C
ATOM    517  O   TYR A  84      29.770 -15.856 -29.104  1.00 38.69           O
```

```
ATOM    518  CB  TYR A  84      31.138 -17.170 -26.230  1.00 38.62           C
ATOM    519  CG  TYR A  84      32.192 -17.581 -27.224  1.00 39.82           C
ATOM    520  CD1 TYR A  84      33.133 -16.659 -27.714  1.00 39.82           C
ATOM    521  CD2 TYR A  84      32.241 -18.883 -27.690  1.00 41.26           C
ATOM    522  CE1 TYR A  84      34.090 -17.036 -28.649  1.00 40.40           C
ATOM    523  CE2 TYR A  84      33.195 -19.276 -28.614  1.00 43.23           C
ATOM    524  CZ  TYR A  84      34.115 -18.357 -29.097  1.00 42.49           C
ATOM    525  OH  TYR A  84      35.066 -18.799 -30.012  1.00 44.65           O
ATOM    526  N   TYR A  85      30.314 -14.501 -27.406  1.00 38.93           N
ATOM    527  CA  TYR A  85      30.687 -13.403 -28.287  1.00 39.40           C
ATOM    528  C   TYR A  85      32.204 -13.227 -28.264  1.00 40.62           C
ATOM    529  O   TYR A  85      32.804 -13.243 -27.186  1.00 39.64           O
ATOM    530  CB  TYR A  85      29.998 -12.117 -27.852  1.00 39.35           C
ATOM    531  CG  TYR A  85      28.510 -12.151 -28.073  1.00 38.65           C
ATOM    532  CD1 TYR A  85      27.643 -12.217 -27.004  1.00 35.96           C
ATOM    533  CD2 TYR A  85      27.983 -12.145 -29.360  1.00 39.49           C
ATOM    534  CE1 TYR A  85      26.299 -12.259 -27.193  1.00 37.98           C
ATOM    535  CE2 TYR A  85      26.614 -12.206 -29.575  1.00 38.79           C
ATOM    536  CZ  TYR A  85      25.782 -12.260 -28.480  1.00 39.13           C
ATOM    537  OH  TYR A  85      24.425 -12.323 -28.656  1.00 40.48           O
ATOM    538  N   THR A  86      32.808 -13.077 -29.454  1.00 42.58           N
ATOM    539  CA  THR A  86      34.229 -12.698 -29.587  1.00 44.76           C
ATOM    540  C   THR A  86      34.452 -11.342 -28.903  1.00 46.26           C
ATOM    541  O   THR A  86      33.468 -10.651 -28.577  1.00 46.75           O
ATOM    542  CB  THR A  86      34.652 -12.589 -31.067  1.00 44.78           C
ATOM    543  OG1 THR A  86      34.131 -11.384 -31.628  1.00 46.03           O
ATOM    544  CG2 THR A  86      34.128 -13.773 -31.891  1.00 44.60           C
ATOM    545  N   PRO A  87      35.728 -10.949 -28.639  1.00 47.86           N
ATOM    546  CA  PRO A  87      35.895  -9.670 -27.929  1.00 48.48           C
ATOM    547  C   PRO A  87      35.515  -8.403 -28.722  1.00 48.71           C
ATOM    548  O   PRO A  87      35.431  -7.333 -28.132  1.00 49.40           O
ATOM    549  CB  PRO A  87      37.381  -9.676 -27.548  1.00 49.08           C
ATOM    550  CG  PRO A  87      37.785 -11.135 -27.635  1.00 48.94           C
ATOM    551  CD  PRO A  87      37.040 -11.584 -28.854  1.00 48.01           C
ATOM    552  N   THR A  88      35.269  -8.534 -30.021  1.00 48.51           N
ATOM    553  CA  THR A  88      34.707  -7.455 -30.829  1.00 48.60           C
ATOM    554  C   THR A  88      33.185  -7.614 -31.048  1.00 47.99           C
ATOM    555  O   THR A  88      32.590  -6.929 -31.907  1.00 47.48           O
ATOM    556  CB  THR A  88      35.401  -7.373 -32.210  1.00 49.18           C
ATOM    557  OG1 THR A  88      34.940  -8.444 -33.047  1.00 50.56           O
ATOM    558  CG2 THR A  88      36.924  -7.422 -32.067  1.00 49.79           C
ATOM    559  N   GLY A  89      32.572  -8.554 -30.317  1.00 46.62           N
ATOM    560  CA  GLY A  89      31.116  -8.680 -30.262  1.00 45.44           C
ATOM    561  C   GLY A  89      30.422  -9.521 -31.308  1.00 45.10           C
ATOM    562  O   GLY A  89      29.201  -9.466 -31.431  1.00 44.74           O
ATOM    563  N   GLU A  90      31.180 -10.307 -32.055  1.00 45.72           N
ATOM    564  CA  GLU A  90      30.597 -11.221 -33.054  1.00 47.53           C
ATOM    565  C   GLU A  90      30.174 -12.580 -32.428  1.00 47.00           C
ATOM    566  O   GLU A  90      30.945 -13.143 -31.624  1.00 47.08           O
ATOM    567  CB  GLU A  90      31.610 -11.460 -34.178  1.00 48.21           C
```

```
ATOM    568  CG  GLU A  90      30.975 -11.712 -35.530  1.00 53.21           C
ATOM    569  CD  GLU A  90      30.485 -10.419 -36.226  1.00 58.85           C
ATOM    570  OE1 GLU A  90      29.773 -10.532 -37.253  1.00 60.00           O
ATOM    571  OE2 GLU A  90      30.807  -9.301 -35.748  1.00 60.33           O
ATOM    572  N   PRO A  91      28.968 -13.105 -32.790  1.00 45.92           N
ATOM    573  CA  PRO A  91      28.449 -14.313 -32.163  1.00 45.02           C
ATOM    574  C   PRO A  91      29.133 -15.547 -32.695  1.00 44.18           C
ATOM    575  O   PRO A  91      29.406 -15.627 -33.896  1.00 45.34           O
ATOM    576  CB  PRO A  91      26.970 -14.333 -32.582  1.00 44.71           C
ATOM    577  CG  PRO A  91      26.716 -13.053 -33.234  1.00 44.60           C
ATOM    578  CD  PRO A  91      28.008 -12.604 -33.785  1.00 46.20           C
ATOM    579  N   VAL A  92      29.419 -16.491 -31.807  1.00 42.27           N
ATOM    580  CA  VAL A  92      29.838 -17.824 -32.213  1.00 40.76           C
ATOM    581  C   VAL A  92      28.736 -18.779 -31.729  1.00 40.56           C
ATOM    582  O   VAL A  92      28.278 -18.667 -30.584  1.00 40.49           O
ATOM    583  CB  VAL A  92      31.258 -18.176 -31.670  1.00 40.57           C
ATOM    584  CG1 VAL A  92      31.712 -19.491 -32.207  1.00 38.35           C
ATOM    585  CG2 VAL A  92      32.265 -17.080 -32.082  1.00 40.37           C
ATOM    586  N   PHE A  93      28.277 -19.672 -32.609  1.00 39.21           N
ATOM    587  CA  PHE A  93      27.122 -20.527 -32.322  1.00 38.56           C
ATOM    588  C   PHE A  93      25.919 -19.785 -31.741  1.00 38.90           C
ATOM    589  O   PHE A  93      25.162 -20.359 -30.957  1.00 39.84           O
ATOM    590  CB  PHE A  93      27.487 -21.690 -31.379  1.00 38.32           C
ATOM    591  CG  PHE A  93      28.512 -22.623 -31.934  1.00 36.61           C
ATOM    592  CD1 PHE A  93      29.701 -22.820 -31.275  1.00 35.87           C
ATOM    593  CD2 PHE A  93      28.275 -23.316 -33.110  1.00 38.35           C
ATOM    594  CE1 PHE A  93      30.658 -23.682 -31.786  1.00 37.20           C
ATOM    595  CE2 PHE A  93      29.215 -24.180 -33.631  1.00 39.87           C
ATOM    596  CZ  PHE A  93      30.412 -24.372 -32.971  1.00 37.93           C
ATOM    597  N   GLY A  94      25.743 -18.519 -32.109  1.00 38.23           N
ATOM    598  CA  GLY A  94      24.573 -17.754 -31.725  1.00 36.19           C
ATOM    599  C   GLY A  94      24.792 -16.788 -30.589  1.00 35.77           C
ATOM    600  O   GLY A  94      23.883 -16.053 -30.235  1.00 36.28           O
ATOM    601  N   GLY A  95      25.978 -16.803 -29.996  1.00 34.98           N
ATOM    602  CA  GLY A  95      26.348 -15.874 -28.911  1.00 35.11           C
ATOM    603  C   GLY A  95      25.803 -16.174 -27.515  1.00 35.21           C
ATOM    604  O   GLY A  95      26.526 -16.113 -26.509  1.00 34.66           O
ATOM    605  N   LEU A  96      24.522 -16.536 -27.482  1.00 35.38           N
ATOM    606  CA  LEU A  96      23.751 -16.663 -26.260  1.00 35.01           C
ATOM    607  C   LEU A  96      23.090 -18.022 -26.269  1.00 35.02           C
ATOM    608  O   LEU A  96      22.681 -18.509 -27.338  1.00 35.23           O
ATOM    609  CB  LEU A  96      22.663 -15.595 -26.220  1.00 35.11           C
ATOM    610  CG  LEU A  96      22.977 -14.121 -26.003  1.00 34.89           C
ATOM    611  CD1 LEU A  96      21.809 -13.345 -26.524  1.00 34.95           C
ATOM    612  CD2 LEU A  96      23.196 -13.837 -24.542  1.00 34.37           C
ATOM    613  N   PRO A  97      22.974 -18.653 -25.089  1.00 35.27           N
ATOM    614  CA  PRO A  97      22.335 -19.968 -25.100  1.00 35.37           C
ATOM    615  C   PRO A  97      20.847 -19.949 -25.616  1.00 35.96           C
ATOM    616  O   PRO A  97      20.420 -20.916 -26.231  1.00 35.95           O
ATOM    617  CB  PRO A  97      22.431 -20.422 -23.642  1.00 34.49           C
```

```
ATOM    618  CG  PRO A  97      22.597 -19.173 -22.868  1.00 36.13           C
ATOM    619  CD  PRO A  97      23.377 -18.234 -23.734  1.00 34.25           C
ATOM    620  N   GLN A  98      20.082 -18.877 -25.366  1.00 36.39           N
ATOM    621  CA  GLN A  98      18.700 -18.780 -25.889  1.00 36.68           C
ATOM    622  C   GLN A  98      18.669 -18.511 -27.400  1.00 37.63           C
ATOM    623  O   GLN A  98      17.592 -18.561 -28.005  1.00 38.22           O
ATOM    624  CB  GLN A  98      17.846 -17.731 -25.148  1.00 36.02           C
ATOM    625  CG  GLN A  98      18.300 -16.272 -25.293  1.00 34.43           C
ATOM    626  CD  GLN A  98      19.341 -15.883 -24.257  1.00 34.81           C
ATOM    627  OE1 GLN A  98      20.253 -16.657 -23.966  1.00 36.53           O
ATOM    628  NE2 GLN A  98      19.212 -14.697 -23.698  1.00 32.20           N
ATOM    629  N   ASN A  99      19.832 -18.229 -28.001  1.00 37.71           N
ATOM    630  CA  ASN A  99      19.927 -18.002 -29.453  1.00 37.77           C
ATOM    631  C   ASN A  99      20.707 -19.106 -30.157  1.00 37.26           C
ATOM    632  O   ASN A  99      21.188 -18.931 -31.287  1.00 38.61           O
ATOM    633  CB  ASN A  99      20.601 -16.652 -29.715  1.00 38.25           C
ATOM    634  CG  ASN A  99      20.410 -16.142 -31.152  1.00 41.18           C
ATOM    635  OD1 ASN A  99      19.451 -16.500 -31.839  1.00 41.06           O
ATOM    636  ND2 ASN A  99      21.325 -15.268 -31.583  1.00 46.79           N
ATOM    637  N   ALA A 100      20.886 -20.226 -29.474  1.00 36.38           N
ATOM    638  CA  ALA A 100      21.611 -21.358 -30.029  1.00 35.40           C
ATOM    639  C   ALA A 100      20.713 -22.577 -29.867  1.00 34.65           C
ATOM    640  O   ALA A 100      19.770 -22.528 -29.086  1.00 34.67           O
ATOM    641  CB  ALA A 100      22.934 -21.564 -29.298  1.00 34.80           C
ATOM    642  N   SER A 101      21.021 -23.646 -30.603  1.00 33.43           N
ATOM    643  CA  SER A 101      20.306 -24.917 -30.568  1.00 33.36           C
ATOM    644  C   SER A 101      20.908 -25.890 -29.525  1.00 32.31           C
ATOM    645  O   SER A 101      22.033 -26.373 -29.677  1.00 31.47           O
ATOM    646  CB  SER A 101      20.363 -25.558 -31.973  1.00 33.19           C
ATOM    647  OG  SER A 101      20.026 -26.935 -31.916  1.00 35.94           O
ATOM    648  N   LEU A 102      20.143 -26.184 -28.490  1.00 32.35           N
ATOM    649  CA  LEU A 102      20.576 -27.075 -27.421  1.00 32.40           C
ATOM    650  C   LEU A 102      20.674 -28.496 -27.960  1.00 32.16           C
ATOM    651  O   LEU A 102      21.559 -29.274 -27.597  1.00 33.32           O
ATOM    652  CB  LEU A 102      19.550 -27.052 -26.288  1.00 32.36           C
ATOM    653  CG  LEU A 102      20.013 -27.224 -24.818  1.00 35.03           C
ATOM    654  CD1 LEU A 102      18.971 -27.960 -24.019  1.00 33.95           C
ATOM    655  CD2 LEU A 102      21.461 -27.767 -24.569  1.00 34.62           C
ATOM    656  N   ILE A 103      19.743 -28.814 -28.837  1.00 30.29           N
ATOM    657  CA  ILE A 103      19.638 -30.114 -29.465  1.00 30.17           C
ATOM    658  C   ILE A 103      20.916 -30.405 -30.278  1.00 28.88           C
ATOM    659  O   ILE A 103      21.507 -31.480 -30.159  1.00 27.65           O
ATOM    660  CB  ILE A 103      18.286 -30.137 -30.287  1.00 30.43           C
ATOM    661  CG1 ILE A 103      18.043 -31.426 -31.044  1.00 31.63           C
ATOM    662  CG2 ILE A 103      18.211 -28.915 -31.261  1.00 33.27           C
ATOM    663  CD1 ILE A 103      17.945 -32.550 -30.193  1.00 33.93           C
ATOM    664  N   ALA A 104      21.387 -29.420 -31.038  1.00 28.32           N
ATOM    665  CA  ALA A 104      22.628 -29.584 -31.803  1.00 28.21           C
ATOM    666  C   ALA A 104      23.834 -29.631 -30.869  1.00 28.13           C
ATOM    667  O   ALA A 104      24.782 -30.381 -31.100  1.00 28.35           O
```

```
ATOM    668  CB  ALA A 104      22.777 -28.484 -32.863  1.00 27.50           C
ATOM    669  N   HIS A 105      23.785 -28.846 -29.796  1.00 28.49           N
ATOM    670  CA  HIS A 105      24.841 -28.869 -28.782  1.00 28.49           C
ATOM    671  C   HIS A 105      24.932 -30.240 -28.139  1.00 28.20           C
ATOM    672  O   HIS A 105      26.026 -30.779 -27.999  1.00 28.06           O
ATOM    673  CB  HIS A 105      24.602 -27.862 -27.665  1.00 28.33           C
ATOM    674  CG  HIS A 105      25.537 -28.057 -26.500  1.00 30.42           C
ATOM    675  ND1 HIS A 105      26.882 -27.737 -26.556  1.00 25.97           N
ATOM    676  CD2 HIS A 105      25.321 -28.560 -25.257  1.00 30.57           C
ATOM    677  CE1 HIS A 105      27.450 -28.035 -25.397  1.00 29.33           C
ATOM    678  NE2 HIS A 105      26.524 -28.530 -24.590  1.00 28.99           N
ATOM    679  N   LEU A 106      23.785 -30.805 -27.761  1.00 27.90           N
ATOM    680  CA  LEU A 106      23.787 -32.105 -27.088  1.00 28.49           C
ATOM    681  C   LEU A 106      24.251 -33.269 -27.978  1.00 29.04           C
ATOM    682  O   LEU A 106      24.913 -34.212 -27.481  1.00 29.09           O
ATOM    683  CB  LEU A 106      22.440 -32.378 -26.444  1.00 29.29           C
ATOM    684  CG  LEU A 106      21.977 -31.481 -25.268  1.00 29.85           C
ATOM    685  CD1 LEU A 106      20.534 -31.829 -24.840  1.00 27.60           C
ATOM    686  CD2 LEU A 106      22.932 -31.475 -24.086  1.00 25.31           C
ATOM    687  N   ALA A 107      23.954 -33.173 -29.284  1.00 29.25           N
ATOM    688  CA  ALA A 107      24.381 -34.168 -30.253  1.00 30.12           C
ATOM    689  C   ALA A 107      25.891 -34.213 -30.354  1.00 30.34           C
ATOM    690  O   ALA A 107      26.475 -35.280 -30.316  1.00 30.43           O
ATOM    691  CB  ALA A 107      23.749 -33.902 -31.670  1.00 29.77           C
ATOM    692  N   ARG A 108      26.500 -33.050 -30.524  1.00 30.83           N
ATOM    693  CA  ARG A 108      27.951 -32.914 -30.585  1.00 32.17           C
ATOM    694  C   ARG A 108      28.618 -33.245 -29.234  1.00 31.96           C
ATOM    695  O   ARG A 108      29.611 -33.974 -29.196  1.00 32.81           O
ATOM    696  CB  ARG A 108      28.324 -31.511 -31.084  1.00 32.41           C
ATOM    697  CG  ARG A 108      29.821 -31.303 -31.412  1.00 39.50           C
ATOM    698  CD  ARG A 108      30.089 -31.330 -32.920  1.00 50.11           C
ATOM    699  NE  ARG A 108      30.950 -30.205 -33.342  1.00 57.97           N
ATOM    700  CZ  ARG A 108      30.546 -29.137 -34.051  1.00 60.28           C
ATOM    701  NH1 ARG A 108      29.284 -29.016 -34.461  1.00 61.55           N
ATOM    702  NH2 ARG A 108      31.410 -28.174 -34.359  1.00 61.60           N
ATOM    703  N   THR A 109      28.060 -32.749 -28.129  1.00 31.35           N
ATOM    704  CA  THR A 109      28.517 -33.116 -26.779  1.00 30.52           C
ATOM    705  C   THR A 109      28.615 -34.638 -26.593  1.00 31.50           C
ATOM    706  O   THR A 109      29.626 -35.135 -26.108  1.00 31.16           O
ATOM    707  CB  THR A 109      27.564 -32.532 -25.717  1.00 29.85           C
ATOM    708  OG1 THR A 109      27.560 -31.102 -25.833  1.00 28.96           O
ATOM    709  CG2 THR A 109      27.935 -32.970 -24.295  1.00 26.94           C
ATOM    710  N   PHE A 110      27.572 -35.371 -26.990  1.00 32.46           N
ATOM    711  CA  PHE A 110      27.535 -36.842 -26.847  1.00 32.52           C
ATOM    712  C   PHE A 110      28.743 -37.473 -27.520  1.00 33.20           C
ATOM    713  O   PHE A 110      29.409 -38.348 -26.941  1.00 32.50           O
ATOM    714  CB  PHE A 110      26.245 -37.388 -27.481  1.00 32.52           C
ATOM    715  CG  PHE A 110      25.955 -38.852 -27.187  1.00 31.77           C
ATOM    716  CD1 PHE A 110      24.952 -39.205 -26.280  1.00 33.65           C
ATOM    717  CD2 PHE A 110      26.610 -39.867 -27.884  1.00 31.84           C
```

```
ATOM    718  CE1 PHE A 110      24.619 -40.566 -26.043  1.00 31.51           C
ATOM    719  CE2 PHE A 110      26.319 -41.217 -27.660  1.00 30.82           C
ATOM    720  CZ  PHE A 110      25.341 -41.572 -26.720  1.00 33.39           C
ATOM    721  N   GLN A 111      29.028 -36.994 -28.739  1.00 33.48           N
ATOM    722  CA  GLN A 111      30.124 -37.504 -29.546  1.00 33.82           C
ATOM    723  C   GLN A 111      31.464 -36.989 -28.987  1.00 33.27           C
ATOM    724  O   GLN A 111      32.450 -37.714 -28.975  1.00 33.60           O
ATOM    725  CB  GLN A 111      29.956 -37.115 -31.028  1.00 34.28           C
ATOM    726  CG  GLN A 111      28.691 -37.671 -31.757  1.00 37.22           C
ATOM    727  CD  GLN A 111      28.500 -39.187 -31.646  1.00 43.99           C
ATOM    728  OE1 GLN A 111      29.437 -39.969 -31.860  1.00 46.13           O
ATOM    729  NE2 GLN A 111      27.264 -39.613 -31.300  1.00 45.08           N
ATOM    730  N   ASP A 112      31.504 -35.747 -28.510  1.00 32.44           N
ATOM    731  CA  ASP A 112      32.737 -35.215 -27.921  1.00 32.51           C
ATOM    732  C   ASP A 112      33.209 -35.995 -26.679  1.00 32.04           C
ATOM    733  O   ASP A 112      34.410 -36.231 -26.519  1.00 32.49           O
ATOM    734  CB  ASP A 112      32.593 -33.729 -27.580  1.00 32.69           C
ATOM    735  CG  ASP A 112      32.618 -32.817 -28.814  1.00 33.45           C
ATOM    736  OD1 ASP A 112      33.137 -33.158 -29.906  1.00 33.53           O
ATOM    737  OD2 ASP A 112      32.129 -31.699 -28.676  1.00 34.61           O
ATOM    738  N   ILE A 113      32.277 -36.350 -25.799  1.00 31.75           N
ATOM    739  CA  ILE A 113      32.583 -37.077 -24.579  1.00 31.31           C
ATOM    740  C   ILE A 113      33.149 -38.483 -24.902  1.00 31.97           C
ATOM    741  O   ILE A 113      34.177 -38.897 -24.338  1.00 33.11           O
ATOM    742  CB  ILE A 113      31.331 -37.226 -23.693  1.00 31.64           C
ATOM    743  CG1 ILE A 113      30.858 -35.869 -23.150  1.00 31.30           C
ATOM    744  CG2 ILE A 113      31.582 -38.307 -22.553  1.00 29.42           C
ATOM    745  CD1 ILE A 113      29.427 -35.922 -22.643  1.00 26.61           C
ATOM    746  N   LEU A 114      32.476 -39.219 -25.779  1.00 30.98           N
ATOM    747  CA  LEU A 114      32.956 -40.537 -26.177  1.00 31.38           C
ATOM    748  C   LEU A 114      34.356 -40.541 -26.780  1.00 30.93           C
ATOM    749  O   LEU A 114      35.082 -41.521 -26.604  1.00 31.88           O
ATOM    750  CB  LEU A 114      32.009 -41.218 -27.172  1.00 30.18           C
ATOM    751  CG  LEU A 114      30.568 -41.561 -26.772  1.00 31.54           C
ATOM    752  CD1 LEU A 114      29.875 -42.310 -27.926  1.00 29.83           C
ATOM    753  CD2 LEU A 114      30.459 -42.328 -25.463  1.00 33.83           C
ATOM    754  N   ALA A 115      34.708 -39.509 -27.542  1.00 30.47           N
ATOM    755  CA  ALA A 115      36.043 -39.447 -28.167  1.00 31.14           C
ATOM    756  C   ALA A 115      37.092 -39.020 -27.125  1.00 31.73           C
ATOM    757  O   ALA A 115      38.165 -39.570 -27.114  1.00 33.00           O
ATOM    758  CB  ALA A 115      36.053 -38.494 -29.372  1.00 30.45           C
ATOM    759  N   ALA A 116      36.763 -38.070 -26.237  1.00 31.47           N
ATOM    760  CA  ALA A 116      37.696 -37.564 -25.233  1.00 31.65           C
ATOM    761  C   ALA A 116      37.909 -38.522 -24.091  1.00 31.71           C
ATOM    762  O   ALA A 116      38.972 -38.532 -23.498  1.00 32.52           O
ATOM    763  CB  ALA A 116      37.213 -36.214 -24.666  1.00 32.23           C
ATOM    764  N   ILE A 117      36.885 -39.295 -23.762  1.00 31.47           N
ATOM    765  CA  ILE A 117      36.915 -40.168 -22.616  1.00 30.51           C
ATOM    766  C   ILE A 117      36.536 -41.568 -23.093  1.00 31.78           C
ATOM    767  O   ILE A 117      35.397 -41.979 -22.940  1.00 32.15           O
```

```
ATOM    768  CB  ILE A 117      35.941 -39.687 -21.483  1.00 30.98           C
ATOM    769  CG1 ILE A 117      36.145 -38.194 -21.123  1.00 27.84           C
ATOM    770  CG2 ILE A 117      36.028 -40.593 -20.273  1.00 27.56           C
ATOM    771  CD1 ILE A 117      35.208 -37.741 -20.054  1.00 28.95           C
ATOM    772  N   PRO A 118      37.486 -42.277 -23.733  1.00 33.03           N
ATOM    773  CA  PRO A 118      37.213 -43.634 -24.241  1.00 33.65           C
ATOM    774  C   PRO A 118      36.897 -44.726 -23.207  1.00 33.90           C
ATOM    775  O   PRO A 118      36.310 -45.725 -23.585  1.00 35.52           O
ATOM    776  CB  PRO A 118      38.482 -43.991 -25.045  1.00 33.97           C
ATOM    777  CG  PRO A 118      39.568 -43.061 -24.516  1.00 34.05           C
ATOM    778  CD  PRO A 118      38.842 -41.801 -24.111  1.00 33.13           C
ATOM    779  N   ALA A 119      37.257 -44.584 -21.939  1.00 32.93           N
ATOM    780  CA  ALA A 119      36.916 -45.635 -20.974  1.00 32.50           C
ATOM    781  C   ALA A 119      35.582 -45.338 -20.281  1.00 32.38           C
ATOM    782  O   ALA A 119      35.467 -44.327 -19.626  1.00 33.97           O
ATOM    783  CB  ALA A 119      38.070 -45.850 -19.933  1.00 32.28           C
ATOM    784  N   PRO A 120      34.554 -46.217 -20.431  1.00 32.45           N
ATOM    785  CA  PRO A 120      33.255 -45.938 -19.785  1.00 31.37           C
ATOM    786  C   PRO A 120      33.303 -45.802 -18.251  1.00 30.91           C
ATOM    787  O   PRO A 120      32.426 -45.204 -17.657  1.00 30.17           O
ATOM    788  CB  PRO A 120      32.381 -47.137 -20.203  1.00 31.76           C
ATOM    789  CG  PRO A 120      33.042 -47.662 -21.449  1.00 32.30           C
ATOM    790  CD  PRO A 120      34.516 -47.481 -21.215  1.00 31.70           C
ATOM    791  N   ASP A 121      34.331 -46.330 -17.618  1.00 31.03           N
ATOM    792  CA  ASP A 121      34.392 -46.311 -16.167  1.00 32.25           C
ATOM    793  C   ASP A 121      35.393 -45.274 -15.666  1.00 30.59           C
ATOM    794  O   ASP A 121      35.801 -45.324 -14.537  1.00 30.50           O
ATOM    795  CB  ASP A 121      34.767 -47.703 -15.655  1.00 33.66           C
ATOM    796  CG  ASP A 121      36.154 -48.174 -16.175  1.00 39.19           C
ATOM    797  OD1 ASP A 121      36.637 -47.657 -17.230  1.00 43.26           O
ATOM    798  OD2 ASP A 121      36.749 -49.076 -15.523  1.00 43.90           O
ATOM    799  N   PHE A 122      35.790 -44.355 -16.556  1.00 30.67           N
ATOM    800  CA  PHE A 122      36.670 -43.247 -16.263  1.00 28.74           C
ATOM    801  C   PHE A 122      36.232 -42.608 -14.957  1.00 28.94           C
ATOM    802  O   PHE A 122      35.040 -42.257 -14.790  1.00 29.33           O
ATOM    803  CB  PHE A 122      36.568 -42.215 -17.395  1.00 28.71           C
ATOM    804  CG  PHE A 122      37.233 -40.905 -17.084  1.00 26.89           C
ATOM    805  CD1 PHE A 122      38.610 -40.760 -17.212  1.00 26.70           C
ATOM    806  CD2 PHE A 122      36.490 -39.824 -16.627  1.00 27.51           C
ATOM    807  CE1 PHE A 122      39.225 -39.549 -16.907  1.00 26.96           C
ATOM    808  CE2 PHE A 122      37.101 -38.594 -16.330  1.00 25.78           C
ATOM    809  CZ  PHE A 122      38.439 -38.446 -16.480  1.00 25.99           C
ATOM    810  N   SER A 123      37.163 -42.426 -14.027  1.00 27.52           N
ATOM    811  CA  SER A 123      36.742 -41.866 -12.741  1.00 27.27           C
ATOM    812  C   SER A 123      37.597 -40.655 -12.312  1.00 27.95           C
ATOM    813  O   SER A 123      37.665 -40.326 -11.131  1.00 29.10           O
ATOM    814  CB  SER A 123      36.752 -42.983 -11.713  1.00 27.35           C
ATOM    815  OG  SER A 123      38.083 -43.418 -11.536  1.00 29.23           O
ATOM    816  N   GLY A 124      38.227 -39.973 -13.279  1.00 26.56           N
ATOM    817  CA  GLY A 124      39.082 -38.871 -12.979  1.00 25.03           C
```

```
ATOM    818  C   GLY A 124      38.268 -37.600 -12.972  1.00 25.00           C
ATOM    819  O   GLY A 124      37.057 -37.644 -13.114  1.00 24.22           O
ATOM    820  N   LEU A 125      38.964 -36.482 -12.784  1.00 24.49           N
ATOM    821  CA  LEU A 125      38.426 -35.143 -12.926  1.00 25.47           C
ATOM    822  C   LEU A 125      37.917 -34.984 -14.343  1.00 25.27           C
ATOM    823  O   LEU A 125      38.598 -35.352 -15.297  1.00 26.45           O
ATOM    824  CB  LEU A 125      39.525 -34.093 -12.657  1.00 24.74           C
ATOM    825  CG  LEU A 125      39.978 -33.784 -11.186  1.00 28.94           C
ATOM    826  CD1 LEU A 125      40.416 -34.938 -10.355  1.00 28.47           C
ATOM    827  CD2 LEU A 125      41.091 -32.836 -11.172  1.00 25.80           C
ATOM    828  N   ALA A 126      36.734 -34.399 -14.472  1.00 25.21           N
ATOM    829  CA  ALA A 126      36.192 -34.033 -15.764  1.00 25.00           C
ATOM    830  C   ALA A 126      35.774 -32.570 -15.628  1.00 25.07           C
ATOM    831  O   ALA A 126      34.679 -32.232 -15.191  1.00 25.49           O
ATOM    832  CB  ALA A 126      35.027 -34.960 -16.168  1.00 23.76           C
ATOM    833  N   VAL A 127      36.700 -31.701 -16.014  1.00 25.29           N
ATOM    834  CA  VAL A 127      36.566 -30.279 -15.833  1.00 24.60           C
ATOM    835  C   VAL A 127      36.053 -29.625 -17.126  1.00 25.71           C
ATOM    836  O   VAL A 127      36.690 -29.714 -18.183  1.00 25.46           O
ATOM    837  CB  VAL A 127      37.929 -29.617 -15.338  1.00 24.61           C
ATOM    838  CG1 VAL A 127      37.676 -28.136 -15.029  1.00 23.17           C
ATOM    839  CG2 VAL A 127      38.463 -30.359 -14.031  1.00 21.75           C
ATOM    840  N   ILE A 128      34.901 -28.967 -17.033  1.00 25.89           N
ATOM    841  CA  ILE A 128      34.407 -28.177 -18.166  1.00 26.78           C
ATOM    842  C   ILE A 128      34.766 -26.710 -17.915  1.00 27.13           C
ATOM    843  O   ILE A 128      34.483 -26.138 -16.853  1.00 26.65           O
ATOM    844  CB  ILE A 128      32.894 -28.336 -18.420  1.00 25.87           C
ATOM    845  CG1 ILE A 128      32.496 -29.829 -18.457  1.00 26.83           C
ATOM    846  CG2 ILE A 128      32.464 -27.530 -19.744  1.00 26.98           C
ATOM    847  CD1 ILE A 128      30.998 -30.117 -18.449  1.00 27.33           C
ATOM    848  N   ASP A 129      35.406 -26.103 -18.899  1.00 27.40           N
ATOM    849  CA  ASP A 129      35.890 -24.773 -18.724  1.00 28.10           C
ATOM    850  C   ASP A 129      35.114 -23.772 -19.593  1.00 27.97           C
ATOM    851  O   ASP A 129      35.508 -23.488 -20.723  1.00 28.41           O
ATOM    852  CB  ASP A 129      37.370 -24.729 -19.036  1.00 28.62           C
ATOM    853  CG  ASP A 129      37.951 -23.329 -18.838  1.00 31.56           C
ATOM    854  OD1 ASP A 129      37.410 -22.577 -17.999  1.00 31.34           O
ATOM    855  OD2 ASP A 129      38.932 -22.994 -19.519  1.00 36.54           O
ATOM    856  N   TRP A 130      34.011 -23.279 -19.049  1.00 27.95           N
ATOM    857  CA  TRP A 130      33.076 -22.364 -19.719  1.00 28.69           C
ATOM    858  C   TRP A 130      33.156 -21.044 -18.966  1.00 29.50           C
ATOM    859  O   TRP A 130      32.661 -20.937 -17.853  1.00 29.00           O
ATOM    860  CB  TRP A 130      31.640 -22.929 -19.644  1.00 28.36           C
ATOM    861  CG  TRP A 130      31.331 -24.016 -20.690  1.00 27.16           C
ATOM    862  CD1 TRP A 130      32.217 -24.626 -21.523  1.00 27.77           C
ATOM    863  CD2 TRP A 130      30.048 -24.562 -21.006  1.00 26.61           C
ATOM    864  NE1 TRP A 130      31.565 -25.539 -22.341  1.00 28.55           N
ATOM    865  CE2 TRP A 130      30.233 -25.518 -22.038  1.00 25.82           C
ATOM    866  CE3 TRP A 130      28.764 -24.352 -20.511  1.00 28.10           C
ATOM    867  CZ2 TRP A 130      29.187 -26.221 -22.600  1.00 27.04           C
```

```
ATOM    868  CZ3 TRP A 130      27.704 -25.085 -21.063  1.00 28.29           C
ATOM    869  CH2 TRP A 130      27.929 -25.996 -22.103  1.00 28.72           C
ATOM    870  N   GLU A 131      33.786 -20.053 -19.574  1.00 31.62           N
ATOM    871  CA  GLU A 131      34.036 -18.792 -18.909  1.00 33.84           C
ATOM    872  C   GLU A 131      33.450 -17.549 -19.579  1.00 35.22           C
ATOM    873  O   GLU A 131      33.647 -16.437 -19.075  1.00 37.41           O
ATOM    874  CB  GLU A 131      35.546 -18.619 -18.724  1.00 34.16           C
ATOM    875  CG  GLU A 131      36.153 -19.552 -17.697  1.00 33.15           C
ATOM    876  CD  GLU A 131      37.664 -19.395 -17.607  1.00 36.46           C
ATOM    877  OE1 GLU A 131      38.146 -18.271 -17.300  1.00 38.66           O
ATOM    878  OE2 GLU A 131      38.384 -20.392 -17.805  1.00 37.91           O
ATOM    879  N   ALA A 132      32.683 -17.699 -20.646  1.00 35.06           N
ATOM    880  CA  ALA A 132      32.103 -16.534 -21.294  1.00 36.39           C
ATOM    881  C   ALA A 132      30.971 -15.859 -20.482  1.00 36.95           C
ATOM    882  O   ALA A 132      31.215 -14.829 -19.824  1.00 39.63           O
ATOM    883  CB  ALA A 132      31.655 -16.858 -22.744  1.00 36.12           C
ATOM    884  N   TRP A 133      29.751 -16.367 -20.609  1.00 35.04           N
ATOM    885  CA  TRP A 133      28.595 -15.930 -19.819  1.00 33.32           C
ATOM    886  C   TRP A 133      28.459 -16.736 -18.530  1.00 33.21           C
ATOM    887  O   TRP A 133      28.841 -17.935 -18.444  1.00 33.24           O
ATOM    888  CB  TRP A 133      27.285 -16.053 -20.640  1.00 32.57           C
ATOM    889  CG  TRP A 133      27.166 -17.345 -21.494  1.00 30.64           C
ATOM    890  CD1 TRP A 133      27.602 -17.502 -22.782  1.00 30.08           C
ATOM    891  CD2 TRP A 133      26.599 -18.609 -21.114  1.00 26.78           C
ATOM    892  NE1 TRP A 133      27.339 -18.758 -23.231  1.00 28.46           N
ATOM    893  CE2 TRP A 133      26.750 -19.477 -22.222  1.00 28.90           C
ATOM    894  CE3 TRP A 133      26.011 -19.105 -19.941  1.00 27.17           C
ATOM    895  CZ2 TRP A 133      26.309 -20.811 -22.204  1.00 30.29           C
ATOM    896  CZ3 TRP A 133      25.579 -20.442 -19.910  1.00 28.77           C
ATOM    897  CH2 TRP A 133      25.743 -21.281 -21.023  1.00 30.03           C
ATOM    898  N   ARG A 134      27.868 -16.094 -17.538  1.00 32.82           N
ATOM    899  CA  ARG A 134      27.524 -16.739 -16.298  1.00 33.26           C
ATOM    900  C   ARG A 134      26.054 -17.083 -16.264  1.00 33.23           C
ATOM    901  O   ARG A 134      25.242 -16.294 -16.758  1.00 34.17           O
ATOM    902  CB  ARG A 134      27.803 -15.790 -15.155  1.00 34.40           C
ATOM    903  CG  ARG A 134      29.021 -16.104 -14.353  1.00 36.86           C
ATOM    904  CD  ARG A 134      30.227 -15.381 -14.821  1.00 41.36           C
ATOM    905  NE  ARG A 134      30.320 -14.048 -14.236  1.00 46.74           N
ATOM    906  CZ  ARG A 134      31.449 -13.449 -13.837  1.00 48.05           C
ATOM    907  NH1 ARG A 134      32.614 -14.079 -13.908  1.00 50.79           N
ATOM    908  NH2 ARG A 134      31.411 -12.209 -13.359  1.00 44.56           N
ATOM    909  N   PRO A 135      25.685 -18.226 -15.643  1.00 32.84           N
ATOM    910  CA  PRO A 135      24.275 -18.605 -15.581  1.00 33.03           C
ATOM    911  C   PRO A 135      23.361 -17.673 -14.795  1.00 33.49           C
ATOM    912  O   PRO A 135      22.147 -17.689 -15.034  1.00 32.26           O
ATOM    913  CB  PRO A 135      24.290 -19.983 -14.880  1.00 32.11           C
ATOM    914  CG  PRO A 135      25.578 -20.043 -14.167  1.00 32.14           C
ATOM    915  CD  PRO A 135      26.547 -19.250 -15.013  1.00 32.26           C
ATOM    916  N   ARG A 136      23.918 -16.907 -13.853  1.00 34.23           N
ATOM    917  CA  ARG A 136      23.123 -15.925 -13.096  1.00 35.62           C
```

```
ATOM    918  C   ARG A 136      23.235 -14.577 -13.778  1.00 35.93           C
ATOM    919  O   ARG A 136      24.334 -14.024 -13.873  1.00 35.26           O
ATOM    920  CB  ARG A 136      23.580 -15.810 -11.650  1.00 35.33           C
ATOM    921  CG  ARG A 136      23.261 -17.013 -10.854  1.00 38.13           C
ATOM    922  CD  ARG A 136      22.035 -16.787 -10.047  1.00 44.26           C
ATOM    923  NE  ARG A 136      20.870 -17.302 -10.716  1.00 45.16           N
ATOM    924  CZ  ARG A 136      19.612 -16.911 -10.508  1.00 45.79           C
ATOM    925  NH1 ARG A 136      19.285 -15.966  -9.626  1.00 43.47           N
ATOM    926  NH2 ARG A 136      18.667 -17.497 -11.213  1.00 44.41           N
ATOM    927  N   TRP A 137      22.091 -14.075 -14.260  1.00 36.69           N
ATOM    928  CA  TRP A 137      21.988 -12.756 -14.938  1.00 37.89           C
ATOM    929  C   TRP A 137      22.753 -11.651 -14.206  1.00 37.92           C
ATOM    930  O   TRP A 137      23.557 -10.952 -14.831  1.00 37.97           O
ATOM    931  CB  TRP A 137      20.510 -12.381 -15.129  1.00 38.71           C
ATOM    932  CG  TRP A 137      20.191 -11.035 -15.776  1.00 39.13           C
ATOM    933  CD1 TRP A 137      19.964  -9.836 -15.128  1.00 40.63           C
ATOM    934  CD2 TRP A 137      20.019 -10.764 -17.181  1.00 39.60           C
ATOM    935  NE1 TRP A 137      19.665  -8.839 -16.050  1.00 40.20           N
ATOM    936  CE2 TRP A 137      19.695  -9.382 -17.311  1.00 40.15           C
ATOM    937  CE3 TRP A 137      20.109 -11.549 -18.341  1.00 40.70           C
ATOM    938  CZ2 TRP A 137      19.451  -8.778 -18.561  1.00 39.59           C
ATOM    939  CZ3 TRP A 137      19.852 -10.945 -19.588  1.00 40.29           C
ATOM    940  CH2 TRP A 137      19.533  -9.567 -19.681  1.00 39.92           C
ATOM    941  N   ALA A 138      22.500 -11.524 -12.894  1.00 38.35           N
ATOM    942  CA  ALA A 138      23.239 -10.631 -11.968  1.00 38.52           C
ATOM    943  C   ALA A 138      24.779 -10.644 -12.044  1.00 38.71           C
ATOM    944  O   ALA A 138      25.406  -9.647 -11.732  1.00 38.74           O
ATOM    945  CB  ALA A 138      22.817 -10.917 -10.534  1.00 38.62           C
ATOM    946  N   PHE A 139      25.383 -11.767 -12.434  1.00 38.33           N
ATOM    947  CA  PHE A 139      26.849 -11.873 -12.436  1.00 38.20           C
ATOM    948  C   PHE A 139      27.472 -11.524 -13.789  1.00 38.30           C
ATOM    949  O   PHE A 139      28.694 -11.507 -13.918  1.00 38.43           O
ATOM    950  CB  PHE A 139      27.333 -13.273 -11.982  1.00 37.42           C
ATOM    951  CG  PHE A 139      26.946 -13.664 -10.548  1.00 36.29           C
ATOM    952  CD1 PHE A 139      26.902 -15.022 -10.189  1.00 34.63           C
ATOM    953  CD2 PHE A 139      26.649 -12.703  -9.573  1.00 36.68           C
ATOM    954  CE1 PHE A 139      26.568 -15.437  -8.891  1.00 35.17           C
ATOM    955  CE2 PHE A 139      26.298 -13.085  -8.259  1.00 35.81           C
ATOM    956  CZ  PHE A 139      26.276 -14.466  -7.914  1.00 36.36           C
ATOM    957  N   ASN A 140      26.656 -11.252 -14.802  1.00 38.35           N
ATOM    958  CA  ASN A 140      27.211 -10.853 -16.113  1.00 39.01           C
ATOM    959  C   ASN A 140      27.529  -9.352 -16.213  1.00 40.08           C
ATOM    960  O   ASN A 140      26.928  -8.634 -16.986  1.00 39.16           O
ATOM    961  CB  ASN A 140      26.329 -11.343 -17.275  1.00 37.81           C
ATOM    962  CG  ASN A 140      26.250 -12.840 -17.317  1.00 36.97           C
ATOM    963  OD1 ASN A 140      27.102 -13.495 -17.909  1.00 35.59           O
ATOM    964  ND2 ASN A 140      25.278 -13.403 -16.621  1.00 35.97           N
ATOM    965  N   TRP A 141      28.484  -8.904 -15.407  1.00 42.38           N
ATOM    966  CA  TRP A 141      28.850  -7.487 -15.325  1.00 44.62           C
ATOM    967  C   TRP A 141      30.203  -7.247 -15.960  1.00 45.86           C
```

```
ATOM    968  O   TRP A 141      30.946  -8.196 -16.255  1.00 46.73           O
ATOM    969  CB  TRP A 141      28.858  -6.998 -13.859  1.00 44.97           C
ATOM    970  CG  TRP A 141      29.671  -7.849 -12.954  1.00 45.09           C
ATOM    971  CD1 TRP A 141      30.965  -8.229 -13.143  1.00 46.69           C
ATOM    972  CD2 TRP A 141      29.257  -8.439 -11.719  1.00 46.16           C
ATOM    973  NE1 TRP A 141      31.386  -9.030 -12.114  1.00 48.77           N
ATOM    974  CE2 TRP A 141      30.358  -9.178 -11.220  1.00 46.60           C
ATOM    975  CE3 TRP A 141      28.069  -8.414 -10.981  1.00 46.43           C
ATOM    976  CZ2 TRP A 141      30.308  -9.887 -10.025  1.00 44.96           C
ATOM    977  CZ3 TRP A 141      28.019  -9.114  -9.778  1.00 46.78           C
ATOM    978  CH2 TRP A 141      29.133  -9.848  -9.318  1.00 46.77           C
ATOM    979  N   ASP A 142      30.522  -5.970 -16.143  1.00 47.36           N
ATOM    980  CA  ASP A 142      31.780  -5.525 -16.752  1.00 48.73           C
ATOM    981  C   ASP A 142      31.788  -5.981 -18.201  1.00 48.19           C
ATOM    982  O   ASP A 142      30.833  -5.681 -18.925  1.00 48.07           O
ATOM    983  CB  ASP A 142      33.020  -5.947 -15.930  1.00 49.31           C
ATOM    984  CG  ASP A 142      33.006  -5.359 -14.479  1.00 54.14           C
ATOM    985  OD1 ASP A 142      32.283  -4.353 -14.240  1.00 56.65           O
ATOM    986  OD2 ASP A 142      33.709  -5.902 -13.572  1.00 56.85           O
ATOM    987  N   THR A 143      32.834  -6.698 -18.621  1.00 48.07           N
ATOM    988  CA  THR A 143      32.943  -7.209 -19.999  1.00 47.40           C
ATOM    989  C   THR A 143      31.889  -8.276 -20.338  1.00 46.61           C
ATOM    990  O   THR A 143      31.680  -8.583 -21.513  1.00 46.89           O
ATOM    991  CB  THR A 143      34.334  -7.828 -20.270  1.00 48.10           C
ATOM    992  OG1 THR A 143      34.704  -8.658 -19.156  1.00 48.48           O
ATOM    993  CG2 THR A 143      35.388  -6.740 -20.467  1.00 48.30           C
ATOM    994  N   LYS A 144      31.241  -8.850 -19.321  1.00 44.89           N
ATOM    995  CA  LYS A 144      30.166  -9.825 -19.547  1.00 43.76           C
ATOM    996  C   LYS A 144      28.793  -9.167 -19.759  1.00 43.18           C
ATOM    997  O   LYS A 144      27.836  -9.824 -20.142  1.00 43.04           O
ATOM    998  CB  LYS A 144      30.127 -10.871 -18.413  1.00 43.51           C
ATOM    999  CG  LYS A 144      31.431 -11.616 -18.261  1.00 42.45           C
ATOM   1000  CD  LYS A 144      31.344 -12.830 -17.372  1.00 45.98           C
ATOM   1001  CE  LYS A 144      32.718 -13.545 -17.358  1.00 47.74           C
ATOM   1002  NZ  LYS A 144      33.443 -13.459 -18.700  1.00 45.97           N
ATOM   1003  N   ASP A 145      28.690  -7.868 -19.504  1.00 43.08           N
ATOM   1004  CA  ASP A 145      27.424  -7.150 -19.731  1.00 43.30           C
ATOM   1005  C   ASP A 145      26.975  -7.192 -21.196  1.00 42.37           C
ATOM   1006  O   ASP A 145      25.841  -6.907 -21.479  1.00 42.77           O
ATOM   1007  CB  ASP A 145      27.459  -5.713 -19.172  1.00 43.72           C
ATOM   1008  CG  ASP A 145      26.094  -5.011 -19.255  1.00 46.64           C
ATOM   1009  OD1 ASP A 145      25.093  -5.564 -18.732  1.00 47.38           O
ATOM   1010  OD2 ASP A 145      26.020  -3.909 -19.869  1.00 47.00           O
ATOM   1011  N   ILE A 146      27.844  -7.593 -22.120  1.00 42.09           N
ATOM   1012  CA  ILE A 146      27.412  -7.846 -23.500  1.00 41.40           C
ATOM   1013  C   ILE A 146      26.323  -8.925 -23.568  1.00 41.36           C
ATOM   1014  O   ILE A 146      25.432  -8.834 -24.397  1.00 42.06           O
ATOM   1015  CB  ILE A 146      28.600  -8.208 -24.438  1.00 41.67           C
ATOM   1016  CG1 ILE A 146      28.116  -8.293 -25.895  1.00 41.30           C
ATOM   1017  CG2 ILE A 146      29.344  -9.513 -23.963  1.00 41.68           C
```

```
ATOM   1018  CD1 ILE A 146      29.234  -8.329 -26.932  1.00 41.85           C
ATOM   1019  N   TYR A 147      26.394  -9.943 -22.695  1.00 40.60           N
ATOM   1020  CA  TYR A 147      25.402 -11.023 -22.668  1.00 39.97           C
ATOM   1021  C   TYR A 147      24.014 -10.473 -22.263  1.00 40.00           C
ATOM   1022  O   TYR A 147      22.990 -10.896 -22.788  1.00 40.19           O
ATOM   1023  CB  TYR A 147      25.899 -12.253 -21.824  1.00 38.64           C
ATOM   1024  CG  TYR A 147      27.150 -12.848 -22.457  1.00 37.42           C
ATOM   1025  CD1 TYR A 147      28.423 -12.564 -21.955  1.00 36.28           C
ATOM   1026  CD2 TYR A 147      27.061 -13.623 -23.613  1.00 35.87           C
ATOM   1027  CE1 TYR A 147      29.554 -13.036 -22.593  1.00 35.69           C
ATOM   1028  CE2 TYR A 147      28.184 -14.122 -24.230  1.00 35.71           C
ATOM   1029  CZ  TYR A 147      29.422 -13.816 -23.729  1.00 35.13           C
ATOM   1030  OH  TYR A 147      30.524 -14.302 -24.373  1.00 37.34           O
ATOM   1031  N   ARG A 148      24.001  -9.511 -21.352  1.00 40.16           N
ATOM   1032  CA  ARG A 148      22.780  -8.813 -20.996  1.00 40.87           C
ATOM   1033  C   ARG A 148      22.286  -7.901 -22.127  1.00 41.64           C
ATOM   1034  O   ARG A 148      21.130  -8.027 -22.543  1.00 41.59           O
ATOM   1035  CB  ARG A 148      22.936  -8.066 -19.672  1.00 40.63           C
ATOM   1036  CG  ARG A 148      23.226  -9.012 -18.569  1.00 39.52           C
ATOM   1037  CD  ARG A 148      23.121  -8.428 -17.227  1.00 40.65           C
ATOM   1038  NE  ARG A 148      24.086  -7.374 -17.007  1.00 42.06           N
ATOM   1039  CZ  ARG A 148      24.551  -7.028 -15.809  1.00 44.27           C
ATOM   1040  NH1 ARG A 148      24.154  -7.694 -14.730  1.00 43.81           N
ATOM   1041  NH2 ARG A 148      25.420  -6.025 -15.695  1.00 43.14           N
ATOM   1042  N   GLN A 149      23.156  -7.035 -22.644  1.00 42.32           N
ATOM   1043  CA  GLN A 149      22.802  -6.143 -23.754  1.00 43.44           C
ATOM   1044  C   GLN A 149      22.217  -6.917 -24.926  1.00 43.72           C
ATOM   1045  O   GLN A 149      21.150  -6.557 -25.431  1.00 43.89           O
ATOM   1046  CB  GLN A 149      24.008  -5.343 -24.233  1.00 43.79           C
ATOM   1047  CG  GLN A 149      24.648  -4.445 -23.188  1.00 46.83           C
ATOM   1048  CD  GLN A 149      26.112  -4.130 -23.515  1.00 52.22           C
ATOM   1049  OE1 GLN A 149      26.520  -4.140 -24.688  1.00 54.72           O
ATOM   1050  NE2 GLN A 149      26.915  -3.861 -22.475  1.00 52.67           N
ATOM   1051  N   ARG A 150      22.891  -7.999 -25.326  1.00 43.92           N
ATOM   1052  CA  ARG A 150      22.436  -8.832 -26.440  1.00 43.92           C
ATOM   1053  C   ARG A 150      21.195  -9.651 -26.149  1.00 44.39           C
ATOM   1054  O   ARG A 150      20.441  -9.984 -27.080  1.00 44.11           O
ATOM   1055  CB  ARG A 150      23.532  -9.771 -26.908  1.00 43.99           C
ATOM   1056  CG  ARG A 150      24.781  -9.069 -27.403  1.00 45.16           C
ATOM   1057  CD  ARG A 150      24.518  -7.976 -28.449  1.00 47.29           C
ATOM   1058  NE  ARG A 150      25.814  -7.477 -28.909  1.00 50.46           N
ATOM   1059  CZ  ARG A 150      26.427  -7.944 -29.985  1.00 50.72           C
ATOM   1060  NH1 ARG A 150      25.824  -8.859 -30.749  1.00 51.42           N
ATOM   1061  NH2 ARG A 150      27.617  -7.485 -30.304  1.00 50.46           N
ATOM   1062  N   SER A 151      20.999 -10.019 -24.879  1.00 44.95           N
ATOM   1063  CA  SER A 151      19.762 -10.691 -24.465  1.00 45.33           C
ATOM   1064  C   SER A 151      18.558  -9.770 -24.660  1.00 46.08           C
ATOM   1065  O   SER A 151      17.530 -10.197 -25.184  1.00 46.14           O
ATOM   1066  CB  SER A 151      19.845 -11.208 -23.020  1.00 45.19           C
ATOM   1067  OG  SER A 151      20.628 -12.379 -22.970  1.00 41.45           O
```

```
ATOM   1068  N   ARG A 152      18.713  -8.514 -24.244  1.00 47.27           N
ATOM   1069  CA  ARG A 152      17.706  -7.465 -24.437  1.00 48.67           C
ATOM   1070  C   ARG A 152      17.450  -7.229 -25.923  1.00 49.22           C
ATOM   1071  O   ARG A 152      16.296  -7.238 -26.351  1.00 49.37           O
ATOM   1072  CB  ARG A 152      18.090  -6.168 -23.710  1.00 48.14           C
ATOM   1073  CG  ARG A 152      18.156  -6.348 -22.195  1.00 48.05           C
ATOM   1074  CD  ARG A 152      18.436  -5.056 -21.450  1.00 49.39           C
ATOM   1075  NE  ARG A 152      19.847  -4.655 -21.367  1.00 52.29           N
ATOM   1076  CZ  ARG A 152      20.586  -4.681 -20.249  1.00 54.44           C
ATOM   1077  NH1 ARG A 152      20.083  -5.117 -19.092  1.00 54.31           N
ATOM   1078  NH2 ARG A 152      21.850  -4.273 -20.281  1.00 55.77           N
ATOM   1079  N   ALA A 153      18.522  -7.098 -26.705  1.00 50.43           N
ATOM   1080  CA  ALA A 153      18.423  -6.924 -28.167  1.00 51.73           C
ATOM   1081  C   ALA A 153      17.579  -7.985 -28.882  1.00 52.79           C
ATOM   1082  O   ALA A 153      16.865  -7.686 -29.840  1.00 52.95           O
ATOM   1083  CB  ALA A 153      19.815  -6.854 -28.800  1.00 51.41           C
ATOM   1084  N   LEU A 154      17.672  -9.226 -28.414  1.00 54.10           N
ATOM   1085  CA  LEU A 154      17.088 -10.373 -29.106  1.00 55.14           C
ATOM   1086  C   LEU A 154      15.552 -10.349 -29.025  1.00 55.39           C
ATOM   1087  O   LEU A 154      14.847 -10.644 -30.017  1.00 54.75           O
ATOM   1088  CB  LEU A 154      17.691 -11.669 -28.544  1.00 55.32           C
ATOM   1089  CG  LEU A 154      17.644 -12.985 -29.332  1.00 56.93           C
ATOM   1090  CD1 LEU A 154      18.510 -12.953 -30.606  1.00 57.27           C
ATOM   1091  CD2 LEU A 154      18.065 -14.143 -28.417  1.00 55.90           C
ATOM   1092  N   VAL A 155      15.042  -9.958 -27.854  1.00 56.24           N
ATOM   1093  CA  VAL A 155      13.595  -9.869 -27.638  1.00 56.84           C
ATOM   1094  C   VAL A 155      13.027  -8.576 -28.218  1.00 57.50           C
ATOM   1095  O   VAL A 155      11.901  -8.560 -28.716  1.00 57.28           O
ATOM   1096  CB  VAL A 155      13.180 -10.063 -26.151  1.00 57.06           C
ATOM   1097  CG1 VAL A 155      13.854 -11.303 -25.559  1.00 55.46           C
ATOM   1098  CG2 VAL A 155      13.490  -8.828 -25.324  1.00 57.28           C
ATOM   1099  N   GLN A 156      13.829  -7.510 -28.162  1.00 58.48           N
ATOM   1100  CA  GLN A 156      13.514  -6.215 -28.777  1.00 59.26           C
ATOM   1101  C   GLN A 156      13.370  -6.276 -30.315  1.00 59.84           C
ATOM   1102  O   GLN A 156      12.528  -5.588 -30.882  1.00 59.88           O
ATOM   1103  CB  GLN A 156      14.550  -5.168 -28.362  1.00 59.04           C
ATOM   1104  CG  GLN A 156      14.129  -3.720 -28.598  1.00 59.74           C
ATOM   1105  CD  GLN A 156      12.910  -3.279 -27.773  1.00 59.98           C
ATOM   1106  OE1 GLN A 156      11.751  -3.606 -28.100  1.00 58.70           O
ATOM   1107  NE2 GLN A 156      13.168  -2.496 -26.717  1.00 59.77           N
ATOM   1108  N   ALA A 157      14.187  -7.098 -30.976  1.00 60.63           N
ATOM   1109  CA  ALA A 157      14.044  -7.375 -32.418  1.00 61.36           C
ATOM   1110  C   ALA A 157      12.819  -8.245 -32.777  1.00 61.83           C
ATOM   1111  O   ALA A 157      12.221  -8.066 -33.841  1.00 62.23           O
ATOM   1112  CB  ALA A 157      15.326  -8.001 -32.979  1.00 61.39           C
ATOM   1113  N   GLN A 158      12.466  -9.182 -31.893  1.00 62.15           N
ATOM   1114  CA  GLN A 158      11.319 -10.081 -32.066  1.00 62.33           C
ATOM   1115  C   GLN A 158      10.006  -9.387 -31.691  1.00 62.22           C
ATOM   1116  O   GLN A 158       8.936  -9.730 -32.217  1.00 62.30           O
ATOM   1117  CB  GLN A 158      11.518 -11.358 -31.233  1.00 62.52           C
```

```
ATOM   1118  CG  GLN A 158      10.383 -12.403 -31.310  1.00 64.52           C
ATOM   1119  CD  GLN A 158      10.282 -13.142 -32.654  1.00 66.21           C
ATOM   1120  OE1 GLN A 158      11.273 -13.676 -33.168  1.00 67.21           O
ATOM   1121  NE2 GLN A 158       9.067 -13.199 -33.208  1.00 66.17           N
ATOM   1122  N   HIS A 159      10.093  -8.418 -30.778  1.00 61.94           N
ATOM   1123  CA  HIS A 159       8.943  -7.606 -30.371  1.00 61.65           C
ATOM   1124  C   HIS A 159       9.376  -6.142 -30.307  1.00 61.45           C
ATOM   1125  O   HIS A 159       9.786  -5.666 -29.236  1.00 60.88           O
ATOM   1126  CB  HIS A 159       8.387  -8.062 -29.019  1.00 61.77           C
ATOM   1127  CG  HIS A 159       8.227  -9.552 -28.885  1.00 63.06           C
ATOM   1128  ND1 HIS A 159       7.060 -10.213 -29.212  1.00 63.44           N
ATOM   1129  CD2 HIS A 159       9.087 -10.507 -28.447  1.00 63.20           C
ATOM   1130  CE1 HIS A 159       7.208 -11.508 -28.986  1.00 64.11           C
ATOM   1131  NE2 HIS A 159       8.430 -11.713 -28.523  1.00 63.43           N
ATOM   1132  N   PRO A 160       9.287  -5.424 -31.462  1.00 61.52           N
ATOM   1133  CA  PRO A 160       9.907  -4.094 -31.631  1.00 61.54           C
ATOM   1134  C   PRO A 160       9.239  -2.975 -30.824  1.00 61.74           C
ATOM   1135  O   PRO A 160       9.885  -1.971 -30.490  1.00 61.45           O
ATOM   1136  CB  PRO A 160       9.800  -3.846 -33.146  1.00 61.36           C
ATOM   1137  CG  PRO A 160       9.457  -5.209 -33.755  1.00 61.20           C
ATOM   1138  CD  PRO A 160       8.604  -5.842 -32.703  1.00 61.33           C
ATOM   1139  N   ASP A 161       7.966  -3.178 -30.497  1.00 62.31           N
ATOM   1140  CA  ASP A 161       7.164  -2.202 -29.773  1.00 62.94           C
ATOM   1141  C   ASP A 161       6.991  -2.656 -28.326  1.00 63.09           C
ATOM   1142  O   ASP A 161       5.878  -2.936 -27.883  1.00 63.05           O
ATOM   1143  CB  ASP A 161       5.799  -2.006 -30.477  1.00 63.15           C
ATOM   1144  CG  ASP A 161       5.934  -1.476 -31.921  1.00 63.48           C
ATOM   1145  OD1 ASP A 161       5.398  -2.131 -32.847  1.00 63.80           O
ATOM   1146  OD2 ASP A 161       6.570  -0.413 -32.135  1.00 63.45           O
ATOM   1147  N   TRP A 162       8.112  -2.739 -27.604  1.00 63.81           N
ATOM   1148  CA  TRP A 162       8.142  -3.231 -26.219  1.00 64.01           C
ATOM   1149  C   TRP A 162       8.947  -2.294 -25.292  1.00 63.94           C
ATOM   1150  O   TRP A 162      10.105  -1.988 -25.597  1.00 63.62           O
ATOM   1151  CB  TRP A 162       8.728  -4.653 -26.181  1.00 64.77           C
ATOM   1152  CG  TRP A 162       7.733  -5.801 -26.320  1.00 65.21           C
ATOM   1153  CD1 TRP A 162       6.524  -5.777 -26.959  1.00 66.55           C
ATOM   1154  CD2 TRP A 162       7.891  -7.144 -25.827  1.00 66.33           C
ATOM   1155  NE1 TRP A 162       5.916  -7.008 -26.884  1.00 66.54           N
ATOM   1156  CE2 TRP A 162       6.733  -7.866 -26.194  1.00 66.37           C
ATOM   1157  CE3 TRP A 162       8.894  -7.805 -25.105  1.00 65.77           C
ATOM   1158  CZ2 TRP A 162       6.553  -9.221 -25.867  1.00 66.16           C
ATOM   1159  CZ3 TRP A 162       8.709  -9.150 -24.775  1.00 65.96           C
ATOM   1160  CH2 TRP A 162       7.552  -9.841 -25.159  1.00 65.75           C
ATOM   1161  N   PRO A 163       8.341  -1.843 -24.160  1.00 64.02           N
ATOM   1162  CA  PRO A 163       9.015  -0.963 -23.176  1.00 64.27           C
ATOM   1163  C   PRO A 163      10.170  -1.650 -22.429  1.00 64.83           C
ATOM   1164  O   PRO A 163      10.190  -2.886 -22.312  1.00 64.76           O
ATOM   1165  CB  PRO A 163       7.896  -0.600 -22.188  1.00 64.30           C
ATOM   1166  CG  PRO A 163       6.893  -1.697 -22.319  1.00 64.11           C
ATOM   1167  CD  PRO A 163       6.954  -2.152 -23.755  1.00 63.91           C
```

```
ATOM   1168  N   ALA A 164      11.096  -0.844 -21.903  1.00 65.02           N
ATOM   1169  CA  ALA A 164      12.367  -1.335 -21.347  1.00 64.96           C
ATOM   1170  C   ALA A 164      12.298  -2.388 -20.208  1.00 65.12           C
ATOM   1171  O   ALA A 164      12.980  -3.422 -20.304  1.00 65.00           O
ATOM   1172  CB  ALA A 164      13.296  -0.158 -20.970  1.00 64.84           C
ATOM   1173  N   PRO A 165      11.498  -2.137 -19.134  1.00 64.96           N
ATOM   1174  CA  PRO A 165      11.459  -3.114 -18.015  1.00 64.73           C
ATOM   1175  C   PRO A 165      10.786  -4.455 -18.377  1.00 64.13           C
ATOM   1176  O   PRO A 165      10.852  -5.426 -17.609  1.00 64.08           O
ATOM   1177  CB  PRO A 165      10.660  -2.378 -16.926  1.00 64.96           C
ATOM   1178  CG  PRO A 165       9.823  -1.399 -17.660  1.00 65.13           C
ATOM   1179  CD  PRO A 165      10.626  -0.975 -18.871  1.00 64.90           C
ATOM   1180  N   GLN A 166      10.148  -4.476 -19.545  1.00 63.35           N
ATOM   1181  CA  GLN A 166       9.466  -5.648 -20.097  1.00 62.17           C
ATOM   1182  C   GLN A 166      10.412  -6.514 -20.961  1.00 61.14           C
ATOM   1183  O   GLN A 166      10.317  -7.749 -20.949  1.00 60.83           O
ATOM   1184  CB  GLN A 166       8.216  -5.193 -20.875  1.00 62.10           C
ATOM   1185  CG  GLN A 166       7.799  -6.061 -22.057  1.00 61.90           C
ATOM   1186  CD  GLN A 166       6.307  -6.239 -22.124  1.00 62.87           C
ATOM   1187  OE1 GLN A 166       5.665  -6.509 -21.107  1.00 62.94           O
ATOM   1188  NE2 GLN A 166       5.738  -6.086 -23.320  1.00 62.25           N
ATOM   1189  N   VAL A 167      11.312  -5.868 -21.708  1.00 59.90           N
ATOM   1190  CA  VAL A 167      12.362  -6.600 -22.422  1.00 58.57           C
ATOM   1191  C   VAL A 167      13.401  -7.145 -21.441  1.00 57.38           C
ATOM   1192  O   VAL A 167      13.996  -8.175 -21.725  1.00 57.41           O
ATOM   1193  CB  VAL A 167      13.069  -5.793 -23.579  1.00 58.78           C
ATOM   1194  CG1 VAL A 167      12.052  -5.226 -24.573  1.00 58.16           C
ATOM   1195  CG2 VAL A 167      14.071  -4.724 -23.042  1.00 58.31           C
ATOM   1196  N   GLU A 168      13.606  -6.445 -20.314  1.00 55.87           N
ATOM   1197  CA  GLU A 168      14.571  -6.823 -19.277  1.00 54.58           C
ATOM   1198  C   GLU A 168      14.172  -8.138 -18.598  1.00 53.46           C
ATOM   1199  O   GLU A 168      14.914  -9.120 -18.657  1.00 52.96           O
ATOM   1200  CB  GLU A 168      14.737  -5.702 -18.243  1.00 54.97           C
ATOM   1201  CG  GLU A 168      15.450  -6.107 -16.926  1.00 55.78           C
ATOM   1202  CD  GLU A 168      16.986  -6.031 -16.976  1.00 58.42           C
ATOM   1203  OE1 GLU A 168      17.558  -5.627 -18.018  1.00 58.54           O
ATOM   1204  OE2 GLU A 168      17.632  -6.373 -15.949  1.00 59.26           O
ATOM   1205  N   ALA A 169      12.987  -8.145 -17.989  1.00 51.88           N
ATOM   1206  CA  ALA A 169      12.402  -9.329 -17.383  1.00 50.08           C
ATOM   1207  C   ALA A 169      12.255 -10.505 -18.353  1.00 49.00           C
ATOM   1208  O   ALA A 169      12.453 -11.655 -17.947  1.00 48.56           O
ATOM   1209  CB  ALA A 169      11.056  -8.984 -16.757  1.00 50.24           C
ATOM   1210  N   VAL A 170      11.893 -10.249 -19.612  1.00 47.17           N
ATOM   1211  CA  VAL A 170      11.790 -11.363 -20.570  1.00 46.61           C
ATOM   1212  C   VAL A 170      13.187 -11.871 -20.986  1.00 46.30           C
ATOM   1213  O   VAL A 170      13.384 -13.079 -21.177  1.00 45.99           O
ATOM   1214  CB  VAL A 170      10.904 -11.054 -21.810  1.00 46.70           C
ATOM   1215  CG1 VAL A 170      11.009 -12.171 -22.862  1.00 45.67           C
ATOM   1216  CG2 VAL A 170       9.437 -10.872 -21.397  1.00 47.21           C
ATOM   1217  N   ALA A 171      14.127 -10.932 -21.124  1.00 45.43           N
```

```
ATOM   1218  CA  ALA A 171      15.537 -11.215 -21.407  1.00 44.72           C
ATOM   1219  C   ALA A 171      16.189 -12.017 -20.267  1.00 43.99           C
ATOM   1220  O   ALA A 171      16.771 -13.054 -20.528  1.00 43.66           O
ATOM   1221  CB  ALA A 171      16.298  -9.914 -21.683  1.00 44.30           C
ATOM   1222  N   GLN A 172      16.037 -11.543 -19.023  1.00 43.62           N
ATOM   1223  CA  GLN A 172      16.515 -12.215 -17.821  1.00 43.62           C
ATOM   1224  C   GLN A 172      16.010 -13.645 -17.671  1.00 43.45           C
ATOM   1225  O   GLN A 172      16.787 -14.536 -17.329  1.00 43.65           O
ATOM   1226  CB  GLN A 172      16.191 -11.416 -16.563  1.00 43.47           C
ATOM   1227  CG  GLN A 172      16.692 -12.106 -15.281  1.00 46.90           C
ATOM   1228  CD  GLN A 172      16.906 -11.155 -14.104  1.00 50.93           C
ATOM   1229  OE1 GLN A 172      16.767  -9.938 -14.235  1.00 54.22           O
ATOM   1230  NE2 GLN A 172      17.265 -11.710 -12.951  1.00 51.30           N
ATOM   1231  N   ASP A 173      14.728 -13.870 -17.940  1.00 42.78           N
ATOM   1232  CA  ASP A 173      14.163 -15.205 -17.846  1.00 42.14           C
ATOM   1233  C   ASP A 173      14.599 -16.087 -18.988  1.00 41.39           C
ATOM   1234  O   ASP A 173      14.803 -17.293 -18.801  1.00 40.64           O
ATOM   1235  CB  ASP A 173      12.635 -15.179 -17.775  1.00 42.66           C
ATOM   1236  CG  ASP A 173      12.117 -14.622 -16.461  1.00 44.70           C
ATOM   1237  OD1 ASP A 173      12.908 -14.406 -15.521  1.00 45.49           O
ATOM   1238  OD2 ASP A 173      10.892 -14.382 -16.374  1.00 49.88           O
ATOM   1239  N   GLN A 174      14.735 -15.511 -20.176  1.00 40.43           N
ATOM   1240  CA  GLN A 174      15.126 -16.326 -21.316  1.00 40.73           C
ATOM   1241  C   GLN A 174      16.583 -16.776 -21.167  1.00 39.42           C
ATOM   1242  O   GLN A 174      16.895 -17.932 -21.418  1.00 39.58           O
ATOM   1243  CB  GLN A 174      14.902 -15.611 -22.661  1.00 40.57           C
ATOM   1244  CG  GLN A 174      13.570 -15.931 -23.363  1.00 41.24           C
ATOM   1245  CD  GLN A 174      13.462 -15.287 -24.755  1.00 43.20           C
ATOM   1246  OE1 GLN A 174      14.470 -15.033 -25.442  1.00 46.83           O
ATOM   1247  NE2 GLN A 174      12.226 -15.025 -25.181  1.00 45.42           N
ATOM   1248  N   PHE A 175      17.444 -15.838 -20.776  1.00 37.78           N
ATOM   1249  CA  PHE A 175      18.847 -16.094 -20.575  1.00 37.32           C
ATOM   1250  C   PHE A 175      19.086 -17.175 -19.505  1.00 35.97           C
ATOM   1251  O   PHE A 175      19.713 -18.193 -19.778  1.00 35.75           O
ATOM   1252  CB  PHE A 175      19.607 -14.815 -20.194  1.00 37.10           C
ATOM   1253  CG  PHE A 175      21.012 -15.090 -19.810  1.00 37.09           C
ATOM   1254  CD1 PHE A 175      21.967 -15.342 -20.795  1.00 35.54           C
ATOM   1255  CD2 PHE A 175      21.374 -15.192 -18.455  1.00 37.06           C
ATOM   1256  CE1 PHE A 175      23.270 -15.656 -20.450  1.00 36.05           C
ATOM   1257  CE2 PHE A 175      22.679 -15.512 -18.103  1.00 35.48           C
ATOM   1258  CZ  PHE A 175      23.626 -15.746 -19.100  1.00 37.13           C
ATOM   1259  N   GLN A 176      18.554 -16.935 -18.309  1.00 34.47           N
ATOM   1260  CA  GLN A 176      18.752 -17.787 -17.168  1.00 33.07           C
ATOM   1261  C   GLN A 176      18.131 -19.152 -17.437  1.00 32.96           C
ATOM   1262  O   GLN A 176      18.734 -20.188 -17.119  1.00 33.13           O
ATOM   1263  CB  GLN A 176      18.208 -17.122 -15.896  1.00 32.83           C
ATOM   1264  CG  GLN A 176      19.073 -15.954 -15.400  1.00 31.29           C
ATOM   1265  CD  GLN A 176      18.736 -15.517 -13.981  1.00 32.68           C
ATOM   1266  OE1 GLN A 176      19.585 -15.001 -13.233  1.00 32.20           O
ATOM   1267  NE2 GLN A 176      17.490 -15.708 -13.605  1.00 29.66           N
```

```
ATOM   1268  N   GLY A 177      16.947 -19.168 -18.046  1.00 31.86           N
ATOM   1269  CA  GLY A 177      16.340 -20.418 -18.470  1.00 30.63           C
ATOM   1270  C   GLY A 177      17.232 -21.226 -19.395  1.00 30.31           C
ATOM   1271  O   GLY A 177      17.532 -22.395 -19.130  1.00 30.06           O
ATOM   1272  N   ALA A 178      17.621 -20.623 -20.505  1.00 30.06           N
ATOM   1273  CA  ALA A 178      18.612 -21.219 -21.433  1.00 30.41           C
ATOM   1274  C   ALA A 178      19.980 -21.616 -20.811  1.00 29.81           C
ATOM   1275  O   ALA A 178      20.480 -22.708 -21.049  1.00 31.01           O
ATOM   1276  CB  ALA A 178      18.851 -20.271 -22.576  1.00 29.91           C
ATOM   1277  N   ALA A 179      20.597 -20.710 -20.061  1.00 30.11           N
ATOM   1278  CA  ALA A 179      21.911 -20.933 -19.444  1.00 29.65           C
ATOM   1279  C   ALA A 179      21.846 -22.187 -18.583  1.00 30.19           C
ATOM   1280  O   ALA A 179      22.782 -23.007 -18.567  1.00 30.41           O
ATOM   1281  CB  ALA A 179      22.284 -19.743 -18.593  1.00 29.49           C
ATOM   1282  N   ARG A 180      20.723 -22.352 -17.880  1.00 29.74           N
ATOM   1283  CA  ARG A 180      20.522 -23.486 -16.998  1.00 29.47           C
ATOM   1284  C   ARG A 180      20.315 -24.768 -17.793  1.00 30.32           C
ATOM   1285  O   ARG A 180      20.876 -25.799 -17.456  1.00 30.92           O
ATOM   1286  CB  ARG A 180      19.308 -23.230 -16.099  1.00 30.10           C
ATOM   1287  CG  ARG A 180      18.869 -24.407 -15.267  1.00 27.03           C
ATOM   1288  CD  ARG A 180      17.772 -23.977 -14.308  1.00 27.88           C
ATOM   1289  NE  ARG A 180      17.253 -25.132 -13.572  1.00 32.12           N
ATOM   1290  CZ  ARG A 180      16.432 -25.066 -12.516  1.00 32.53           C
ATOM   1291  NH1 ARG A 180      16.035 -23.874 -12.051  1.00 30.23           N
ATOM   1292  NH2 ARG A 180      16.019 -26.194 -11.930  1.00 27.47           N
ATOM   1293  N   ALA A 181      19.503 -24.724 -18.851  1.00 29.87           N
ATOM   1294  CA  ALA A 181      19.273 -25.933 -19.635  1.00 29.42           C
ATOM   1295  C   ALA A 181      20.596 -26.439 -20.200  1.00 28.65           C
ATOM   1296  O   ALA A 181      20.864 -27.636 -20.145  1.00 29.80           O
ATOM   1297  CB  ALA A 181      18.221 -25.684 -20.777  1.00 29.83           C
ATOM   1298  N   TRP A 182      21.420 -25.526 -20.709  1.00 27.62           N
ATOM   1299  CA  TRP A 182      22.689 -25.856 -21.333  1.00 27.62           C
ATOM   1300  C   TRP A 182      23.708 -26.459 -20.351  1.00 26.50           C
ATOM   1301  O   TRP A 182      24.342 -27.496 -20.632  1.00 26.11           O
ATOM   1302  CB  TRP A 182      23.265 -24.587 -21.986  1.00 28.23           C
ATOM   1303  CG  TRP A 182      22.731 -24.342 -23.373  1.00 29.63           C
ATOM   1304  CD1 TRP A 182      21.444 -24.004 -23.718  1.00 29.32           C
ATOM   1305  CD2 TRP A 182      23.474 -24.398 -24.604  1.00 26.69           C
ATOM   1306  NE1 TRP A 182      21.337 -23.884 -25.076  1.00 28.58           N
ATOM   1307  CE2 TRP A 182      22.568 -24.097 -25.646  1.00 30.25           C
ATOM   1308  CE3 TRP A 182      24.804 -24.686 -24.919  1.00 27.56           C
ATOM   1309  CZ2 TRP A 182      22.953 -24.079 -26.992  1.00 29.37           C
ATOM   1310  CZ3 TRP A 182      25.197 -24.658 -26.237  1.00 29.65           C
ATOM   1311  CH2 TRP A 182      24.277 -24.357 -27.266  1.00 29.48           C
ATOM   1312  N   MET A 183      23.818 -25.856 -19.177  1.00 25.91           N
ATOM   1313  CA  MET A 183      24.824 -26.278 -18.192  1.00 27.14           C
ATOM   1314  C   MET A 183      24.404 -27.531 -17.471  1.00 26.87           C
ATOM   1315  O   MET A 183      25.186 -28.452 -17.354  1.00 26.28           O
ATOM   1316  CB  MET A 183      25.124 -25.147 -17.198  1.00 25.95           C
ATOM   1317  CG  MET A 183      25.933 -23.992 -17.815  1.00 26.47           C
```

```
ATOM   1318  SD  MET A 183      26.197 -22.676 -16.608  1.00 30.30           S
ATOM   1319  CE  MET A 183      27.675 -23.289 -15.763  1.00 29.61           C
ATOM   1320  N   ALA A 184      23.152 -27.578 -17.014  1.00 27.25           N
ATOM   1321  CA  ALA A 184      22.586 -28.810 -16.424  1.00 26.22           C
ATOM   1322  C   ALA A 184      22.557 -29.963 -17.425  1.00 26.03           C
ATOM   1323  O   ALA A 184      22.948 -31.083 -17.086  1.00 27.18           O
ATOM   1324  CB  ALA A 184      21.186 -28.538 -15.831  1.00 25.38           C
ATOM   1325  N   GLY A 185      22.115 -29.709 -18.658  1.00 25.96           N
ATOM   1326  CA  GLY A 185      22.044 -30.769 -19.688  1.00 25.12           C
ATOM   1327  C   GLY A 185      23.393 -31.348 -20.104  1.00 25.15           C
ATOM   1328  O   GLY A 185      23.513 -32.544 -20.360  1.00 25.86           O
ATOM   1329  N   THR A 186      24.411 -30.499 -20.185  1.00 24.75           N
ATOM   1330  CA  THR A 186      25.767 -30.924 -20.482  1.00 24.90           C
ATOM   1331  C   THR A 186      26.368 -31.783 -19.343  1.00 25.33           C
ATOM   1332  O   THR A 186      26.870 -32.860 -19.577  1.00 25.60           O
ATOM   1333  CB  THR A 186      26.619 -29.674 -20.771  1.00 24.77           C
ATOM   1334  OG1 THR A 186      26.081 -29.029 -21.927  1.00 27.14           O
ATOM   1335  CG2 THR A 186      28.039 -30.037 -21.063  1.00 21.68           C
ATOM   1336  N   LEU A 187      26.282 -31.301 -18.110  1.00 25.14           N
ATOM   1337  CA  LEU A 187      26.697 -32.090 -16.931  1.00 25.88           C
ATOM   1338  C   LEU A 187      25.929 -33.411 -16.815  1.00 25.90           C
ATOM   1339  O   LEU A 187      26.505 -34.479 -16.532  1.00 26.66           O
ATOM   1340  CB  LEU A 187      26.454 -31.280 -15.644  1.00 24.04           C
ATOM   1341  CG  LEU A 187      27.477 -30.220 -15.226  1.00 25.81           C
ATOM   1342  CD1 LEU A 187      26.983 -29.577 -13.932  1.00 23.87           C
ATOM   1343  CD2 LEU A 187      28.899 -30.837 -15.014  1.00 22.96           C
ATOM   1344  N   GLN A 188      24.615 -33.343 -16.998  1.00 25.68           N
ATOM   1345  CA  GLN A 188      23.808 -34.537 -16.923  1.00 25.46           C
ATOM   1346  C   GLN A 188      24.180 -35.578 -17.999  1.00 25.60           C
ATOM   1347  O   GLN A 188      24.335 -36.764 -17.695  1.00 25.92           O
ATOM   1348  CB  GLN A 188      22.361 -34.173 -17.020  1.00 26.71           C
ATOM   1349  CG  GLN A 188      21.428 -35.410 -16.880  1.00 31.37           C
ATOM   1350  CD  GLN A 188      20.003 -34.978 -16.768  1.00 39.00           C
ATOM   1351  OE1 GLN A 188      19.533 -34.619 -15.677  1.00 44.14           O
ATOM   1352  NE2 GLN A 188      19.307 -34.950 -17.898  1.00 39.10           N
ATOM   1353  N   LEU A 189      24.335 -35.141 -19.240  1.00 25.49           N
ATOM   1354  CA  LEU A 189      24.818 -36.021 -20.315  1.00 25.65           C
ATOM   1355  C   LEU A 189      26.228 -36.545 -20.038  1.00 25.84           C
ATOM   1356  O   LEU A 189      26.482 -37.723 -20.218  1.00 26.15           O
ATOM   1357  CB  LEU A 189      24.760 -35.312 -21.675  1.00 25.01           C
ATOM   1358  CG  LEU A 189      25.224 -36.081 -22.928  1.00 26.90           C
ATOM   1359  CD1 LEU A 189      24.573 -37.453 -23.005  1.00 27.65           C
ATOM   1360  CD2 LEU A 189      24.964 -35.262 -24.206  1.00 25.51           C
ATOM   1361  N   GLY A 190      27.143 -35.687 -19.559  1.00 26.30           N
ATOM   1362  CA  GLY A 190      28.459 -36.177 -19.172  1.00 25.82           C
ATOM   1363  C   GLY A 190      28.374 -37.333 -18.202  1.00 26.86           C
ATOM   1364  O   GLY A 190      29.022 -38.380 -18.435  1.00 27.56           O
ATOM   1365  N   ARG A 191      27.596 -37.155 -17.120  1.00 27.11           N
ATOM   1366  CA  ARG A 191      27.405 -38.204 -16.104  1.00 28.91           C
ATOM   1367  C   ARG A 191      26.625 -39.447 -16.603  1.00 29.92           C
```

```
ATOM   1368  O   ARG A 191      26.949 -40.572 -16.184  1.00 31.13           O
ATOM   1369  CB  ARG A 191      26.731 -37.674 -14.848  1.00 27.73           C
ATOM   1370  CG  ARG A 191      26.686 -38.684 -13.643  1.00 31.18           C
ATOM   1371  CD  ARG A 191      25.556 -38.313 -12.598  1.00 30.77           C
ATOM   1372  NE  ARG A 191      25.456 -36.878 -12.720  1.00 40.60           N
ATOM   1373  CZ  ARG A 191      24.393 -36.158 -13.033  1.00 37.07           C
ATOM   1374  NH1 ARG A 191      23.194 -36.681 -13.183  1.00 31.11           N
ATOM   1375  NH2 ARG A 191      24.580 -34.859 -13.125  1.00 35.15           N
ATOM   1376  N   ALA A 192      25.612 -39.251 -17.451  1.00 28.40           N
ATOM   1377  CA  ALA A 192      24.904 -40.383 -18.103  1.00 29.52           C
ATOM   1378  C   ALA A 192      25.895 -41.282 -18.854  1.00 29.15           C
ATOM   1379  O   ALA A 192      25.855 -42.483 -18.713  1.00 29.51           O
ATOM   1380  CB  ALA A 192      23.786 -39.852 -19.070  1.00 28.42           C
ATOM   1381  N   LEU A 193      26.820 -40.676 -19.611  1.00 30.15           N
ATOM   1382  CA  LEU A 193      27.793 -41.416 -20.430  1.00 29.22           C
ATOM   1383  C   LEU A 193      28.988 -41.935 -19.638  1.00 29.89           C
ATOM   1384  O   LEU A 193      29.508 -43.007 -19.937  1.00 30.66           O
ATOM   1385  CB  LEU A 193      28.324 -40.510 -21.564  1.00 28.91           C
ATOM   1386  CG  LEU A 193      27.439 -40.241 -22.786  1.00 29.60           C
ATOM   1387  CD1 LEU A 193      28.186 -39.452 -23.832  1.00 30.57           C
ATOM   1388  CD2 LEU A 193      26.901 -41.556 -23.381  1.00 26.88           C
ATOM   1389  N   ARG A 194      29.487 -41.121 -18.702  1.00 29.31           N
ATOM   1390  CA  ARG A 194      30.627 -41.495 -17.858  1.00 28.76           C
ATOM   1391  C   ARG A 194      30.268 -41.300 -16.366  1.00 27.86           C
ATOM   1392  O   ARG A 194      30.590 -40.263 -15.771  1.00 26.43           O
ATOM   1393  CB  ARG A 194      31.879 -40.717 -18.260  1.00 28.76           C
ATOM   1394  CG  ARG A 194      32.245 -40.865 -19.755  1.00 28.90           C
ATOM   1395  CD  ARG A 194      32.740 -42.255 -20.016  1.00 30.60           C
ATOM   1396  NE  ARG A 194      33.259 -42.489 -21.379  1.00 31.00           N
ATOM   1397  CZ  ARG A 194      32.636 -43.247 -22.298  1.00 31.70           C
ATOM   1398  NH1 ARG A 194      31.450 -43.788 -22.022  1.00 27.26           N
ATOM   1399  NH2 ARG A 194      33.199 -43.474 -23.479  1.00 28.50           N
ATOM   1400  N   PRO A 195      29.503 -42.268 -15.798  1.00 27.07           N
ATOM   1401  CA  PRO A 195      28.900 -42.018 -14.474  1.00 27.28           C
ATOM   1402  C   PRO A 195      29.883 -41.870 -13.315  1.00 27.74           C
ATOM   1403  O   PRO A 195      29.460 -41.402 -12.255  1.00 27.47           O
ATOM   1404  CB  PRO A 195      27.980 -43.215 -14.247  1.00 27.48           C
ATOM   1405  CG  PRO A 195      28.405 -44.270 -15.254  1.00 26.85           C
ATOM   1406  CD  PRO A 195      29.075 -43.544 -16.392  1.00 26.95           C
ATOM   1407  N   ARG A 196      31.148 -42.276 -13.527  1.00 27.46           N
ATOM   1408  CA  ARG A 196      32.196 -42.209 -12.505  1.00 29.02           C
ATOM   1409  C   ARG A 196      33.078 -40.932 -12.626  1.00 28.45           C
ATOM   1410  O   ARG A 196      33.925 -40.678 -11.780  1.00 27.65           O
ATOM   1411  CB  ARG A 196      33.062 -43.462 -12.514  1.00 29.78           C
ATOM   1412  CG  ARG A 196      32.390 -44.776 -12.056  1.00 32.05           C
ATOM   1413  CD  ARG A 196      33.467 -45.852 -12.084  1.00 43.08           C
ATOM   1414  NE  ARG A 196      33.161 -46.969 -11.189  1.00 51.80           N
ATOM   1415  CZ  ARG A 196      32.738 -48.161 -11.599  1.00 57.07           C
ATOM   1416  NH1 ARG A 196      32.575 -48.427 -12.903  1.00 61.16           N
ATOM   1417  NH2 ARG A 196      32.467 -49.099 -10.707  1.00 60.26           N
```

```
ATOM   1418  N   GLY A 197      32.835 -40.120 -13.654  1.00 27.72           N
ATOM   1419  CA  GLY A 197      33.588 -38.869 -13.851  1.00 26.31           C
ATOM   1420  C   GLY A 197      33.247 -37.842 -12.812  1.00 26.15           C
ATOM   1421  O   GLY A 197      32.106 -37.717 -12.362  1.00 26.25           O
ATOM   1422  N   LEU A 198      34.249 -37.084 -12.403  1.00 26.18           N
ATOM   1423  CA  LEU A 198      34.022 -36.051 -11.392  1.00 25.95           C
ATOM   1424  C   LEU A 198      33.725 -34.741 -12.116  1.00 24.75           C
ATOM   1425  O   LEU A 198      34.559 -33.818 -12.167  1.00 25.92           O
ATOM   1426  CB  LEU A 198      35.239 -35.924 -10.438  1.00 25.52           C
ATOM   1427  CG  LEU A 198      35.610 -37.189  -9.632  1.00 27.53           C
ATOM   1428  CD1 LEU A 198      36.913 -36.983  -8.800  1.00 24.16           C
ATOM   1429  CD2 LEU A 198      34.477 -37.571  -8.721  1.00 25.19           C
ATOM   1430  N   TRP A 199      32.527 -34.677 -12.649  1.00 23.60           N
ATOM   1431  CA  TRP A 199      32.086 -33.644 -13.581  1.00 24.64           C
ATOM   1432  C   TRP A 199      31.771 -32.378 -12.825  1.00 24.77           C
ATOM   1433  O   TRP A 199      30.985 -32.409 -11.886  1.00 25.23           O
ATOM   1434  CB  TRP A 199      30.783 -34.082 -14.275  1.00 23.96           C
ATOM   1435  CG  TRP A 199      30.975 -35.233 -15.282  1.00 25.18           C
ATOM   1436  CD1 TRP A 199      30.750 -36.560 -15.072  1.00 26.65           C
ATOM   1437  CD2 TRP A 199      31.394 -35.102 -16.639  1.00 23.26           C
ATOM   1438  NE1 TRP A 199      31.037 -37.270 -16.210  1.00 26.88           N
ATOM   1439  CE2 TRP A 199      31.449 -36.394 -17.186  1.00 26.81           C
ATOM   1440  CE3 TRP A 199      31.761 -34.003 -17.441  1.00 25.38           C
ATOM   1441  CZ2 TRP A 199      31.868 -36.641 -18.536  1.00 25.59           C
ATOM   1442  CZ3 TRP A 199      32.175 -34.236 -18.788  1.00 25.41           C
ATOM   1443  CH2 TRP A 199      32.223 -35.554 -19.308  1.00 26.09           C
ATOM   1444  N   GLY A 200      32.318 -31.262 -13.291  1.00 24.38           N
ATOM   1445  CA  GLY A 200      31.949 -29.962 -12.763  1.00 23.07           C
ATOM   1446  C   GLY A 200      32.552 -28.871 -13.597  1.00 23.20           C
ATOM   1447  O   GLY A 200      33.414 -29.097 -14.434  1.00 22.91           O
ATOM   1448  N   PHE A 201      32.060 -27.660 -13.397  1.00 23.65           N
ATOM   1449  CA  PHE A 201      32.567 -26.520 -14.150  1.00 23.28           C
ATOM   1450  C   PHE A 201      33.667 -25.807 -13.418  1.00 23.44           C
ATOM   1451  O   PHE A 201      33.577 -25.580 -12.193  1.00 22.94           O
ATOM   1452  CB  PHE A 201      31.409 -25.527 -14.381  1.00 24.42           C
ATOM   1453  CG  PHE A 201      30.419 -25.983 -15.456  1.00 24.84           C
ATOM   1454  CD1 PHE A 201      29.232 -26.601 -15.106  1.00 25.56           C
ATOM   1455  CD2 PHE A 201      30.688 -25.748 -16.799  1.00 24.11           C
ATOM   1456  CE1 PHE A 201      28.322 -26.984 -16.084  1.00 26.31           C
ATOM   1457  CE2 PHE A 201      29.793 -26.139 -17.764  1.00 24.86           C
ATOM   1458  CZ  PHE A 201      28.619 -26.755 -17.406  1.00 26.46           C
ATOM   1459  N   TYR A 202      34.694 -25.407 -14.156  1.00 23.35           N
ATOM   1460  CA  TYR A 202      35.770 -24.590 -13.566  1.00 23.78           C
ATOM   1461  C   TYR A 202      35.232 -23.229 -13.009  1.00 24.16           C
ATOM   1462  O   TYR A 202      34.441 -22.532 -13.709  1.00 23.29           O
ATOM   1463  CB  TYR A 202      36.924 -24.337 -14.599  1.00 23.91           C
ATOM   1464  CG  TYR A 202      37.789 -23.166 -14.151  1.00 25.23           C
ATOM   1465  CD1 TYR A 202      38.783 -23.353 -13.176  1.00 25.47           C
ATOM   1466  CD2 TYR A 202      37.560 -21.867 -14.628  1.00 24.12           C
ATOM   1467  CE1 TYR A 202      39.526 -22.281 -12.689  1.00 26.17           C
```

```
ATOM   1468  CE2 TYR A 202      38.336 -20.761 -14.157  1.00 22.17           C
ATOM   1469  CZ  TYR A 202      39.285 -20.993 -13.189  1.00 26.80           C
ATOM   1470  OH  TYR A 202      40.028 -19.969 -12.670  1.00 29.27           O
ATOM   1471  N   GLY A 203      35.631 -22.841 -11.780  1.00 23.45           N
ATOM   1472  CA  GLY A 203      35.323 -21.493 -11.309  1.00 23.01           C
ATOM   1473  C   GLY A 203      33.972 -21.352 -10.641  1.00 24.69           C
ATOM   1474  O   GLY A 203      33.473 -20.232 -10.476  1.00 25.18           O
ATOM   1475  N   PHE A 204      33.342 -22.468 -10.271  1.00 24.87           N
ATOM   1476  CA  PHE A 204      32.039 -22.436  -9.595  1.00 25.97           C
ATOM   1477  C   PHE A 204      32.131 -23.204  -8.289  1.00 25.80           C
ATOM   1478  O   PHE A 204      32.714 -24.281  -8.271  1.00 26.68           O
ATOM   1479  CB  PHE A 204      30.899 -23.059 -10.459  1.00 25.84           C
ATOM   1480  CG  PHE A 204      30.468 -22.185 -11.625  1.00 26.10           C
ATOM   1481  CD1 PHE A 204      31.125 -22.260 -12.831  1.00 26.76           C
ATOM   1482  CD2 PHE A 204      29.402 -21.273 -11.489  1.00 27.47           C
ATOM   1483  CE1 PHE A 204      30.742 -21.471 -13.924  1.00 28.05           C
ATOM   1484  CE2 PHE A 204      29.005 -20.459 -12.540  1.00 26.74           C
ATOM   1485  CZ  PHE A 204      29.682 -20.547 -13.777  1.00 29.49           C
ATOM   1486  N   PRO A 205      31.518 -22.684  -7.212  1.00 25.78           N
ATOM   1487  CA  PRO A 205      30.912 -21.325  -7.129  1.00 25.52           C
ATOM   1488  C   PRO A 205      31.989 -20.228  -7.056  1.00 26.76           C
ATOM   1489  O   PRO A 205      33.152 -20.514  -6.768  1.00 26.00           O
ATOM   1490  CB  PRO A 205      30.157 -21.348  -5.789  1.00 24.12           C
ATOM   1491  CG  PRO A 205      30.932 -22.321  -4.935  1.00 24.76           C
ATOM   1492  CD  PRO A 205      31.310 -23.444  -5.956  1.00 25.78           C
ATOM   1493  N   ASP A 206      31.598 -18.974  -7.289  1.00 27.57           N
ATOM   1494  CA  ASP A 206      32.494 -17.870  -7.054  1.00 28.24           C
ATOM   1495  C   ASP A 206      31.898 -17.096  -5.898  1.00 29.25           C
ATOM   1496  O   ASP A 206      30.686 -16.909  -5.793  1.00 30.69           O
ATOM   1497  CB  ASP A 206      32.598 -17.003  -8.279  1.00 28.03           C
ATOM   1498  CG  ASP A 206      33.805 -16.073  -8.247  1.00 29.62           C
ATOM   1499  OD1 ASP A 206      34.256 -15.565  -7.197  1.00 30.89           O
ATOM   1500  OD2 ASP A 206      34.343 -15.856  -9.327  1.00 33.36           O
ATOM   1501  N   CYS A 207      32.746 -16.668  -5.005  1.00 31.54           N
ATOM   1502  CA  CYS A 207      32.321 -15.993  -3.790  1.00 32.00           C
ATOM   1503  C   CYS A 207      32.344 -14.443  -4.057  1.00 32.25           C
ATOM   1504  O   CYS A 207      31.695 -13.663  -3.354  1.00 32.53           O
ATOM   1505  CB  CYS A 207      33.201 -16.536  -2.635  1.00 31.15           C
ATOM   1506  SG  CYS A 207      33.237 -15.680  -1.065  1.00 37.43           S
ATOM   1507  N   TYR A 208      33.025 -14.015  -5.128  1.00 31.67           N
ATOM   1508  CA  TYR A 208      33.114 -12.590  -5.516  1.00 32.11           C
ATOM   1509  C   TYR A 208      33.592 -11.702  -4.357  1.00 33.16           C
ATOM   1510  O   TYR A 208      33.146 -10.558  -4.228  1.00 34.03           O
ATOM   1511  CB  TYR A 208      31.789 -12.053  -6.127  1.00 32.10           C
ATOM   1512  CG  TYR A 208      31.360 -12.784  -7.376  1.00 31.43           C
ATOM   1513  CD1 TYR A 208      30.315 -13.702  -7.348  1.00 32.17           C
ATOM   1514  CD2 TYR A 208      32.060 -12.626  -8.560  1.00 33.20           C
ATOM   1515  CE1 TYR A 208      29.966 -14.424  -8.480  1.00 32.31           C
ATOM   1516  CE2 TYR A 208      31.723 -13.331  -9.697  1.00 33.89           C
ATOM   1517  CZ  TYR A 208      30.676 -14.232  -9.655  1.00 33.53           C
```

```
ATOM   1518  OH  TYR A 208      30.345 -14.924 -10.803  1.00 33.79           O
ATOM   1519  N   ASN A 209      34.512 -12.215  -3.533  1.00 32.42           N
ATOM   1520  CA  ASN A 209      35.045 -11.464  -2.395  1.00 31.59           C
ATOM   1521  C   ASN A 209      36.357 -10.731  -2.775  1.00 32.27           C
ATOM   1522  O   ASN A 209      37.367 -10.840  -2.084  1.00 30.80           O
ATOM   1523  CB  ASN A 209      35.268 -12.401  -1.213  1.00 31.25           C
ATOM   1524  CG  ASN A 209      36.162 -13.623  -1.569  1.00 29.29           C
ATOM   1525  OD1 ASN A 209      36.343 -13.952  -2.741  1.00 27.96           O
ATOM   1526  ND2 ASN A 209      36.750 -14.262  -0.543  1.00 28.08           N
ATOM   1527  N   TYR A 210      36.326 -10.033  -3.914  1.00 33.72           N
ATOM   1528  CA  TYR A 210      37.471  -9.260  -4.457  1.00 34.34           C
ATOM   1529  C   TYR A 210      37.537  -7.829  -3.892  1.00 34.30           C
ATOM   1530  O   TYR A 210      38.313  -7.023  -4.371  1.00 33.80           O
ATOM   1531  CB  TYR A 210      37.352  -9.162  -5.983  1.00 34.91           C
ATOM   1532  CG  TYR A 210      37.162 -10.491  -6.650  1.00 37.34           C
ATOM   1533  CD1 TYR A 210      35.965 -10.799  -7.325  1.00 39.22           C
ATOM   1534  CD2 TYR A 210      38.175 -11.470  -6.607  1.00 38.60           C
ATOM   1535  CE1 TYR A 210      35.777 -12.091  -7.922  1.00 41.99           C
ATOM   1536  CE2 TYR A 210      38.001 -12.752  -7.189  1.00 38.30           C
ATOM   1537  CZ  TYR A 210      36.808 -13.043  -7.844  1.00 38.50           C
ATOM   1538  OH  TYR A 210      36.656 -14.254  -8.447  1.00 40.00           O
ATOM   1539  N   ASP A 211      36.701  -7.511  -2.910  1.00 34.51           N
ATOM   1540  CA  ASP A 211      36.702  -6.182  -2.279  1.00 35.56           C
ATOM   1541  C   ASP A 211      37.902  -5.886  -1.354  1.00 35.90           C
ATOM   1542  O   ASP A 211      37.743  -5.380  -0.250  1.00 35.72           O
ATOM   1543  CB  ASP A 211      35.350  -5.850  -1.606  1.00 35.44           C
ATOM   1544  CG  ASP A 211      34.683  -7.054  -0.850  1.00 37.63           C
ATOM   1545  OD1 ASP A 211      35.080  -8.241  -0.925  1.00 35.00           O
ATOM   1546  OD2 ASP A 211      33.670  -6.780  -0.169  1.00 40.83           O
ATOM   1547  N   PHE A 212      39.104  -6.183  -1.843  1.00 37.39           N
ATOM   1548  CA  PHE A 212      40.339  -6.084  -1.075  1.00 39.14           C
ATOM   1549  C   PHE A 212      40.601  -4.701  -0.542  1.00 41.91           C
ATOM   1550  O   PHE A 212      41.119  -4.564   0.563  1.00 42.80           O
ATOM   1551  CB  PHE A 212      41.523  -6.466  -1.946  1.00 38.10           C
ATOM   1552  CG  PHE A 212      41.414  -7.809  -2.559  1.00 38.20           C
ATOM   1553  CD1 PHE A 212      41.543  -7.969  -3.924  1.00 36.33           C
ATOM   1554  CD2 PHE A 212      41.216  -8.944  -1.758  1.00 36.57           C
ATOM   1555  CE1 PHE A 212      41.468  -9.223  -4.478  1.00 36.44           C
ATOM   1556  CE2 PHE A 212      41.110 -10.165  -2.317  1.00 32.80           C
ATOM   1557  CZ  PHE A 212      41.246 -10.327  -3.656  1.00 33.46           C
ATOM   1558  N   LEU A 213      40.283  -3.670  -1.334  1.00 44.81           N
ATOM   1559  CA  LEU A 213      40.425  -2.275  -0.876  1.00 47.59           C
ATOM   1560  C   LEU A 213      39.085  -1.780  -0.324  1.00 49.07           C
ATOM   1561  O   LEU A 213      38.183  -1.356  -1.049  1.00 49.68           O
ATOM   1562  CB  LEU A 213      40.993  -1.338  -1.957  1.00 47.79           C
ATOM   1563  CG  LEU A 213      41.974  -1.889  -3.019  1.00 49.47           C
ATOM   1564  CD1 LEU A 213      42.289  -0.777  -4.015  1.00 51.77           C
ATOM   1565  CD2 LEU A 213      43.277  -2.530  -2.451  1.00 50.08           C
ATOM   1566  N   SER A 214      38.991  -1.882   0.990  1.00 50.33           N
ATOM   1567  CA  SER A 214      37.846  -1.544   1.774  1.00 51.50           C
```

```
ATOM   1568  C   SER A 214      38.503  -1.624   3.154  1.00 52.23           C
ATOM   1569  O   SER A 214      39.342  -2.512   3.392  1.00 52.79           O
ATOM   1570  CB  SER A 214      36.745  -2.612   1.584  1.00 51.68           C
ATOM   1571  OG  SER A 214      35.864  -2.710   2.713  1.00 53.39           O
ATOM   1572  N   PRO A 215      38.200  -0.672   4.051  1.00 52.63           N
ATOM   1573  CA  PRO A 215      38.702  -0.900   5.422  1.00 52.97           C
ATOM   1574  C   PRO A 215      38.281  -2.276   6.028  1.00 53.02           C
ATOM   1575  O   PRO A 215      39.144  -3.040   6.486  1.00 53.98           O
ATOM   1576  CB  PRO A 215      38.112   0.277   6.226  1.00 53.11           C
ATOM   1577  CG  PRO A 215      37.760   1.327   5.199  1.00 53.02           C
ATOM   1578  CD  PRO A 215      37.461   0.600   3.906  1.00 52.39           C
ATOM   1579  N   ASN A 216      36.987  -2.609   5.978  1.00 52.02           N
ATOM   1580  CA  ASN A 216      36.426  -3.703   6.788  1.00 50.67           C
ATOM   1581  C   ASN A 216      36.519  -5.137   6.157  1.00 48.43           C
ATOM   1582  O   ASN A 216      35.669  -6.008   6.427  1.00 48.16           O
ATOM   1583  CB  ASN A 216      34.976  -3.339   7.180  1.00 51.24           C
ATOM   1584  CG  ASN A 216      34.863  -2.747   8.603  1.00 54.97           C
ATOM   1585  OD1 ASN A 216      34.839  -1.504   8.807  1.00 55.51           O
ATOM   1586  ND2 ASN A 216      34.778  -3.641   9.597  1.00 57.08           N
ATOM   1587  N   TYR A 217      37.564  -5.375   5.357  1.00 45.63           N
ATOM   1588  CA  TYR A 217      37.706  -6.621   4.570  1.00 42.88           C
ATOM   1589  C   TYR A 217      37.756  -7.876   5.452  1.00 41.60           C
ATOM   1590  O   TYR A 217      38.688  -8.040   6.224  1.00 41.87           O
ATOM   1591  CB  TYR A 217      38.925  -6.565   3.629  1.00 41.91           C
ATOM   1592  CG  TYR A 217      38.932  -7.736   2.662  1.00 40.99           C
ATOM   1593  CD1 TYR A 217      38.010  -7.801   1.614  1.00 37.99           C
ATOM   1594  CD2 TYR A 217      39.831  -8.810   2.829  1.00 39.81           C
ATOM   1595  CE1 TYR A 217      37.993  -8.907   0.732  1.00 40.94           C
ATOM   1596  CE2 TYR A 217      39.818  -9.912   1.973  1.00 38.85           C
ATOM   1597  CZ  TYR A 217      38.892  -9.966   0.928  1.00 40.05           C
ATOM   1598  OH  TYR A 217      38.890 -11.027   0.062  1.00 36.92           O
ATOM   1599  N   THR A 218      36.713  -8.712   5.381  1.00 39.75           N
ATOM   1600  CA  THR A 218      36.687 -10.007   6.062  1.00 37.33           C
ATOM   1601  C   THR A 218      36.897 -11.214   5.114  1.00 36.02           C
ATOM   1602  O   THR A 218      37.067 -12.341   5.595  1.00 35.07           O
ATOM   1603  CB  THR A 218      35.380 -10.245   6.822  1.00 37.49           C
ATOM   1604  OG1 THR A 218      34.283 -10.177   5.908  1.00 36.68           O
ATOM   1605  CG2 THR A 218      35.188  -9.216   7.994  1.00 37.50           C
ATOM   1606  N   GLY A 219      36.871 -10.985   3.794  1.00 33.91           N
ATOM   1607  CA  GLY A 219      36.839 -12.085   2.810  1.00 32.63           C
ATOM   1608  C   GLY A 219      35.463 -12.706   2.606  1.00 32.32           C
ATOM   1609  O   GLY A 219      35.298 -13.563   1.737  1.00 30.57           O
ATOM   1610  N   GLN A 220      34.462 -12.281   3.392  1.00 32.89           N
ATOM   1611  CA  GLN A 220      33.094 -12.811   3.245  1.00 35.28           C
ATOM   1612  C   GLN A 220      32.488 -12.546   1.851  1.00 34.57           C
ATOM   1613  O   GLN A 220      32.663 -11.472   1.259  1.00 33.21           O
ATOM   1614  CB  GLN A 220      32.150 -12.265   4.309  1.00 34.29           C
ATOM   1615  CG  GLN A 220      32.369 -12.719   5.722  1.00 38.72           C
ATOM   1616  CD  GLN A 220      31.381 -12.019   6.739  1.00 41.68           C
ATOM   1617  OE1 GLN A 220      30.890 -10.896   6.501  1.00 46.93           O
```

```
ATOM   1618  NE2 GLN A 220      31.103 -12.696   7.859  1.00 46.02           N
ATOM   1619  N   CYS A 221      31.778 -13.536   1.331  1.00 36.13           N
ATOM   1620  CA  CYS A 221      31.087 -13.381   0.050  1.00 38.25           C
ATOM   1621  C   CYS A 221      30.056 -12.298   0.280  1.00 39.54           C
ATOM   1622  O   CYS A 221      29.245 -12.412   1.210  1.00 40.43           O
ATOM   1623  CB  CYS A 221      30.408 -14.679  -0.397  1.00 38.00           C
ATOM   1624  SG  CYS A 221      31.442 -16.159  -0.194  1.00 41.60           S
ATOM   1625  N   PRO A 222      30.105 -11.216  -0.522  1.00 40.17           N
ATOM   1626  CA  PRO A 222      29.146 -10.150  -0.276  1.00 41.06           C
ATOM   1627  C   PRO A 222      27.687 -10.597  -0.237  1.00 42.16           C
ATOM   1628  O   PRO A 222      27.341 -11.737  -0.586  1.00 42.40           O
ATOM   1629  CB  PRO A 222      29.394  -9.180  -1.437  1.00 41.12           C
ATOM   1630  CG  PRO A 222      30.822  -9.443  -1.842  1.00 40.33           C
ATOM   1631  CD  PRO A 222      31.009 -10.904  -1.639  1.00 39.65           C
ATOM   1632  N   SER A 223      26.875  -9.709   0.333  1.00 43.77           N
ATOM   1633  CA  SER A 223      25.401  -9.607   0.210  1.00 44.02           C
ATOM   1634  C   SER A 223      24.549 -10.740  -0.461  1.00 43.97           C
ATOM   1635  O   SER A 223      24.318 -11.883   0.070  1.00 44.90           O
ATOM   1636  CB  SER A 223      25.124  -8.257  -0.497  1.00 44.36           C
ATOM   1637  OG  SER A 223      25.637  -8.271  -1.834  1.00 42.24           O
ATOM   1638  N   GLY A 224      24.042 -10.395  -1.632  1.00 42.56           N
ATOM   1639  CA  GLY A 224      23.185 -11.308  -2.344  1.00 41.38           C
ATOM   1640  C   GLY A 224      23.986 -12.216  -3.233  1.00 39.66           C
ATOM   1641  O   GLY A 224      23.426 -12.737  -4.203  1.00 39.57           O
ATOM   1642  N   ILE A 225      25.292 -12.383  -2.923  1.00 38.70           N
ATOM   1643  CA  ILE A 225      26.140 -13.310  -3.694  1.00 37.21           C
ATOM   1644  C   ILE A 225      25.740 -14.722  -3.279  1.00 36.41           C
ATOM   1645  O   ILE A 225      25.361 -15.504  -4.124  1.00 36.39           O
ATOM   1646  CB  ILE A 225      27.681 -13.118  -3.507  1.00 36.96           C
ATOM   1647  CG1 ILE A 225      28.171 -11.744  -4.003  1.00 36.24           C
ATOM   1648  CG2 ILE A 225      28.454 -14.294  -4.161  1.00 36.57           C
ATOM   1649  CD1 ILE A 225      27.652 -11.316  -5.330  1.00 37.35           C
ATOM   1650  N   ARG A 226      25.801 -15.010  -1.980  1.00 35.65           N
ATOM   1651  CA  ARG A 226      25.381 -16.288  -1.454  1.00 36.21           C
ATOM   1652  C   ARG A 226      23.967 -16.618  -1.875  1.00 35.67           C
ATOM   1653  O   ARG A 226      23.686 -17.755  -2.248  1.00 35.65           O
ATOM   1654  CB  ARG A 226      25.564 -16.354   0.052  1.00 36.19           C
ATOM   1655  CG  ARG A 226      27.063 -16.336   0.454  1.00 38.30           C
ATOM   1656  CD  ARG A 226      27.331 -16.348   1.958  1.00 38.28           C
ATOM   1657  NE  ARG A 226      26.332 -15.559   2.699  1.00 50.71           N
ATOM   1658  CZ  ARG A 226      26.495 -14.316   3.175  1.00 50.65           C
ATOM   1659  NH1 ARG A 226      27.650 -13.661   3.030  1.00 50.95           N
ATOM   1660  NH2 ARG A 226      25.487 -13.734   3.817  1.00 51.40           N
ATOM   1661  N   ALA A 227      23.109 -15.601  -1.908  1.00 35.43           N
ATOM   1662  CA  ALA A 227      21.722 -15.764  -2.288  1.00 35.18           C
ATOM   1663  C   ALA A 227      21.590 -16.164  -3.758  1.00 34.52           C
ATOM   1664  O   ALA A 227      20.776 -17.009  -4.081  1.00 35.32           O
ATOM   1665  CB  ALA A 227      20.921 -14.448  -1.989  1.00 35.57           C
ATOM   1666  N   GLN A 228      22.383 -15.556  -4.637  1.00 33.86           N
ATOM   1667  CA  GLN A 228      22.452 -15.987  -6.044  1.00 34.14           C
```

```
ATOM   1668  C   GLN A 228      22.997 -17.404  -6.200  1.00 32.85           C
ATOM   1669  O   GLN A 228      22.519 -18.140  -7.034  1.00 31.46           O
ATOM   1670  CB  GLN A 228      23.320 -15.063  -6.903  1.00 35.13           C
ATOM   1671  CG  GLN A 228      22.845 -13.614  -7.059  1.00 36.63           C
ATOM   1672  CD  GLN A 228      21.514 -13.491  -7.777  1.00 39.66           C
ATOM   1673  OE1 GLN A 228      21.224 -14.187  -8.755  1.00 39.49           O
ATOM   1674  NE2 GLN A 228      20.699 -12.592  -7.292  1.00 40.72           N
ATOM   1675  N   ASN A 229      24.016 -17.758  -5.420  1.00 32.63           N
ATOM   1676  CA  ASN A 229      24.553 -19.150  -5.395  1.00 32.71           C
ATOM   1677  C   ASN A 229      23.542 -20.216  -4.950  1.00 32.97           C
ATOM   1678  O   ASN A 229      23.510 -21.319  -5.514  1.00 32.81           O
ATOM   1679  CB  ASN A 229      25.845 -19.236  -4.585  1.00 31.43           C
ATOM   1680  CG  ASN A 229      27.024 -18.570  -5.291  1.00 29.84           C
ATOM   1681  OD1 ASN A 229      27.026 -18.405  -6.502  1.00 30.11           O
ATOM   1682  ND2 ASN A 229      28.041 -18.226  -4.539  1.00 26.83           N
ATOM   1683  N   ASP A 230      22.709 -19.887  -3.958  1.00 34.24           N
ATOM   1684  CA  ASP A 230      21.539 -20.738  -3.597  1.00 35.11           C
ATOM   1685  C   ASP A 230      20.597 -20.990  -4.794  1.00 34.39           C
ATOM   1686  O   ASP A 230      20.088 -22.091  -4.944  1.00 35.88           O
ATOM   1687  CB  ASP A 230      20.739 -20.187  -2.391  1.00 35.92           C
ATOM   1688  CG  ASP A 230      21.601 -20.025  -1.107  1.00 38.41           C
ATOM   1689  OD1 ASP A 230      22.653 -20.704  -0.988  1.00 38.05           O
ATOM   1690  OD2 ASP A 230      21.218 -19.190  -0.225  1.00 40.41           O
ATOM   1691  N   GLN A 231      20.401 -19.992  -5.641  1.00 34.29           N
ATOM   1692  CA  GLN A 231      19.636 -20.109  -6.885  1.00 34.69           C
ATOM   1693  C   GLN A 231      20.322 -20.987  -7.943  1.00 33.78           C
ATOM   1694  O   GLN A 231      19.743 -21.287  -9.002  1.00 34.82           O
ATOM   1695  CB  GLN A 231      19.338 -18.721  -7.498  1.00 35.17           C
ATOM   1696  CG  GLN A 231      18.540 -17.744  -6.644  1.00 38.90           C
ATOM   1697  CD  GLN A 231      17.192 -18.299  -6.255  1.00 46.63           C
ATOM   1698  OE1 GLN A 231      16.333 -18.532  -7.116  1.00 49.59           O
ATOM   1699  NE2 GLN A 231      16.993 -18.533  -4.950  1.00 47.70           N
ATOM   1700  N   LEU A 232      21.544 -21.407  -7.662  1.00 32.56           N
ATOM   1701  CA  LEU A 232      22.244 -22.343  -8.506  1.00 30.96           C
ATOM   1702  C   LEU A 232      22.249 -23.759  -7.922  1.00 31.48           C
ATOM   1703  O   LEU A 232      23.087 -24.596  -8.302  1.00 31.66           O
ATOM   1704  CB  LEU A 232      23.664 -21.871  -8.779  1.00 29.74           C
ATOM   1705  CG  LEU A 232      23.866 -20.616  -9.633  1.00 28.17           C
ATOM   1706  CD1 LEU A 232      25.333 -20.132  -9.581  1.00 23.55           C
ATOM   1707  CD2 LEU A 232      23.405 -20.854 -11.085  1.00 24.09           C
ATOM   1708  N   GLY A 233      21.315 -24.053  -7.026  1.00 31.30           N
ATOM   1709  CA  GLY A 233      21.206 -25.417  -6.450  1.00 30.80           C
ATOM   1710  C   GLY A 233      21.109 -26.483  -7.535  1.00 30.53           C
ATOM   1711  O   GLY A 233      21.716 -27.561  -7.431  1.00 31.70           O
ATOM   1712  N   TRP A 234      20.394 -26.171  -8.602  1.00 28.77           N
ATOM   1713  CA  TRP A 234      20.297 -27.060  -9.762  1.00 28.60           C
ATOM   1714  C   TRP A 234      21.691 -27.430 -10.304  1.00 28.60           C
ATOM   1715  O   TRP A 234      21.919 -28.578 -10.697  1.00 30.42           O
ATOM   1716  CB  TRP A 234      19.447 -26.419 -10.875  1.00 26.90           C
ATOM   1717  CG  TRP A 234      20.018 -25.107 -11.441  1.00 26.79           C
```

```
ATOM   1718  CD1 TRP A 234      19.671 -23.859 -11.072  1.00 26.15           C
ATOM   1719  CD2 TRP A 234      21.030 -24.948 -12.494  1.00 26.34           C
ATOM   1720  NE1 TRP A 234      20.372 -22.928 -11.817  1.00 27.37           N
ATOM   1721  CE2 TRP A 234      21.219 -23.569 -12.680  1.00 22.96           C
ATOM   1722  CE3 TRP A 234      21.774 -25.852 -13.296  1.00 26.38           C
ATOM   1723  CZ2 TRP A 234      22.137 -23.045 -13.616  1.00 24.91           C
ATOM   1724  CZ3 TRP A 234      22.690 -25.339 -14.222  1.00 24.69           C
ATOM   1725  CH2 TRP A 234      22.857 -23.938 -14.371  1.00 25.74           C
ATOM   1726  N   LEU A 235      22.599 -26.459 -10.317  1.00 28.30           N
ATOM   1727  CA  LEU A 235      23.997 -26.630 -10.770  1.00 27.44           C
ATOM   1728  C   LEU A 235      24.755 -27.536  -9.838  1.00 28.11           C
ATOM   1729  O   LEU A 235      25.388 -28.477 -10.298  1.00 29.81           O
ATOM   1730  CB  LEU A 235      24.714 -25.282 -10.877  1.00 26.24           C
ATOM   1731  CG  LEU A 235      26.135 -25.325 -11.434  1.00 27.20           C
ATOM   1732  CD1 LEU A 235      26.211 -26.126 -12.769  1.00 26.95           C
ATOM   1733  CD2 LEU A 235      26.711 -23.894 -11.612  1.00 25.00           C
ATOM   1734  N   TRP A 236      24.693 -27.263  -8.532  1.00 27.76           N
ATOM   1735  CA  TRP A 236      25.370 -28.092  -7.538  1.00 28.39           C
ATOM   1736  C   TRP A 236      24.851 -29.536  -7.557  1.00 28.45           C
ATOM   1737  O   TRP A 236      25.646 -30.466  -7.434  1.00 29.85           O
ATOM   1738  CB  TRP A 236      25.331 -27.460  -6.117  1.00 27.35           C
ATOM   1739  CG  TRP A 236      25.428 -25.969  -6.142  1.00 26.47           C
ATOM   1740  CD1 TRP A 236      24.593 -25.082  -5.536  1.00 25.53           C
ATOM   1741  CD2 TRP A 236      26.400 -25.188  -6.864  1.00 25.00           C
ATOM   1742  NE1 TRP A 236      24.998 -23.780  -5.819  1.00 25.76           N
ATOM   1743  CE2 TRP A 236      26.107 -23.831  -6.632  1.00 24.35           C
ATOM   1744  CE3 TRP A 236      27.504 -25.517  -7.672  1.00 26.00           C
ATOM   1745  CZ2 TRP A 236      26.855 -22.788  -7.203  1.00 24.30           C
ATOM   1746  CZ3 TRP A 236      28.241 -24.479  -8.241  1.00 25.27           C
ATOM   1747  CH2 TRP A 236      27.881 -23.125  -8.022  1.00 24.97           C
ATOM   1748  N   GLY A 237      23.545 -29.713  -7.761  1.00 28.91           N
ATOM   1749  CA  GLY A 237      22.920 -31.041  -7.854  1.00 27.77           C
ATOM   1750  C   GLY A 237      23.461 -31.818  -9.050  1.00 28.03           C
ATOM   1751  O   GLY A 237      23.604 -33.040  -8.972  1.00 28.61           O
ATOM   1752  N   GLN A 238      23.752 -31.135 -10.160  1.00 27.22           N
ATOM   1753  CA  GLN A 238      24.204 -31.814 -11.378  1.00 27.13           C
ATOM   1754  C   GLN A 238      25.735 -32.094 -11.366  1.00 27.71           C
ATOM   1755  O   GLN A 238      26.221 -32.931 -12.136  1.00 26.54           O
ATOM   1756  CB  GLN A 238      23.763 -31.021 -12.635  1.00 29.44           C
ATOM   1757  CG  GLN A 238      22.214 -31.086 -12.977  1.00 27.47           C
ATOM   1758  CD  GLN A 238      21.751 -32.434 -13.548  1.00 31.11           C
ATOM   1759  OE1 GLN A 238      22.522 -33.379 -13.707  1.00 31.80           O
ATOM   1760  NE2 GLN A 238      20.463 -32.508 -13.886  1.00 33.57           N
ATOM   1761  N   SER A 239      26.457 -31.450 -10.429  1.00 26.65           N
ATOM   1762  CA  SER A 239      27.918 -31.565 -10.266  1.00 26.14           C
ATOM   1763  C   SER A 239      28.335 -32.811  -9.482  1.00 26.67           C
ATOM   1764  O   SER A 239      27.663 -33.214  -8.521  1.00 26.51           O
ATOM   1765  CB  SER A 239      28.472 -30.327  -9.556  1.00 26.36           C
ATOM   1766  OG  SER A 239      28.275 -29.157 -10.335  1.00 27.91           O
ATOM   1767  N   ARG A 240      29.457 -33.399  -9.888  1.00 25.89           N
```

```
ATOM   1768  CA  ARG A 240      30.072 -34.510  -9.141  1.00 26.92           C
ATOM   1769  C   ARG A 240      31.475 -34.150  -8.554  1.00 26.37           C
ATOM   1770  O   ARG A 240      32.149 -34.981  -7.931  1.00 26.98           O
ATOM   1771  CB  ARG A 240      30.096 -35.793  -9.995  1.00 27.06           C
ATOM   1772  CG  ARG A 240      28.659 -36.417 -10.266  1.00 27.01           C
ATOM   1773  CD  ARG A 240      27.907 -36.793  -8.961  1.00 27.37           C
ATOM   1774  NE  ARG A 240      26.501 -37.173  -9.207  1.00 34.02           N
ATOM   1775  CZ  ARG A 240      25.449 -36.342  -9.342  1.00 32.91           C
ATOM   1776  NH1 ARG A 240      25.580 -35.033  -9.189  1.00 29.74           N
ATOM   1777  NH2 ARG A 240      24.236 -36.843  -9.595  1.00 31.76           N
ATOM   1778  N   ALA A 241      31.917 -32.928  -8.814  1.00 25.26           N
ATOM   1779  CA  ALA A 241      32.968 -32.287  -8.028  1.00 23.97           C
ATOM   1780  C   ALA A 241      32.783 -30.797  -8.190  1.00 23.40           C
ATOM   1781  O   ALA A 241      32.139 -30.390  -9.161  1.00 23.71           O
ATOM   1782  CB  ALA A 241      34.368 -32.693  -8.519  1.00 23.38           C
ATOM   1783  N   LEU A 242      33.370 -30.003  -7.285  1.00 23.31           N
ATOM   1784  CA  LEU A 242      33.372 -28.543  -7.421  1.00 24.42           C
ATOM   1785  C   LEU A 242      34.809 -28.067  -7.578  1.00 24.43           C
ATOM   1786  O   LEU A 242      35.713 -28.582  -6.886  1.00 24.89           O
ATOM   1787  CB  LEU A 242      32.701 -27.820  -6.223  1.00 23.77           C
ATOM   1788  CG  LEU A 242      31.193 -28.041  -6.043  1.00 25.29           C
ATOM   1789  CD1 LEU A 242      30.684 -27.383  -4.739  1.00 25.23           C
ATOM   1790  CD2 LEU A 242      30.299 -27.598  -7.249  1.00 22.10           C
ATOM   1791  N   TYR A 243      34.998 -27.117  -8.512  1.00 24.28           N
ATOM   1792  CA  TYR A 243      36.272 -26.573  -8.884  1.00 23.69           C
ATOM   1793  C   TYR A 243      36.290 -25.044  -8.723  1.00 25.34           C
ATOM   1794  O   TYR A 243      36.513 -24.341  -9.704  1.00 27.13           O
ATOM   1795  CB  TYR A 243      36.609 -26.923 -10.346  1.00 23.39           C
ATOM   1796  CG  TYR A 243      36.606 -28.416 -10.610  1.00 22.39           C
ATOM   1797  CD1 TYR A 243      35.520 -29.046 -11.226  1.00 20.79           C
ATOM   1798  CD2 TYR A 243      37.658 -29.223 -10.161  1.00 25.37           C
ATOM   1799  CE1 TYR A 243      35.526 -30.434 -11.465  1.00 21.27           C
ATOM   1800  CE2 TYR A 243      37.662 -30.605 -10.355  1.00 19.55           C
ATOM   1801  CZ  TYR A 243      36.608 -31.200 -11.018  1.00 22.27           C
ATOM   1802  OH  TYR A 243      36.631 -32.561 -11.195  1.00 22.87           O
ATOM   1803  N   PRO A 244      36.136 -24.522  -7.474  1.00 25.42           N
ATOM   1804  CA  PRO A 244      36.222 -23.084  -7.320  1.00 24.13           C
ATOM   1805  C   PRO A 244      37.634 -22.617  -7.611  1.00 24.81           C
ATOM   1806  O   PRO A 244      38.561 -23.355  -7.380  1.00 24.46           O
ATOM   1807  CB  PRO A 244      35.958 -22.850  -5.822  1.00 24.13           C
ATOM   1808  CG  PRO A 244      36.463 -24.165  -5.122  1.00 22.94           C
ATOM   1809  CD  PRO A 244      35.965 -25.218  -6.161  1.00 24.50           C
ATOM   1810  N   SER A 245      37.794 -21.361  -8.052  1.00 24.04           N
ATOM   1811  CA  SER A 245      39.110 -20.820  -8.294  1.00 24.74           C
ATOM   1812  C   SER A 245      39.623 -20.021  -7.070  1.00 25.29           C
ATOM   1813  O   SER A 245      38.895 -19.150  -6.552  1.00 24.99           O
ATOM   1814  CB  SER A 245      39.028 -19.887  -9.484  1.00 23.30           C
ATOM   1815  OG  SER A 245      40.307 -19.494  -9.853  1.00 28.64           O
ATOM   1816  N   ILE A 246      40.874 -20.273  -6.643  1.00 24.82           N
ATOM   1817  CA  ILE A 246      41.474 -19.419  -5.596  1.00 25.53           C
```

```
ATOM   1818  C   ILE A 246      42.771 -18.803  -6.098  1.00 27.05           C
ATOM   1819  O   ILE A 246      43.807 -18.749  -5.379  1.00 26.82           O
ATOM   1820  CB  ILE A 246      41.636 -20.171  -4.229  1.00 24.90           C
ATOM   1821  CG1 ILE A 246      42.495 -21.415  -4.422  1.00 22.61           C
ATOM   1822  CG2 ILE A 246      40.198 -20.615  -3.698  1.00 22.77           C
ATOM   1823  CD1 ILE A 246      42.862 -22.231  -3.158  1.00 25.50           C
ATOM   1824  N   TYR A 247      42.720 -18.354  -7.357  1.00 27.74           N
ATOM   1825  CA  TYR A 247      43.790 -17.532  -7.920  1.00 28.29           C
ATOM   1826  C   TYR A 247      43.836 -16.275  -7.085  1.00 29.18           C
ATOM   1827  O   TYR A 247      42.783 -15.733  -6.701  1.00 29.22           O
ATOM   1828  CB  TYR A 247      43.553 -17.197  -9.393  1.00 27.41           C
ATOM   1829  CG  TYR A 247      43.482 -18.388 -10.293  1.00 28.67           C
ATOM   1830  CD1 TYR A 247      43.930 -19.641  -9.869  1.00 26.31           C
ATOM   1831  CD2 TYR A 247      42.971 -18.264 -11.611  1.00 29.33           C
ATOM   1832  CE1 TYR A 247      43.840 -20.764 -10.694  1.00 26.24           C
ATOM   1833  CE2 TYR A 247      42.902 -19.363 -12.456  1.00 28.12           C
ATOM   1834  CZ  TYR A 247      43.325 -20.600 -11.997  1.00 29.12           C
ATOM   1835  OH  TYR A 247      43.281 -21.673 -12.831  1.00 29.56           O
ATOM   1836  N   MET A 248      45.044 -15.814  -6.797  1.00 30.58           N
ATOM   1837  CA  MET A 248      45.211 -14.693  -5.914  1.00 33.62           C
ATOM   1838  C   MET A 248      45.585 -13.458  -6.739  1.00 34.37           C
ATOM   1839  O   MET A 248      46.670 -13.407  -7.332  1.00 34.40           O
ATOM   1840  CB  MET A 248      46.269 -14.997  -4.854  1.00 33.44           C
ATOM   1841  CG  MET A 248      45.802 -15.985  -3.786  1.00 34.95           C
ATOM   1842  SD  MET A 248      47.081 -16.712  -2.742  1.00 39.43           S
ATOM   1843  CE  MET A 248      48.047 -15.284  -2.417  1.00 40.84           C
ATOM   1844  N   PRO A 249      44.669 -12.482  -6.830  1.00 35.66           N
ATOM   1845  CA  PRO A 249      45.035 -11.313  -7.621  1.00 37.18           C
ATOM   1846  C   PRO A 249      46.350 -10.669  -7.216  1.00 38.60           C
ATOM   1847  O   PRO A 249      46.768 -10.723  -6.048  1.00 37.61           O
ATOM   1848  CB  PRO A 249      43.845 -10.377  -7.410  1.00 37.24           C
ATOM   1849  CG  PRO A 249      42.617 -11.410  -7.349  1.00 36.92           C
ATOM   1850  CD  PRO A 249      43.262 -12.403  -6.361  1.00 36.10           C
ATOM   1851  N   ALA A 250      46.984 -10.053  -8.216  1.00 40.42           N
ATOM   1852  CA  ALA A 250      48.221  -9.319  -8.023  1.00 41.64           C
ATOM   1853  C   ALA A 250      48.212  -8.391  -6.801  1.00 42.05           C
ATOM   1854  O   ALA A 250      49.191  -8.353  -6.057  1.00 42.70           O
ATOM   1855  CB  ALA A 250      48.567  -8.568  -9.311  1.00 41.96           C
ATOM   1856  N   VAL A 251      47.100  -7.664  -6.581  1.00 42.50           N
ATOM   1857  CA  VAL A 251      46.963  -6.731  -5.434  1.00 41.87           C
ATOM   1858  C   VAL A 251      47.091  -7.355  -4.073  1.00 42.10           C
ATOM   1859  O   VAL A 251      47.184  -6.627  -3.076  1.00 42.51           O
ATOM   1860  CB  VAL A 251      45.570  -6.030  -5.322  1.00 41.98           C
ATOM   1861  CG1 VAL A 251      45.624  -4.609  -5.766  1.00 43.06           C
ATOM   1862  CG2 VAL A 251      44.431  -6.827  -5.966  1.00 42.24           C
ATOM   1863  N   LEU A 252      46.988  -8.682  -3.988  1.00 42.43           N
ATOM   1864  CA  LEU A 252      47.062  -9.338  -2.690  1.00 42.01           C
ATOM   1865  C   LEU A 252      48.517  -9.386  -2.251  1.00 42.39           C
ATOM   1866  O   LEU A 252      48.789  -9.423  -1.055  1.00 41.13           O
ATOM   1867  CB  LEU A 252      46.463 -10.754  -2.752  1.00 41.96           C
```

```
ATOM   1868  CG  LEU A 252      44.942 -10.915  -2.555  1.00 39.92           C
ATOM   1869  CD1 LEU A 252      44.525 -12.293  -2.932  1.00 37.16           C
ATOM   1870  CD2 LEU A 252      44.556 -10.607  -1.108  1.00 40.28           C
ATOM   1871  N   GLU A 253      49.430  -9.393  -3.238  1.00 43.55           N
ATOM   1872  CA  GLU A 253      50.873  -9.544  -2.983  1.00 45.01           C
ATOM   1873  C   GLU A 253      51.292  -8.562  -1.939  1.00 45.06           C
ATOM   1874  O   GLU A 253      51.106  -7.368  -2.124  1.00 45.89           O
ATOM   1875  CB  GLU A 253      51.757  -9.336  -4.246  1.00 45.08           C
ATOM   1876  CG  GLU A 253      53.331  -9.395  -3.964  1.00 44.44           C
ATOM   1877  CD  GLU A 253      54.153  -9.773  -5.207  1.00 45.67           C
ATOM   1878  OE1 GLU A 253      53.727  -9.430  -6.345  1.00 46.64           O
ATOM   1879  OE2 GLU A 253      55.208 -10.432  -5.061  1.00 46.69           O
ATOM   1880  N   GLY A 254      51.849  -9.075  -0.854  1.00 45.58           N
ATOM   1881  CA  GLY A 254      52.362  -8.235   0.218  1.00 46.47           C
ATOM   1882  C   GLY A 254      51.322  -7.598   1.110  1.00 46.53           C
ATOM   1883  O   GLY A 254      51.616  -6.612   1.785  1.00 47.04           O
ATOM   1884  N   THR A 255      50.106  -8.127   1.119  1.00 46.24           N
ATOM   1885  CA  THR A 255      49.159  -7.775   2.205  1.00 46.29           C
ATOM   1886  C   THR A 255      48.877  -8.948   3.160  1.00 45.11           C
ATOM   1887  O   THR A 255      49.410 -10.045   2.975  1.00 46.18           O
ATOM   1888  CB  THR A 255      47.799  -7.216   1.699  1.00 47.04           C
ATOM   1889  OG1 THR A 255      47.048  -6.790   2.861  1.00 48.58           O
ATOM   1890  CG2 THR A 255      46.996  -8.332   0.883  1.00 44.93           C
ATOM   1891  N   GLY A 256      48.044  -8.717   4.176  1.00 43.00           N
ATOM   1892  CA  GLY A 256      47.595  -9.814   5.037  1.00 40.85           C
ATOM   1893  C   GLY A 256      46.159 -10.302   4.783  1.00 38.68           C
ATOM   1894  O   GLY A 256      45.456 -10.679   5.731  1.00 37.87           O
ATOM   1895  N   LYS A 257      45.718 -10.286   3.518  1.00 36.17           N
ATOM   1896  CA  LYS A 257      44.298 -10.583   3.202  1.00 34.17           C
ATOM   1897  C   LYS A 257      44.102 -11.867   2.406  1.00 32.48           C
ATOM   1898  O   LYS A 257      42.965 -12.266   2.178  1.00 32.00           O
ATOM   1899  CB  LYS A 257      43.650  -9.416   2.431  1.00 34.61           C
ATOM   1900  CG  LYS A 257      43.452  -8.111   3.228  1.00 36.25           C
ATOM   1901  CD  LYS A 257      43.466  -6.894   2.261  1.00 37.22           C
ATOM   1902  CE  LYS A 257      43.011  -5.569   2.949  1.00 38.03           C
ATOM   1903  NZ  LYS A 257      43.356  -4.322   2.129  1.00 39.23           N
ATOM   1904  N   SER A 258      45.190 -12.479   1.948  1.00 31.23           N
ATOM   1905  CA  SER A 258      45.122 -13.720   1.189  1.00 32.34           C
ATOM   1906  C   SER A 258      44.355 -14.870   1.883  1.00 31.79           C
ATOM   1907  O   SER A 258      43.552 -15.568   1.247  1.00 31.79           O
ATOM   1908  CB  SER A 258      46.524 -14.193   0.795  1.00 32.15           C
ATOM   1909  OG  SER A 258      47.187 -13.199   0.014  1.00 35.83           O
ATOM   1910  N   GLN A 259      44.596 -15.067   3.176  1.00 31.27           N
ATOM   1911  CA  GLN A 259      44.024 -16.226   3.813  1.00 31.86           C
ATOM   1912  C   GLN A 259      42.486 -16.129   3.966  1.00 30.89           C
ATOM   1913  O   GLN A 259      41.801 -17.113   3.717  1.00 28.85           O
ATOM   1914  CB  GLN A 259      44.760 -16.604   5.118  1.00 32.22           C
ATOM   1915  CG  GLN A 259      44.170 -17.891   5.758  1.00 36.08           C
ATOM   1916  CD  GLN A 259      45.144 -18.665   6.603  1.00 43.46           C
ATOM   1917  OE1 GLN A 259      45.726 -18.105   7.524  1.00 43.63           O
```

```
ATOM   1918  NE2 GLN A 259      45.301 -20.004   6.316  1.00 45.80           N
ATOM   1919  N   MET A 260      41.980 -14.940   4.320  1.00 29.76           N
ATOM   1920  CA  MET A 260      40.535 -14.666   4.429  1.00 31.84           C
ATOM   1921  C   MET A 260      39.822 -14.771   3.078  1.00 29.28           C
ATOM   1922  O   MET A 260      38.710 -15.239   3.008  1.00 29.57           O
ATOM   1923  CB  MET A 260      40.245 -13.247   4.994  1.00 31.47           C
ATOM   1924  CG  MET A 260      41.017 -12.822   6.211  1.00 36.63           C
ATOM   1925  SD  MET A 260      40.877 -11.012   6.536  1.00 38.08           S
ATOM   1926  CE  MET A 260      39.491 -11.091   7.617  1.00 42.70           C
ATOM   1927  N   TYR A 261      40.469 -14.273   2.039  1.00 28.98           N
ATOM   1928  CA  TYR A 261      40.022 -14.397   0.641  1.00 28.19           C
ATOM   1929  C   TYR A 261      39.844 -15.871   0.268  1.00 26.26           C
ATOM   1930  O   TYR A 261      38.778 -16.258  -0.126  1.00 26.44           O
ATOM   1931  CB  TYR A 261      41.031 -13.699  -0.296  1.00 27.37           C
ATOM   1932  CG  TYR A 261      40.901 -14.044  -1.779  1.00 27.49           C
ATOM   1933  CD1 TYR A 261      39.906 -13.463  -2.561  1.00 24.48           C
ATOM   1934  CD2 TYR A 261      41.819 -14.888  -2.403  1.00 26.91           C
ATOM   1935  CE1 TYR A 261      39.811 -13.719  -3.913  1.00 23.53           C
ATOM   1936  CE2 TYR A 261      41.718 -15.191  -3.766  1.00 24.57           C
ATOM   1937  CZ  TYR A 261      40.697 -14.594  -4.503  1.00 27.63           C
ATOM   1938  OH  TYR A 261      40.568 -14.864  -5.843  1.00 29.11           O
ATOM   1939  N   VAL A 262      40.893 -16.680   0.431  1.00 25.95           N
ATOM   1940  CA  VAL A 262      40.838 -18.138   0.145  1.00 24.25           C
ATOM   1941  C   VAL A 262      39.860 -18.870   1.050  1.00 24.97           C
ATOM   1942  O   VAL A 262      39.031 -19.661   0.556  1.00 24.26           O
ATOM   1943  CB  VAL A 262      42.231 -18.855   0.262  1.00 24.22           C
ATOM   1944  CG1 VAL A 262      42.039 -20.362   0.004  1.00 21.96           C
ATOM   1945  CG2 VAL A 262      43.254 -18.239  -0.760  1.00 20.81           C
ATOM   1946  N   GLN A 263      39.911 -18.563   2.364  1.00 24.64           N
ATOM   1947  CA  GLN A 263      39.114 -19.316   3.313  1.00 24.42           C
ATOM   1948  C   GLN A 263      37.671 -19.319   2.916  1.00 24.01           C
ATOM   1949  O   GLN A 263      37.009 -20.348   2.978  1.00 24.48           O
ATOM   1950  CB  GLN A 263      39.277 -18.749   4.739  1.00 24.56           C
ATOM   1951  CG  GLN A 263      38.628 -19.571   5.900  1.00 26.12           C
ATOM   1952  CD  GLN A 263      37.121 -19.380   6.021  1.00 34.04           C
ATOM   1953  OE1 GLN A 263      36.629 -18.268   5.935  1.00 41.45           O
ATOM   1954  NE2 GLN A 263      36.393 -20.454   6.263  1.00 35.18           N
ATOM   1955  N   HIS A 264      37.153 -18.147   2.542  1.00 24.18           N
ATOM   1956  CA  HIS A 264      35.728 -18.000   2.293  1.00 23.29           C
ATOM   1957  C   HIS A 264      35.353 -18.564   0.929  1.00 23.66           C
ATOM   1958  O   HIS A 264      34.195 -18.930   0.717  1.00 23.45           O
ATOM   1959  CB  HIS A 264      35.333 -16.544   2.390  1.00 23.37           C
ATOM   1960  CG  HIS A 264      35.280 -16.045   3.790  1.00 26.76           C
ATOM   1961  ND1 HIS A 264      36.388 -15.546   4.437  1.00 25.25           N
ATOM   1962  CD2 HIS A 264      34.266 -16.014   4.689  1.00 28.45           C
ATOM   1963  CE1 HIS A 264      36.053 -15.198   5.669  1.00 28.12           C
ATOM   1964  NE2 HIS A 264      34.774 -15.469   5.848  1.00 28.27           N
ATOM   1965  N   ARG A 265      36.326 -18.663   0.021  1.00 22.95           N
ATOM   1966  CA  ARG A 265      36.034 -19.179  -1.342  1.00 23.51           C
ATOM   1967  C   ARG A 265      35.895 -20.684  -1.254  1.00 24.93           C
```

```
ATOM   1968  O   ARG A 265      34.985 -21.273  -1.865  1.00 26.15           O
ATOM   1969  CB  ARG A 265      37.108 -18.756  -2.351  1.00 22.67           C
ATOM   1970  CG  ARG A 265      37.109 -17.222  -2.568  1.00 20.46           C
ATOM   1971  CD  ARG A 265      38.304 -16.825  -3.467  1.00 24.27           C
ATOM   1972  NE  ARG A 265      38.086 -17.110  -4.898  1.00 23.11           N
ATOM   1973  CZ  ARG A 265      37.376 -16.339  -5.707  1.00 26.36           C
ATOM   1974  NH1 ARG A 265      36.772 -15.228  -5.233  1.00 24.44           N
ATOM   1975  NH2 ARG A 265      37.249 -16.687  -6.976  1.00 26.04           N
ATOM   1976  N   VAL A 266      36.772 -21.304  -0.467  1.00 25.17           N
ATOM   1977  CA  VAL A 266      36.689 -22.757  -0.231  1.00 24.55           C
ATOM   1978  C   VAL A 266      35.424 -23.103   0.558  1.00 25.02           C
ATOM   1979  O   VAL A 266      34.716 -24.011   0.175  1.00 25.95           O
ATOM   1980  CB  VAL A 266      38.001 -23.315   0.441  1.00 23.71           C
ATOM   1981  CG1 VAL A 266      37.902 -24.804   0.699  1.00 23.62           C
ATOM   1982  CG2 VAL A 266      39.218 -23.048  -0.464  1.00 21.35           C
ATOM   1983  N   ALA A 267      35.165 -22.378   1.664  1.00 24.55           N
ATOM   1984  CA  ALA A 267      33.973 -22.517   2.476  1.00 23.66           C
ATOM   1985  C   ALA A 267      32.681 -22.400   1.667  1.00 24.07           C
ATOM   1986  O   ALA A 267      31.702 -23.126   1.924  1.00 26.34           O
ATOM   1987  CB  ALA A 267      33.972 -21.476   3.692  1.00 21.97           C
ATOM   1988  N   GLU A 268      32.643 -21.517   0.693  1.00 23.81           N
ATOM   1989  CA  GLU A 268      31.429 -21.378  -0.127  1.00 24.57           C
ATOM   1990  C   GLU A 268      31.170 -22.619  -0.973  1.00 24.57           C
ATOM   1991  O   GLU A 268      30.011 -22.957  -1.245  1.00 24.52           O
ATOM   1992  CB  GLU A 268      31.529 -20.135  -1.044  1.00 25.60           C
ATOM   1993  CG  GLU A 268      30.322 -19.851  -1.932  1.00 25.03           C
ATOM   1994  CD  GLU A 268      29.031 -19.457  -1.154  1.00 30.55           C
ATOM   1995  OE1 GLU A 268      29.002 -19.428   0.128  1.00 29.97           O
ATOM   1996  OE2 GLU A 268      28.028 -19.162  -1.853  1.00 31.16           O
ATOM   1997  N   ALA A 269      32.244 -23.275  -1.435  1.00 23.49           N
ATOM   1998  CA  ALA A 269      32.074 -24.513  -2.178  1.00 23.88           C
ATOM   1999  C   ALA A 269      31.487 -25.584  -1.255  1.00 24.14           C
ATOM   2000  O   ALA A 269      30.545 -26.263  -1.605  1.00 25.45           O
ATOM   2001  CB  ALA A 269      33.417 -24.960  -2.756  1.00 23.14           C
ATOM   2002  N   PHE A 270      32.018 -25.754  -0.056  1.00 24.31           N
ATOM   2003  CA  PHE A 270      31.329 -26.644   0.877  1.00 25.79           C
ATOM   2004  C   PHE A 270      29.941 -26.217   1.239  1.00 26.86           C
ATOM   2005  O   PHE A 270      29.099 -27.079   1.384  1.00 28.49           O
ATOM   2006  CB  PHE A 270      32.106 -26.925   2.134  1.00 24.18           C
ATOM   2007  CG  PHE A 270      33.376 -27.668   1.869  1.00 26.50           C
ATOM   2008  CD1 PHE A 270      34.616 -27.002   1.917  1.00 23.14           C
ATOM   2009  CD2 PHE A 270      33.343 -29.034   1.582  1.00 21.77           C
ATOM   2010  CE1 PHE A 270      35.806 -27.712   1.672  1.00 21.34           C
ATOM   2011  CE2 PHE A 270      34.489 -29.700   1.350  1.00 25.14           C
ATOM   2012  CZ  PHE A 270      35.739 -29.030   1.388  1.00 24.24           C
ATOM   2013  N   ARG A 271      29.696 -24.917   1.397  1.00 27.12           N
ATOM   2014  CA  ARG A 271      28.363 -24.464   1.762  1.00 27.80           C
ATOM   2015  C   ARG A 271      27.307 -24.868   0.752  1.00 27.71           C
ATOM   2016  O   ARG A 271      26.278 -25.392   1.129  1.00 27.73           O
ATOM   2017  CB  ARG A 271      28.324 -22.927   1.993  1.00 28.11           C
```

```
ATOM   2018  CG  ARG A 271      26.961 -22.493   2.594  1.00 28.31           C
ATOM   2019  CD  ARG A 271      26.830 -20.982   2.609  1.00 25.22           C
ATOM   2020  NE  ARG A 271      26.696 -20.442   1.275  1.00 27.21           N
ATOM   2021  CZ  ARG A 271      25.561 -20.411   0.573  1.00 28.89           C
ATOM   2022  NH1 ARG A 271      24.439 -20.963   1.039  1.00 30.03           N
ATOM   2023  NH2 ARG A 271      25.551 -19.843  -0.626  1.00 29.88           N
ATOM   2024  N   VAL A 272      27.554 -24.629  -0.538  1.00 28.51           N
ATOM   2025  CA  VAL A 272      26.539 -24.981  -1.557  1.00 28.15           C
ATOM   2026  C   VAL A 272      26.406 -26.505  -1.707  1.00 28.93           C
ATOM   2027  O   VAL A 272      25.332 -26.998  -2.011  1.00 29.58           O
ATOM   2028  CB  VAL A 272      26.780 -24.284  -2.931  1.00 28.21           C
ATOM   2029  CG1 VAL A 272      26.863 -22.751  -2.797  1.00 25.70           C
ATOM   2030  CG2 VAL A 272      28.065 -24.840  -3.630  1.00 26.82           C
ATOM   2031  N   ALA A 273      27.494 -27.253  -1.501  1.00 29.91           N
ATOM   2032  CA  ALA A 273      27.435 -28.720  -1.542  1.00 29.37           C
ATOM   2033  C   ALA A 273      26.493 -29.215  -0.442  1.00 30.30           C
ATOM   2034  O   ALA A 273      25.610 -30.016  -0.691  1.00 30.29           O
ATOM   2035  CB  ALA A 273      28.817 -29.350  -1.392  1.00 28.78           C
ATOM   2036  N   VAL A 274      26.660 -28.724   0.775  1.00 30.62           N
ATOM   2037  CA  VAL A 274      25.833 -29.193   1.858  1.00 30.58           C
ATOM   2038  C   VAL A 274      24.337 -28.830   1.623  1.00 31.80           C
ATOM   2039  O   VAL A 274      23.446 -29.671   1.830  1.00 33.32           O
ATOM   2040  CB  VAL A 274      26.355 -28.672   3.226  1.00 30.84           C
ATOM   2041  CG1 VAL A 274      25.303 -28.939   4.350  1.00 29.66           C
ATOM   2042  CG2 VAL A 274      27.711 -29.299   3.597  1.00 29.46           C
ATOM   2043  N   ALA A 275      24.061 -27.605   1.181  1.00 31.17           N
ATOM   2044  CA  ALA A 275      22.686 -27.164   0.951  1.00 32.56           C
ATOM   2045  C   ALA A 275      21.999 -27.920  -0.203  1.00 34.27           C
ATOM   2046  O   ALA A 275      20.761 -27.928  -0.285  1.00 34.67           O
ATOM   2047  CB  ALA A 275      22.641 -25.648   0.706  1.00 31.15           C
ATOM   2048  N   ALA A 276      22.793 -28.526  -1.106  1.00 34.63           N
ATOM   2049  CA  ALA A 276      22.239 -29.192  -2.280  1.00 35.14           C
ATOM   2050  C   ALA A 276      22.036 -30.648  -1.949  1.00 36.00           C
ATOM   2051  O   ALA A 276      21.736 -31.435  -2.820  1.00 36.70           O
ATOM   2052  CB  ALA A 276      23.180 -29.078  -3.478  1.00 34.70           C
ATOM   2053  N   GLY A 277      22.275 -31.014  -0.698  1.00 36.56           N
ATOM   2054  CA  GLY A 277      22.074 -32.367  -0.298  1.00 37.01           C
ATOM   2055  C   GLY A 277      23.217 -33.252  -0.742  1.00 36.63           C
ATOM   2056  O   GLY A 277      23.003 -34.449  -0.924  1.00 37.52           O
ATOM   2057  N   ASP A 278      24.432 -32.702  -0.884  1.00 35.11           N
ATOM   2058  CA  ASP A 278      25.632 -33.567  -1.143  1.00 33.11           C
ATOM   2059  C   ASP A 278      26.861 -33.118  -0.337  1.00 32.50           C
ATOM   2060  O   ASP A 278      27.783 -32.539  -0.897  1.00 33.71           O
ATOM   2061  CB  ASP A 278      25.880 -33.688  -2.666  1.00 32.51           C
ATOM   2062  CG  ASP A 278      26.900 -34.768  -3.052  1.00 33.93           C
ATOM   2063  OD1 ASP A 278      27.378 -35.543  -2.195  1.00 31.85           O
ATOM   2064  OD2 ASP A 278      27.197 -34.893  -4.274  1.00 36.45           O
ATOM   2065  N   PRO A 279      26.891 -33.420   0.984  1.00 32.24           N
ATOM   2066  CA  PRO A 279      27.939 -32.982   1.889  1.00 31.75           C
ATOM   2067  C   PRO A 279      29.267 -33.594   1.521  1.00 31.62           C
```

```
ATOM   2068  O   PRO A 279      30.326 -33.099   1.940  1.00 32.38           O
ATOM   2069  CB  PRO A 279      27.501 -33.500   3.282  1.00 30.83           C
ATOM   2070  CG  PRO A 279      26.129 -33.984   3.125  1.00 33.11           C
ATOM   2071  CD  PRO A 279      25.866 -34.233   1.687  1.00 32.94           C
ATOM   2072  N   ASN A 280      29.214 -34.619   0.704  1.00 30.76           N
ATOM   2073  CA  ASN A 280      30.402 -35.350   0.300  1.00 31.24           C
ATOM   2074  C   ASN A 280      31.001 -35.002  -1.052  1.00 29.93           C
ATOM   2075  O   ASN A 280      31.981 -35.634  -1.460  1.00 31.46           O
ATOM   2076  CB  ASN A 280      30.093 -36.834   0.311  1.00 31.55           C
ATOM   2077  CG  ASN A 280      29.832 -37.362   1.719  1.00 34.41           C
ATOM   2078  OD1 ASN A 280      30.674 -37.211   2.610  1.00 35.65           O
ATOM   2079  ND2 ASN A 280      28.670 -37.998   1.910  1.00 33.72           N
ATOM   2080  N   LEU A 281      30.389 -34.059  -1.752  1.00 28.74           N
ATOM   2081  CA  LEU A 281      30.855 -33.567  -3.065  1.00 27.75           C
ATOM   2082  C   LEU A 281      32.352 -33.185  -2.971  1.00 27.65           C
ATOM   2083  O   LEU A 281      32.726 -32.313  -2.180  1.00 26.86           O
ATOM   2084  CB  LEU A 281      30.025 -32.327  -3.434  1.00 27.16           C
ATOM   2085  CG  LEU A 281      29.985 -31.759  -4.877  1.00 28.55           C
ATOM   2086  CD1 LEU A 281      29.857 -32.857  -5.934  1.00 28.83           C
ATOM   2087  CD2 LEU A 281      28.810 -30.789  -5.021  1.00 26.46           C
ATOM   2088  N   PRO A 282      33.215 -33.901  -3.703  1.00 26.29           N
ATOM   2089  CA  PRO A 282      34.631 -33.507  -3.658  1.00 25.17           C
ATOM   2090  C   PRO A 282      34.813 -32.046  -4.089  1.00 25.89           C
ATOM   2091  O   PRO A 282      34.265 -31.611  -5.103  1.00 25.88           O
ATOM   2092  CB  PRO A 282      35.313 -34.456  -4.680  1.00 23.77           C
ATOM   2093  CG  PRO A 282      34.339 -35.612  -4.868  1.00 25.65           C
ATOM   2094  CD  PRO A 282      32.957 -35.082  -4.558  1.00 25.44           C
ATOM   2095  N   VAL A 283      35.594 -31.301  -3.310  1.00 25.59           N
ATOM   2096  CA  VAL A 283      35.917 -29.915  -3.629  1.00 24.35           C
ATOM   2097  C   VAL A 283      37.401 -29.875  -3.977  1.00 23.76           C
ATOM   2098  O   VAL A 283      38.243 -30.304  -3.196  1.00 23.64           O
ATOM   2099  CB  VAL A 283      35.567 -28.989  -2.426  1.00 24.44           C
ATOM   2100  CG1 VAL A 283      36.071 -27.553  -2.629  1.00 24.08           C
ATOM   2101  CG2 VAL A 283      34.005 -29.043  -2.195  1.00 23.33           C
ATOM   2102  N   LEU A 284      37.717 -29.396  -5.176  1.00 24.39           N
ATOM   2103  CA  LEU A 284      39.128 -29.343  -5.611  1.00 23.98           C
ATOM   2104  C   LEU A 284      39.420 -27.970  -6.168  1.00 22.50           C
ATOM   2105  O   LEU A 284      39.264 -27.751  -7.375  1.00 22.36           O
ATOM   2106  CB  LEU A 284      39.382 -30.418  -6.675  1.00 23.57           C
ATOM   2107  CG  LEU A 284      39.335 -31.903  -6.208  1.00 26.21           C
ATOM   2108  CD1 LEU A 284      38.166 -32.555  -6.913  1.00 24.27           C
ATOM   2109  CD2 LEU A 284      40.622 -32.630  -6.666  1.00 26.05           C
ATOM   2110  N   PRO A 285      39.838 -27.036  -5.306  1.00 23.12           N
ATOM   2111  CA  PRO A 285      40.098 -25.682  -5.819  1.00 21.64           C
ATOM   2112  C   PRO A 285      41.224 -25.591  -6.841  1.00 23.02           C
ATOM   2113  O   PRO A 285      42.173 -26.356  -6.765  1.00 22.38           O
ATOM   2114  CB  PRO A 285      40.508 -24.897  -4.549  1.00 20.94           C
ATOM   2115  CG  PRO A 285      39.922 -25.708  -3.369  1.00 20.84           C
ATOM   2116  CD  PRO A 285      40.128 -27.138  -3.836  1.00 22.04           C
ATOM   2117  N   TYR A 286      41.134 -24.627  -7.775  1.00 22.56           N
```

```
ATOM   2118  CA  TYR A 286      42.204 -24.340  -8.724  1.00 22.26           C
ATOM   2119  C   TYR A 286      43.108 -23.292  -8.105  1.00 22.97           C
ATOM   2120  O   TYR A 286      42.627 -22.245  -7.643  1.00 21.37           O
ATOM   2121  CB  TYR A 286      41.614 -23.759 -10.026  1.00 22.01           C
ATOM   2122  CG  TYR A 286      41.427 -24.800 -11.066  1.00 24.59           C
ATOM   2123  CD1 TYR A 286      40.459 -25.810 -10.908  1.00 26.13           C
ATOM   2124  CD2 TYR A 286      42.235 -24.824 -12.197  1.00 24.99           C
ATOM   2125  CE1 TYR A 286      40.300 -26.798 -11.893  1.00 28.10           C
ATOM   2126  CE2 TYR A 286      42.055 -25.793 -13.203  1.00 23.13           C
ATOM   2127  CZ  TYR A 286      41.121 -26.774 -13.027  1.00 26.11           C
ATOM   2128  OH  TYR A 286      40.967 -27.736 -14.013  1.00 27.42           O
ATOM   2129  N   VAL A 287      44.427 -23.534  -8.151  1.00 22.76           N
ATOM   2130  CA  VAL A 287      45.366 -22.604  -7.585  1.00 22.03           C
ATOM   2131  C   VAL A 287      46.473 -22.345  -8.602  1.00 23.37           C
ATOM   2132  O   VAL A 287      46.735 -23.194  -9.488  1.00 22.40           O
ATOM   2133  CB  VAL A 287      45.997 -23.252  -6.246  1.00 23.27           C
ATOM   2134  CG1 VAL A 287      44.886 -23.773  -5.320  1.00 21.27           C
ATOM   2135  CG2 VAL A 287      46.915 -24.388  -6.577  1.00 20.64           C
ATOM   2136  N   GLN A 288      47.179 -21.231  -8.419  1.00 23.06           N
ATOM   2137  CA  GLN A 288      48.435 -20.952  -9.112  1.00 21.98           C
ATOM   2138  C   GLN A 288      49.596 -20.842  -8.122  1.00 24.05           C
ATOM   2139  O   GLN A 288      49.386 -20.683  -6.876  1.00 23.46           O
ATOM   2140  CB  GLN A 288      48.272 -19.662  -9.910  1.00 23.42           C
ATOM   2141  CG  GLN A 288      47.349 -19.826 -11.141  1.00 22.13           C
ATOM   2142  CD  GLN A 288      47.343 -18.554 -11.945  1.00 26.25           C
ATOM   2143  OE1 GLN A 288      48.360 -18.179 -12.558  1.00 23.82           O
ATOM   2144  NE2 GLN A 288      46.198 -17.845 -11.924  1.00 21.60           N
ATOM   2145  N   ILE A 289      50.831 -20.980  -8.632  1.00 25.22           N
ATOM   2146  CA  ILE A 289      52.031 -20.757  -7.792  1.00 26.10           C
ATOM   2147  C   ILE A 289      52.651 -19.362  -8.020  1.00 26.20           C
ATOM   2148  O   ILE A 289      53.754 -19.079  -7.528  1.00 26.16           O
ATOM   2149  CB  ILE A 289      53.101 -21.842  -8.032  1.00 27.08           C
ATOM   2150  CG1 ILE A 289      53.518 -21.865  -9.525  1.00 26.21           C
ATOM   2151  CG2 ILE A 289      52.565 -23.206  -7.556  1.00 28.51           C
ATOM   2152  CD1 ILE A 289      54.763 -22.677  -9.854  1.00 23.68           C
ATOM   2153  N   PHE A 290      51.933 -18.523  -8.758  1.00 25.30           N
ATOM   2154  CA  PHE A 290      52.236 -17.106  -8.962  1.00 26.79           C
ATOM   2155  C   PHE A 290      51.020 -16.258  -8.537  1.00 27.94           C
ATOM   2156  O   PHE A 290      49.868 -16.738  -8.639  1.00 28.15           O
ATOM   2157  CB  PHE A 290      52.400 -16.840 -10.482  1.00 27.17           C
ATOM   2158  CG  PHE A 290      53.521 -17.564 -11.085  1.00 25.71           C
ATOM   2159  CD1 PHE A 290      53.306 -18.735 -11.764  1.00 23.53           C
ATOM   2160  CD2 PHE A 290      54.817 -17.082 -10.963  1.00 25.94           C
ATOM   2161  CE1 PHE A 290      54.399 -19.463 -12.325  1.00 25.48           C
ATOM   2162  CE2 PHE A 290      55.895 -17.769 -11.552  1.00 27.74           C
ATOM   2163  CZ  PHE A 290      55.675 -18.972 -12.231  1.00 26.26           C
ATOM   2164  N   TYR A 291      51.211 -14.989  -8.155  1.00 27.88           N
ATOM   2165  CA  TYR A 291      50.026 -14.094  -8.206  1.00 29.23           C
ATOM   2166  C   TYR A 291      49.395 -14.105  -9.620  1.00 29.68           C
ATOM   2167  O   TYR A 291      50.095 -14.262 -10.601  1.00 29.60           O
```

```
ATOM   2168  CB  TYR A 291      50.325 -12.690  -7.720  1.00 28.93           C
ATOM   2169  CG  TYR A 291      50.635 -12.699  -6.234  1.00 31.49           C
ATOM   2170  CD1 TYR A 291      51.952 -12.767  -5.794  1.00 31.03           C
ATOM   2171  CD2 TYR A 291      49.612 -12.716  -5.281  1.00 31.53           C
ATOM   2172  CE1 TYR A 291      52.269 -12.797  -4.458  1.00 32.11           C
ATOM   2173  CE2 TYR A 291      49.910 -12.762  -3.916  1.00 33.07           C
ATOM   2174  CZ  TYR A 291      51.261 -12.797  -3.518  1.00 33.31           C
ATOM   2175  OH  TYR A 291      51.623 -12.844  -2.188  1.00 35.00           O
ATOM   2176  N   ASP A 292      48.080 -13.954  -9.701  1.00 29.79           N
ATOM   2177  CA  ASP A 292      47.363 -14.138 -10.946  1.00 30.28           C
ATOM   2178  C   ASP A 292      47.823 -13.049 -11.935  1.00 31.10           C
ATOM   2179  O   ASP A 292      47.982 -11.864 -11.561  1.00 31.31           O
ATOM   2180  CB  ASP A 292      45.877 -14.075 -10.648  1.00 29.76           C
ATOM   2181  CG  ASP A 292      44.994 -14.412 -11.841  1.00 32.03           C
ATOM   2182  OD1 ASP A 292      43.914 -13.797 -11.873  1.00 31.91           O
ATOM   2183  OD2 ASP A 292      45.313 -15.274 -12.710  1.00 31.21           O
ATOM   2184  N   THR A 293      48.077 -13.459 -13.180  1.00 30.61           N
ATOM   2185  CA  THR A 293      48.563 -12.575 -14.264  1.00 30.51           C
ATOM   2186  C   THR A 293      50.017 -12.128 -14.169  1.00 30.82           C
ATOM   2187  O   THR A 293      50.402 -11.293 -14.959  1.00 32.04           O
ATOM   2188  CB  THR A 293      47.684 -11.287 -14.514  1.00 30.15           C
ATOM   2189  OG1 THR A 293      47.949 -10.321 -13.487  1.00 33.67           O
ATOM   2190  CG2 THR A 293      46.199 -11.602 -14.564  1.00 27.62           C
ATOM   2191  N   THR A 294      50.803 -12.645 -13.215  1.00 30.64           N
ATOM   2192  CA  THR A 294      52.169 -12.186 -12.965  1.00 30.36           C
ATOM   2193  C   THR A 294      53.173 -13.322 -13.119  1.00 30.87           C
ATOM   2194  O   THR A 294      52.776 -14.478 -13.259  1.00 30.76           O
ATOM   2195  CB  THR A 294      52.367 -11.574 -11.524  1.00 30.37           C
ATOM   2196  OG1 THR A 294      52.531 -12.626 -10.548  1.00 32.06           O
ATOM   2197  CG2 THR A 294      51.228 -10.636 -11.116  1.00 27.88           C
ATOM   2198  N   ASN A 295      54.462 -12.992 -13.080  1.00 31.86           N
ATOM   2199  CA  ASN A 295      55.519 -13.992 -12.832  1.00 33.66           C
ATOM   2200  C   ASN A 295      56.074 -13.884 -11.406  1.00 32.77           C
ATOM   2201  O   ASN A 295      57.235 -14.220 -11.115  1.00 33.78           O
ATOM   2202  CB  ASN A 295      56.651 -13.908 -13.866  1.00 34.34           C
ATOM   2203  CG  ASN A 295      57.377 -12.554 -13.854  1.00 39.13           C
ATOM   2204  OD1 ASN A 295      57.022 -11.627 -13.105  1.00 42.08           O
ATOM   2205  ND2 ASN A 295      58.395 -12.432 -14.708  1.00 41.46           N
ATOM   2206  N   HIS A 296      55.251 -13.408 -10.491  1.00 32.67           N
ATOM   2207  CA  HIS A 296      55.745 -13.269  -9.128  1.00 32.65           C
ATOM   2208  C   HIS A 296      55.333 -14.527  -8.389  1.00 31.13           C
ATOM   2209  O   HIS A 296      54.168 -14.691  -8.113  1.00 30.56           O
ATOM   2210  CB  HIS A 296      55.155 -12.034  -8.462  1.00 33.32           C
ATOM   2211  CG  HIS A 296      55.577 -10.745  -9.087  1.00 40.38           C
ATOM   2212  ND1 HIS A 296      55.382  -9.526  -8.468  1.00 47.90           N
ATOM   2213  CD2 HIS A 296      56.207 -10.474 -10.259  1.00 42.91           C
ATOM   2214  CE1 HIS A 296      55.863  -8.563  -9.237  1.00 46.70           C
ATOM   2215  NE2 HIS A 296      56.369  -9.113 -10.327  1.00 45.20           N
ATOM   2216  N   PHE A 297      56.295 -15.398  -8.091  1.00 29.89           N
ATOM   2217  CA  PHE A 297      56.077 -16.612  -7.274  1.00 29.37           C
```

```
ATOM   2218  C   PHE A 297      55.431 -16.327  -5.934  1.00 29.39           C
ATOM   2219  O   PHE A 297      55.755 -15.328  -5.273  1.00 29.57           O
ATOM   2220  CB  PHE A 297      57.390 -17.393  -7.046  1.00 28.26           C
ATOM   2221  CG  PHE A 297      57.904 -18.101  -8.286  1.00 27.81           C
ATOM   2222  CD1 PHE A 297      58.919 -17.519  -9.068  1.00 30.51           C
ATOM   2223  CD2 PHE A 297      57.370 -19.317  -8.689  1.00 26.20           C
ATOM   2224  CE1 PHE A 297      59.421 -18.164 -10.251  1.00 30.19           C
ATOM   2225  CE2 PHE A 297      57.851 -19.982  -9.852  1.00 28.33           C
ATOM   2226  CZ  PHE A 297      58.871 -19.408 -10.630  1.00 28.66           C
ATOM   2227  N   LEU A 298      54.546 -17.224  -5.520  1.00 29.39           N
ATOM   2228  CA  LEU A 298      53.937 -17.119  -4.204  1.00 29.92           C
ATOM   2229  C   LEU A 298      54.962 -17.481  -3.149  1.00 30.00           C
ATOM   2230  O   LEU A 298      55.564 -18.564  -3.201  1.00 30.86           O
ATOM   2231  CB  LEU A 298      52.649 -17.970  -4.021  1.00 29.27           C
ATOM   2232  CG  LEU A 298      51.419 -17.703  -4.920  1.00 30.66           C
ATOM   2233  CD1 LEU A 298      50.281 -18.581  -4.457  1.00 31.37           C
ATOM   2234  CD2 LEU A 298      50.981 -16.273  -4.878  1.00 31.91           C
ATOM   2235  N   PRO A 299      55.168 -16.564  -2.197  1.00 29.42           N
ATOM   2236  CA  PRO A 299      55.941 -16.875  -0.992  1.00 29.91           C
ATOM   2237  C   PRO A 299      55.398 -18.143  -0.292  1.00 30.04           C
ATOM   2238  O   PRO A 299      54.230 -18.509  -0.472  1.00 30.05           O
ATOM   2239  CB  PRO A 299      55.760 -15.630  -0.102  1.00 28.94           C
ATOM   2240  CG  PRO A 299      55.295 -14.542  -0.972  1.00 29.50           C
ATOM   2241  CD  PRO A 299      54.674 -15.176  -2.237  1.00 28.69           C
ATOM   2242  N   LEU A 300      56.238 -18.803   0.491  1.00 29.68           N
ATOM   2243  CA  LEU A 300      55.843 -20.003   1.199  1.00 30.02           C
ATOM   2244  C   LEU A 300      54.541 -19.810   1.991  1.00 30.58           C
ATOM   2245  O   LEU A 300      53.629 -20.636   1.967  1.00 30.51           O
ATOM   2246  CB  LEU A 300      56.966 -20.446   2.117  1.00 28.42           C
ATOM   2247  CG  LEU A 300      56.546 -21.650   2.957  1.00 29.14           C
ATOM   2248  CD1 LEU A 300      56.029 -22.775   2.063  1.00 28.21           C
ATOM   2249  CD2 LEU A 300      57.751 -22.074   3.795  1.00 29.97           C
ATOM   2250  N   ASP A 301      54.555 -18.732   2.741  1.00 31.38           N
ATOM   2251  CA  ASP A 301      53.457 -18.026   3.358  1.00 32.80           C
ATOM   2252  C   ASP A 301      52.097 -18.189   2.664  1.00 31.34           C
ATOM   2253  O   ASP A 301      51.103 -18.655   3.244  1.00 31.40           O
ATOM   2254  CB  ASP A 301      53.871 -16.543   3.168  1.00 35.57           C
ATOM   2255  CG  ASP A 301      53.313 -15.686   4.191  1.00 40.11           C
ATOM   2256  OD1 ASP A 301      53.000 -16.290   5.209  1.00 48.46           O
ATOM   2257  OD2 ASP A 301      53.182 -14.451   4.000  1.00 47.55           O
ATOM   2258  N   GLU A 302      52.076 -17.689   1.437  1.00 28.85           N
ATOM   2259  CA  GLU A 302      50.918 -17.652   0.573  1.00 29.08           C
ATOM   2260  C   GLU A 302      50.477 -19.043   0.056  1.00 28.28           C
ATOM   2261  O   GLU A 302      49.302 -19.248  -0.165  1.00 29.53           O
ATOM   2262  CB  GLU A 302      51.195 -16.705  -0.600  1.00 28.43           C
ATOM   2263  CG  GLU A 302      51.372 -15.225  -0.181  1.00 30.59           C
ATOM   2264  CD  GLU A 302      50.027 -14.538   0.117  1.00 34.64           C
ATOM   2265  OE1 GLU A 302      49.316 -14.997   1.048  1.00 30.48           O
ATOM   2266  OE2 GLU A 302      49.675 -13.555  -0.596  1.00 33.68           O
ATOM   2267  N   LEU A 303      51.420 -19.966  -0.119  1.00 26.83           N
```

```
ATOM   2268  CA  LEU A 303      51.152 -21.396  -0.293  1.00 26.81           C
ATOM   2269  C   LEU A 303      50.337 -21.984   0.884  1.00 27.32           C
ATOM   2270  O   LEU A 303      49.316 -22.680   0.691  1.00 28.34           O
ATOM   2271  CB  LEU A 303      52.486 -22.132  -0.475  1.00 24.69           C
ATOM   2272  CG  LEU A 303      53.072 -22.535  -1.834  1.00 29.43           C
ATOM   2273  CD1 LEU A 303      52.370 -21.995  -3.177  1.00 22.16           C
ATOM   2274  CD2 LEU A 303      54.642 -22.701  -1.886  1.00 25.33           C
ATOM   2275  N   GLU A 304      50.747 -21.670   2.104  1.00 26.49           N
ATOM   2276  CA  GLU A 304      50.028 -22.116   3.296  1.00 27.02           C
ATOM   2277  C   GLU A 304      48.604 -21.562   3.313  1.00 25.68           C
ATOM   2278  O   GLU A 304      47.666 -22.253   3.701  1.00 26.21           O
ATOM   2279  CB  GLU A 304      50.769 -21.674   4.606  1.00 25.62           C
ATOM   2280  CG  GLU A 304      52.198 -22.160   4.735  1.00 26.85           C
ATOM   2281  CD  GLU A 304      52.950 -21.594   5.989  1.00 29.75           C
ATOM   2282  OE1 GLU A 304      52.265 -21.169   6.954  1.00 31.31           O
ATOM   2283  OE2 GLU A 304      54.226 -21.562   5.982  1.00 29.24           O
ATOM   2284  N   HIS A 305      48.484 -20.300   2.928  1.00 25.77           N
ATOM   2285  CA  HIS A 305      47.236 -19.552   2.919  1.00 25.70           C
ATOM   2286  C   HIS A 305      46.351 -19.984   1.792  1.00 25.29           C
ATOM   2287  O   HIS A 305      45.196 -19.512   1.730  1.00 25.33           O
ATOM   2288  CB  HIS A 305      47.466 -18.042   2.712  1.00 26.66           C
ATOM   2289  CG  HIS A 305      48.226 -17.368   3.821  1.00 28.27           C
ATOM   2290  ND1 HIS A 305      48.948 -16.202   3.618  1.00 30.27           N
ATOM   2291  CD2 HIS A 305      48.388 -17.695   5.131  1.00 28.88           C
ATOM   2292  CE1 HIS A 305      49.506 -15.835   4.764  1.00 32.59           C
ATOM   2293  NE2 HIS A 305      49.199 -16.728   5.694  1.00 28.03           N
ATOM   2294  N   SER A 306      46.866 -20.828   0.888  1.00 23.72           N
ATOM   2295  CA  SER A 306      46.056 -21.248  -0.266  1.00 25.26           C
ATOM   2296  C   SER A 306      45.890 -22.764  -0.387  1.00 25.25           C
ATOM   2297  O   SER A 306      44.806 -23.290  -0.187  1.00 26.07           O
ATOM   2298  CB  SER A 306      46.579 -20.604  -1.578  1.00 24.58           C
ATOM   2299  OG  SER A 306      47.924 -20.910  -1.801  1.00 26.01           O
ATOM   2300  N   LEU A 307      46.952 -23.470  -0.732  1.00 25.79           N
ATOM   2301  CA  LEU A 307      46.917 -24.932  -0.720  1.00 26.37           C
ATOM   2302  C   LEU A 307      46.769 -25.493   0.705  1.00 25.70           C
ATOM   2303  O   LEU A 307      46.032 -26.429   0.926  1.00 27.09           O
ATOM   2304  CB  LEU A 307      48.195 -25.493  -1.368  1.00 26.08           C
ATOM   2305  CG  LEU A 307      48.355 -25.482  -2.909  1.00 29.56           C
ATOM   2306  CD1 LEU A 307      48.551 -24.086  -3.445  1.00 28.81           C
ATOM   2307  CD2 LEU A 307      49.542 -26.349  -3.377  1.00 28.74           C
ATOM   2308  N   GLY A 308      47.462 -24.925   1.678  1.00 25.33           N
ATOM   2309  CA  GLY A 308      47.308 -25.366   3.050  1.00 24.76           C
ATOM   2310  C   GLY A 308      45.911 -25.122   3.568  1.00 24.24           C
ATOM   2311  O   GLY A 308      45.265 -26.018   4.145  1.00 23.70           O
ATOM   2312  N   GLU A 309      45.433 -23.906   3.351  1.00 23.16           N
ATOM   2313  CA  GLU A 309      44.070 -23.565   3.703  1.00 22.79           C
ATOM   2314  C   GLU A 309      43.014 -24.550   3.129  1.00 23.06           C
ATOM   2315  O   GLU A 309      42.092 -24.935   3.825  1.00 22.79           O
ATOM   2316  CB  GLU A 309      43.764 -22.151   3.189  1.00 22.20           C
ATOM   2317  CG  GLU A 309      42.360 -21.740   3.437  1.00 22.75           C
```

```
ATOM   2318  CD  GLU A 309      42.019 -21.535   4.914  1.00 28.41           C
ATOM   2319  OE1 GLU A 309      42.953 -21.276   5.734  1.00 28.10           O
ATOM   2320  OE2 GLU A 309      40.803 -21.666   5.245  1.00 29.19           O
ATOM   2321  N   SER A 310      43.128 -24.907   1.845  1.00 22.73           N
ATOM   2322  CA  SER A 310      42.205 -25.813   1.214  1.00 22.52           C
ATOM   2323  C   SER A 310      42.224 -27.167   1.884  1.00 22.77           C
ATOM   2324  O   SER A 310      41.178 -27.755   2.105  1.00 23.39           O
ATOM   2325  CB  SER A 310      42.564 -25.984  -0.294  1.00 22.67           C
ATOM   2326  OG  SER A 310      42.465 -24.711  -0.965  1.00 24.85           O
ATOM   2327  N   ALA A 311      43.413 -27.713   2.105  1.00 22.48           N
ATOM   2328  CA  ALA A 311      43.526 -29.017   2.764  1.00 23.57           C
ATOM   2329  C   ALA A 311      42.880 -29.007   4.153  1.00 24.02           C
ATOM   2330  O   ALA A 311      42.210 -29.969   4.536  1.00 25.72           O
ATOM   2331  CB  ALA A 311      44.992 -29.424   2.884  1.00 21.52           C
ATOM   2332  N   ALA A 312      43.066 -27.918   4.895  1.00 24.10           N
ATOM   2333  CA  ALA A 312      42.646 -27.867   6.324  1.00 24.33           C
ATOM   2334  C   ALA A 312      41.121 -27.800   6.409  1.00 25.56           C
ATOM   2335  O   ALA A 312      40.535 -28.167   7.432  1.00 25.36           O
ATOM   2336  CB  ALA A 312      43.286 -26.706   6.995  1.00 22.75           C
ATOM   2337  N   GLN A 313      40.470 -27.359   5.306  1.00 24.81           N
ATOM   2338  CA  GLN A 313      39.013 -27.419   5.238  1.00 24.55           C
ATOM   2339  C   GLN A 313      38.516 -28.780   4.696  1.00 23.46           C
ATOM   2340  O   GLN A 313      37.302 -28.993   4.489  1.00 23.01           O
ATOM   2341  CB  GLN A 313      38.475 -26.284   4.346  1.00 23.87           C
ATOM   2342  CG  GLN A 313      38.720 -24.891   4.906  1.00 25.85           C
ATOM   2343  CD  GLN A 313      37.838 -23.862   4.267  1.00 26.72           C
ATOM   2344  OE1 GLN A 313      36.664 -24.110   4.001  1.00 29.26           O
ATOM   2345  NE2 GLN A 313      38.389 -22.688   4.028  1.00 27.68           N
ATOM   2346  N   GLY A 314      39.428 -29.693   4.426  1.00 22.80           N
ATOM   2347  CA  GLY A 314      38.979 -30.997   3.892  1.00 22.90           C
ATOM   2348  C   GLY A 314      38.779 -30.992   2.379  1.00 23.46           C
ATOM   2349  O   GLY A 314      38.066 -31.843   1.881  1.00 23.86           O
ATOM   2350  N   ALA A 315      39.428 -30.062   1.634  1.00 23.92           N
ATOM   2351  CA  ALA A 315      39.425 -30.185   0.170  1.00 23.70           C
ATOM   2352  C   ALA A 315      39.942 -31.562  -0.227  1.00 22.80           C
ATOM   2353  O   ALA A 315      40.812 -32.113   0.434  1.00 22.17           O
ATOM   2354  CB  ALA A 315      40.204 -29.022  -0.543  1.00 22.98           C
ATOM   2355  N   ALA A 316      39.399 -32.120  -1.321  1.00 22.63           N
ATOM   2356  CA  ALA A 316      39.799 -33.462  -1.827  1.00 20.58           C
ATOM   2357  C   ALA A 316      41.132 -33.410  -2.539  1.00 20.69           C
ATOM   2358  O   ALA A 316      41.786 -34.430  -2.712  1.00 20.47           O
ATOM   2359  CB  ALA A 316      38.672 -34.076  -2.762  1.00 18.35           C
ATOM   2360  N   GLY A 317      41.582 -32.199  -2.874  1.00 20.15           N
ATOM   2361  CA  GLY A 317      42.907 -32.004  -3.458  1.00 19.76           C
ATOM   2362  C   GLY A 317      42.902 -30.613  -4.067  1.00 20.78           C
ATOM   2363  O   GLY A 317      41.980 -29.827  -3.854  1.00 19.53           O
ATOM   2364  N   VAL A 318      43.897 -30.311  -4.878  1.00 21.10           N
ATOM   2365  CA  VAL A 318      43.922 -28.989  -5.503  1.00 22.14           C
ATOM   2366  C   VAL A 318      44.421 -29.249  -6.951  1.00 23.23           C
ATOM   2367  O   VAL A 318      45.166 -30.224  -7.210  1.00 21.39           O
```

```
ATOM   2368  CB  VAL A 318      44.837 -28.149  -4.546  1.00 24.97           C
ATOM   2369  CG1 VAL A 318      46.303 -28.160  -4.883  1.00 23.38           C
ATOM   2370  CG2 VAL A 318      44.157 -26.973  -3.786  1.00 23.66           C
ATOM   2371  N   VAL A 319      43.958 -28.428  -7.895  1.00 22.49           N
ATOM   2372  CA  VAL A 319      44.542 -28.442  -9.208  1.00 21.96           C
ATOM   2373  C   VAL A 319      45.517 -27.268  -9.335  1.00 22.95           C
ATOM   2374  O   VAL A 319      45.112 -26.120  -9.265  1.00 22.76           O
ATOM   2375  CB  VAL A 319      43.486 -28.368 -10.333  1.00 21.93           C
ATOM   2376  CG1 VAL A 319      44.219 -28.474 -11.670  1.00 20.08           C
ATOM   2377  CG2 VAL A 319      42.444 -29.532 -10.213  1.00 17.87           C
ATOM   2378  N   LEU A 320      46.813 -27.545  -9.507  1.00 23.13           N
ATOM   2379  CA  LEU A 320      47.756 -26.434  -9.692  1.00 23.59           C
ATOM   2380  C   LEU A 320      47.919 -26.118 -11.184  1.00 23.93           C
ATOM   2381  O   LEU A 320      48.632 -26.834 -11.914  1.00 24.75           O
ATOM   2382  CB  LEU A 320      49.127 -26.761  -9.056  1.00 24.09           C
ATOM   2383  CG  LEU A 320      49.321 -27.128  -7.590  1.00 26.26           C
ATOM   2384  CD1 LEU A 320      49.072 -28.628  -7.355  1.00 21.29           C
ATOM   2385  CD2 LEU A 320      50.735 -26.708  -7.104  1.00 24.24           C
ATOM   2386  N   TRP A 321      47.254 -25.048 -11.631  1.00 25.29           N
ATOM   2387  CA  TRP A 321      47.235 -24.656 -13.014  1.00 24.90           C
ATOM   2388  C   TRP A 321      48.395 -23.696 -13.140  1.00 25.71           C
ATOM   2389  O   TRP A 321      48.545 -22.800 -12.295  1.00 24.96           O
ATOM   2390  CB  TRP A 321      45.913 -24.006 -13.406  1.00 24.53           C
ATOM   2391  CG  TRP A 321      45.969 -23.435 -14.803  1.00 27.44           C
ATOM   2392  CD1 TRP A 321      45.979 -24.157 -15.977  1.00 28.70           C
ATOM   2393  CD2 TRP A 321      46.025 -22.043 -15.199  1.00 24.98           C
ATOM   2394  NE1 TRP A 321      46.069 -23.312 -17.038  1.00 29.38           N
ATOM   2395  CE2 TRP A 321      46.084 -22.016 -16.602  1.00 25.35           C
ATOM   2396  CE3 TRP A 321      46.010 -20.821 -14.497  1.00 25.86           C
ATOM   2397  CZ2 TRP A 321      46.094 -20.813 -17.340  1.00 26.37           C
ATOM   2398  CZ3 TRP A 321      46.037 -19.642 -15.203  1.00 26.40           C
ATOM   2399  CH2 TRP A 321      46.107 -19.641 -16.623  1.00 27.03           C
ATOM   2400  N   VAL A 322      49.266 -23.962 -14.129  1.00 25.11           N
ATOM   2401  CA  VAL A 322      50.332 -23.056 -14.520  1.00 24.67           C
ATOM   2402  C   VAL A 322      50.083 -22.563 -15.959  1.00 26.12           C
ATOM   2403  O   VAL A 322      50.157 -23.337 -16.900  1.00 25.35           O
ATOM   2404  CB  VAL A 322      51.749 -23.687 -14.436  1.00 25.72           C
ATOM   2405  CG1 VAL A 322      52.878 -22.607 -14.748  1.00 20.77           C
ATOM   2406  CG2 VAL A 322      52.020 -24.266 -13.015  1.00 22.81           C
ATOM   2407  N   SER A 323      49.846 -21.256 -16.106  1.00 26.22           N
ATOM   2408  CA  SER A 323      49.685 -20.635 -17.411  1.00 27.10           C
ATOM   2409  C   SER A 323      50.848 -20.928 -18.353  1.00 27.62           C
ATOM   2410  O   SER A 323      52.018 -21.072 -17.917  1.00 27.68           O
ATOM   2411  CB  SER A 323      49.639 -19.125 -17.249  1.00 26.39           C
ATOM   2412  OG  SER A 323      49.275 -18.534 -18.483  1.00 27.57           O
ATOM   2413  N   TRP A 324      50.516 -20.994 -19.635  1.00 27.19           N
ATOM   2414  CA  TRP A 324      51.506 -21.112 -20.716  1.00 27.70           C
ATOM   2415  C   TRP A 324      52.492 -19.950 -20.637  1.00 27.94           C
ATOM   2416  O   TRP A 324      53.681 -20.099 -20.951  1.00 27.89           O
ATOM   2417  CB  TRP A 324      50.767 -21.122 -22.073  1.00 27.89           C
```

```
ATOM   2418  CG  TRP A 324      49.939 -19.827 -22.362  1.00 26.30           C
ATOM   2419  CD1 TRP A 324      48.595 -19.638 -22.156  1.00 28.45           C
ATOM   2420  CD2 TRP A 324      50.430 -18.595 -22.928  1.00 25.54           C
ATOM   2421  NE1 TRP A 324      48.231 -18.382 -22.564  1.00 26.44           N
ATOM   2422  CE2 TRP A 324      49.333 -17.722 -23.036  1.00 25.93           C
ATOM   2423  CE3 TRP A 324      51.714 -18.138 -23.315  1.00 28.97           C
ATOM   2424  CZ2 TRP A 324      49.454 -16.405 -23.521  1.00 28.60           C
ATOM   2425  CZ3 TRP A 324      51.839 -16.824 -23.826  1.00 30.51           C
ATOM   2426  CH2 TRP A 324      50.694 -15.978 -23.924  1.00 28.39           C
ATOM   2427  N   GLU A 325      52.013 -18.796 -20.153  1.00 29.19           N
ATOM   2428  CA  GLU A 325      52.864 -17.590 -20.005  1.00 30.61           C
ATOM   2429  C   GLU A 325      54.038 -17.843 -19.097  1.00 30.58           C
ATOM   2430  O   GLU A 325      55.107 -17.221 -19.250  1.00 31.32           O
ATOM   2431  CB  GLU A 325      52.091 -16.424 -19.422  1.00 31.33           C
ATOM   2432  CG  GLU A 325      50.933 -16.008 -20.252  1.00 34.69           C
ATOM   2433  CD  GLU A 325      50.425 -14.614 -19.915  1.00 42.47           C
ATOM   2434  OE1 GLU A 325      51.235 -13.663 -19.961  1.00 46.28           O
ATOM   2435  OE2 GLU A 325      49.204 -14.467 -19.625  1.00 44.13           O
ATOM   2436  N   ASN A 326      53.871 -18.776 -18.163  1.00 29.23           N
ATOM   2437  CA  ASN A 326      54.915 -18.999 -17.176  1.00 29.13           C
ATOM   2438  C   ASN A 326      55.870 -20.137 -17.503  1.00 28.59           C
ATOM   2439  O   ASN A 326      56.905 -20.283 -16.848  1.00 29.53           O
ATOM   2440  CB  ASN A 326      54.258 -19.205 -15.805  1.00 29.18           C
ATOM   2441  CG  ASN A 326      53.575 -17.935 -15.297  1.00 31.57           C
ATOM   2442  OD1 ASN A 326      52.366 -17.872 -15.182  1.00 27.86           O
ATOM   2443  ND2 ASN A 326      54.370 -16.922 -14.987  1.00 31.47           N
ATOM   2444  N   THR A 327      55.523 -20.972 -18.472  1.00 28.15           N
ATOM   2445  CA  THR A 327      56.423 -22.056 -18.907  1.00 28.67           C
ATOM   2446  C   THR A 327      56.957 -21.825 -20.354  1.00 30.64           C
ATOM   2447  O   THR A 327      57.450 -22.746 -21.018  1.00 31.36           O
ATOM   2448  CB  THR A 327      55.727 -23.435 -18.806  1.00 28.19           C
ATOM   2449  OG1 THR A 327      54.460 -23.373 -19.443  1.00 27.13           O
ATOM   2450  CG2 THR A 327      55.476 -23.832 -17.356  1.00 26.17           C
ATOM   2451  N   ARG A 328      56.839 -20.597 -20.854  1.00 31.92           N
ATOM   2452  CA  ARG A 328      57.189 -20.325 -22.234  1.00 33.16           C
ATOM   2453  C   ARG A 328      58.690 -20.334 -22.502  1.00 33.79           C
ATOM   2454  O   ARG A 328      59.158 -20.952 -23.463  1.00 34.68           O
ATOM   2455  CB  ARG A 328      56.577 -18.997 -22.680  1.00 34.16           C
ATOM   2456  CG  ARG A 328      57.098 -18.492 -24.013  1.00 35.99           C
ATOM   2457  CD  ARG A 328      56.387 -17.283 -24.450  1.00 37.06           C
ATOM   2458  NE  ARG A 328      55.275 -17.743 -25.267  1.00 48.86           N
ATOM   2459  CZ  ARG A 328      55.359 -18.032 -26.577  1.00 54.82           C
ATOM   2460  NH1 ARG A 328      56.517 -17.910 -27.285  1.00 54.47           N
ATOM   2461  NH2 ARG A 328      54.263 -18.436 -27.197  1.00 58.19           N
ATOM   2462  N   THR A 329      59.447 -19.660 -21.642  1.00 34.34           N
ATOM   2463  CA  THR A 329      60.870 -19.455 -21.866  1.00 33.94           C
ATOM   2464  C   THR A 329      61.742 -20.381 -21.016  1.00 34.28           C
ATOM   2465  O   THR A 329      61.270 -20.998 -20.018  1.00 34.77           O
ATOM   2466  CB  THR A 329      61.250 -17.977 -21.622  1.00 33.57           C
ATOM   2467  OG1 THR A 329      60.957 -17.628 -20.274  1.00 35.68           O
```

```
ATOM   2468  CG2 THR A 329      60.475 -17.038 -22.558  1.00 33.05           C
ATOM   2469  N   LYS A 330      62.998 -20.494 -21.426  1.00 33.13           N
ATOM   2470  CA  LYS A 330      64.028 -21.186 -20.667  1.00 34.37           C
ATOM   2471  C   LYS A 330      64.201 -20.556 -19.259  1.00 34.78           C
ATOM   2472  O   LYS A 330      64.280 -21.262 -18.259  1.00 34.11           O
ATOM   2473  CB  LYS A 330      65.361 -21.139 -21.463  1.00 34.76           C
ATOM   2474  CG  LYS A 330      66.553 -21.902 -20.811  1.00 35.99           C
ATOM   2475  CD  LYS A 330      67.792 -21.848 -21.701  1.00 35.04           C
ATOM   2476  CE  LYS A 330      68.979 -22.538 -21.064  1.00 40.68           C
ATOM   2477  NZ  LYS A 330      70.287 -22.140 -21.792  1.00 46.87           N
ATOM   2478  N   GLU A 331      64.278 -19.228 -19.195  1.00 35.39           N
ATOM   2479  CA  GLU A 331      64.418 -18.500 -17.926  1.00 36.67           C
ATOM   2480  C   GLU A 331      63.281 -18.811 -16.941  1.00 35.67           C
ATOM   2481  O   GLU A 331      63.542 -19.162 -15.789  1.00 36.14           O
ATOM   2482  CB  GLU A 331      64.438 -17.009 -18.224  1.00 37.46           C
ATOM   2483  CG  GLU A 331      65.065 -16.100 -17.181  1.00 42.84           C
ATOM   2484  CD  GLU A 331      65.387 -14.735 -17.798  1.00 50.94           C
ATOM   2485  OE1 GLU A 331      66.597 -14.459 -17.984  1.00 53.50           O
ATOM   2486  OE2 GLU A 331      64.431 -13.975 -18.157  1.00 53.23           O
ATOM   2487  N   SER A 332      62.038 -18.673 -17.414  1.00 35.05           N
ATOM   2488  CA  SER A 332      60.816 -18.990 -16.666  1.00 34.49           C
ATOM   2489  C   SER A 332      60.796 -20.413 -16.185  1.00 33.66           C
ATOM   2490  O   SER A 332      60.392 -20.670 -15.072  1.00 33.58           O
ATOM   2491  CB  SER A 332      59.591 -18.846 -17.586  1.00 35.58           C
ATOM   2492  OG  SER A 332      59.275 -17.501 -17.838  1.00 38.93           O
ATOM   2493  N   CYS A 333      61.157 -21.336 -17.078  1.00 33.60           N
ATOM   2494  CA  CYS A 333      61.136 -22.762 -16.808  1.00 34.07           C
ATOM   2495  C   CYS A 333      62.178 -23.127 -15.750  1.00 33.82           C
ATOM   2496  O   CYS A 333      61.946 -23.972 -14.878  1.00 34.09           O
ATOM   2497  CB  CYS A 333      61.386 -23.578 -18.098  1.00 33.50           C
ATOM   2498  SG  CYS A 333      60.011 -23.741 -19.193  1.00 35.72           S
ATOM   2499  N   GLN A 334      63.333 -22.496 -15.859  1.00 33.03           N
ATOM   2500  CA  GLN A 334      64.402 -22.689 -14.921  1.00 33.03           C
ATOM   2501  C   GLN A 334      64.035 -22.091 -13.551  1.00 31.52           C
ATOM   2502  O   GLN A 334      64.372 -22.668 -12.544  1.00 30.58           O
ATOM   2503  CB  GLN A 334      65.731 -22.138 -15.499  1.00 33.45           C
ATOM   2504  CG  GLN A 334      66.960 -22.221 -14.549  1.00 39.15           C
ATOM   2505  CD  GLN A 334      67.481 -23.662 -14.288  1.00 45.61           C
ATOM   2506  OE1 GLN A 334      67.534 -24.499 -15.208  1.00 49.18           O
ATOM   2507  NE2 GLN A 334      67.900 -23.931 -13.044  1.00 42.09           N
ATOM   2508  N   ALA A 335      63.327 -20.961 -13.512  1.00 30.90           N
ATOM   2509  CA  ALA A 335      62.890 -20.400 -12.221  1.00 31.12           C
ATOM   2510  C   ALA A 335      61.825 -21.281 -11.543  1.00 30.95           C
ATOM   2511  O   ALA A 335      61.766 -21.338 -10.327  1.00 31.07           O
ATOM   2512  CB  ALA A 335      62.393 -18.962 -12.374  1.00 30.92           C
ATOM   2513  N   ILE A 336      61.001 -21.967 -12.346  1.00 31.23           N
ATOM   2514  CA  ILE A 336      60.043 -22.950 -11.832  1.00 30.23           C
ATOM   2515  C   ILE A 336      60.762 -24.186 -11.276  1.00 31.43           C
ATOM   2516  O   ILE A 336      60.425 -24.670 -10.166  1.00 31.56           O
ATOM   2517  CB  ILE A 336      58.989 -23.351 -12.873  1.00 30.85           C
```

```
ATOM   2518  CG1 ILE A 336      58.070 -22.158 -13.192  1.00 31.52           C
ATOM   2519  CG2 ILE A 336      58.168 -24.603 -12.392  1.00 29.58           C
ATOM   2520  CD1 ILE A 336      57.115 -22.399 -14.367  1.00 28.33           C
ATOM   2521  N   LYS A 337      61.751 -24.683 -12.018  1.00 30.91           N
ATOM   2522  CA  LYS A 337      62.547 -25.813 -11.563  1.00 31.98           C
ATOM   2523  C   LYS A 337      63.116 -25.599 -10.133  1.00 32.69           C
ATOM   2524  O   LYS A 337      63.069 -26.507  -9.289  1.00 32.36           O
ATOM   2525  CB  LYS A 337      63.662 -26.116 -12.579  1.00 31.29           C
ATOM   2526  CG  LYS A 337      64.679 -27.167 -12.131  1.00 32.09           C
ATOM   2527  CD  LYS A 337      65.923 -27.155 -13.014  1.00 33.26           C
ATOM   2528  CE  LYS A 337      67.022 -28.134 -12.528  1.00 35.08           C
ATOM   2529  NZ  LYS A 337      66.586 -29.571 -12.538  1.00 36.25           N
ATOM   2530  N   GLU A 338      63.669 -24.401  -9.909  1.00 33.12           N
ATOM   2531  CA  GLU A 338      64.336 -23.998  -8.683  1.00 33.38           C
ATOM   2532  C   GLU A 338      63.316 -23.682  -7.590  1.00 32.08           C
ATOM   2533  O   GLU A 338      63.574 -23.925  -6.427  1.00 31.19           O
ATOM   2534  CB  GLU A 338      65.205 -22.760  -8.953  1.00 33.45           C
ATOM   2535  CG  GLU A 338      66.305 -22.964 -10.057  1.00 37.07           C
ATOM   2536  CD  GLU A 338      67.123 -21.681 -10.379  1.00 38.50           C
ATOM   2537  OE1 GLU A 338      67.851 -21.624 -11.421  1.00 43.87           O
ATOM   2538  OE2 GLU A 338      67.044 -20.718  -9.587  1.00 45.08           O
ATOM   2539  N   TYR A 339      62.164 -23.121  -7.972  1.00 30.98           N
ATOM   2540  CA  TYR A 339      61.069 -22.944  -7.018  1.00 30.53           C
ATOM   2541  C   TYR A 339      60.522 -24.284  -6.521  1.00 30.09           C
ATOM   2542  O   TYR A 339      60.165 -24.425  -5.349  1.00 29.44           O
ATOM   2543  CB  TYR A 339      59.968 -22.130  -7.661  1.00 29.64           C
ATOM   2544  CG  TYR A 339      58.796 -21.796  -6.777  1.00 29.72           C
ATOM   2545  CD1 TYR A 339      58.864 -20.772  -5.811  1.00 29.97           C
ATOM   2546  CD2 TYR A 339      57.611 -22.481  -6.916  1.00 28.61           C
ATOM   2547  CE1 TYR A 339      57.735 -20.465  -5.033  1.00 29.24           C
ATOM   2548  CE2 TYR A 339      56.520 -22.182  -6.174  1.00 28.62           C
ATOM   2549  CZ  TYR A 339      56.583 -21.182  -5.246  1.00 29.61           C
ATOM   2550  OH  TYR A 339      55.450 -20.923  -4.564  1.00 30.09           O
ATOM   2551  N   MET A 340      60.460 -25.254  -7.430  1.00 30.76           N
ATOM   2552  CA  MET A 340      60.035 -26.603  -7.105  1.00 31.34           C
ATOM   2553  C   MET A 340      60.968 -27.191  -6.052  1.00 32.44           C
ATOM   2554  O   MET A 340      60.494 -27.738  -5.056  1.00 32.99           O
ATOM   2555  CB  MET A 340      59.973 -27.482  -8.373  1.00 31.36           C
ATOM   2556  CG  MET A 340      59.377 -28.875  -8.159  1.00 30.27           C
ATOM   2557  SD  MET A 340      57.605 -28.737  -7.814  1.00 31.27           S
ATOM   2558  CE  MET A 340      57.071 -28.341  -9.515  1.00 31.06           C
ATOM   2559  N   ASP A 341      62.286 -27.041  -6.248  1.00 32.47           N
ATOM   2560  CA  ASP A 341      63.255 -27.667  -5.374  1.00 33.45           C
ATOM   2561  C   ASP A 341      63.339 -26.994  -3.990  1.00 33.06           C
ATOM   2562  O   ASP A 341      63.431 -27.692  -2.987  1.00 33.70           O
ATOM   2563  CB  ASP A 341      64.662 -27.766  -6.030  1.00 33.50           C
ATOM   2564  CG  ASP A 341      64.715 -28.782  -7.203  1.00 37.66           C
ATOM   2565  OD1 ASP A 341      63.773 -29.606  -7.372  1.00 40.29           O
ATOM   2566  OD2 ASP A 341      65.704 -28.748  -7.992  1.00 41.19           O
ATOM   2567  N   THR A 342      63.291 -25.657  -3.954  1.00 32.01           N
```

```
ATOM   2568  CA  THR A 342      63.491 -24.891  -2.720  1.00 32.26           C
ATOM   2569  C   THR A 342      62.196 -24.735  -1.924  1.00 30.72           C
ATOM   2570  O   THR A 342      62.242 -24.702  -0.728  1.00 29.76           O
ATOM   2571  CB  THR A 342      64.050 -23.460  -2.998  1.00 32.45           C
ATOM   2572  OG1 THR A 342      63.077 -22.706  -3.760  1.00 34.25           O
ATOM   2573  CG2 THR A 342      65.332 -23.541  -3.825  1.00 32.92           C
ATOM   2574  N   THR A 343      61.056 -24.617  -2.607  1.00 29.93           N
ATOM   2575  CA  THR A 343      59.821 -24.135  -1.981  1.00 28.87           C
ATOM   2576  C   THR A 343      58.615 -25.028  -2.202  1.00 29.19           C
ATOM   2577  O   THR A 343      58.015 -25.500  -1.234  1.00 28.86           O
ATOM   2578  CB  THR A 343      59.485 -22.672  -2.459  1.00 28.99           C
ATOM   2579  OG1 THR A 343      60.632 -21.839  -2.231  1.00 25.35           O
ATOM   2580  CG2 THR A 343      58.259 -22.088  -1.675  1.00 25.92           C
ATOM   2581  N   LEU A 344      58.248 -25.232  -3.477  1.00 28.12           N
ATOM   2582  CA  LEU A 344      57.002 -25.887  -3.791  1.00 26.33           C
ATOM   2583  C   LEU A 344      56.973 -27.376  -3.504  1.00 26.45           C
ATOM   2584  O   LEU A 344      55.998 -27.868  -2.916  1.00 26.47           O
ATOM   2585  CB  LEU A 344      56.539 -25.597  -5.228  1.00 27.51           C
ATOM   2586  CG  LEU A 344      55.215 -26.229  -5.666  1.00 27.27           C
ATOM   2587  CD1 LEU A 344      54.008 -25.723  -4.776  1.00 26.93           C
ATOM   2588  CD2 LEU A 344      54.980 -25.966  -7.189  1.00 23.49           C
ATOM   2589  N   GLY A 345      58.003 -28.106  -3.906  1.00 24.67           N
ATOM   2590  CA  GLY A 345      57.935 -29.550  -3.794  1.00 23.88           C
ATOM   2591  C   GLY A 345      57.917 -29.995  -2.345  1.00 24.77           C
ATOM   2592  O   GLY A 345      57.087 -30.818  -1.989  1.00 25.35           O
ATOM   2593  N   PRO A 346      58.843 -29.481  -1.486  1.00 24.59           N
ATOM   2594  CA  PRO A 346      58.761 -29.853  -0.087  1.00 25.01           C
ATOM   2595  C   PRO A 346      57.447 -29.503   0.546  1.00 25.65           C
ATOM   2596  O   PRO A 346      56.956 -30.270   1.372  1.00 26.93           O
ATOM   2597  CB  PRO A 346      59.939 -29.076   0.573  1.00 25.02           C
ATOM   2598  CG  PRO A 346      60.936 -28.956  -0.549  1.00 23.94           C
ATOM   2599  CD  PRO A 346      60.031 -28.655  -1.745  1.00 24.21           C
ATOM   2600  N   PHE A 347      56.880 -28.364   0.168  1.00 26.92           N
ATOM   2601  CA  PHE A 347      55.552 -27.970   0.629  1.00 27.80           C
ATOM   2602  C   PHE A 347      54.459 -28.951   0.241  1.00 28.05           C
ATOM   2603  O   PHE A 347      53.572 -29.239   1.066  1.00 29.14           O
ATOM   2604  CB  PHE A 347      55.128 -26.554   0.155  1.00 27.64           C
ATOM   2605  CG  PHE A 347      53.745 -26.164   0.656  1.00 27.82           C
ATOM   2606  CD1 PHE A 347      53.569 -25.698   1.951  1.00 29.93           C
ATOM   2607  CD2 PHE A 347      52.630 -26.355  -0.134  1.00 29.45           C
ATOM   2608  CE1 PHE A 347      52.291 -25.394   2.426  1.00 32.41           C
ATOM   2609  CE2 PHE A 347      51.342 -26.035   0.339  1.00 32.75           C
ATOM   2610  CZ  PHE A 347      51.177 -25.560   1.630  1.00 28.23           C
ATOM   2611  N   ILE A 348      54.471 -29.416  -1.017  1.00 27.48           N
ATOM   2612  CA  ILE A 348      53.483 -30.391  -1.462  1.00 26.87           C
ATOM   2613  C   ILE A 348      53.533 -31.698  -0.645  1.00 26.43           C
ATOM   2614  O   ILE A 348      52.535 -32.174  -0.144  1.00 27.20           O
ATOM   2615  CB  ILE A 348      53.616 -30.681  -2.990  1.00 27.03           C
ATOM   2616  CG1 ILE A 348      53.256 -29.422  -3.839  1.00 27.18           C
ATOM   2617  CG2 ILE A 348      52.761 -31.842  -3.378  1.00 26.63           C
```

```
ATOM   2618  CD1 ILE A 348      51.807 -28.950  -3.700  1.00 26.41           C
ATOM   2619  N   LEU A 349      54.702 -32.291  -0.542  1.00 27.02           N
ATOM   2620  CA  LEU A 349      54.902 -33.454   0.286  1.00 27.85           C
ATOM   2621  C   LEU A 349      54.467 -33.180   1.766  1.00 26.91           C
ATOM   2622  O   LEU A 349      53.909 -34.031   2.432  1.00 26.03           O
ATOM   2623  CB  LEU A 349      56.385 -33.788   0.277  1.00 28.66           C
ATOM   2624  CG  LEU A 349      56.865 -35.246   0.399  1.00 34.30           C
ATOM   2625  CD1 LEU A 349      58.226 -35.330   1.088  1.00 31.76           C
ATOM   2626  CD2 LEU A 349      55.869 -36.235   1.001  1.00 36.92           C
ATOM   2627  N   ASN A 350      54.749 -31.984   2.246  1.00 25.94           N
ATOM   2628  CA  ASN A 350      54.458 -31.604   3.617  1.00 27.11           C
ATOM   2629  C   ASN A 350      52.947 -31.645   3.844  1.00 27.22           C
ATOM   2630  O   ASN A 350      52.463 -32.401   4.689  1.00 27.81           O
ATOM   2631  CB  ASN A 350      55.096 -30.216   3.893  1.00 26.28           C
ATOM   2632  CG  ASN A 350      55.013 -29.776   5.353  1.00 27.24           C
ATOM   2633  OD1 ASN A 350      54.055 -30.057   6.070  1.00 23.88           O
ATOM   2634  ND2 ASN A 350      56.055 -29.085   5.786  1.00 26.86           N
ATOM   2635  N   VAL A 351      52.207 -30.877   3.044  1.00 27.61           N
ATOM   2636  CA  VAL A 351      50.739 -30.813   3.181  1.00 27.99           C
ATOM   2637  C   VAL A 351      50.033 -32.141   2.873  1.00 27.91           C
ATOM   2638  O   VAL A 351      49.044 -32.482   3.512  1.00 29.16           O
ATOM   2639  CB  VAL A 351      50.105 -29.623   2.399  1.00 26.33           C
ATOM   2640  CG1 VAL A 351      50.241 -29.803   0.858  1.00 30.29           C
ATOM   2641  CG2 VAL A 351      48.658 -29.537   2.736  1.00 28.25           C
ATOM   2642  N   THR A 352      50.550 -32.905   1.919  1.00 27.19           N
ATOM   2643  CA  THR A 352      49.943 -34.174   1.538  1.00 26.25           C
ATOM   2644  C   THR A 352      50.091 -35.207   2.652  1.00 26.08           C
ATOM   2645  O   THR A 352      49.168 -35.949   2.947  1.00 26.73           O
ATOM   2646  CB  THR A 352      50.624 -34.707   0.226  1.00 25.87           C
ATOM   2647  OG1 THR A 352      50.335 -33.796  -0.836  1.00 28.05           O
ATOM   2648  CG2 THR A 352      50.099 -36.038  -0.150  1.00 24.75           C
ATOM   2649  N   SER A 353      51.285 -35.290   3.205  1.00 26.06           N
ATOM   2650  CA  SER A 353      51.597 -36.157   4.323  1.00 27.41           C
ATOM   2651  C   SER A 353      50.902 -35.731   5.599  1.00 27.32           C
ATOM   2652  O   SER A 353      50.479 -36.599   6.376  1.00 28.20           O
ATOM   2653  CB  SER A 353      53.117 -36.180   4.557  1.00 27.52           C
ATOM   2654  OG  SER A 353      53.780 -36.654   3.394  1.00 29.68           O
ATOM   2655  N   GLY A 354      50.804 -34.419   5.860  1.00 27.13           N
ATOM   2656  CA  GLY A 354      50.124 -33.946   7.109  1.00 26.36           C
ATOM   2657  C   GLY A 354      48.670 -34.403   7.073  1.00 26.90           C
ATOM   2658  O   GLY A 354      48.135 -34.926   8.059  1.00 27.44           O
ATOM   2659  N   ALA A 355      48.037 -34.239   5.908  1.00 25.95           N
ATOM   2660  CA  ALA A 355      46.641 -34.615   5.707  1.00 25.61           C
ATOM   2661  C   ALA A 355      46.460 -36.113   5.866  1.00 25.66           C
ATOM   2662  O   ALA A 355      45.512 -36.552   6.514  1.00 25.89           O
ATOM   2663  CB  ALA A 355      46.171 -34.166   4.339  1.00 24.22           C
ATOM   2664  N   LEU A 356      47.354 -36.891   5.253  1.00 25.41           N
ATOM   2665  CA  LEU A 356      47.306 -38.344   5.331  1.00 26.13           C
ATOM   2666  C   LEU A 356      47.533 -38.826   6.765  1.00 26.51           C
ATOM   2667  O   LEU A 356      46.797 -39.726   7.279  1.00 27.01           O
```

```
ATOM   2668  CB  LEU A 356      48.343 -39.004   4.398  1.00 25.53           C
ATOM   2669  CG  LEU A 356      48.392 -40.539   4.582  1.00 27.36           C
ATOM   2670  CD1 LEU A 356      46.984 -41.138   4.333  1.00 24.30           C
ATOM   2671  CD2 LEU A 356      49.510 -41.332   3.746  1.00 26.35           C
ATOM   2672  N   LEU A 357      48.572 -38.287   7.414  1.00 27.10           N
ATOM   2673  CA  LEU A 357      48.906 -38.747   8.763  1.00 27.41           C
ATOM   2674  C   LEU A 357      47.769 -38.428   9.725  1.00 27.32           C
ATOM   2675  O   LEU A 357      47.447 -39.215  10.628  1.00 28.79           O
ATOM   2676  CB  LEU A 357      50.226 -38.141   9.235  1.00 28.12           C
ATOM   2677  CG  LEU A 357      51.443 -38.699   8.513  1.00 28.88           C
ATOM   2678  CD1 LEU A 357      52.670 -37.893   8.858  1.00 28.46           C
ATOM   2679  CD2 LEU A 357      51.678 -40.156   8.905  1.00 33.08           C
ATOM   2680  N   CYS A 358      47.155 -37.268   9.545  1.00 28.14           N
ATOM   2681  CA  CYS A 358      46.071 -36.879  10.437  1.00 28.43           C
ATOM   2682  C   CYS A 358      44.872 -37.843  10.252  1.00 28.11           C
ATOM   2683  O   CYS A 358      44.308 -38.330  11.234  1.00 28.24           O
ATOM   2684  CB  CYS A 358      45.663 -35.414  10.195  1.00 28.04           C
ATOM   2685  SG  CYS A 358      44.427 -34.825  11.426  1.00 31.14           S
ATOM   2686  N   SER A 359      44.510 -38.097   8.991  1.00 27.26           N
ATOM   2687  CA  SER A 359      43.474 -39.048   8.619  1.00 26.99           C
ATOM   2688  C   SER A 359      43.707 -40.390   9.305  1.00 26.85           C
ATOM   2689  O   SER A 359      42.767 -41.029   9.781  1.00 27.59           O
ATOM   2690  CB  SER A 359      43.457 -39.222   7.095  1.00 26.77           C
ATOM   2691  OG  SER A 359      42.525 -40.164   6.690  1.00 25.72           O
ATOM   2692  N   GLN A 360      44.952 -40.843   9.316  1.00 26.51           N
ATOM   2693  CA  GLN A 360      45.283 -42.134   9.900  1.00 26.35           C
ATOM   2694  C   GLN A 360      45.199 -42.089  11.431  1.00 26.63           C
ATOM   2695  O   GLN A 360      44.681 -43.014  12.037  1.00 26.23           O
ATOM   2696  CB  GLN A 360      46.645 -42.638   9.422  1.00 25.56           C
ATOM   2697  CG  GLN A 360      46.673 -42.913   7.888  1.00 26.81           C
ATOM   2698  CD  GLN A 360      48.038 -43.329   7.409  1.00 27.70           C
ATOM   2699  OE1 GLN A 360      49.033 -42.918   7.979  1.00 34.74           O
ATOM   2700  NE2 GLN A 360      48.098 -44.160   6.372  1.00 29.51           N
ATOM   2701  N   ALA A 361      45.672 -41.003  12.029  1.00 27.45           N
ATOM   2702  CA  ALA A 361      45.864 -40.933  13.503  1.00 28.62           C
ATOM   2703  C   ALA A 361      44.561 -40.545  14.173  1.00 28.86           C
ATOM   2704  O   ALA A 361      44.273 -41.019  15.261  1.00 29.73           O
ATOM   2705  CB  ALA A 361      46.958 -39.909  13.872  1.00 27.38           C
ATOM   2706  N   LEU A 362      43.808 -39.671  13.520  1.00 26.97           N
ATOM   2707  CA  LEU A 362      42.597 -39.136  14.105  1.00 27.84           C
ATOM   2708  C   LEU A 362      41.307 -39.783  13.590  1.00 27.50           C
ATOM   2709  O   LEU A 362      40.337 -39.884  14.333  1.00 28.48           O
ATOM   2710  CB  LEU A 362      42.547 -37.596  13.890  1.00 27.30           C
ATOM   2711  CG  LEU A 362      41.497 -36.828  14.663  1.00 28.46           C
ATOM   2712  CD1 LEU A 362      41.775 -36.918  16.211  1.00 27.56           C
ATOM   2713  CD2 LEU A 362      41.509 -35.418  14.171  1.00 27.39           C
ATOM   2714  N   CYS A 363      41.283 -40.208  12.324  1.00 27.27           N
ATOM   2715  CA  CYS A 363      40.019 -40.555  11.649  1.00 26.87           C
ATOM   2716  C   CYS A 363      40.033 -41.986  11.156  1.00 26.99           C
ATOM   2717  O   CYS A 363      39.397 -42.301  10.145  1.00 26.86           O
```

```
ATOM   2718  CB  CYS A 363      39.774 -39.599  10.477  1.00 26.16           C
ATOM   2719  SG  CYS A 363      39.720 -37.861  11.079  1.00 30.20           S
ATOM   2720  N   SER A 364      40.829 -42.816  11.834  1.00 25.66           N
ATOM   2721  CA  SER A 364      40.966 -44.252  11.564  1.00 26.35           C
ATOM   2722  C   SER A 364      41.334 -44.557  10.125  1.00 26.12           C
ATOM   2723  O   SER A 364      41.091 -45.660   9.699  1.00 27.22           O
ATOM   2724  CB  SER A 364      39.687 -45.027  11.958  1.00 25.46           C
ATOM   2725  OG  SER A 364      39.165 -44.503  13.196  1.00 29.01           O
ATOM   2726  N   GLY A 365      41.906 -43.592   9.384  1.00 24.66           N
ATOM   2727  CA  GLY A 365      42.171 -43.819   7.951  1.00 23.44           C
ATOM   2728  C   GLY A 365      40.921 -43.791   7.086  1.00 22.39           C
ATOM   2729  O   GLY A 365      40.996 -44.083   5.914  1.00 21.98           O
ATOM   2730  N   HIS A 366      39.773 -43.399   7.652  1.00 23.69           N
ATOM   2731  CA  HIS A 366      38.470 -43.446   6.939  1.00 22.98           C
ATOM   2732  C   HIS A 366      37.698 -42.129   6.944  1.00 23.32           C
ATOM   2733  O   HIS A 366      36.435 -42.135   6.806  1.00 23.17           O
ATOM   2734  CB  HIS A 366      37.558 -44.480   7.580  1.00 22.51           C
ATOM   2735  CG  HIS A 366      38.138 -45.856   7.663  1.00 24.54           C
ATOM   2736  ND1 HIS A 366      38.532 -46.572   6.554  1.00 25.45           N
ATOM   2737  CD2 HIS A 366      38.306 -46.685   8.721  1.00 25.60           C
ATOM   2738  CE1 HIS A 366      38.930 -47.775   6.926  1.00 24.52           C
ATOM   2739  NE2 HIS A 366      38.814 -47.860   8.234  1.00 23.73           N
ATOM   2740  N   GLY A 367      38.426 -41.017   7.112  1.00 21.53           N
ATOM   2741  CA  GLY A 367      37.868 -39.708   6.917  1.00 22.18           C
ATOM   2742  C   GLY A 367      38.975 -38.709   6.756  1.00 23.52           C
ATOM   2743  O   GLY A 367      40.157 -39.040   6.919  1.00 23.73           O
ATOM   2744  N   ARG A 368      38.588 -37.486   6.436  1.00 24.29           N
ATOM   2745  CA  ARG A 368      39.484 -36.335   6.348  1.00 25.77           C
ATOM   2746  C   ARG A 368      39.457 -35.546   7.636  1.00 27.20           C
ATOM   2747  O   ARG A 368      38.376 -35.404   8.238  1.00 26.86           O
ATOM   2748  CB  ARG A 368      39.082 -35.430   5.145  1.00 26.01           C
ATOM   2749  CG  ARG A 368      39.470 -36.091   3.822  1.00 24.51           C
ATOM   2750  CD  ARG A 368      39.730 -35.182   2.511  1.00 27.76           C
ATOM   2751  NE  ARG A 368      38.566 -35.417   1.844  1.00 29.75           N
ATOM   2752  CZ  ARG A 368      38.200 -36.181   0.840  1.00 28.19           C
ATOM   2753  NH1 ARG A 368      38.896 -36.636  -0.188  1.00 30.88           N
ATOM   2754  NH2 ARG A 368      36.923 -36.278   0.837  1.00 24.90           N
ATOM   2755  N   CYS A 369      40.641 -35.074   8.089  1.00 28.55           N
ATOM   2756  CA  CYS A 369      40.711 -34.074   9.147  1.00 29.77           C
ATOM   2757  C   CYS A 369      40.308 -32.737   8.561  1.00 30.27           C
ATOM   2758  O   CYS A 369      40.708 -32.356   7.439  1.00 30.04           O
ATOM   2759  CB  CYS A 369      42.103 -33.952   9.796  1.00 29.73           C
ATOM   2760  SG  CYS A 369      42.673 -35.462  10.613  1.00 31.37           S
ATOM   2761  N   VAL A 370      39.536 -32.029   9.373  1.00 31.40           N
ATOM   2762  CA  VAL A 370      38.875 -30.781   9.041  1.00 32.70           C
ATOM   2763  C   VAL A 370      38.966 -29.917  10.322  1.00 32.86           C
ATOM   2764  O   VAL A 370      38.755 -30.417  11.437  1.00 30.79           O
ATOM   2765  CB  VAL A 370      37.387 -31.065   8.633  1.00 33.41           C
ATOM   2766  CG1 VAL A 370      36.559 -29.829   8.744  1.00 36.98           C
ATOM   2767  CG2 VAL A 370      37.353 -31.553   7.195  1.00 32.54           C
```

```
ATOM   2768  N   ARG A 371      39.328 -28.645  10.158  1.00 32.57           N
ATOM   2769  CA  ARG A 371      39.497 -27.713  11.286  1.00 32.84           C
ATOM   2770  C   ARG A 371      38.375 -27.748  12.233  1.00 31.54           C
ATOM   2771  O   ARG A 371      37.257 -27.693  11.793  1.00 32.46           O
ATOM   2772  CB  ARG A 371      39.421 -26.285  10.750  1.00 33.51           C
ATOM   2773  CG  ARG A 371      40.690 -25.695  10.619  1.00 33.92           C
ATOM   2774  CD  ARG A 371      40.495 -24.404   9.998  1.00 29.59           C
ATOM   2775  NE  ARG A 371      41.727 -24.072   9.356  1.00 27.18           N
ATOM   2776  CZ  ARG A 371      41.782 -23.375   8.245  1.00 25.94           C
ATOM   2777  NH1 ARG A 371      40.630 -22.996   7.670  1.00 24.17           N
ATOM   2778  NH2 ARG A 371      42.976 -23.009   7.782  1.00 26.09           N
ATOM   2779  N   ARG A 372      38.634 -27.734  13.534  1.00 31.37           N
ATOM   2780  CA  ARG A 372      37.551 -27.372  14.469  1.00 31.39           C
ATOM   2781  C   ARG A 372      37.383 -25.864  14.381  1.00 31.59           C
ATOM   2782  O   ARG A 372      38.316 -25.106  14.081  1.00 29.86           O
ATOM   2783  CB  ARG A 372      37.829 -27.786  15.902  1.00 30.18           C
ATOM   2784  CG  ARG A 372      37.833 -29.263  16.125  1.00 32.77           C
ATOM   2785  CD  ARG A 372      38.528 -29.646  17.421  1.00 37.77           C
ATOM   2786  NE  ARG A 372      38.503 -31.101  17.651  1.00 42.43           N
ATOM   2787  CZ  ARG A 372      37.416 -31.778  18.017  1.00 46.29           C
ATOM   2788  NH1 ARG A 372      36.261 -31.144  18.183  1.00 47.32           N
ATOM   2789  NH2 ARG A 372      37.475 -33.086  18.217  1.00 46.19           N
ATOM   2790  N   THR A 373      36.169 -25.443  14.657  1.00 33.61           N
ATOM   2791  CA  THR A 373      35.773 -24.065  14.494  1.00 35.73           C
ATOM   2792  C   THR A 373      36.438 -23.153  15.578  1.00 35.29           C
ATOM   2793  O   THR A 373      36.712 -21.983  15.345  1.00 36.08           O
ATOM   2794  CB  THR A 373      34.232 -24.020  14.434  1.00 36.30           C
ATOM   2795  OG1 THR A 373      33.809 -22.950  13.555  1.00 42.37           O
ATOM   2796  CG2 THR A 373      33.638 -23.883  15.772  1.00 36.31           C
ATOM   2797  N   SER A 374      36.753 -23.747  16.722  1.00 34.26           N
ATOM   2798  CA  SER A 374      37.588 -23.154  17.769  1.00 33.86           C
ATOM   2799  C   SER A 374      39.024 -22.895  17.308  1.00 32.91           C
ATOM   2800  O   SER A 374      39.733 -22.190  17.992  1.00 31.92           O
ATOM   2801  CB  SER A 374      37.637 -24.106  18.984  1.00 33.33           C
ATOM   2802  OG  SER A 374      38.371 -25.262  18.599  1.00 35.40           O
ATOM   2803  N   HIS A 375      39.453 -23.486  16.175  1.00 32.06           N
ATOM   2804  CA  HIS A 375      40.821 -23.276  15.665  1.00 31.71           C
ATOM   2805  C   HIS A 375      40.829 -22.841  14.187  1.00 31.78           C
ATOM   2806  O   HIS A 375      41.320 -23.587  13.330  1.00 31.70           O
ATOM   2807  CB  HIS A 375      41.687 -24.522  15.910  1.00 31.47           C
ATOM   2808  CG  HIS A 375      42.019 -24.749  17.355  1.00 32.91           C
ATOM   2809  ND1 HIS A 375      41.097 -25.206  18.278  1.00 33.61           N
ATOM   2810  CD2 HIS A 375      43.169 -24.561  18.038  1.00 32.94           C
ATOM   2811  CE1 HIS A 375      41.667 -25.284  19.464  1.00 32.44           C
ATOM   2812  NE2 HIS A 375      42.926 -24.903  19.342  1.00 33.20           N
ATOM   2813  N   PRO A 376      40.272 -21.623  13.889  1.00 32.02           N
ATOM   2814  CA  PRO A 376      39.929 -21.206  12.507  1.00 30.91           C
ATOM   2815  C   PRO A 376      41.088 -21.111  11.532  1.00 31.55           C
ATOM   2816  O   PRO A 376      40.864 -20.929  10.325  1.00 31.48           O
ATOM   2817  CB  PRO A 376      39.289 -19.820  12.703  1.00 31.17           C
```

```
ATOM   2818  CG  PRO A 376      39.884 -19.301  14.003  1.00 30.32           C
ATOM   2819  CD  PRO A 376      39.929 -20.553  14.869  1.00 31.24           C
ATOM   2820  N   LYS A 377      42.311 -21.236  12.029  1.00 31.74           N
ATOM   2821  CA  LYS A 377      43.483 -21.065  11.168  1.00 33.17           C
ATOM   2822  C   LYS A 377      44.440 -22.237  11.223  1.00 32.93           C
ATOM   2823  O   LYS A 377      45.500 -22.191  10.623  1.00 35.10           O
ATOM   2824  CB  LYS A 377      44.192 -19.779  11.561  1.00 34.55           C
ATOM   2825  CG  LYS A 377      43.493 -18.562  10.956  1.00 38.42           C
ATOM   2826  CD  LYS A 377      43.554 -17.367  11.841  1.00 46.12           C
ATOM   2827  CE  LYS A 377      43.119 -16.156  11.039  1.00 50.24           C
ATOM   2828  NZ  LYS A 377      44.088 -15.836   9.933  1.00 54.96           N
ATOM   2829  N   ALA A 378      44.083 -23.281  11.966  1.00 31.56           N
ATOM   2830  CA  ALA A 378      44.895 -24.467  12.026  1.00 30.52           C
ATOM   2831  C   ALA A 378      45.172 -25.048  10.601  1.00 30.17           C
ATOM   2832  O   ALA A 378      44.299 -25.040   9.732  1.00 29.78           O
ATOM   2833  CB  ALA A 378      44.210 -25.493  12.914  1.00 29.31           C
ATOM   2834  N   LEU A 379      46.363 -25.599  10.412  1.00 29.47           N
ATOM   2835  CA  LEU A 379      46.761 -26.229   9.160  1.00 30.03           C
ATOM   2836  C   LEU A 379      47.286 -27.644   9.426  1.00 30.26           C
ATOM   2837  O   LEU A 379      47.647 -27.979  10.565  1.00 31.20           O
ATOM   2838  CB  LEU A 379      47.873 -25.403   8.496  1.00 30.30           C
ATOM   2839  CG  LEU A 379      47.557 -23.959   8.090  1.00 28.76           C
ATOM   2840  CD1 LEU A 379      48.826 -23.276   7.618  1.00 27.39           C
ATOM   2841  CD2 LEU A 379      46.508 -23.930   6.967  1.00 24.62           C
ATOM   2842  N   LEU A 380      47.332 -28.457   8.384  1.00 30.20           N
ATOM   2843  CA  LEU A 380      47.776 -29.844   8.451  1.00 31.08           C
ATOM   2844  C   LEU A 380      49.189 -29.966   7.880  1.00 31.25           C
ATOM   2845  O   LEU A 380      49.370 -30.183   6.732  1.00 33.69           O
ATOM   2846  CB  LEU A 380      46.804 -30.745   7.663  1.00 30.63           C
ATOM   2847  CG  LEU A 380      45.392 -31.009   8.217  1.00 32.24           C
ATOM   2848  CD1 LEU A 380      44.525 -31.677   7.181  1.00 28.02           C
ATOM   2849  CD2 LEU A 380      45.441 -31.848   9.470  1.00 30.42           C
ATOM   2850  N   LEU A 381      50.200 -29.819   8.689  1.00 32.37           N
ATOM   2851  CA  LEU A 381      51.568 -29.721   8.220  1.00 32.54           C
ATOM   2852  C   LEU A 381      52.405 -30.607   9.096  1.00 33.37           C
ATOM   2853  O   LEU A 381      51.905 -31.103  10.135  1.00 35.05           O
ATOM   2854  CB  LEU A 381      52.046 -28.281   8.327  1.00 32.30           C
ATOM   2855  CG  LEU A 381      51.228 -27.311   7.454  1.00 34.02           C
ATOM   2856  CD1 LEU A 381      51.360 -25.931   8.043  1.00 36.45           C
ATOM   2857  CD2 LEU A 381      51.483 -27.344   5.860  1.00 33.13           C
ATOM   2858  N   LEU A 382      53.658 -30.840   8.709  1.00 31.79           N
ATOM   2859  CA  LEU A 382      54.508 -31.714   9.508  1.00 29.99           C
ATOM   2860  C   LEU A 382      55.390 -30.868  10.392  1.00 30.10           C
ATOM   2861  O   LEU A 382      55.893 -29.785   9.971  1.00 30.26           O
ATOM   2862  CB  LEU A 382      55.367 -32.620   8.628  1.00 30.07           C
ATOM   2863  CG  LEU A 382      54.737 -33.439   7.497  1.00 27.46           C
ATOM   2864  CD1 LEU A 382      55.854 -34.008   6.696  1.00 24.08           C
ATOM   2865  CD2 LEU A 382      53.822 -34.563   7.994  1.00 25.55           C
ATOM   2866  N   ASN A 383      55.600 -31.353  11.614  1.00 28.30           N
ATOM   2867  CA  ASN A 383      56.464 -30.669  12.565  1.00 28.17           C
```

```
ATOM   2868  C   ASN A 383      57.923 -30.865  12.145  1.00 28.32           C
ATOM   2869  O   ASN A 383      58.352 -32.003  12.007  1.00 28.23           O
ATOM   2870  CB  ASN A 383      56.184 -31.258  13.950  1.00 27.69           C
ATOM   2871  CG  ASN A 383      56.979 -30.603  15.090  1.00 28.25           C
ATOM   2872  OD1 ASN A 383      57.869 -29.750  14.907  1.00 26.65           O
ATOM   2873  ND2 ASN A 383      56.664 -31.056  16.304  1.00 24.00           N
ATOM   2874  N   PRO A 384      58.697 -29.760  11.935  1.00 28.82           N
ATOM   2875  CA  PRO A 384      60.098 -29.971  11.550  1.00 29.06           C
ATOM   2876  C   PRO A 384      60.938 -30.625  12.634  1.00 29.86           C
ATOM   2877  O   PRO A 384      62.043 -31.065  12.341  1.00 31.43           O
ATOM   2878  CB  PRO A 384      60.590 -28.558  11.252  1.00 28.73           C
ATOM   2879  CG  PRO A 384      59.725 -27.706  12.161  1.00 28.69           C
ATOM   2880  CD  PRO A 384      58.382 -28.318  12.032  1.00 28.20           C
ATOM   2881  N   ALA A 385      60.436 -30.700  13.867  1.00 29.75           N
ATOM   2882  CA  ALA A 385      61.131 -31.413  14.923  1.00 30.53           C
ATOM   2883  C   ALA A 385      60.914 -32.920  14.849  1.00 30.70           C
ATOM   2884  O   ALA A 385      61.724 -33.680  15.400  1.00 30.73           O
ATOM   2885  CB  ALA A 385      60.736 -30.882  16.326  1.00 30.24           C
ATOM   2886  N   SER A 386      59.817 -33.339  14.203  1.00 29.94           N
ATOM   2887  CA  SER A 386      59.466 -34.753  14.067  1.00 30.02           C
ATOM   2888  C   SER A 386      59.864 -35.348  12.725  1.00 30.31           C
ATOM   2889  O   SER A 386      60.147 -36.561  12.645  1.00 30.10           O
ATOM   2890  CB  SER A 386      57.970 -34.938  14.211  1.00 30.01           C
ATOM   2891  OG  SER A 386      57.520 -34.373  15.417  1.00 32.75           O
ATOM   2892  N   PHE A 387      59.858 -34.505  11.681  1.00 29.58           N
ATOM   2893  CA  PHE A 387      60.112 -34.942  10.312  1.00 30.02           C
ATOM   2894  C   PHE A 387      61.139 -34.061   9.625  1.00 31.17           C
ATOM   2895  O   PHE A 387      61.290 -32.888   9.969  1.00 31.30           O
ATOM   2896  CB  PHE A 387      58.846 -34.873   9.444  1.00 29.00           C
ATOM   2897  CG  PHE A 387      57.772 -35.859   9.799  1.00 27.94           C
ATOM   2898  CD1 PHE A 387      56.708 -35.477  10.645  1.00 28.89           C
ATOM   2899  CD2 PHE A 387      57.784 -37.150   9.256  1.00 28.30           C
ATOM   2900  CE1 PHE A 387      55.675 -36.362  10.982  1.00 27.88           C
ATOM   2901  CE2 PHE A 387      56.750 -38.043   9.567  1.00 28.37           C
ATOM   2902  CZ  PHE A 387      55.701 -37.654  10.435  1.00 27.57           C
ATOM   2903  N   SER A 388      61.797 -34.642   8.625  1.00 31.82           N
ATOM   2904  CA  SER A 388      62.725 -33.952   7.770  1.00 33.48           C
ATOM   2905  C   SER A 388      62.389 -34.265   6.295  1.00 34.10           C
ATOM   2906  O   SER A 388      62.185 -35.427   5.917  1.00 34.15           O
ATOM   2907  CB  SER A 388      64.139 -34.408   8.120  1.00 34.37           C
ATOM   2908  OG  SER A 388      65.098 -33.596   7.465  1.00 38.12           O
ATOM   2909  N   ILE A 389      62.270 -33.233   5.467  1.00 34.54           N
ATOM   2910  CA  ILE A 389      61.960 -33.462   4.067  1.00 34.46           C
ATOM   2911  C   ILE A 389      63.238 -33.146   3.346  1.00 36.21           C
ATOM   2912  O   ILE A 389      63.809 -32.075   3.541  1.00 36.42           O
ATOM   2913  CB  ILE A 389      60.771 -32.584   3.552  1.00 33.99           C
ATOM   2914  CG1 ILE A 389      59.438 -33.085   4.158  1.00 31.67           C
ATOM   2915  CG2 ILE A 389      60.743 -32.553   2.008  1.00 31.75           C
ATOM   2916  CD1 ILE A 389      58.295 -32.194   3.977  1.00 28.21           C
ATOM   2917  N   GLN A 390      63.715 -34.082   2.533  1.00 38.16           N
```

```
ATOM   2918  CA  GLN A 390      64.990 -33.854   1.867  1.00 40.54           C
ATOM   2919  C   GLN A 390      65.063 -34.407   0.454  1.00 42.09           C
ATOM   2920  O   GLN A 390      64.411 -35.406   0.114  1.00 41.06           O
ATOM   2921  CB  GLN A 390      66.131 -34.490   2.662  1.00 40.72           C
ATOM   2922  CG  GLN A 390      66.278 -33.952   4.074  1.00 20.00           C
ATOM   2923  CD  GLN A 390      67.418 -34.605   4.831  1.00 20.00           C
ATOM   2924  OE1 GLN A 390      68.110 -35.473   4.301  1.00 20.00           O
ATOM   2925  NE2 GLN A 390      67.614 -34.190   6.076  1.00 20.00           N
ATOM   2926  N   LEU A 391      65.882 -33.755  -0.358  1.00 45.47           N
ATOM   2927  CA  LEU A 391      66.153 -34.264  -1.697  1.00 49.57           C
ATOM   2928  C   LEU A 391      67.143 -35.412  -1.665  1.00 52.33           C
ATOM   2929  O   LEU A 391      68.246 -35.267  -1.107  1.00 52.99           O
ATOM   2930  CB  LEU A 391      66.669 -33.158  -2.612  1.00 49.32           C
ATOM   2931  CG  LEU A 391      66.341 -33.403  -4.083  1.00 49.51           C
ATOM   2932  CD1 LEU A 391      64.934 -34.026  -4.304  1.00 47.84           C
ATOM   2933  CD2 LEU A 391      66.500 -32.088  -4.826  1.00 51.62           C
ATOM   2934  N   THR A 392      66.750 -36.544  -2.259  1.00 55.49           N
ATOM   2935  CA  THR A 392      67.647 -37.714  -2.403  1.00 58.78           C
ATOM   2936  C   THR A 392      68.763 -37.411  -3.430  1.00 59.66           C
ATOM   2937  O   THR A 392      68.459 -36.980  -4.550  1.00 59.97           O
ATOM   2938  CB  THR A 392      66.869 -38.999  -2.828  1.00 58.65           C
ATOM   2939  OG1 THR A 392      65.513 -38.922  -2.368  1.00 59.57           O
ATOM   2940  CG2 THR A 392      67.528 -40.267  -2.264  1.00 58.91           C
ATOM   2941  N   PRO A 393      70.054 -37.626  -3.049  1.00 60.97           N
ATOM   2942  CA  PRO A 393      71.230 -37.322  -3.903  1.00 61.38           C
ATOM   2943  C   PRO A 393      71.114 -37.687  -5.392  1.00 62.82           C
ATOM   2944  O   PRO A 393      70.440 -38.667  -5.754  1.00 63.51           O
ATOM   2945  CB  PRO A 393      72.350 -38.108  -3.239  1.00 61.63           C
ATOM   2946  CG  PRO A 393      71.990 -38.034  -1.761  1.00 61.29           C
ATOM   2947  CD  PRO A 393      70.476 -38.171  -1.738  1.00 61.01           C
ATOM   2948  N   GLY A 394      71.761 -36.892  -6.245  1.00 63.20           N
ATOM   2949  CA  GLY A 394      71.656 -37.075  -7.685  1.00 63.56           C
ATOM   2950  C   GLY A 394      70.295 -36.587  -8.121  1.00 63.75           C
ATOM   2951  O   GLY A 394      70.181 -35.861  -9.114  1.00 64.25           O
ATOM   2952  N   GLY A 395      69.263 -36.982  -7.373  1.00 63.35           N
ATOM   2953  CA  GLY A 395      67.910 -36.477  -7.598  1.00 63.03           C
ATOM   2954  C   GLY A 395      66.816 -37.522  -7.756  1.00 62.29           C
ATOM   2955  O   GLY A 395      66.076 -37.503  -8.736  1.00 62.32           O
ATOM   2956  N   GLY A 396      66.710 -38.440  -6.797  1.00 61.32           N
ATOM   2957  CA  GLY A 396      65.490 -39.233  -6.665  1.00 59.54           C
ATOM   2958  C   GLY A 396      64.399 -38.250  -6.240  1.00 57.88           C
ATOM   2959  O   GLY A 396      64.633 -37.039  -6.203  1.00 58.09           O
ATOM   2960  N   PRO A 397      63.200 -38.748  -5.916  1.00 56.43           N
ATOM   2961  CA  PRO A 397      62.220 -37.800  -5.407  1.00 55.14           C
ATOM   2962  C   PRO A 397      62.540 -37.346  -3.973  1.00 53.78           C
ATOM   2963  O   PRO A 397      63.499 -37.842  -3.342  1.00 53.85           O
ATOM   2964  CB  PRO A 397      60.895 -38.585  -5.457  1.00 55.41           C
ATOM   2965  CG  PRO A 397      61.196 -39.864  -6.223  1.00 56.21           C
ATOM   2966  CD  PRO A 397      62.658 -40.115  -5.994  1.00 56.86           C
ATOM   2967  N   LEU A 398      61.759 -36.392  -3.475  1.00 51.55           N
```

```
ATOM   2968  CA  LEU A 398      61.875 -35.974  -2.094  1.00 49.52           C
ATOM   2969  C   LEU A 398      61.509 -37.170  -1.254  1.00 49.03           C
ATOM   2970  O   LEU A 398      60.528 -37.873  -1.543  1.00 48.71           O
ATOM   2971  CB  LEU A 398      60.954 -34.793  -1.765  1.00 48.92           C
ATOM   2972  CG  LEU A 398      61.209 -33.434  -2.427  1.00 47.51           C
ATOM   2973  CD1 LEU A 398      59.989 -32.581  -2.279  1.00 44.19           C
ATOM   2974  CD2 LEU A 398      62.481 -32.720  -1.902  1.00 45.04           C
ATOM   2975  N   SER A 399      62.337 -37.408  -0.241  1.00 48.16           N
ATOM   2976  CA  SER A 399      62.013 -38.353   0.821  1.00 47.55           C
ATOM   2977  C   SER A 399      61.501 -37.643   2.073  1.00 46.95           C
ATOM   2978  O   SER A 399      61.816 -36.479   2.369  1.00 46.85           O
ATOM   2979  CB  SER A 399      63.227 -39.213   1.193  1.00 46.91           C
ATOM   2980  OG  SER A 399      64.310 -38.406   1.623  1.00 46.01           O
ATOM   2981  N   LEU A 400      60.700 -38.385   2.803  1.00 45.73           N
ATOM   2982  CA  LEU A 400      60.306 -38.000   4.098  1.00 44.51           C
ATOM   2983  C   LEU A 400      60.996 -38.961   5.104  1.00 44.56           C
ATOM   2984  O   LEU A 400      60.895 -40.187   4.959  1.00 44.46           O
ATOM   2985  CB  LEU A 400      58.782 -38.077   4.148  1.00 43.92           C
ATOM   2986  CG  LEU A 400      58.124 -37.709   5.459  1.00 41.87           C
ATOM   2987  CD1 LEU A 400      58.419 -36.269   5.784  1.00 39.55           C
ATOM   2988  CD2 LEU A 400      56.663 -37.993   5.355  1.00 38.76           C
ATOM   2989  N   ARG A 401      61.722 -38.401   6.080  1.00 44.05           N
ATOM   2990  CA  ARG A 401      62.276 -39.170   7.213  1.00 44.30           C
ATOM   2991  C   ARG A 401      61.647 -38.740   8.552  1.00 42.74           C
ATOM   2992  O   ARG A 401      61.321 -37.563   8.761  1.00 41.92           O
ATOM   2993  CB  ARG A 401      63.802 -38.985   7.337  1.00 45.19           C
ATOM   2994  CG  ARG A 401      64.653 -39.453   6.154  1.00 50.37           C
ATOM   2995  CD  ARG A 401      64.887 -40.984   6.118  1.00 58.25           C
ATOM   2996  NE  ARG A 401      65.436 -41.433   4.821  1.00 62.36           N
ATOM   2997  CZ  ARG A 401      64.705 -41.832   3.773  1.00 62.58           C
ATOM   2998  NH1 ARG A 401      63.376 -41.862   3.834  1.00 62.18           N
ATOM   2999  NH2 ARG A 401      65.312 -42.210   2.654  1.00 63.55           N
ATOM   3000  N   GLY A 402      61.528 -39.696   9.466  1.00 41.38           N
ATOM   3001  CA  GLY A 402      60.996 -39.428  10.794  1.00 39.43           C
ATOM   3002  C   GLY A 402      59.638 -40.059  11.061  1.00 38.23           C
ATOM   3003  O   GLY A 402      59.241 -41.029  10.402  1.00 37.34           O
ATOM   3004  N   ALA A 403      58.926 -39.489  12.035  1.00 36.92           N
ATOM   3005  CA  ALA A 403      57.734 -40.107  12.579  1.00 35.66           C
ATOM   3006  C   ALA A 403      56.827 -39.093  13.259  1.00 34.91           C
ATOM   3007  O   ALA A 403      57.282 -38.122  13.841  1.00 34.61           O
ATOM   3008  CB  ALA A 403      58.151 -41.204  13.591  1.00 35.22           C
ATOM   3009  N   LEU A 404      55.527 -39.332  13.199  1.00 34.39           N
ATOM   3010  CA  LEU A 404      54.581 -38.475  13.887  1.00 34.23           C
ATOM   3011  C   LEU A 404      54.689 -38.718  15.386  1.00 34.92           C
ATOM   3012  O   LEU A 404      54.460 -39.843  15.847  1.00 35.97           O
ATOM   3013  CB  LEU A 404      53.171 -38.811  13.418  1.00 34.41           C
ATOM   3014  CG  LEU A 404      52.012 -37.887  13.735  1.00 32.45           C
ATOM   3015  CD1 LEU A 404      52.082 -36.584  12.918  1.00 28.54           C
ATOM   3016  CD2 LEU A 404      50.782 -38.696  13.409  1.00 31.43           C
ATOM   3017  N   SER A 405      55.041 -37.681  16.143  1.00 34.22           N
```

```
ATOM   3018  CA  SER A 405      55.215 -37.831  17.575  1.00 34.23           C
ATOM   3019  C   SER A 405      53.863 -37.939  18.237  1.00 33.77           C
ATOM   3020  O   SER A 405      52.863 -37.610  17.629  1.00 34.32           O
ATOM   3021  CB  SER A 405      56.056 -36.682  18.182  1.00 34.24           C
ATOM   3022  OG  SER A 405      55.307 -35.493  18.298  1.00 34.71           O
ATOM   3023  N   LEU A 406      53.839 -38.427  19.478  1.00 33.83           N
ATOM   3024  CA  LEU A 406      52.638 -38.382  20.315  1.00 33.10           C
ATOM   3025  C   LEU A 406      52.173 -36.929  20.586  1.00 32.19           C
ATOM   3026  O   LEU A 406      51.013 -36.670  20.587  1.00 32.14           O
ATOM   3027  CB  LEU A 406      52.813 -39.206  21.616  1.00 32.99           C
ATOM   3028  CG  LEU A 406      52.989 -40.745  21.507  1.00 33.64           C
ATOM   3029  CD1 LEU A 406      53.046 -41.412  22.908  1.00 33.32           C
ATOM   3030  CD2 LEU A 406      51.991 -41.503  20.593  1.00 32.20           C
ATOM   3031  N   GLU A 407      53.074 -35.980  20.751  1.00 32.67           N
ATOM   3032  CA  GLU A 407      52.688 -34.556  20.825  1.00 33.45           C
ATOM   3033  C   GLU A 407      52.091 -33.978  19.517  1.00 33.66           C
ATOM   3034  O   GLU A 407      51.207 -33.113  19.580  1.00 34.19           O
ATOM   3035  CB  GLU A 407      53.889 -33.704  21.231  1.00 33.29           C
ATOM   3036  CG  GLU A 407      53.567 -32.231  21.372  1.00 37.10           C
ATOM   3037  CD  GLU A 407      54.640 -31.450  22.106  1.00 44.87           C
ATOM   3038  OE1 GLU A 407      55.815 -31.888  22.158  1.00 46.35           O
ATOM   3039  OE2 GLU A 407      54.291 -30.397  22.682  1.00 50.02           O
ATOM   3040  N   ASP A 408      52.610 -34.403  18.366  1.00 32.85           N
ATOM   3041  CA  ASP A 408      52.012 -34.023  17.065  1.00 34.16           C
ATOM   3042  C   ASP A 408      50.604 -34.528  17.015  1.00 34.20           C
ATOM   3043  O   ASP A 408      49.703 -33.800  16.646  1.00 35.71           O
ATOM   3044  CB  ASP A 408      52.773 -34.615  15.868  1.00 33.14           C
ATOM   3045  CG  ASP A 408      54.176 -34.047  15.711  1.00 33.70           C
ATOM   3046  OD1 ASP A 408      54.437 -32.931  16.249  1.00 32.92           O
ATOM   3047  OD2 ASP A 408      55.017 -34.705  15.028  1.00 30.82           O
ATOM   3048  N   GLN A 409      50.412 -35.788  17.393  1.00 34.48           N
ATOM   3049  CA  GLN A 409      49.079 -36.378  17.412  1.00 35.27           C
ATOM   3050  C   GLN A 409      48.127 -35.660  18.400  1.00 34.02           C
ATOM   3051  O   GLN A 409      46.992 -35.381  18.086  1.00 34.73           O
ATOM   3052  CB  GLN A 409      49.184 -37.861  17.725  1.00 34.71           C
ATOM   3053  CG  GLN A 409      49.927 -38.672  16.682  1.00 37.28           C
ATOM   3054  CD  GLN A 409      50.042 -40.153  17.064  1.00 39.32           C
ATOM   3055  OE1 GLN A 409      49.044 -40.779  17.447  1.00 44.08           O
ATOM   3056  NE2 GLN A 409      51.260 -40.713  16.973  1.00 41.78           N
ATOM   3057  N   ALA A 410      48.607 -35.347  19.588  1.00 33.59           N
ATOM   3058  CA  ALA A 410      47.855 -34.528  20.570  1.00 32.49           C
ATOM   3059  C   ALA A 410      47.458 -33.142  19.989  1.00 32.36           C
ATOM   3060  O   ALA A 410      46.324 -32.679  20.153  1.00 32.43           O
ATOM   3061  CB  ALA A 410      48.697 -34.392  21.888  1.00 31.02           C
ATOM   3062  N   GLN A 411      48.376 -32.487  19.288  1.00 32.16           N
ATOM   3063  CA  GLN A 411      48.026 -31.231  18.631  1.00 33.76           C
ATOM   3064  C   GLN A 411      46.918 -31.372  17.543  1.00 32.64           C
ATOM   3065  O   GLN A 411      45.984 -30.564  17.500  1.00 31.75           O
ATOM   3066  CB  GLN A 411      49.283 -30.505  18.116  1.00 34.62           C
ATOM   3067  CG  GLN A 411      49.116 -28.978  17.894  1.00 38.03           C
```

```
ATOM   3068  CD  GLN A 411      48.718 -28.189  19.178  1.00 40.19           C
ATOM   3069  OE1 GLN A 411      49.190 -28.479  20.286  1.00 41.98           O
ATOM   3070  NE2 GLN A 411      47.846 -27.190  19.015  1.00 40.14           N
ATOM   3071  N   MET A 412      46.977 -32.423  16.729  1.00 33.02           N
ATOM   3072  CA  MET A 412      45.898 -32.726  15.761  1.00 34.34           C
ATOM   3073  C   MET A 412      44.554 -32.909  16.455  1.00 33.46           C
ATOM   3074  O   MET A 412      43.558 -32.392  15.971  1.00 33.04           O
ATOM   3075  CB  MET A 412      46.177 -34.012  14.968  1.00 34.52           C
ATOM   3076  CG  MET A 412      47.028 -33.839  13.749  1.00 35.88           C
ATOM   3077  SD  MET A 412      47.916 -35.371  13.290  1.00 38.63           S
ATOM   3078  CE  MET A 412      48.853 -34.713  11.918  1.00 37.91           C
ATOM   3079  N   ALA A 413      44.530 -33.659  17.565  1.00 31.26           N
ATOM   3080  CA  ALA A 413      43.295 -33.882  18.340  1.00 31.23           C
ATOM   3081  C   ALA A 413      42.684 -32.577  18.857  1.00 31.16           C
ATOM   3082  O   ALA A 413      41.485 -32.486  19.096  1.00 30.59           O
ATOM   3083  CB  ALA A 413      43.556 -34.818  19.541  1.00 30.25           C
ATOM   3084  N   VAL A 414      43.514 -31.581  19.111  1.00 30.54           N
ATOM   3085  CA  VAL A 414      42.934 -30.338  19.527  1.00 31.44           C
ATOM   3086  C   VAL A 414      42.548 -29.421  18.343  1.00 31.01           C
ATOM   3087  O   VAL A 414      41.597 -28.638  18.441  1.00 31.87           O
ATOM   3088  CB  VAL A 414      43.789 -29.614  20.627  1.00 32.99           C
ATOM   3089  CG1 VAL A 414      44.965 -28.861  20.080  1.00 30.21           C
ATOM   3090  CG2 VAL A 414      42.898 -28.673  21.340  1.00 37.27           C
ATOM   3091  N   GLU A 415      43.254 -29.506  17.230  1.00 29.09           N
ATOM   3092  CA  GLU A 415      42.958 -28.536  16.184  1.00 29.39           C
ATOM   3093  C   GLU A 415      41.880 -28.974  15.188  1.00 29.40           C
ATOM   3094  O   GLU A 415      41.204 -28.114  14.602  1.00 28.95           O
ATOM   3095  CB  GLU A 415      44.233 -28.139  15.479  1.00 29.73           C
ATOM   3096  CG  GLU A 415      45.132 -27.215  16.340  1.00 31.42           C
ATOM   3097  CD  GLU A 415      46.472 -26.988  15.687  1.00 36.51           C
ATOM   3098  OE1 GLU A 415      47.216 -26.122  16.167  1.00 41.73           O
ATOM   3099  OE2 GLU A 415      46.804 -27.695  14.710  1.00 40.23           O
ATOM   3100  N   PHE A 416      41.709 -30.298  15.078  1.00 27.12           N
ATOM   3101  CA  PHE A 416      40.996 -30.987  14.005  1.00 28.03           C
ATOM   3102  C   PHE A 416      39.964 -31.972  14.508  1.00 28.15           C
ATOM   3103  O   PHE A 416      40.140 -32.566  15.591  1.00 27.48           O
ATOM   3104  CB  PHE A 416      42.002 -31.725  13.075  1.00 26.95           C
ATOM   3105  CG  PHE A 416      42.736 -30.785  12.211  1.00 27.88           C
ATOM   3106  CD1 PHE A 416      42.136 -30.317  11.046  1.00 28.52           C
ATOM   3107  CD2 PHE A 416      43.960 -30.237  12.623  1.00 26.99           C
ATOM   3108  CE1 PHE A 416      42.760 -29.349  10.253  1.00 29.38           C
ATOM   3109  CE2 PHE A 416      44.605 -29.257  11.856  1.00 29.12           C
ATOM   3110  CZ  PHE A 416      44.012 -28.797  10.666  1.00 27.87           C
ATOM   3111  N   LYS A 417      38.882 -32.102  13.719  1.00 28.76           N
ATOM   3112  CA  LYS A 417      37.880 -33.151  13.842  1.00 29.22           C
ATOM   3113  C   LYS A 417      37.820 -33.899  12.466  1.00 30.13           C
ATOM   3114  O   LYS A 417      38.609 -33.598  11.573  1.00 28.72           O
ATOM   3115  CB  LYS A 417      36.516 -32.560  14.160  1.00 28.70           C
ATOM   3116  CG  LYS A 417      35.985 -31.714  13.013  1.00 30.54           C
ATOM   3117  CD  LYS A 417      34.738 -30.969  13.416  1.00 34.50           C
```

```
ATOM   3118  CE  LYS A 417      34.334 -29.978  12.311  1.00 36.55           C
ATOM   3119  NZ  LYS A 417      32.965 -29.458  12.672  1.00 40.08           N
ATOM   3120  N   CYS A 418      36.888 -34.853  12.337  1.00 29.64           N
ATOM   3121  CA  CYS A 418      36.814 -35.723  11.193  1.00 30.47           C
ATOM   3122  C   CYS A 418      35.583 -35.459  10.351  1.00 31.29           C
ATOM   3123  O   CYS A 418      34.493 -35.274  10.866  1.00 30.76           O
ATOM   3124  CB  CYS A 418      36.750 -37.199  11.606  1.00 29.72           C
ATOM   3125  SG  CYS A 418      38.198 -37.814  12.499  1.00 29.34           S
ATOM   3126  N   ARG A 419      35.775 -35.480   9.035  1.00 32.58           N
ATOM   3127  CA  ARG A 419      34.646 -35.617   8.121  1.00 33.27           C
ATOM   3128  C   ARG A 419      34.842 -36.981   7.442  1.00 32.99           C
ATOM   3129  O   ARG A 419      35.785 -37.182   6.675  1.00 31.91           O
ATOM   3130  CB  ARG A 419      34.610 -34.486   7.096  1.00 32.50           C
ATOM   3131  CG  ARG A 419      33.285 -34.529   6.336  1.00 36.60           C
ATOM   3132  CD  ARG A 419      33.320 -33.806   5.002  1.00 40.09           C
ATOM   3133  NE  ARG A 419      33.716 -32.406   5.147  1.00 42.43           N
ATOM   3134  CZ  ARG A 419      34.706 -31.855   4.433  1.00 43.26           C
ATOM   3135  NH1 ARG A 419      35.418 -32.573   3.505  1.00 39.69           N
ATOM   3136  NH2 ARG A 419      34.989 -30.594   4.650  1.00 39.74           N
ATOM   3137  N   CYS A 420      33.961 -37.930   7.746  1.00 33.88           N
ATOM   3138  CA  CYS A 420      34.193 -39.322   7.339  1.00 34.71           C
ATOM   3139  C   CYS A 420      33.964 -39.523   5.838  1.00 32.87           C
ATOM   3140  O   CYS A 420      33.156 -38.836   5.236  1.00 32.64           O
ATOM   3141  CB  CYS A 420      33.359 -40.295   8.176  1.00 35.00           C
ATOM   3142  SG  CYS A 420      33.759 -40.243  10.016  1.00 40.30           S
ATOM   3143  N   TYR A 421      34.695 -40.444   5.242  1.00 31.90           N
ATOM   3144  CA  TYR A 421      34.365 -40.868   3.889  1.00 33.36           C
ATOM   3145  C   TYR A 421      32.965 -41.467   3.899  1.00 34.73           C
ATOM   3146  O   TYR A 421      32.513 -41.952   4.935  1.00 35.09           O
ATOM   3147  CB  TYR A 421      35.381 -41.873   3.412  1.00 31.99           C
ATOM   3148  CG  TYR A 421      36.768 -41.303   3.329  1.00 28.62           C
ATOM   3149  CD1 TYR A 421      37.864 -42.045   3.733  1.00 28.06           C
ATOM   3150  CD2 TYR A 421      36.992 -40.037   2.814  1.00 27.87           C
ATOM   3151  CE1 TYR A 421      39.145 -41.560   3.636  1.00 27.86           C
ATOM   3152  CE2 TYR A 421      38.331 -39.538   2.680  1.00 28.35           C
ATOM   3153  CZ  TYR A 421      39.357 -40.282   3.143  1.00 30.62           C
ATOM   3154  OH  TYR A 421      40.667 -39.831   3.037  1.00 33.75           O
ATOM   3155  N   PRO A 422      32.233 -41.360   2.770  1.00 37.44           N
ATOM   3156  CA  PRO A 422      30.920 -41.979   2.714  1.00 37.78           C
ATOM   3157  C   PRO A 422      31.004 -43.465   3.167  1.00 38.92           C
ATOM   3158  O   PRO A 422      31.934 -44.210   2.791  1.00 38.32           O
ATOM   3159  CB  PRO A 422      30.552 -41.866   1.233  1.00 37.38           C
ATOM   3160  CG  PRO A 422      31.261 -40.695   0.749  1.00 38.00           C
ATOM   3161  CD  PRO A 422      32.565 -40.669   1.495  1.00 37.53           C
ATOM   3162  N   GLY A 423      30.060 -43.857   4.007  1.00 40.40           N
ATOM   3163  CA  GLY A 423      30.062 -45.215   4.552  1.00 42.77           C
ATOM   3164  C   GLY A 423      30.640 -45.382   5.954  1.00 42.95           C
ATOM   3165  O   GLY A 423      30.510 -46.452   6.537  1.00 43.53           O
ATOM   3166  N   TRP A 424      31.289 -44.346   6.492  1.00 42.46           N
ATOM   3167  CA  TRP A 424      31.942 -44.465   7.789  1.00 40.91           C
```

```
ATOM   3168  C   TRP A 424      31.317 -43.505   8.739  1.00 41.22           C
ATOM   3169  O   TRP A 424      30.832 -42.436   8.350  1.00 41.24           O
ATOM   3170  CB  TRP A 424      33.451 -44.289   7.688  1.00 40.33           C
ATOM   3171  CG  TRP A 424      34.072 -45.379   6.895  1.00 39.62           C
ATOM   3172  CD1 TRP A 424      34.277 -45.396   5.527  1.00 38.75           C
ATOM   3173  CD2 TRP A 424      34.582 -46.636   7.393  1.00 39.67           C
ATOM   3174  NE1 TRP A 424      34.878 -46.574   5.158  1.00 39.19           N
ATOM   3175  CE2 TRP A 424      35.066 -47.360   6.273  1.00 40.21           C
ATOM   3176  CE3 TRP A 424      34.653 -47.221   8.666  1.00 38.34           C
ATOM   3177  CZ2 TRP A 424      35.638 -48.642   6.392  1.00 43.80           C
ATOM   3178  CZ3 TRP A 424      35.217 -48.494   8.801  1.00 42.14           C
ATOM   3179  CH2 TRP A 424      35.710 -49.202   7.657  1.00 41.53           C
ATOM   3180  N   GLN A 425      31.255 -43.921   9.993  1.00 42.34           N
ATOM   3181  CA  GLN A 425      30.460 -43.194  10.982  1.00 44.41           C
ATOM   3182  C   GLN A 425      31.339 -42.247  11.818  1.00 42.20           C
ATOM   3183  O   GLN A 425      32.440 -42.611  12.291  1.00 41.04           O
ATOM   3184  CB  GLN A 425      29.759 -44.229  11.874  1.00 44.73           C
ATOM   3185  CG  GLN A 425      28.579 -43.728  12.684  1.00 48.52           C
ATOM   3186  CD  GLN A 425      27.773 -44.891  13.315  1.00 52.76           C
ATOM   3187  OE1 GLN A 425      28.062 -46.099  13.066  1.00 61.40           O
ATOM   3188  NE2 GLN A 425      26.747 -44.538  14.137  1.00 57.46           N
ATOM   3189  N   ALA A 426      30.845 -41.026  11.909  1.00 41.93           N
ATOM   3190  CA  ALA A 426      31.250 -40.007  12.834  1.00 42.76           C
ATOM   3191  C   ALA A 426      31.082 -40.491  14.280  1.00 43.16           C
ATOM   3192  O   ALA A 426      30.205 -41.341  14.541  1.00 43.52           O
ATOM   3193  CB  ALA A 426      30.373 -38.770  12.602  1.00 43.41           C
ATOM   3194  N   PRO A 427      31.891 -39.936  15.231  1.00 42.94           N
ATOM   3195  CA  PRO A 427      32.900 -38.869  15.011  1.00 42.01           C
ATOM   3196  C   PRO A 427      34.309 -39.269  14.537  1.00 40.87           C
ATOM   3197  O   PRO A 427      35.013 -38.395  14.035  1.00 40.07           O
ATOM   3198  CB  PRO A 427      32.985 -38.190  16.405  1.00 41.93           C
ATOM   3199  CG  PRO A 427      32.876 -39.370  17.347  1.00 44.05           C
ATOM   3200  CD  PRO A 427      31.774 -40.256  16.675  1.00 43.15           C
ATOM   3201  N   TRP A 428      34.737 -40.528  14.715  1.00 38.96           N
ATOM   3202  CA  TRP A 428      36.110 -40.910  14.371  1.00 37.86           C
ATOM   3203  C   TRP A 428      36.281 -41.875  13.175  1.00 35.66           C
ATOM   3204  O   TRP A 428      37.398 -42.315  12.919  1.00 33.63           O
ATOM   3205  CB  TRP A 428      36.886 -41.479  15.612  1.00 39.92           C
ATOM   3206  CG  TRP A 428      36.676 -40.654  16.868  1.00 40.98           C
ATOM   3207  CD1 TRP A 428      36.012 -41.040  18.010  1.00 42.47           C
ATOM   3208  CD2 TRP A 428      37.075 -39.286  17.071  1.00 43.07           C
ATOM   3209  NE1 TRP A 428      35.975 -39.987  18.916  1.00 45.48           N
ATOM   3210  CE2 TRP A 428      36.640 -38.910  18.376  1.00 46.28           C
ATOM   3211  CE3 TRP A 428      37.785 -38.348  16.297  1.00 42.88           C
ATOM   3212  CZ2 TRP A 428      36.869 -37.620  18.900  1.00 44.14           C
ATOM   3213  CZ3 TRP A 428      38.032 -37.065  16.828  1.00 42.04           C
ATOM   3214  CH2 TRP A 428      37.570 -36.721  18.120  1.00 42.69           C
ATOM   3215  N   CYS A 429      35.192 -42.227  12.506  1.00 35.13           N
ATOM   3216  CA  CYS A 429      35.230 -43.008  11.224  1.00 37.26           C
ATOM   3217  C   CYS A 429      35.753 -44.402  11.444  1.00 38.61           C
```

```
ATOM   3218  O   CYS A 429      36.370 -45.014  10.570  1.00 38.72           O
ATOM   3219  CB  CYS A 429      36.049 -42.288  10.155  1.00 35.20           C
ATOM   3220  SG  CYS A 429      35.796 -40.515  10.148  1.00 36.32           S
ATOM   3221  N   GLU A 430      35.514 -44.900  12.646  1.00 41.35           N
ATOM   3222  CA  GLU A 430      36.069 -46.165  13.066  1.00 44.50           C
ATOM   3223  C   GLU A 430      35.202 -47.324  12.589  1.00 45.03           C
ATOM   3224  O   GLU A 430      35.740 -48.354  12.183  1.00 45.31           O
ATOM   3225  CB  GLU A 430      36.205 -46.194  14.588  1.00 44.35           C
ATOM   3226  CG  GLU A 430      36.700 -47.494  15.088  1.00 51.49           C
ATOM   3227  CD  GLU A 430      36.796 -47.503  16.600  1.00 60.38           C
ATOM   3228  OE1 GLU A 430      35.911 -46.888  17.261  1.00 62.88           O
ATOM   3229  OE2 GLU A 430      37.774 -48.107  17.106  1.00 62.73           O
ATOM   3230  N   ARG A 431      33.888 -47.132  12.613  1.00 46.10           N
ATOM   3231  CA  ARG A 431      32.925 -48.187  12.273  1.00 50.42           C
ATOM   3232  C   ARG A 431      32.175 -47.765  11.022  1.00 50.30           C
ATOM   3233  O   ARG A 431      31.910 -46.562  10.839  1.00 49.35           O
ATOM   3234  CB  ARG A 431      31.857 -48.322  13.369  1.00 49.26           C
ATOM   3235  CG  ARG A 431      32.346 -48.645  14.791  1.00 54.76           C
ATOM   3236  CD  ARG A 431      31.210 -48.292  15.807  1.00 56.90           C
ATOM   3237  NE  ARG A 431      30.606 -46.968  15.538  1.00 68.45           N
ATOM   3238  CZ  ARG A 431      30.785 -45.877  16.296  1.00 72.93           C
ATOM   3239  NH1 ARG A 431      31.528 -45.935  17.416  1.00 73.78           N
ATOM   3240  NH2 ARG A 431      30.201 -44.725  15.953  1.00 74.50           N
ATOM   3241  N   LYS A 432      31.777 -48.739  10.194  1.00 51.99           N
ATOM   3242  CA  LYS A 432      30.967 -48.437   9.012  1.00 54.16           C
ATOM   3243  C   LYS A 432      29.659 -47.898   9.488  1.00 54.70           C
ATOM   3244  O   LYS A 432      29.221 -48.239  10.569  1.00 55.09           O
ATOM   3245  CB  LYS A 432      30.760 -49.652   8.101  1.00 54.61           C
ATOM   3246  CG  LYS A 432      32.054 -50.379   7.755  1.00 56.64           C
ATOM   3247  CD  LYS A 432      32.205 -50.629   6.269  1.00 59.23           C
ATOM   3248  CE  LYS A 432      33.376 -51.641   5.987  1.00 60.92           C
ATOM   3249  NZ  LYS A 432      33.789 -51.712   4.497  1.00 62.64           N
ATOM   3250  N   SER A 433      29.054 -47.022   8.708  1.00 56.66           N
ATOM   3251  CA  SER A 433      27.804 -46.424   9.106  1.00 60.01           C
ATOM   3252  C   SER A 433      26.598 -47.340   8.943  1.00 61.54           C
ATOM   3253  O   SER A 433      26.664 -48.409   8.295  1.00 60.35           O
ATOM   3254  CB  SER A 433      27.574 -45.068   8.410  1.00 60.54           C
ATOM   3255  OG  SER A 433      28.178 -45.026   7.120  1.00 64.48           O
ATOM   3256  N   MET A 434      25.509 -46.879   9.570  1.00 64.58           N
ATOM   3257  CA  MET A 434      24.217 -47.546   9.616  1.00 68.14           C
ATOM   3258  C   MET A 434      23.866 -48.270   8.306  1.00 66.74           C
ATOM   3259  O   MET A 434      23.859 -49.517   8.244  1.00 67.70           O
ATOM   3260  CB  MET A 434      23.109 -46.531  10.002  1.00 68.61           C
ATOM   3261  CG  MET A 434      22.987 -46.164  11.511  1.00 71.68           C
ATOM   3262  SD  MET A 434      21.582 -45.028  11.938  1.00 76.48           S
ATOM   3263  CE  MET A 434      22.259 -44.109  13.359  1.00 75.04           C
ATOM   3264  N   TRP A 435      23.630 -47.496   7.249  1.00 65.00           N
ATOM   3265  CA  TRP A 435      22.935 -48.027   6.075  1.00 62.31           C
ATOM   3266  C   TRP A 435      23.844 -48.383   4.942  1.00 61.22           C
ATOM   3267  O   TRP A 435      23.609 -47.986   3.809  1.00 60.36           O
```

```
ATOM   3268  CB  TRP A 435      21.882 -47.050   5.612  1.00 62.11           C
ATOM   3269  CG  TRP A 435      21.087 -46.582   6.751  1.00 60.99           C
ATOM   3270  CD1 TRP A 435      21.185 -45.375   7.363  1.00 60.44           C
ATOM   3271  CD2 TRP A 435      20.079 -47.319   7.458  1.00 61.92           C
ATOM   3272  NE1 TRP A 435      20.295 -45.302   8.405  1.00 61.84           N
ATOM   3273  CE2 TRP A 435      19.600 -46.480   8.491  1.00 61.40           C
ATOM   3274  CE3 TRP A 435      19.532 -48.600   7.319  1.00 61.40           C
ATOM   3275  CZ2 TRP A 435      18.591 -46.874   9.383  1.00 61.81           C
ATOM   3276  CZ3 TRP A 435      18.528 -48.995   8.207  1.00 62.17           C
ATOM   3277  CH2 TRP A 435      18.064 -48.123   9.229  1.00 61.30           C
ATOM   3278  N   THR A 436      24.821 -49.218   5.271  1.00 60.31           N
ATOM   3279  CA  THR A 436      25.958 -49.561   4.429  1.00 59.92           C
ATOM   3280  C   THR A 436      26.089 -51.059   4.094  1.00 59.41           C
ATOM   3281  O   THR A 436      25.511 -51.915   4.794  1.00 59.50           O
ATOM   3282  CB  THR A 436      27.238 -49.036   5.155  1.00 60.24           C
ATOM   3283  OG1 THR A 436      27.572 -47.748   4.604  1.00 61.34           O
ATOM   3284  CG2 THR A 436      28.410 -50.008   5.069  1.00 59.41           C
TER    3285      THR A 436
HETATM 3286  C1  NAG B   1      55.813 -28.162   6.854  1.00 33.58           C
HETATM 3287  C2  NAG B   1      57.242 -27.845   7.354  1.00 38.22           C
HETATM 3288  C3  NAG B   1      57.133 -26.765   8.401  1.00 37.88           C
HETATM 3289  C4  NAG B   1      56.534 -25.512   7.785  1.00 39.65           C
HETATM 3290  C5  NAG B   1      55.254 -25.780   6.965  1.00 37.19           C
HETATM 3291  C6  NAG B   1      55.477 -24.883   5.755  1.00 40.16           C
HETATM 3292  C7  NAG B   1      58.787 -29.785   7.527  1.00 33.61           C
HETATM 3293  C8  NAG B   1      58.891 -31.155   8.112  1.00 31.47           C
HETATM 3294  N2  NAG B   1      57.795 -29.024   7.965  1.00 33.34           N
HETATM 3295  O3  NAG B   1      58.434 -26.512   8.832  1.00 43.70           O
HETATM 3296  O4  NAG B   1      56.190 -24.558   8.787  1.00 39.96           O
HETATM 3297  O5  NAG B   1      55.342 -26.988   6.270  1.00 35.48           O
HETATM 3298  O6  NAG B   1      54.533 -23.935   5.855  1.00 39.50           O
HETATM 3299  O7  NAG B   1      59.655 -29.413   6.763  1.00 37.15           O
HETATM 3300  C1  NAG B   2      56.508 -23.204   8.454  1.00 39.26           C
HETATM 3301  C2  NAG B   2      55.830 -22.357   9.504  1.00 43.15           C
HETATM 3302  C3  NAG B   2      56.261 -20.899   9.434  1.00 45.88           C
HETATM 3303  C4  NAG B   2      57.778 -20.747   9.271  1.00 46.84           C
HETATM 3304  C5  NAG B   2      58.322 -21.678   8.204  1.00 43.57           C
HETATM 3305  C6  NAG B   2      59.826 -21.554   7.977  1.00 46.50           C
HETATM 3306  C7  NAG B   2      53.672 -23.172  10.204  1.00 46.80           C
HETATM 3307  C8  NAG B   2      52.186 -23.059  10.033  1.00 43.89           C
HETATM 3308  N2  NAG B   2      54.394 -22.391   9.390  1.00 45.09           N
HETATM 3309  O3  NAG B   2      55.785 -20.254  10.596  1.00 45.43           O
HETATM 3310  O4  NAG B   2      58.037 -19.440   8.825  1.00 52.20           O
HETATM 3311  O5  NAG B   2      57.923 -22.995   8.494  1.00 41.31           O
HETATM 3312  O6  NAG B   2      60.528 -22.457   8.807  1.00 53.27           O
HETATM 3313  O7  NAG B   2      54.198 -23.953  11.023  1.00 45.21           O
HETATM 3314  C1  BMA B   3      58.582 -18.581   9.835  1.00 53.59           C
HETATM 3315  C2  BMA B   3      59.244 -17.431   9.079  1.00 55.78           C
HETATM 3316  C3  BMA B   3      59.724 -16.392  10.107  1.00 60.46           C
HETATM 3317  C4  BMA B   3      58.562 -15.843  10.952  1.00 58.22           C
```

```
HETATM 3318  C5  BMA B   3      57.973 -17.091  11.616  1.00 55.74           C
HETATM 3319  C6  BMA B   3      56.795 -16.817  12.515  1.00 56.11           C
HETATM 3320  O2  BMA B   3      58.349 -16.852   8.131  1.00 51.16           O
HETATM 3321  O3  BMA B   3      60.473 -15.337   9.556  1.00 69.40           O
HETATM 3322  O4  BMA B   3      59.067 -14.931  11.912  1.00 56.23           O
HETATM 3323  O5  BMA B   3      57.560 -18.059  10.671  1.00 52.71           O
HETATM 3324  O6  BMA B   3      56.701 -17.968  13.315  1.00 57.79           O
HETATM 3325  C1  MAN B   4      55.609 -17.853  14.229  1.00 64.02           C
HETATM 3326  C2  MAN B   4      55.617 -19.137  15.057  1.00 68.58           C
HETATM 3327  C3  MAN B   4      55.129 -20.288  14.148  1.00 68.91           C
HETATM 3328  C4  MAN B   4      53.739 -19.941  13.601  1.00 68.46           C
HETATM 3329  C5  MAN B   4      53.739 -18.605  12.836  1.00 69.14           C
HETATM 3330  C6  MAN B   4      52.320 -18.196  12.410  1.00 70.08           C
HETATM 3331  O2  MAN B   4      54.871 -18.923  16.270  1.00 70.49           O
HETATM 3332  O3  MAN B   4      55.162 -21.538  14.829  1.00 71.34           O
HETATM 3333  O4  MAN B   4      53.287 -20.986  12.773  1.00 69.59           O
HETATM 3334  O5  MAN B   4      54.349 -17.580  13.620  1.00 65.17           O
HETATM 3335  O6  MAN B   4      52.136 -16.786  12.371  1.00 73.36           O
HETATM 3336  C1  MAN B   5      55.905 -22.612  14.194  1.00 72.43           C
HETATM 3337  C2  MAN B   5      55.890 -23.828  15.132  1.00 74.01           C
HETATM 3338  C3  MAN B   5      56.950 -23.679  16.235  1.00 75.13           C
HETATM 3339  C4  MAN B   5      58.356 -23.463  15.633  1.00 75.45           C
HETATM 3340  C5  MAN B   5      58.364 -22.349  14.557  1.00 74.29           C
HETATM 3341  C6  MAN B   5      59.556 -22.475  13.609  1.00 74.93           C
HETATM 3342  O2  MAN B   5      56.070 -25.041  14.411  1.00 72.63           O
HETATM 3343  O3  MAN B   5      56.926 -24.804  17.102  1.00 75.20           O
HETATM 3344  O4  MAN B   5      59.322 -23.214  16.650  1.00 73.57           O
HETATM 3345  O5  MAN B   5      57.210 -22.276  13.727  1.00 72.21           O
HETATM 3346  O6  MAN B   5      59.718 -21.229  12.943  1.00 77.11           O
HETATM 3347  C1  MAN B   6      61.078 -15.728   8.312  1.00 79.77           C
HETATM 3348  C2  MAN B   6      62.565 -15.719   8.599  1.00 82.83           C
HETATM 3349  C3  MAN B   6      62.822 -14.253   9.014  1.00 84.11           C
HETATM 3350  C4  MAN B   6      62.471 -13.250   7.878  1.00 84.45           C
HETATM 3351  C5  MAN B   6      60.999 -13.473   7.481  1.00 85.71           C
HETATM 3352  C6  MAN B   6      60.533 -12.575   6.321  1.00 87.08           C
HETATM 3353  O2  MAN B   6      63.260 -16.221   7.462  1.00 84.86           O
HETATM 3354  O3  MAN B   6      64.081 -14.140   9.655  1.00 83.99           O
HETATM 3355  O4  MAN B   6      62.571 -11.895   8.278  1.00 84.76           O
HETATM 3356  O5  MAN B   6      60.723 -14.862   7.227  1.00 83.32           O
HETATM 3357  O6  MAN B   6      59.637 -11.591   6.819  1.00 87.88           O
HETATM 3358  C1  NAG C   1      21.364 -14.997 -33.008  1.00 53.34           C
HETATM 3359  C2  NAG C   1      22.258 -13.744 -33.048  1.00 57.64           C
HETATM 3360  C3  NAG C   1      22.491 -13.353 -34.515  1.00 61.26           C
HETATM 3361  C4  NAG C   1      23.045 -14.503 -35.354  1.00 63.93           C
HETATM 3362  C5  NAG C   1      22.165 -15.749 -35.137  1.00 60.50           C
HETATM 3363  C6  NAG C   1      22.743 -16.974 -35.796  1.00 59.90           C
HETATM 3364  C7  NAG C   1      22.227 -12.074 -31.209  1.00 56.01           C
HETATM 3365  C8  NAG C   1      21.438 -11.062 -30.455  1.00 55.06           C
HETATM 3366  N2  NAG C   1      21.690 -12.641 -32.281  1.00 55.34           N
HETATM 3367  O3  NAG C   1      23.362 -12.246 -34.606  1.00 64.57           O
```

```
HETATM 3368  O4  NAG C   1      23.033 -14.100 -36.719  1.00 69.96           O
HETATM 3369  O5  NAG C   1      22.015 -16.020 -33.755  1.00 57.21           O
HETATM 3370  O6  NAG C   1      21.716 -17.903 -36.002  1.00 61.11           O
HETATM 3371  O7  NAG C   1      23.345 -12.321 -30.793  1.00 60.47           O
HETATM 3372  C1  NAG C   2      24.309 -14.061 -37.404  1.00 74.29           C
HETATM 3373  C2  NAG C   2      24.083 -14.351 -38.903  1.00 77.44           C
HETATM 3374  C3  NAG C   2      25.319 -14.095 -39.771  1.00 79.77           C
HETATM 3375  C4  NAG C   2      26.042 -12.783 -39.440  1.00 80.58           C
HETATM 3376  C5  NAG C   2      26.193 -12.625 -37.906  1.00 78.72           C
HETATM 3377  C6  NAG C   2      26.804 -11.267 -37.536  1.00 78.44           C
HETATM 3378  C7  NAG C   2      22.529 -16.142 -39.599  1.00 77.75           C
HETATM 3379  C8  NAG C   2      22.594 -17.408 -40.406  1.00 78.22           C
HETATM 3380  N2  NAG C   2      23.723 -15.735 -39.161  1.00 77.58           N
HETATM 3381  O3  NAG C   2      24.911 -14.123 -41.127  1.00 81.99           O
HETATM 3382  O4  NAG C   2      27.277 -12.707 -40.170  1.00 81.91           O
HETATM 3383  O5  NAG C   2      24.947 -12.804 -37.223  1.00 76.01           O
HETATM 3384  O6  NAG C   2      25.850 -10.322 -37.087  1.00 78.26           O
HETATM 3385  O7  NAG C   2      21.449 -15.563 -39.354  1.00 74.88           O
HETATM 3386  C   ACT A 901      54.372 -30.043 -25.398  1.00 70.11           C
HETATM 3387  O   ACT A 901      55.412 -29.957 -26.078  1.00 70.69           O
HETATM 3388  OXT ACT A 901      54.442 -30.898 -24.487  1.00 70.14           O
HETATM 3389  CH3 ACT A 901      53.155 -29.206 -25.656  1.00 69.12           C
HETATM 3390  C   ACT A 902      53.986 -22.973 -23.999  1.00 65.62           C
HETATM 3391  O   ACT A 902      54.208 -23.111 -22.733  1.00 64.84           O
HETATM 3392  OXT ACT A 902      54.467 -21.955 -24.577  1.00 66.39           O
HETATM 3393  CH3 ACT A 902      53.195 -23.939 -24.845  1.00 64.12           C
HETATM 3394  C   ACT A 903      20.576 -36.961 -20.914  1.00 62.70           C
HETATM 3395  O   ACT A 903      20.413 -36.000 -20.111  1.00 63.78           O
HETATM 3396  OXT ACT A 903      20.637 -36.692 -22.141  1.00 63.53           O
HETATM 3397  CH3 ACT A 903      20.702 -38.340 -20.411  1.00 61.61           C
HETATM 3398  C   ACT A 904      17.529 -24.115  -7.695  1.00 64.85           C
HETATM 3399  O   ACT A 904      18.371 -24.601  -8.421  1.00 64.74           O
HETATM 3400  OXT ACT A 904      16.510 -23.746  -8.335  1.00 66.67           O
HETATM 3401  CH3 ACT A 904      17.742 -24.000  -6.214  1.00 64.64           C
HETATM 3402  C   ACT A 905      41.934 -21.737 -16.316  1.00 56.52           C
HETATM 3403  O   ACT A 905      42.336 -21.125 -15.286  1.00 54.27           O
HETATM 3404  OXT ACT A 905      41.419 -21.074 -17.288  1.00 57.66           O
HETATM 3405  CH3 ACT A 905      42.091 -23.211 -16.454  1.00 56.14           C
HETATM 3406  C   ACT A 906      41.606 -39.113  -9.926  1.00 65.75           C
HETATM 3407  O   ACT A 906      40.443 -39.082  -9.493  1.00 66.68           O
HETATM 3408  OXT ACT A 906      41.865 -40.110 -10.645  1.00 65.20           O
HETATM 3409  CH3 ACT A 906      42.565 -38.017  -9.575  1.00 65.19           C
HETATM 3410  C   ACT A 907      39.413 -46.114   3.035  1.00 72.09           C
HETATM 3411  O   ACT A 907      40.324 -45.469   2.467  1.00 72.03           O
HETATM 3412  OXT ACT A 907      38.541 -45.434   3.662  1.00 70.66           O
HETATM 3413  CH3 ACT A 907      39.425 -47.628   2.943  1.00 72.15           C
HETATM 3414  C1  GOL A 601      25.727 -38.039   0.303  1.00 72.79           C
HETATM 3415  O1  GOL A 601      26.091 -36.984  -0.558  1.00 69.01           O
HETATM 3416  C2  GOL A 601      24.321 -37.883   0.883  1.00 73.32           C
HETATM 3417  O2  GOL A 601      24.425 -37.443   2.225  1.00 72.12           O
```

```
HETATM 3418  C3  GOL A 601      23.618 -39.245   0.831  1.00 73.19           C
HETATM 3419  O3  GOL A 601      22.390 -39.156   0.140  1.00 73.06           O
HETATM 3420  O   HOH A 908      32.597 -43.041 -15.837  1.00 37.59           O
HETATM 3421  O   HOH A 909      58.794 -15.116  -3.538  1.00 52.71           O
HETATM 3422  O   HOH A 910      43.668 -21.153  15.037  1.00 26.33           O
HETATM 3423  O   HOH A 911      46.854 -27.667   5.683  1.00 30.61           O
HETATM 3424  O   HOH A 912      47.712 -16.488  12.703  1.00 65.12           O
HETATM 3425  O   HOH A 913      36.292 -32.376  -0.643  1.00 26.11           O
HETATM 3426  O   HOH A 914      27.448 -34.630 -13.608  1.00 34.47           O
HETATM 3427  O   HOH A 915      42.471 -33.322 -21.297  1.00 28.88           O
HETATM 3428  O   HOH A 916      41.069 -37.049  -2.004  1.00 28.69           O
HETATM 3429  O   HOH A 917      39.451 -42.529 -20.553  1.00 31.84           O
HETATM 3430  O   HOH A 918      34.019 -43.211  15.746  1.00 37.22           O
HETATM 3431  O   HOH A 919      46.833 -36.471   1.200  1.00 27.73           O
HETATM 3432  O   HOH A 920      33.327 -22.986 -16.300  1.00 29.45           O
HETATM 3433  O   HOH A 921      30.186 -27.367 -11.275  1.00 26.04           O
HETATM 3434  O   HOH A 922      63.858 -14.228  12.832  1.00 34.26           O
HETATM 3435  O   HOH A 923      47.889 -20.827  -4.506  1.00 27.89           O
HETATM 3436  O   HOH A 924      32.497 -26.413 -10.008  1.00 24.00           O
HETATM 3437  O   HOH A 925      54.628 -41.575  11.179  1.00 40.16           O
HETATM 3438  O   HOH A 926      37.436 -23.252   7.920  1.00 28.27           O
HETATM 3439  O   HOH A 927      24.946 -24.893   3.613  1.00 38.72           O
HETATM 3440  O   HOH A 928      50.808 -21.346 -11.519  1.00 38.00           O
HETATM 3441  O   HOH A 929      46.703 -15.689 -16.387  1.00 45.84           O
HETATM 3442  O   HOH A 930      28.946 -20.404 -19.494  1.00 35.22           O
HETATM 3443  O   HOH A 931      43.029 -35.572   6.408  1.00 31.01           O
HETATM 3444  O   HOH A 932      48.405 -15.938 -14.183  1.00 32.82           O
HETATM 3445  O   HOH A 933      33.674 -41.139  -9.197  1.00 39.53           O
HETATM 3446  O   HOH A 934      47.321 -17.195  -7.499  1.00 29.61           O
HETATM 3447  O   HOH A 935      53.566 -31.101 -18.731  1.00 40.61           O
HETATM 3448  O   HOH A 936      54.153 -37.283 -10.347  1.00 43.42           O
HETATM 3449  O   HOH A 937      52.006 -24.490 -18.397  1.00 31.21           O
HETATM 3450  O   HOH A 938      54.448 -33.898  12.403  1.00 43.58           O
HETATM 3451  O   HOH A 939      31.062 -37.061  -6.727  1.00 35.34           O
HETATM 3452  O   HOH A 940      26.729 -17.315 -12.313  1.00 40.74           O
HETATM 3453  O   HOH A 941      31.063 -23.844   4.594  1.00 42.10           O
HETATM 3454  O   HOH A 942      35.035 -19.885 -22.217  1.00 41.50           O
HETATM 3455  O   HOH A 943      46.636 -13.758   4.921  1.00 39.54           O
HETATM 3456  O   HOH A 944      62.742 -29.142  -9.993  1.00 41.42           O
HETATM 3457  O   HOH A 945      45.629 -38.130 -16.458  1.00 40.71           O
HETATM 3458  O   HOH A 946      47.654 -16.826 -18.795  1.00 41.97           O
HETATM 3459  O   HOH A 947      35.439 -19.669  -7.972  1.00 34.42           O
HETATM 3460  O   HOH A 948      18.748 -30.037 -13.202  1.00 37.18           O
HETATM 3461  O   HOH A 949      58.227 -32.511  -7.637  1.00 39.23           O
HETATM 3462  O   HOH A 950      37.423 -12.911   8.276  1.00 51.36           O
HETATM 3463  O   HOH A 951      60.495 -29.938 -17.296  1.00 37.47           O
HETATM 3464  O   HOH A 952      57.904 -28.023   3.612  1.00 34.14           O
HETATM 3465  O   HOH A 953      68.134 -26.661 -15.947  1.00 45.81           O
HETATM 3466  O   HOH A 954      44.416 -45.516  11.414  1.00 49.55           O
HETATM 3467  O   HOH A 955      29.080 -19.029  -8.361  1.00 35.30           O
```

```
HETATM 3468  O   HOH A 956      52.465 -41.682  -5.382  1.00 49.92           O
HETATM 3469  O   HOH A 957      29.470 -17.465 -10.830  1.00 39.92           O
HETATM 3470  O   HOH A 958      45.064 -28.489 -26.497  1.00 45.52           O
HETATM 3471  O   HOH A 959      46.270 -19.429  -6.037  1.00 26.62           O
HETATM 3472  O   HOH A 960      33.207  -7.867   4.379  1.00 54.99           O
HETATM 3473  O   HOH A 961      23.396 -32.170 -35.069  1.00 50.71           O
HETATM 3474  O   HOH A 962      21.988 -35.148  -9.868  1.00 43.77           O
HETATM 3475  O   HOH A 963      50.309 -19.461 -13.808  1.00 28.98           O
HETATM 3476  O   HOH A 964      17.818 -28.092 -14.421  1.00 41.62           O
HETATM 3477  O   HOH A 965      56.620 -32.184 -16.577  1.00 39.59           O
HETATM 3478  O   HOH A 966      11.268 -13.217 -27.759  1.00 51.80           O
HETATM 3479  O   HOH A 967      23.165  -5.157 -27.674  1.00 55.16           O
HETATM 3480  O   HOH A 968      53.313 -33.822 -19.119  1.00 56.21           O
HETATM 3481  O   HOH A 969      35.057 -35.769  14.525  1.00 38.02           O
HETATM 3482  O   HOH A 970      39.008 -23.251 -26.479  1.00 45.37           O
HETATM 3483  O   HOH A 971      32.594 -22.599 -28.811  1.00 45.29           O
HETATM 3484  O   HOH A 972      30.356 -39.175 -10.666  1.00 39.20           O
HETATM 3485  O   HOH A 973      47.698 -22.827 -20.106  1.00 33.50           O
HETATM 3486  O   HOH A 974      65.637 -18.530 -14.152  1.00 47.80           O
HETATM 3487  O   HOH A 975      34.041 -44.281   1.084  1.00 37.63           O
HETATM 3488  O   HOH A 976      50.226 -30.431  22.142  1.00 56.21           O
HETATM 3489  O   HOH A 977      19.646 -20.118 -12.500  1.00 41.12           O
HETATM 3490  O   HOH A 978      49.919 -38.475 -13.681  1.00 40.29           O
HETATM 3491  O   HOH A 979      59.048 -13.903  -7.878  1.00 30.38           O
HETATM 3492  O   HOH A 980      50.217  -8.238 -14.057  1.00 57.00           O
HETATM 3493  O   HOH A 981      41.925 -32.673   2.744  1.00 34.77           O
HETATM 3494  O   HOH A 982      42.876 -41.239   4.105  1.00 39.50           O
HETATM 3495  O   HOH A 983      33.640 -14.327   8.403  1.00 56.15           O
HETATM 3496  O   HOH A 984      34.000 -10.875 -11.859  1.00 41.64           O
HETATM 3497  O   HOH A 985      32.149 -18.407 -14.701  1.00 36.06           O
HETATM 3498  O   HOH A 986      58.582 -24.568  11.083  1.00 50.96           O
HETATM 3499  O   HOH A 987      18.329 -11.749  -9.383  1.00 59.83           O
HETATM 3500  O   HOH A 988      20.595 -19.856 -15.001  1.00 39.10           O
HETATM 3501  O   HOH A 989      36.630 -44.442  -2.713  1.00 47.01           O
HETATM 3502  O   HOH A 990      13.195  -7.396 -14.874  1.00 77.39           O
HETATM 3503  O   HOH A 991      27.683 -17.839   4.674  1.00 65.39           O
HETATM 3504  O   HOH A 992      29.677 -26.153   5.070  1.00 44.97           O
HETATM 3505  O   HOH A 993      35.045 -28.910 -31.045  1.00 52.37           O
HETATM 3506  O   HOH A 994      45.356 -38.793  18.745  1.00 52.68           O
HETATM 3507  O   HOH A 995      35.726 -36.221   3.942  1.00 33.27           O
HETATM 3508  O   HOH A 996      17.430 -34.340 -14.163  1.00 49.72           O
HETATM 3509  O   HOH A 997      61.398 -15.199 -19.444  1.00 52.15           O
HETATM 3510  O   HOH A 998      33.345 -37.217   2.728  1.00 38.76           O
HETATM 3511  O   HOH A 999      62.207 -30.453   6.567  1.00 39.74           O
HETATM 3512  O   HOH A1000      50.479 -20.528  15.360  1.00 58.64           O
HETATM 3513  O   HOH A1001      31.810 -45.903 -24.887  1.00 58.33           O
HETATM 3514  O   HOH A1002      31.332 -37.117   9.198  1.00 42.63           O
HETATM 3515  O   HOH A1003      31.167 -15.917   3.429  1.00 40.72           O
HETATM 3516  O   HOH A1004      20.512 -13.288 -11.755  1.00 45.73           O
HETATM 3517  O   HOH A1005      64.689 -17.412 -21.612  1.00 53.74           O
```

```
HETATM 3518  O   HOH A1006      61.148 -38.246  14.675  1.00 61.34           O
HETATM 3519  O   HOH A1007      62.599 -19.055  -8.632  1.00 52.01           O
HETATM 3520  O   HOH A1008      63.792 -18.828 -24.073  1.00 45.58           O
HETATM 3521  O   HOH A1009      42.935 -45.073   1.069  1.00 36.10           O
HETATM 3522  O   HOH A1010      51.628  -9.243  -7.671  1.00 50.60           O
HETATM 3523  O   HOH A1011      23.182 -25.149  -2.582  1.00 52.81           O
HETATM 3524  O   HOH A1012      39.775 -43.183 -14.715  1.00 33.15           O
HETATM 3525  O   HOH A1013      35.333 -27.660   5.797  1.00 41.67           O
HETATM 3526  O   HOH A1014      40.209 -40.157 -20.782  1.00 48.87           O
HETATM 3527  O   HOH A1015      61.257 -39.173  -9.540  1.00 67.15           O
HETATM 3528  O   HOH A1016      18.369 -29.876 -20.315  1.00 63.54           O
HETATM 3529  O   HOH A1017      57.146 -16.781 -15.343  1.00 40.23           O
HETATM 3530  O   HOH A1018      26.360 -39.929  -9.049  1.00 61.27           O
HETATM 3531  O   HOH A1019      64.656 -36.672   4.196  1.00 54.31           O
HETATM 3532  O   HOH A1020      35.904 -17.964 -10.185  1.00 43.79           O
HETATM 3533  O   HOH A1021      42.088 -42.760  14.474  1.00 43.59           O
HETATM 3534  O   HOH A1022      32.488 -51.588  11.105  1.00 51.50           O
HETATM 3535  O   HOH A1023      38.233 -48.870  11.791  1.00 55.22           O
HETATM 3536  O   HOH A1024      33.243 -16.360 -15.835  1.00 44.43           O
HETATM 3537  O   HOH A1025      17.044 -26.784 -29.169  1.00 50.12           O
HETATM 3538  O   HOH A1026      33.811 -20.207  -3.868  1.00 35.29           O
HETATM 3539  O   HOH A1027      20.092 -33.491  -9.951  1.00 51.14           O
HETATM 3540  O   HOH A1028      68.453 -22.778 -17.404  1.00 53.77           O
HETATM 3541  O   HOH A1029      45.289  -9.589 -10.867  1.00 50.69           O
HETATM 3542  O   HOH A1030      32.209 -25.629 -28.488  1.00 43.32           O
HETATM 3543  O   HOH A1031      32.925 -18.905   5.600  1.00 57.37           O
HETATM 3544  O   HOH A1032      40.335 -42.240 -10.252  1.00 42.10           O
HETATM 3545  O   HOH A1033      63.164 -20.533  -5.593  1.00 61.18           O
HETATM 3546  O   HOH A1034      25.974 -33.213  -6.206  1.00 46.93           O
HETATM 3547  O   HOH A1035      36.439 -35.224 -27.971  1.00 46.34           O
HETATM 3548  O   HOH A1036      16.835 -20.813 -12.538  1.00 46.06           O
HETATM 3549  O   HOH A1037      49.563 -35.016 -19.340  1.00 50.94           O
HETATM 3550  O   HOH A1038      31.774 -18.360 -11.902  1.00 37.22           O
HETATM 3551  O   HOH A1039      38.631 -44.403  17.877  1.00 57.80           O
HETATM 3552  O   HOH A1040      47.336 -39.577 -14.647  1.00 57.36           O
HETATM 3553  O   HOH A1041      48.092 -42.842  -4.359  1.00 40.63           O
HETATM 3554  O   HOH A1042      32.494 -18.454   2.711  1.00 53.45           O
HETATM 3555  O   HOH A1043      33.521 -16.214 -11.729  1.00 45.92           O
HETATM 3556  O   HOH A1044      53.666 -13.018   1.923  1.00 56.61           O
HETATM 3557  O   HOH A1045      32.828 -38.242  -2.303  1.00 48.85           O
HETATM 3558  O   HOH A1046      42.226 -33.462   5.428  1.00 37.36           O
HETATM 3559  O   HOH A1047      47.897 -34.244 -21.339  1.00 51.57           O
HETATM 3560  O   HOH A1048      30.837 -31.007   4.171  1.00 41.97           O
HETATM 3561  O   HOH A1049      61.480 -19.291  11.818  1.00 57.64           O
HETATM 3562  O   HOH A1050      40.899 -44.216  -3.398  1.00 49.08           O
HETATM 3563  O   HOH A1051      26.859 -41.235 -11.419  1.00 53.52           O
HETATM 3564  O   HOH A1052      46.167 -40.711 -25.606  1.00 56.07           O
HETATM 3565  O   HOH A1053      14.773 -17.502 -14.445  1.00 60.83           O
HETATM 3566  O   HOH A1054      21.017 -33.642 -21.230  1.00 51.28           O
HETATM 3567  O   HOH A1055      28.051  -3.842 -15.982  1.00 52.51           O
```

```
HETATM 3568  O   HOH A1056      52.276 -28.592  19.661  1.00 54.78           O
HETATM 3569  O   HOH A1057      39.037 -32.831 -24.427  1.00 51.05           O
HETATM 3570  O   HOH A1058      69.435 -26.971 -20.165  1.00 66.67           O
HETATM 3571  O   HOH A1059      34.562 -34.739  16.833  1.00 53.04           O
HETATM 3572  O   HOH A1060      64.168 -33.828 -12.307  1.00 74.20           O
HETATM 3573  O   HOH A1061      59.008 -34.324  17.795  1.00 58.12           O
HETATM 3574  O   HOH A1062      64.744 -27.649  -0.431  1.00 57.52           O
HETATM 3575  O   HOH A1063      61.027 -21.394   0.562  1.00 53.05           O
HETATM 3576  O   HOH A1064      50.914 -15.751 -14.814  1.00 34.94           O
HETATM 3577  O   HOH A1065      34.542 -19.797 -14.562  1.00 37.27           O
HETATM 3578  O   HOH A1066      38.033 -22.507 -22.481  1.00 42.91           O
HETATM 3579  O   HOH A1067      30.352 -41.250  -6.287  1.00 43.23           O
HETATM 3580  O   HOH A1068      15.048 -27.805 -30.665  1.00 46.21           O
HETATM 3581  O   HOH A1069      30.045 -35.497 -33.838  1.00 68.01           O
HETATM 3582  O   HOH A1070      40.097 -44.549 -17.151  1.00 41.12           O
HETATM 3583  O   HOH A1071      32.580 -44.697  13.833  1.00 42.17           O
HETATM 3584  O   HOH A1072      33.317 -43.640  -8.755  1.00 51.44           O
HETATM 3585  O   HOH A1073      31.218 -39.651  -8.292  1.00 44.61           O
HETATM 3586  O   HOH A1074      57.640 -17.428 -19.646  1.00 47.19           O
HETATM 3587  O   HOH A1075      15.573 -20.445 -27.247  1.00 68.54           O
HETATM 3588  O   HOH A1076      23.756 -22.562   3.575  1.00 42.02           O
HETATM 3589  O   HOH A1077      54.623  -9.936 -13.472  1.00 47.07           O
HETATM 3590  O   HOH A1078      30.890 -19.093 -16.809  1.00 48.14           O
HETATM 3591  O   HOH A1079      36.497 -37.444  -1.913  1.00 39.05           O
HETATM 3592  O   HOH A1080      34.706  -9.870   1.264  1.00 40.90           O
HETATM 3593  O   HOH A1081      36.664 -23.165  10.979  1.00 53.03           O
HETATM 3594  O   HOH A1082      42.755 -36.956 -20.486  1.00 49.04           O
HETATM 3595  O   HOH A1083      55.570 -19.246   5.890  1.00 40.74           O
HETATM 3596  O   HOH A1084      50.162 -24.470 -20.623  1.00 37.94           O
HETATM 3597  O   HOH A1085      63.905 -33.613  12.439  1.00 56.22           O
HETATM 3598  O   HOH A1086      56.335 -25.235  11.710  1.00 53.88           O
HETATM 3599  O   HOH A1087      33.155 -35.345  19.043  1.00 56.98           O
HETATM 3600  O   HOH A1088      48.083 -40.812 -20.762  1.00 72.65           O
HETATM 3601  O   HOH A1089      59.487 -15.291 -12.197  1.00 60.41           O
HETATM 3602  O   HOH A1090      60.938 -20.991 -27.413  1.00 43.11           O
HETATM 3603  O   HOH A1091      19.828 -30.567 -10.575  1.00 45.30           O
HETATM 3604  O   HOH A1092      23.498 -31.879   3.315  1.00 61.58           O
HETATM 3605  O   HOH A1093      53.203 -11.575  -0.576  1.00 54.40           O
HETATM 3606  O   HOH A1094      21.955 -19.851 -33.696  1.00 50.81           O
HETATM 3607  O   HOH A1095      59.537 -35.461  -5.189  1.00 50.65           O
HETATM 3608  O   HOH A1096      34.653 -25.095   5.205  1.00 39.17           O
HETATM 3609  O   HOH A1097      49.453 -41.097  -5.447  1.00 44.89           O
HETATM 3610  O   HOH A1098      36.078 -18.123 -13.080  1.00 40.67           O
HETATM 3611  O   HOH A1099      36.232 -45.360   1.767  1.00 41.41           O
HETATM 3612  O   HOH A1100      29.822 -21.183   4.923  1.00 56.20           O
HETATM 3613  O   HOH A1101      32.773 -39.973 -30.888  1.00 50.65           O
HETATM 3614  O   HOH A1102      43.670 -14.314   8.149  1.00 53.13           O
HETATM 3615  O   HOH A1103      51.788 -37.963 -16.664  1.00 70.96           O
HETATM 3616  O   HOH A1104      44.969 -24.133 -19.825  1.00 44.47           O
HETATM 3617  O   HOH A1105      60.421 -24.720  18.574  1.00 55.26           O
```

```
HETATM 3618  O   HOH A1106      32.761 -13.216 -23.658  1.00 47.44           O
HETATM 3619  O   HOH A1107      15.938 -24.234 -17.563  1.00 45.97           O
HETATM 3620  O   HOH A1108      49.096 -30.549  11.691  1.00 53.88           O
HETATM 3621  O   HOH A1109      32.837 -29.666 -30.050  1.00 45.86           O
HETATM 3622  O   HOH A1110      48.434 -26.227  12.838  1.00 52.25           O
HETATM 3623  O   HOH A1111      59.313 -32.474 -16.164  1.00 48.63           O
HETATM 3624  O   HOH A1112      68.029 -33.306   8.318  1.00 58.59           O
HETATM 3625  O   HOH A1113      23.972 -17.994   3.550  1.00 53.79           O
HETATM 3626  O   HOH A1114      49.730 -42.431  11.330  1.00 50.00           O
HETATM 3627  O   HOH A1115      66.585 -20.400 -25.123  1.00 48.88           O
HETATM 3628  O   HOH A1116      61.302 -18.608 -25.780  1.00 53.07           O
HETATM 3629  O   HOH A1117      67.274 -28.734 -25.151  1.00 57.51           O
HETATM 3630  O   HOH A1118      58.192 -37.738 -12.372  1.00 49.36           O
HETATM 3631  O   HOH A1119      28.862 -10.180   3.821  1.00 65.02           O
HETATM 3632  O   HOH A1120      67.068 -26.508  -8.528  1.00 58.03           O
HETATM 3633  O   HOH A1121      52.590 -38.568   1.372  1.00 62.47           O
HETATM 3634  O   HOH A1122      22.598 -26.364   4.587  1.00 56.87           O
HETATM 3635  O   HOH A1123      58.974 -12.390  11.182  1.00 48.96           O
HETATM 3636  O   HOH A1124      39.339 -17.507 -13.513  1.00 53.69           O
HETATM 3637  O   HOH A1125      39.304 -46.795 -16.429  1.00 61.52           O
HETATM 3638  O   HOH A1126      35.881 -47.966   2.572  1.00 50.32           O
HETATM 3639  O   HOH A1127      35.524 -44.931  -8.541  1.00 56.45           O
HETATM 3640  O   HOH A1128      19.784 -30.878  -5.868  1.00 61.98           O
HETATM 3641  O   HOH A1129      55.795 -38.874  -4.981  1.00 61.57           O
HETATM 3642  O   HOH A1130      58.464 -41.432   7.426  1.00 61.24           O
HETATM 3643  O   HOH A1131      38.523 -46.248 -13.492  1.00 55.04           O
HETATM 3644  O   HOH A1132      64.378 -41.026  -2.892  1.00 63.23           O
HETATM 3645  O   HOH A1133      56.273 -36.902  21.812  1.00 41.31           O
HETATM 3646  O   HOH A1134      63.340 -32.390 -27.153  1.00 55.69           O
HETATM 3647  O   HOH A1135      53.617 -39.066  -7.566  1.00 62.81           O
HETATM 3648  O   HOH A1136      53.121 -13.300 -21.540  1.00 61.00           O
HETATM 3649  O   HOH A1137      43.979 -13.070   5.828  1.00 40.93           O
HETATM 3650  O   HOH A1138      55.601 -34.150 -17.845  1.00 47.73           O
HETATM 3651  O   HOH A1139      38.015 -43.196  -4.496  1.00 54.63           O
HETATM 3652  O   HOH A1140      66.233 -23.101 -25.230  1.00 58.98           O
HETATM 3653  O   HOH A1141      58.136 -37.249  -3.390  1.00 54.58           O
HETATM 3654  O   HOH A1142      33.444 -47.300  17.840  1.00 59.34           O
HETATM 3655  O   HOH A1143      53.813 -10.552 -16.130  1.00 59.55           O
HETATM 3656  O   HOH A1144      50.984 -25.180 -23.068  1.00 43.32           O
HETATM 3657  O   HOH A1145      47.197 -24.967  20.866  1.00 46.42           O
HETATM 3658  O   HOH A1146      45.139 -46.094   8.867  1.00 49.62           O
HETATM 3659  O   HOH A1147      25.541 -31.169 -33.739  1.00 49.45           O
HETATM 3660  O   HOH A1148      58.032 -18.496   5.548  1.00 38.48           O
HETATM 3661  O   HOH A1149      56.717 -39.352  20.278  1.00 46.22           O
HETATM 3662  O   HOH A1150      49.563 -14.755  10.879  1.00 76.06           O
HETATM 3663  O   HOH A1151      48.118 -30.075  14.057  1.00 55.47           O
HETATM 3664  O   HOH A1152      15.633 -20.439 -14.690  1.00 54.25           O
HETATM 3665  O   HOH A1153      51.391 -11.192   1.488  1.00 61.95           O
HETATM 3666  O   HOH A1154      60.583 -28.535   3.980  1.00 49.76           O
HETATM 3667  O   HOH A1155      32.556 -32.404   0.696  1.00 42.26           O
```

```
HETATM 3668  O   HOH A1156      28.955 -46.961 -13.213  1.00 55.67           O
HETATM 3669  O   HOH A1157      19.031 -26.513   1.316  1.00 57.05           O
HETATM 3670  O   HOH A1158      48.305 -43.480  12.854  1.00 61.39           O
HETATM 3671  O   HOH A1159      60.009 -35.721 -12.453  1.00 46.33           O
HETATM 3672  O   HOH A1160      59.234 -18.129   0.640  1.00 54.73           O
HETATM 3673  O   HOH A1161      31.072 -54.023   9.110  1.00 66.61           O
HETATM 3674  O   HOH A1162      22.210 -17.653   1.632  1.00 58.00           O
HETATM 3675  O   HOH A1163      34.584 -42.050 -30.576  1.00 61.55           O
HETATM 3676  O   HOH A1164      58.670 -43.612  10.444  1.00 70.60           O
HETATM 3677  O   HOH A1165      48.934 -23.904  12.058  1.00 51.41           O
HETATM 3678  O   HOH A1166      27.007 -41.085   2.920  1.00 54.83           O
HETATM 3679  O   HOH A1167      57.838 -34.669 -20.074  1.00 47.63           O
HETATM 3680  O   HOH A1168      42.630 -27.094 -16.285  1.00 36.30           O
HETATM 3681  O   HOH A1169      60.302 -19.505   5.020  1.00 42.85           O
HETATM 3682  O   HOH A1170      64.005 -35.911  11.936  1.00 55.84           O
HETATM 3683  O   HOH A1171      25.358 -37.645 -31.569  1.00 60.52           O
HETATM 3684  O   HOH A1172      54.131 -13.368 -16.785  1.00 57.21           O
HETATM 3685  O   HOH A1173      70.116 -26.905 -12.942  1.00 72.60           O
HETATM 3686  O   HOH A1174      34.134 -25.735 -31.455  1.00 58.01           O
HETATM 3687  O   HOH A1175      41.116 -45.914  -1.363  1.00 53.57           O
HETATM 3688  O   HOH A1176      27.979 -42.241   5.009  1.00 60.83           O
HETATM 3689  O   HOH A1177      61.843 -26.784  15.032  1.00 60.94           O
HETATM 3690  O   HOH A1178      44.230 -15.834 -15.144  1.00 44.63           O
HETATM 3691  O   HOH A1179      51.144 -12.168 -23.403  1.00 51.65           O
HETATM 3692  O   HOH A1180      53.219 -40.357   5.285  1.00 65.27           O
HETATM 3693  O   HOH A1181      44.293 -43.387 -11.316  1.00 62.02           O
HETATM 3694  O   HOH A1182      44.381 -32.817 -19.582  1.00 71.37           O
HETATM 3695  O   HOH A1183      29.486 -40.782   6.304  1.00 58.94           O
HETATM 3696  O   HOH A1184      57.969  -9.011 -12.618  1.00 64.52           O
HETATM 3697  O   HOH A1185      36.739 -18.486 -25.929  1.00 61.73           O
HETATM 3698  O   HOH A1186      22.189 -39.884 -13.802  1.00 61.06           O
HETATM 3699  O   HOH A1187      45.885 -42.785  16.705  1.00 52.54           O
HETATM 3700  O   HOH A1188      47.064 -42.541 -10.365  1.00 57.90           O
HETATM 3701  O   HOH A1189      45.637 -45.010   4.973  1.00 55.66           O
HETATM 3702  O   HOH A1190      50.277 -26.691  15.488  1.00 59.36           O
HETATM 3703  O   HOH A1191      39.216 -41.783 -28.474  1.00 56.93           O
HETATM 3704  O   HOH A1192      49.888 -19.870   7.859  1.00 49.52           O
HETATM 3705  O   HOH A1193      40.787 -43.807 -18.656  1.00 57.00           O
HETATM 3706  O   HOH A1194      39.092 -36.051 -28.214  1.00 47.12           O
HETATM 3707  O   HOH A1195      51.177  -5.867  -5.361  1.00 68.21           O
HETATM 3708  O   HOH A1196      30.998 -47.304 -14.789  1.00 62.18           O
HETATM 3709  O   HOH A1197      29.703 -45.559 -23.742  1.00 46.03           O
HETATM 3710  O   HOH A1198      14.746 -18.060 -28.609  1.00 63.32           O
HETATM 3711  O   HOH A1199       9.867 -16.394 -24.737  0.50 30.34           O
HETATM 3712  O   HOH A1200      31.708 -34.705  14.562  1.00 56.74           O
HETATM 3713  O   HOH A1201      29.170 -53.494   7.126  1.00 68.58           O
HETATM 3714  O   HOH A1202      63.328 -10.899 -18.701  1.00 61.98           O
HETATM 3715  O   HOH A1203      62.720 -42.518   9.202  1.00 58.43           O
HETATM 3716  O   HOH A1204      30.024 -45.864  -0.613  1.00 54.99           O
HETATM 3717  O   HOH A1205      58.357 -27.516  16.291  1.00 52.18           O
```

```
HETATM 3718  O   HOH A1206      17.198 -28.980  -9.045  1.00 58.97           O
HETATM 3719  O   HOH A1207      41.780 -19.506   7.661  1.00 47.54           O
HETATM 3720  O   HOH A1208      23.064 -37.692 -31.780  1.00 60.58           O
HETATM 3721  O   HOH A1209      27.596 -34.331 -33.944  1.00 62.19           O
HETATM 3722  O   HOH A1210      23.971 -41.695 -14.555  1.00 57.71           O
HETATM 3723  O   HOH A1211      20.180 -13.818 -38.260  1.00 67.15           O
HETATM 3724  O   HOH A1212      30.032  -4.542 -11.304  1.00 60.03           O
HETATM 3725  O   HOH A1213      16.968 -23.769 -23.749  1.00 56.30           O
HETATM 3726  O   HOH A1214      52.023 -42.962   0.703  1.00 61.43           O
HETATM 3727  O   HOH A1215      16.665 -32.175 -13.161  1.00 46.22           O
HETATM 3728  O   HOH A1216      41.816 -17.150   7.476  1.00 48.63           O
HETATM 3729  O   HOH A1217      41.094 -25.778 -16.844  1.00 54.24           O
HETATM 3730  O   HOH A1218      53.931 -38.056 -15.360  1.00 54.38           O
HETATM 3731  O   HOH A1219      57.327 -25.914   3.685  1.00 40.24           O
HETATM 3732  O   HOH A1220      40.131 -15.052  -9.813  1.00 64.19           O
HETATM 3733  O   HOH A1221      39.802 -34.119  17.706  1.00 38.41           O
HETATM 3734  O   HOH A1222      32.535 -31.577   8.651  1.00 41.80           O
HETATM 3735  O   HOH A1223      18.945 -10.280 -33.140  1.00 61.04           O
HETATM 3736  O   HOH A1224      16.793 -12.947 -24.819  1.00 53.98           O
HETATM 3737  O   HOH A1225      36.364 -14.391 -18.336  1.00 53.05           O
HETATM 3738  O   HOH A1226      50.168 -35.048  -3.383  1.00 37.01           O
HETATM 3739  O   HOH A1227      70.351 -34.203  -3.907  1.00 59.79           O
HETATM 3740  O   HOH A1228      32.788 -10.072 -25.669  1.00 65.44           O
HETATM 3741  O   HOH A1229      32.518 -26.542 -24.831  1.00 42.34           O
HETATM 3742  O   HOH A1230      25.354 -26.179 -34.436  1.00 52.64           O
HETATM 3743  O   HOH A1231      30.091 -19.414   2.544  1.00 56.73           O
HETATM 3744  O   HOH A1232      34.301 -33.689   0.921  1.00 39.81           O
HETATM 3745  O   HOH A1233      52.633 -35.902  -2.522  1.00 46.78           O
HETATM 3746  O   HOH A1234      28.418  -6.777   1.215  1.00 58.76           O
HETATM 3747  O   HOH A1235      36.823  -3.792 -17.627  1.00 59.99           O
HETATM 3748  O   HOH A1236      67.275 -22.018  -6.248  1.00 65.65           O
HETATM 3749  O   HOH A1237      58.715 -25.318   1.565  1.00 48.35           O
HETATM 3750  O   HOH A1238      24.418  -9.486  -7.041  1.00 55.44           O
HETATM 3751  O   HOH A1239      60.275 -32.487  -5.838  1.00 48.48           O
HETATM 3752  O   HOH A1240      38.307 -20.674   9.354  1.00 49.67           O
HETATM 3753  O   HOH A1241      45.430 -45.624  -8.099  1.00 51.60           O
HETATM 3754  O   HOH A1242      59.537 -17.353  -3.116  1.00 56.53           O
CONECT  202 2498
CONECT  636 3358
CONECT 1506 1624
CONECT 1624 1506
CONECT 2498  202
CONECT 2634 3286
CONECT 2685 2760
CONECT 2719 3125
CONECT 2760 2685
CONECT 3125 2719
CONECT 3142 3220
CONECT 3220 3142
CONECT 3286 2634 3287 3297
```

```
CONECT 3287 3286 3288 3294
CONECT 3288 3287 3289 3295
CONECT 3289 3288 3290 3296
CONECT 3290 3289 3291 3297
CONECT 3291 3290 3298
CONECT 3292 3293 3294 3299
CONECT 3293 3292
CONECT 3294 3287 3292
CONECT 3295 3288
CONECT 3296 3289 3300
CONECT 3297 3286 3290
CONECT 3298 3291
CONECT 3299 3292
CONECT 3300 3296 3301 3311
CONECT 3301 3300 3302 3308
CONECT 3302 3301 3303 3309
CONECT 3303 3302 3304 3310
CONECT 3304 3303 3305 3311
CONECT 3305 3304 3312
CONECT 3306 3307 3308 3313
CONECT 3307 3306
CONECT 3308 3301 3306
CONECT 3309 3302
CONECT 3310 3303 3314
CONECT 3311 3300 3304
CONECT 3312 3305
CONECT 3313 3306
CONECT 3314 3310 3315 3323
CONECT 3315 3314 3316 3320
CONECT 3316 3315 3317 3321
CONECT 3317 3316 3318 3322
CONECT 3318 3317 3319 3323
CONECT 3319 3318 3324
CONECT 3320 3315
CONECT 3321 3316 3347
CONECT 3322 3317
CONECT 3323 3314 3318
CONECT 3324 3319 3325
CONECT 3325 3324 3326 3334
CONECT 3326 3325 3327 3331
CONECT 3327 3326 3328 3332
CONECT 3328 3327 3329 3333
CONECT 3329 3328 3330 3334
CONECT 3330 3329 3335
CONECT 3331 3326
CONECT 3332 3327 3336
CONECT 3333 3328
CONECT 3334 3325 3329
CONECT 3335 3330
CONECT 3336 3332 3337 3345
```

```
CONECT 3337 3336 3338 3342
CONECT 3338 3337 3339 3343
CONECT 3339 3338 3340 3344
CONECT 3340 3339 3341 3345
CONECT 3341 3340 3346
CONECT 3342 3337
CONECT 3343 3338
CONECT 3344 3339
CONECT 3345 3336 3340
CONECT 3346 3341
CONECT 3347 3321 3348 3356
CONECT 3348 3347 3349 3353
CONECT 3349 3348 3350 3354
CONECT 3350 3349 3351 3355
CONECT 3351 3350 3352 3356
CONECT 3352 3351 3357
CONECT 3353 3348
CONECT 3354 3349
CONECT 3355 3350
CONECT 3356 3347 3351
CONECT 3357 3352
CONECT 3358  636 3359 3369
CONECT 3359 3358 3360 3366
CONECT 3360 3359 3361 3367
CONECT 3361 3360 3362 3368
CONECT 3362 3361 3363 3369
CONECT 3363 3362 3370
CONECT 3364 3365 3366 3371
CONECT 3365 3364
CONECT 3366 3359 3364
CONECT 3367 3360
CONECT 3368 3361 3372
CONECT 3369 3358 3362
CONECT 3370 3363
CONECT 3371 3364
CONECT 3372 3368 3373 3383
CONECT 3373 3372 3374 3380
CONECT 3374 3373 3375 3381
CONECT 3375 3374 3376 3382
CONECT 3376 3375 3377 3383
CONECT 3377 3376 3384
CONECT 3378 3379 3380 3385
CONECT 3379 3378
CONECT 3380 3373 3378
CONECT 3381 3374
CONECT 3382 3375
CONECT 3383 3372 3376
CONECT 3384 3377
CONECT 3385 3378
CONECT 3386 3387 3388 3389
```

```
CONECT 3387 3386
CONECT 3388 3386
CONECT 3389 3386
CONECT 3390 3391 3392 3393
CONECT 3391 3390
CONECT 3392 3390
CONECT 3393 3390
CONECT 3394 3395 3396 3397
CONECT 3395 3394
CONECT 3396 3394
CONECT 3397 3394
CONECT 3398 3399 3400 3401
CONECT 3399 3398
CONECT 3400 3398
CONECT 3401 3398
CONECT 3402 3403 3404 3405
CONECT 3403 3402
CONECT 3404 3402
CONECT 3405 3402
CONECT 3406 3407 3408 3409
CONECT 3407 3406
CONECT 3408 3406
CONECT 3409 3406
CONECT 3410 3411 3412 3413
CONECT 3411 3410
CONECT 3412 3410
CONECT 3413 3410
CONECT 3414 3415 3416
CONECT 3415 3414
CONECT 3416 3414 3417 3418
CONECT 3417 3416
CONECT 3418 3416 3419
CONECT 3419 3418
MASTER      313    0   16   18   13    0    0    6 3753    1  146   33
END
```