```
HEADER    HYDROLASE                               19-JUL-00   1FCV
TITLE     CRYSTAL STRUCTURE OF BEE VENOM HYALURONIDASE IN COMPLEX WITH
TITLE    2 HYALURONIC ACID TETRAMER
CAVEAT     1FCV    NAG B 2 HAS WRONG CHIRALITY AT ATOM C1 GCU B 3 HAS WRONG
CAVEAT   2 1FCV    CHIRALITY AT ATOM C1 GCU B 5 HAS WRONG CHIRALITY AT ATOM C1
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: HYALURONOGLUCOSAMINIDASE;
COMPND   3 CHAIN: A;
COMPND   4 SYNONYM: HYALURONIDASE, API M II;
COMPND   5 EC: 3.2.1.35;
COMPND   6 ENGINEERED: YES
SOURCE    MOL_ID: 1;
SOURCE   2 ORGANISM_SCIENTIFIC: APIS MELLIFERA;
SOURCE   3 ORGANISM_COMMON: HONEY BEE;
SOURCE   4 ORGANISM_TAXID: 7460;
SOURCE   5 EXPRESSION_SYSTEM: TRICHOPLUSIA NI;
SOURCE   6 EXPRESSION_SYSTEM_COMMON: CABBAGE LOOPER;
SOURCE   7 EXPRESSION_SYSTEM_TAXID: 7111;
SOURCE   8 EXPRESSION_SYSTEM_CELL: HIGH-FIVE INSECT CELLS;
SOURCE   9 EXPRESSION_SYSTEM_VECTOR_TYPE: BACULOVIRUS;
SOURCE  10 EXPRESSION_SYSTEM_VECTOR: PMELBAC A
KEYWDS    7 STRANDED TIM BARREL, ALLERGEN, GLYCOSIDASE FAMILY 56, HYALURONIC
KEYWDS   2 ACID, HYDROLASE
EXPDTA    X-RAY DIFFRACTION
AUTHOR    Z.MARKOVIC-HOUSLEY,G.MIGLIERINI,L.SOLDATOVA,P.J.RIZKALLAH,U.MUELLER,
AUTHOR   2 T.SCHIRMER
REVDAT   7   30-OCT-24 1FCV    1       REMARK HETSYN
REVDAT   6   29-JUL-20 1FCV    1       CAVEAT COMPND REMARK HETNAM
REVDAT   6 2                    1       LINK   SITE   ATOM
REVDAT   5   25-NOV-15 1FCV    1       AUTHOR
REVDAT   4   13-JUL-11 1FCV    1       VERSN
REVDAT   3   24-FEB-09 1FCV    1       VERSN
REVDAT   2   01-APR-03 1FCV    1       JRNL
REVDAT   1   01-OCT-01 1FCV    0
JRNL        AUTH   Z.MARKOVIC-HOUSLEY,G.MIGLIERINI,L.SOLDATOVA,P.J.RIZKALLAH,
JRNL        AUTH 2 U.MULLER,T.SCHIRMER
JRNL        TITL   CRYSTAL STRUCTURE OF HYALURONIDASE, A MAJOR ALLERGEN OF BEE
JRNL        TITL 2 VENOM.
JRNL        REF    STRUCTURE FOLD.DES.           V.   8  1025 2000
JRNL        REFN                   ISSN 0969-2126
JRNL        PMID   11080624
JRNL        DOI    10.1016/S0969-2126(00)00511-6
REMARK   2
REMARK   2 RESOLUTION.    2.65 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
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Halozyme EX2179
Merck v. Halozyme
PGR2025-00050

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REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.65
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 8.00
REMARK   3   DATA CUTOFF            (SIGMA(F)) : 0.000
REMARK   3   COMPLETENESS FOR RANGE        (%) : NULL
REMARK   3   NUMBER OF REFLECTIONS             : 12387
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : NULL
REMARK   3   FREE R VALUE TEST SET SELECTION  : RANDOM
REMARK   3   R VALUE     (WORKING + TEST SET) : 0.180
REMARK   3   R VALUE           (WORKING SET) : 0.163
REMARK   3   FREE R VALUE                     : 0.252
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : NULL
REMARK   3   FREE R VALUE TEST SET COUNT      : 1295
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   PROTEIN ATOMS            : 2681
REMARK   3   NUCLEIC ACID ATOMS       : 0
REMARK   3   HETEROGEN ATOMS          : 53
REMARK   3   SOLVENT ATOMS            : 132
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : 34.40
REMARK   3   MEAN B VALUE      (OVERALL, A**2) : NULL
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) : 0.009 ; NULL
REMARK   3    ANGLE DISTANCE                 (A) : 0.032 ; 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.
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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: NULL
REMARK   4
REMARK   4 1FCV COMPLIES WITH FORMAT V. 3.30, 13-JUL-11
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 28-JUL-00.
REMARK 100 THE DEPOSITION ID IS D_1000011485.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 10-APR-00
REMARK 200  TEMPERATURE           (KELVIN) : 277
REMARK 200  PH                             : 4.6
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : N
REMARK 200  RADIATION SOURCE               : ROTATING ANODE
REMARK 200  BEAMLINE                       : NULL
REMARK 200  X-RAY GENERATOR MODEL          : ENRAF-NONIUS FR571
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 1.54
REMARK 200  MONOCHROMATOR                  : NULL
REMARK 200  OPTICS                         : NULL
REMARK 200
REMARK 200  DETECTOR TYPE                  : IMAGE PLATE
REMARK 200  DETECTOR MANUFACTURER          : MARRESEARCH
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : MOSFLM
REMARK 200  DATA SCALING SOFTWARE          : SCALA, CCP4 (SCALA)
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 13411
REMARK 200  RESOLUTION RANGE HIGH      (A) : 2.650
REMARK 200  RESOLUTION RANGE LOW       (A) : 30.000
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 0.000
REMARK 200
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REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 99.8
REMARK 200  DATA REDUNDANCY                : 3.700
REMARK 200  R MERGE                    (I) : 0.10000
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : 7.4000
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.65
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.79
REMARK 200  COMPLETENESS FOR SHELL     (%) : 99.9
REMARK 200  DATA REDUNDANCY IN SHELL       : 3.70
REMARK 200  R MERGE FOR SHELL          (I) : 0.29500
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : NULL
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: NULL
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: NULL
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 54.00
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 2.70
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: PEG 4000, AMMONIUM SULPHATE, NA
REMARK 280  ACETATE, PH 4.6, VAPOR DIFFUSION, HANGING DROP, TEMPERATURE 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
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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      100.88400
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       50.44200
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       50.44200
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      100.88400
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
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     THR A     1
REMARK 465     PRO A     2
REMARK 465     ASP A     3
REMARK 465     ASN A     4
REMARK 465     ASN A     5
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REMARK 465     LYS A     6
REMARK 465     THR A     7
REMARK 465     VAL A     8
REMARK 465     ARG A     9
REMARK 465     ASN A   334
REMARK 465     ASN A   335
REMARK 465     ASN A   336
REMARK 465     ALA A   337
REMARK 465     ASN A   338
REMARK 465     ASP A   339
REMARK 465     ARG A   340
REMARK 465     LEU A   341
REMARK 465     THR A   342
REMARK 465     VAL A   343
REMARK 465     ASP A   344
REMARK 465     VAL A   345
REMARK 465     SER A   346
REMARK 465     VAL A   347
REMARK 465     ASP A   348
REMARK 465     GLN A   349
REMARK 465     VAL A   350
REMARK 475
REMARK 475 ZERO OCCUPANCY RESIDUES
REMARK 475 THE FOLLOWING RESIDUES WERE MODELED WITH ZERO OCCUPANCY.
REMARK 475 THE LOCATION AND PROPERTIES OF THESE RESIDUES MAY NOT
REMARK 475 BE RELIABLE. (M=MODEL NUMBER; RES=RESIDUE NAME;
REMARK 475 C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE)
REMARK 475   M RES C  SSEQI
REMARK 475     LEU A   333
REMARK 480
REMARK 480 ZERO OCCUPANCY ATOM
REMARK 480 THE FOLLOWING RESIDUES HAVE ATOMS MODELED WITH ZERO
REMARK 480 OCCUPANCY. THE LOCATION AND PROPERTIES OF THESE ATOMS
REMARK 480 MAY NOT BE RELIABLE. (M=MODEL NUMBER; RES=RESIDUE NAME;
REMARK 480 C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE):
REMARK 480   M RES C SSEQI ATOMS
REMARK 480     GLU A   10   CG   CD   OE1  OE2
REMARK 480     GLU A   30   CG   CD   OE1  OE2
REMARK 480     ASP A   93   CG   OD1  OD2
REMARK 480     LYS A  131   CD   CE   NZ
REMARK 480     ARG A  138   CG   CD   NE   CZ   NH1  NH2
REMARK 480     ARG A  174   CB   CG   CD   NE   CZ   NH1  NH2
REMARK 480     ARG A  280   NE   CZ   NH1  NH2
REMARK 480     ARG A  330   CG   CD   NE   CZ   NH1  NH2
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    ALA A   332     N    LEU A   333             1.69
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  GLU A   236     NZ   LYS A   261     4455     2.09
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),1X,F6.3)
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   RES CSSEQI ATM2   DEVIATION
REMARK 500    GLU A  10   CB    GLU A  10   CG      0.149
REMARK 500    ALA A 332   C     LEU A 333   N      -0.256
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
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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  28   CD  -  NE  -  CZ  ANGL. DEV. =  10.7 DEGREES
REMARK 500    ARG A  28   NE  -  CZ  -  NH1 ANGL. DEV. =   4.2 DEGREES
REMARK 500    ASP A  44   CB  -  CG  -  OD2 ANGL. DEV. =   6.1 DEGREES
REMARK 500    ARG A  47   NE  -  CZ  -  NH2 ANGL. DEV. =  -4.0 DEGREES
REMARK 500    ARG A 116   NE  -  CZ  -  NH2 ANGL. DEV. =  -4.8 DEGREES
REMARK 500    TRP A 123   CA  -  CB  -  CG  ANGL. DEV. =  14.7 DEGREES
REMARK 500    ARG A 155   NE  -  CZ  -  NH1 ANGL. DEV. =   4.0 DEGREES
REMARK 500    ARG A 155   NE  -  CZ  -  NH2 ANGL. DEV. =  -3.0 DEGREES
REMARK 500    TYR A 160   CB  -  CG  -  CD2 ANGL. DEV. =  -5.3 DEGREES
REMARK 500    ARG A 176   CD  -  NE  -  CZ  ANGL. DEV. =   9.5 DEGREES
REMARK 500    ARG A 176   NE  -  CZ  -  NH1 ANGL. DEV. =  -3.3 DEGREES
REMARK 500    TYR A 183   CB  -  CG  -  CD2 ANGL. DEV. =  -3.9 DEGREES
REMARK 500    ARG A 229   NE  -  CZ  -  NH2 ANGL. DEV. =  -4.3 DEGREES
REMARK 500    ARG A 244   NH1 -  CZ  -  NH2 ANGL. DEV. =   8.5 DEGREES
REMARK 500    ARG A 244   NE  -  CZ  -  NH1 ANGL. DEV. =  -6.9 DEGREES
REMARK 500    ARG A 250   NE  -  CZ  -  NH1 ANGL. DEV. =  -4.5 DEGREES
REMARK 500    ARG A 250   NE  -  CZ  -  NH2 ANGL. DEV. =   7.0 DEGREES
REMARK 500    THR A 256   N   -  CA  -  CB  ANGL. DEV. = -13.4 DEGREES
REMARK 500    ARG A 273   NE  -  CZ  -  NH1 ANGL. DEV. =  -3.5 DEGREES
REMARK 500    ARG A 280   CG  -  CD  -  NE  ANGL. DEV. =  14.7 DEGREES
REMARK 500    ARG A 288   CA  -  CB  -  CG  ANGL. DEV. =  13.3 DEGREES
REMARK 500    ARG A 317   NE  -  CZ  -  NH2 ANGL. DEV. =  -5.3 DEGREES
REMARK 500    ALA A 332   CA  -  C   -  N   ANGL. DEV. =  23.9 DEGREES
REMARK 500    ALA A 332   O   -  C   -  N   ANGL. DEV. = -29.0 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
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REMARK 500    ALA A 124     -121.45     41.06
REMARK 500    ALA A 185       -4.64     78.26
REMARK 500    CYS A 189      -35.93   -140.02
REMARK 500    MET A 212       35.56    -95.68
REMARK 500    ARG A 273       56.99   -174.21
REMARK 500    ILE A 307       43.82   -142.73
REMARK 500    GLU A 323      -67.53   -133.53
REMARK 500    ILE A 331     -105.88    -75.93
REMARK 500    ALA A 332      -65.98    -29.77
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: MAIN CHAIN PLANARITY
REMARK 500
REMARK 500 THE FOLLOWING RESIDUES HAVE A PSEUDO PLANARITY
REMARK 500 TORSION ANGLE, C(I) - CA(I) - N(I+1) - O(I), GREATER
REMARK 500 10.0 DEGREES. (M=MODEL NUMBER; RES=RESIDUE NAME;
REMARK 500 C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 500 I=INSERTION CODE).
REMARK 500
REMARK 500  M RES CSSEQI        ANGLE
REMARK 500    ASP A  66        -14.77
REMARK 500    ASP A 101        -10.87
REMARK 500
REMARK 500 REMARK: NULL
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1FCQ   RELATED DB: PDB
REMARK 900 1FCQ IS THE SAME PROTEIN WITHOUT LIGAND IN A DIFFERENT CRYSTAL FORM
REMARK 900 RELATED ID: 1FCU   RELATED DB: PDB
REMARK 900 1FCU IS THE SAME PROTEIN WITHOUT LIGAND IN THE SAME CRYSTAL FORM
DBREF  1FCV A    1   350  UNP    Q08169   HUGA_APIME      33    382
SEQRES   1 A  350  THR PRO ASP ASN ASN LYS THR VAL ARG GLU PHE ASN VAL
SEQRES   2 A  350  TYR TRP ASN VAL PRO THR PHE MET CYS HIS LYS TYR GLY
SEQRES   3 A  350  LEU ARG PHE GLU GLU VAL SER GLU LYS TYR GLY ILE LEU
SEQRES   4 A  350  GLN ASN TRP MET ASP LYS PHE ARG GLY GLU GLU ILE ALA
SEQRES   5 A  350  ILE LEU TYR ASP PRO GLY MET PHE PRO ALA LEU LEU LYS
SEQRES   6 A  350  ASP PRO ASN GLY ASN VAL VAL ALA ARG ASN GLY GLY VAL
SEQRES   7 A  350  PRO GLN LEU GLY ASN LEU THR LYS HIS LEU GLN VAL PHE
SEQRES   8 A  350  ARG ASP HIS LEU ILE ASN GLN ILE PRO ASP LYS SER PHE
SEQRES   9 A  350  PRO GLY VAL GLY VAL ILE ASP PHE GLU SER TRP ARG PRO
SEQRES  10 A  350  ILE PHE ARG GLN ASN TRP ALA SER LEU GLN PRO TYR LYS
SEQRES  11 A  350  LYS LEU SER VAL GLU VAL VAL ARG ARG GLU HIS PRO PHE
SEQRES  12 A  350  TRP ASP ASP GLN ARG VAL GLU GLN GLU ALA LYS ARG ARG
SEQRES  13 A  350  PHE GLU LYS TYR GLY GLN LEU PHE MET GLU GLU THR LEU
SEQRES  14 A  350  LYS ALA ALA LYS ARG MET ARG PRO ALA ALA ASN TRP GLY
SEQRES  15 A  350  TYR TYR ALA TYR PRO TYR CYS TYR ASN LEU THR PRO ASN
SEQRES  16 A  350  GLN PRO SER ALA GLN CYS GLU ALA THR THR MET GLN GLU
SEQRES  17 A  350  ASN ASP LYS MET SER TRP LEU PHE GLU SER GLU ASP VAL
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SEQRES  18 A  350  LEU LEU PRO SER VAL TYR LEU ARG TRP ASN LEU THR SER
SEQRES  19 A  350  GLY GLU ARG VAL GLY LEU VAL GLY GLY ARG VAL LYS GLU
SEQRES  20 A  350  ALA LEU ARG ILE ALA ARG GLN MET THR THR SER ARG LYS
SEQRES  21 A  350  LYS VAL LEU PRO TYR TYR TRP TYR LYS TYR GLN ASP ARG
SEQRES  22 A  350  ARG ASP THR ASP LEU SER ARG ALA ASP LEU GLU ALA THR
SEQRES  23 A  350  LEU ARG LYS ILE THR ASP LEU GLY ALA ASP GLY PHE ILE
SEQRES  24 A  350  ILE TRP GLY SER SER ASP ASP ILE ASN THR LYS ALA LYS
SEQRES  25 A  350  CYS LEU GLN PHE ARG GLU TYR LEU ASN ASN GLU LEU GLY
SEQRES  26 A  350  PRO ALA VAL LYS ARG ILE ALA LEU ASN ASN ASN ALA ASN
SEQRES  27 A  350  ASP ARG LEU THR VAL ASP VAL SER VAL ASP GLN VAL
HET    GCU  B   1       1
HET    NAG  B   2      14
HET    GCU  B   3      12
HET    NAG  B   4      14
HET    GCU  B   5      12
HETNAM     GCU ALPHA-D-GLUCOPYRANURONIC ACID
HETNAM     NAG 2-ACETAMIDO-2-DEOXY-BETA-D-GLUCOPYRANOSE
HETSYN     GCU ALPHA-D-GLUCURONIC ACID; D-GLUCURONIC ACID; GLUCURONIC
HETSYN   2 GCU  ACID
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
FORMUL   2  GCU    3(C6 H10 O7)
FORMUL   2  NAG    2(C8 H15 N O6)
FORMUL   3  HOH   *132(H2 O)
HELIX    1   1 PRO A   18  GLY A   26  5                                    9
HELIX    2   2 GLU A   30  LYS A   35  1                                    6
HELIX    3   3 ASN A   41  LYS A   45  5                                    5
HELIX    4   4 ASN A   75  GLY A   77  5                                    3
HELIX    5   5 VAL A   78  GLY A   82  5                                    5
HELIX    6   6 ASN A   83  ILE A   99  1                                   17
HELIX    7   7 ILE A  118  ASN A  122  5                                    5
HELIX    8   8 TRP A  123  LEU A  126  5                                    4
HELIX    9   9 GLN A  127  HIS A  141  1                                   15
HELIX   10  10 ASP A  145  ARG A  176  1                                   32
HELIX   11  11 GLU A  202  MET A  212  1                                   11
HELIX   12  12 MET A  212  GLU A  219  1                                    8
HELIX   13  13 THR A  233  ARG A  253  1                                   21
HELIX   14  14 SER A  279  GLY A  294  1                                   16
HELIX   15  15 SER A  303  ILE A  307  5                                    5
HELIX   16  16 THR A  309  GLU A  323  1                                   15
HELIX   17  17 GLU A  323  ILE A  331  1                                    9
SHEET    1   A 3 ASN A  12  ASN A  16  0
SHEET    2   A 3 GLY A 297  TRP A 301  1  O  PHE A 298   N  TYR A  14
SHEET    3   A 3 TYR A 265  TRP A 267  1  N  TYR A 266   O  ILE A 299
SHEET    1   B 3 ILE A  51  TYR A  55  0
SHEET    2   B 3 VAL A 107  ASP A 111  1  O  VAL A 107   N  ALA A  52
SHEET    3   B 3 ASN A 180  TYR A 183  1  O  ASN A 180   N  GLY A 108
SHEET    1   C 2 ALA A  62  LYS A  65  0
SHEET    2   C 2 VAL A  71  ARG A  74 -1  N  VAL A  72   O  LEU A  64
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SHEET    1   D 2 VAL A 221  LEU A 222  0
SHEET    2   D 2 LYS A 261  VAL A 262  1  O  LYS A 261   N  LEU A 222
SHEET    1   E 2 LYS A 269  TYR A 270  0
SHEET    2   E 2 ARG A 273  ASP A 277 -1  N  ARG A 273   O  TYR A 270
SSBOND   1 CYS A   22    CYS A  313                          1555   1555  2.05
SSBOND   2 CYS A  189    CYS A  201                          1555   1555  1.99
LINK         O4  GCU B   1                 C1  NAG B   2     1555   1555  1.35
LINK         O3  NAG B   2                 C1  GCU B   3     1555   1555  1.30
LINK         O4  GCU B   3                 C1  NAG B   4     1555   1555  1.33
LINK         O3  NAG B   4                 C1  GCU B   5     1555   1555  1.31
CISPEP   1 TYR A  186    PRO A  187          0         2.58
CRYST1   71.012   71.012  151.326  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      0.014080  0.008130  0.000000        0.00000
SCALE2      0.000000  0.016260  0.000000        0.00000
SCALE3      0.000000  0.000000  0.006610        0.00000
ATOM      1  N   GLU A  10     -17.008  51.967  -3.959  1.00 60.60           N
ATOM      2  CA  GLU A  10     -15.820  51.727  -4.835  1.00 59.01           C
ATOM      3  C   GLU A  10     -15.447  50.246  -4.813  1.00 55.41           C
ATOM      4  O   GLU A  10     -15.415  49.615  -3.760  1.00 58.68           O
ATOM      5  CB  GLU A  10     -14.614  52.573  -4.467  1.00 59.55           C
ATOM      6  CG  GLU A  10     -15.057  54.125  -4.880  0.00104.69           C
ATOM      7  CD  GLU A  10     -13.844  55.020  -4.718  0.00110.34           C
ATOM      8  OE1 GLU A  10     -12.741  54.485  -4.478  0.00112.66           O
ATOM      9  OE2 GLU A  10     -13.995  56.254  -4.830  0.00113.38           O
ATOM     10  N   PHE A  11     -15.243  49.691  -5.999  1.00 46.14           N
ATOM     11  CA  PHE A  11     -15.043  48.259  -6.136  1.00 36.59           C
ATOM     12  C   PHE A  11     -14.069  47.955  -7.265  1.00 37.80           C
ATOM     13  O   PHE A  11     -14.443  47.894  -8.435  1.00 36.16           O
ATOM     14  CB  PHE A  11     -16.407  47.611  -6.400  1.00 29.70           C
ATOM     15  CG  PHE A  11     -16.375  46.115  -6.378  1.00 29.70           C
ATOM     16  CD1 PHE A  11     -16.498  45.434  -5.175  1.00 24.85           C
ATOM     17  CD2 PHE A  11     -16.182  45.392  -7.558  1.00 25.42           C
ATOM     18  CE1 PHE A  11     -16.456  44.049  -5.157  1.00 28.21           C
ATOM     19  CE2 PHE A  11     -16.115  44.015  -7.540  1.00 25.17           C
ATOM     20  CZ  PHE A  11     -16.260  43.333  -6.336  1.00 29.04           C
ATOM     21  N   ASN A  12     -12.803  47.728  -6.922  1.00 33.84           N
ATOM     22  CA  ASN A  12     -11.770  47.446  -7.885  1.00 30.53           C
ATOM     23  C   ASN A  12     -11.380  45.985  -8.030  1.00 33.21           C
ATOM     24  O   ASN A  12     -11.115  45.310  -7.031  1.00 38.82           O
ATOM     25  CB  ASN A  12     -10.502  48.172  -7.446  1.00 29.98           C
ATOM     26  CG  ASN A  12     -10.713  49.630  -7.163  1.00 28.95           C
ATOM     27  OD1 ASN A  12     -10.414  50.113  -6.075  1.00 35.27           O
ATOM     28  ND2 ASN A  12     -11.157  50.376  -8.152  1.00 33.28           N
ATOM     29  N   VAL A  13     -11.256  45.514  -9.255  1.00 28.48           N
ATOM     30  CA  VAL A  13     -10.767  44.171  -9.576  1.00 24.98           C
ATOM     31  C   VAL A  13      -9.333  44.301 -10.103  1.00 23.22           C
ATOM     32  O   VAL A  13      -9.005  45.227 -10.846  1.00 19.92           O
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ATOM     33  CB  VAL A  13     -11.651  43.503 -10.634  1.00 24.45           C
ATOM     34  CG1 VAL A  13     -11.161  42.110 -10.956  1.00 27.47           C
ATOM     35  CG2 VAL A  13     -13.101  43.459 -10.175  1.00 27.71           C
ATOM     36  N   TYR A  14      -8.433  43.438  -9.690  1.00 21.41           N
ATOM     37  CA  TYR A  14      -7.021  43.481  -9.978  1.00 17.97           C
ATOM     38  C   TYR A  14      -6.587  42.222 -10.699  1.00 17.98           C
ATOM     39  O   TYR A  14      -6.974  41.156 -10.271  1.00 17.83           O
ATOM     40  CB  TYR A  14      -6.183  43.486  -8.692  1.00 20.49           C
ATOM     41  CG  TYR A  14      -6.210  44.764  -7.908  1.00 23.01           C
ATOM     42  CD1 TYR A  14      -7.121  44.909  -6.869  1.00 24.31           C
ATOM     43  CD2 TYR A  14      -5.364  45.823  -8.228  1.00 24.59           C
ATOM     44  CE1 TYR A  14      -7.181  46.084  -6.137  1.00 29.50           C
ATOM     45  CE2 TYR A  14      -5.444  47.018  -7.535  1.00 28.99           C
ATOM     46  CZ  TYR A  14      -6.347  47.133  -6.494  1.00 32.04           C
ATOM     47  OH  TYR A  14      -6.415  48.310  -5.795  1.00 34.27           O
ATOM     48  N   TRP A  15      -5.620  42.344 -11.581  1.00 22.92           N
ATOM     49  CA  TRP A  15      -5.190  41.162 -12.346  1.00 24.59           C
ATOM     50  C   TRP A  15      -3.808  40.730 -11.860  1.00 24.56           C
ATOM     51  O   TRP A  15      -2.873  41.524 -11.896  1.00 26.05           O
ATOM     52  CB  TRP A  15      -5.243  41.533 -13.811  1.00 22.17           C
ATOM     53  CG  TRP A  15      -4.795  40.528 -14.813  1.00 20.98           C
ATOM     54  CD1 TRP A  15      -3.547  40.462 -15.367  1.00 18.09           C
ATOM     55  CD2 TRP A  15      -5.576  39.495 -15.427  1.00 17.63           C
ATOM     56  NE1 TRP A  15      -3.507  39.457 -16.288  1.00 18.20           N
ATOM     57  CE2 TRP A  15      -4.722  38.830 -16.337  1.00 20.70           C
ATOM     58  CE3 TRP A  15      -6.892  39.072 -15.314  1.00 12.18           C
ATOM     59  CZ2 TRP A  15      -5.143  37.760 -17.133  1.00 19.85           C
ATOM     60  CZ3 TRP A  15      -7.302  38.000 -16.073  1.00 15.52           C
ATOM     61  CH2 TRP A  15      -6.441  37.365 -16.973  1.00 19.79           C
ATOM     62  N   ASN A  16      -3.738  39.496 -11.381  1.00 19.04           N
ATOM     63  CA  ASN A  16      -2.519  38.940 -10.840  1.00 17.05           C
ATOM     64  C   ASN A  16      -2.306  37.564 -11.469  1.00 20.29           C
ATOM     65  O   ASN A  16      -1.884  36.608 -10.830  1.00 24.90           O
ATOM     66  CB  ASN A  16      -2.561  38.911  -9.324  1.00 13.44           C
ATOM     67  CG  ASN A  16      -1.251  38.620  -8.621  1.00 16.67           C
ATOM     68  OD1 ASN A  16      -1.259  37.867  -7.634  1.00 14.61           O
ATOM     69  ND2 ASN A  16      -0.172  39.254  -9.111  1.00 12.57           N
ATOM     70  N   VAL A  17      -2.669  37.448 -12.736  1.00 19.26           N
ATOM     71  CA  VAL A  17      -2.439  36.210 -13.485  1.00 21.12           C
ATOM     72  C   VAL A  17      -1.129  36.459 -14.203  1.00 21.57           C
ATOM     73  O   VAL A  17      -0.976  37.522 -14.811  1.00 25.17           O
ATOM     74  CB  VAL A  17      -3.553  35.983 -14.517  1.00 21.60           C
ATOM     75  CG1 VAL A  17      -3.347  34.744 -15.370  1.00 19.88           C
ATOM     76  CG2 VAL A  17      -4.899  35.954 -13.817  1.00 23.79           C
ATOM     77  N   PRO A  18      -0.203  35.525 -14.183  1.00 22.28           N
ATOM     78  CA  PRO A  18       1.109  35.721 -14.793  1.00 23.41           C
ATOM     79  C   PRO A  18       1.151  35.601 -16.296  1.00 24.10           C
ATOM     80  O   PRO A  18       1.953  34.825 -16.818  1.00 22.38           O
ATOM     81  CB  PRO A  18       1.951  34.660 -14.082  1.00 16.23           C
ATOM     82  CG  PRO A  18       0.990  33.532 -13.955  1.00 11.20           C
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ATOM     83  CD  PRO A  18      -0.277  34.224 -13.493  1.00 16.14           C
ATOM     84  N   THR A  19       0.359  36.386 -17.011  1.00 26.08           N
ATOM     85  CA  THR A  19       0.285  36.431 -18.460  1.00 25.76           C
ATOM     86  C   THR A  19       1.523  37.011 -19.114  1.00 25.75           C
ATOM     87  O   THR A  19       1.606  36.972 -20.339  1.00 34.39           O
ATOM     88  CB  THR A  19      -0.947  37.214 -18.985  1.00 25.89           C
ATOM     89  OG1 THR A  19      -1.206  38.456 -18.267  1.00 15.57           O
ATOM     90  CG2 THR A  19      -2.201  36.337 -18.947  1.00 20.52           C
ATOM     91  N   PHE A  20       2.561  37.462 -18.445  1.00 25.27           N
ATOM     92  CA  PHE A  20       3.845  37.880 -18.975  1.00 21.41           C
ATOM     93  C   PHE A  20       4.499  36.692 -19.672  1.00 25.86           C
ATOM     94  O   PHE A  20       5.253  36.818 -20.635  1.00 23.73           O
ATOM     95  CB  PHE A  20       4.764  38.446 -17.883  1.00 18.67           C
ATOM     96  CG  PHE A  20       5.308  37.411 -16.939  1.00 19.65           C
ATOM     97  CD1 PHE A  20       6.444  36.686 -17.256  1.00 15.17           C
ATOM     98  CD2 PHE A  20       4.674  37.172 -15.720  1.00 21.23           C
ATOM     99  CE1 PHE A  20       6.932  35.725 -16.396  1.00 18.08           C
ATOM    100  CE2 PHE A  20       5.173  36.215 -14.851  1.00 21.72           C
ATOM    101  CZ  PHE A  20       6.294  35.485 -15.193  1.00 19.86           C
ATOM    102  N   MET A  21       4.216  35.473 -19.208  1.00 28.19           N
ATOM    103  CA  MET A  21       4.568  34.212 -19.802  1.00 30.14           C
ATOM    104  C   MET A  21       4.097  34.027 -21.253  1.00 29.68           C
ATOM    105  O   MET A  21       4.638  33.145 -21.918  1.00 26.32           O
ATOM    106  CB  MET A  21       3.875  33.040 -19.074  1.00 30.55           C
ATOM    107  CG  MET A  21       4.155  32.861 -17.605  1.00 31.72           C
ATOM    108  SD  MET A  21       5.746  32.156 -17.185  1.00 33.30           S
ATOM    109  CE  MET A  21       5.720  30.531 -17.880  1.00 22.40           C
ATOM    110  N   CYS A  22       3.079  34.755 -21.698  1.00 27.10           N
ATOM    111  CA  CYS A  22       2.549  34.671 -23.034  1.00 24.63           C
ATOM    112  C   CYS A  22       3.020  35.806 -23.940  1.00 26.72           C
ATOM    113  O   CYS A  22       2.763  35.791 -25.163  1.00 26.94           O
ATOM    114  CB  CYS A  22       1.017  34.662 -22.971  1.00 23.96           C
ATOM    115  SG  CYS A  22       0.250  33.397 -21.953  1.00 16.92           S
ATOM    116  N   HIS A  23       3.839  36.721 -23.422  1.00 24.23           N
ATOM    117  CA  HIS A  23       4.287  37.876 -24.210  1.00 24.28           C
ATOM    118  C   HIS A  23       5.170  37.427 -25.350  1.00 27.05           C
ATOM    119  O   HIS A  23       5.070  37.889 -26.500  1.00 26.96           O
ATOM    120  CB  HIS A  23       4.865  38.967 -23.321  1.00 21.99           C
ATOM    121  CG  HIS A  23       3.882  39.599 -22.388  1.00 23.78           C
ATOM    122  ND1 HIS A  23       4.235  40.430 -21.364  1.00 26.21           N
ATOM    123  CD2 HIS A  23       2.529  39.491 -22.275  1.00 25.90           C
ATOM    124  CE1 HIS A  23       3.177  40.862 -20.692  1.00 21.38           C
ATOM    125  NE2 HIS A  23       2.127  40.268 -21.219  1.00 24.05           N
ATOM    126  N   LYS A  24       5.979  36.384 -25.145  1.00 27.08           N
ATOM    127  CA  LYS A  24       6.833  35.822 -26.173  1.00 23.74           C
ATOM    128  C   LYS A  24       6.070  35.341 -27.411  1.00 28.47           C
ATOM    129  O   LYS A  24       6.683  35.084 -28.463  1.00 27.20           O
ATOM    130  CB  LYS A  24       7.623  34.661 -25.558  1.00 16.79           C
ATOM    131  CG  LYS A  24       6.677  33.495 -25.264  1.00 25.36           C
ATOM    132  CD  LYS A  24       7.468  32.278 -24.812  1.00 30.63           C
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ATOM    133  CE  LYS A  24       8.297  32.552 -23.572  1.00 33.86           C
ATOM    134  NZ  LYS A  24       7.417  32.926 -22.406  1.00 35.10           N
ATOM    135  N   TYR A  25       4.771  35.060 -27.327  1.00 29.91           N
ATOM    136  CA  TYR A  25       3.999  34.531 -28.435  1.00 29.37           C
ATOM    137  C   TYR A  25       3.163  35.646 -29.058  1.00 31.24           C
ATOM    138  O   TYR A  25       2.363  35.424 -29.966  1.00 32.27           O
ATOM    139  CB  TYR A  25       3.098  33.372 -28.067  1.00 27.27           C
ATOM    140  CG  TYR A  25       3.711  32.243 -27.275  1.00 30.67           C
ATOM    141  CD1 TYR A  25       3.249  32.009 -25.976  1.00 29.30           C
ATOM    142  CD2 TYR A  25       4.714  31.420 -27.762  1.00 28.87           C
ATOM    143  CE1 TYR A  25       3.769  31.000 -25.204  1.00 26.97           C
ATOM    144  CE2 TYR A  25       5.250  30.402 -26.990  1.00 29.04           C
ATOM    145  CZ  TYR A  25       4.768  30.209 -25.714  1.00 30.91           C
ATOM    146  OH  TYR A  25       5.271  29.207 -24.916  1.00 37.25           O
ATOM    147  N   GLY A  26       3.351  36.869 -28.573  1.00 30.18           N
ATOM    148  CA  GLY A  26       2.605  37.997 -29.094  1.00 31.15           C
ATOM    149  C   GLY A  26       1.286  38.269 -28.404  1.00 35.22           C
ATOM    150  O   GLY A  26       0.595  39.195 -28.840  1.00 39.17           O
ATOM    151  N   LEU A  27       0.899  37.569 -27.361  1.00 35.54           N
ATOM    152  CA  LEU A  27      -0.336  37.782 -26.617  1.00 34.87           C
ATOM    153  C   LEU A  27      -0.106  38.686 -25.411  1.00 34.12           C
ATOM    154  O   LEU A  27       0.526  38.306 -24.422  1.00 36.64           O
ATOM    155  CB  LEU A  27      -0.812  36.397 -26.152  1.00 35.63           C
ATOM    156  CG  LEU A  27      -0.824  35.269 -27.190  1.00 34.27           C
ATOM    157  CD1 LEU A  27      -1.441  34.004 -26.628  1.00 38.10           C
ATOM    158  CD2 LEU A  27      -1.634  35.678 -28.398  1.00 34.44           C
ATOM    159  N   ARG A  28      -0.482  39.952 -25.437  1.00 32.46           N
ATOM    160  CA  ARG A  28      -0.192  40.840 -24.311  1.00 32.00           C
ATOM    161  C   ARG A  28      -1.353  41.102 -23.380  1.00 31.18           C
ATOM    162  O   ARG A  28      -1.252  41.920 -22.462  1.00 30.67           O
ATOM    163  CB  ARG A  28       0.445  42.123 -24.873  1.00 36.59           C
ATOM    164  CG  ARG A  28       1.665  41.826 -25.745  1.00 45.96           C
ATOM    165  CD  ARG A  28       2.719  42.902 -25.821  1.00 46.79           C
ATOM    166  NE  ARG A  28       3.199  43.320 -24.522  1.00 53.93           N
ATOM    167  CZ  ARG A  28       4.335  43.181 -23.875  1.00 55.97           C
ATOM    168  NH1 ARG A  28       5.402  42.559 -24.356  1.00 56.35           N
ATOM    169  NH2 ARG A  28       4.460  43.697 -22.650  1.00 57.35           N
ATOM    170  N   PHE A  29      -2.491  40.438 -23.523  1.00 28.19           N
ATOM    171  CA  PHE A  29      -3.679  40.579 -22.711  1.00 28.44           C
ATOM    172  C   PHE A  29      -4.096  42.002 -22.405  1.00 28.22           C
ATOM    173  O   PHE A  29      -4.699  42.292 -21.349  1.00 30.46           O
ATOM    174  CB  PHE A  29      -3.498  39.735 -21.411  1.00 24.89           C
ATOM    175  CG  PHE A  29      -3.448  38.272 -21.765  1.00 26.74           C
ATOM    176  CD1 PHE A  29      -2.279  37.687 -22.243  1.00 28.34           C
ATOM    177  CD2 PHE A  29      -4.576  37.481 -21.666  1.00 21.85           C
ATOM    178  CE1 PHE A  29      -2.235  36.347 -22.594  1.00 26.87           C
ATOM    179  CE2 PHE A  29      -4.527  36.154 -22.032  1.00 21.52           C
ATOM    180  CZ  PHE A  29      -3.377  35.568 -22.494  1.00 21.14           C
ATOM    181  N   GLU A  30      -3.945  42.953 -23.303  1.00 25.89           N
ATOM    182  CA  GLU A  30      -4.361  44.341 -23.163  1.00 28.89           C
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ATOM    183  C   GLU A  30      -5.854  44.523 -22.887  1.00 27.78           C
ATOM    184  O   GLU A  30      -6.250  45.513 -22.263  1.00 25.44           O
ATOM    185  CB  GLU A  30      -4.103  45.171 -24.439  1.00 27.78           C
ATOM    186  CG  GLU A  30      -2.842  44.837 -25.290  0.00 76.98           C
ATOM    187  CD  GLU A  30      -3.059  44.001 -26.528  0.00 88.34           C
ATOM    188  OE1 GLU A  30      -4.133  44.090 -27.157  0.00 93.07           O
ATOM    189  OE2 GLU A  30      -2.150  43.235 -26.907  0.00 99.95           O
ATOM    190  N   GLU A  31      -6.683  43.576 -23.319  1.00 25.60           N
ATOM    191  CA  GLU A  31      -8.111  43.606 -23.138  1.00 30.20           C
ATOM    192  C   GLU A  31      -8.533  43.449 -21.675  1.00 34.17           C
ATOM    193  O   GLU A  31      -9.664  43.808 -21.303  1.00 34.41           O
ATOM    194  CB  GLU A  31      -8.818  42.585 -24.022  1.00 26.73           C
ATOM    195  CG  GLU A  31      -8.575  41.139 -23.704  1.00 30.18           C
ATOM    196  CD  GLU A  31      -7.368  40.539 -24.393  1.00 33.19           C
ATOM    197  OE1 GLU A  31      -7.387  39.299 -24.595  1.00 37.73           O
ATOM    198  OE2 GLU A  31      -6.397  41.234 -24.723  1.00 28.33           O
ATOM    199  N   VAL A  32      -7.654  42.941 -20.821  1.00 31.73           N
ATOM    200  CA  VAL A  32      -7.930  42.780 -19.403  1.00 31.35           C
ATOM    201  C   VAL A  32      -8.407  44.141 -18.893  1.00 31.46           C
ATOM    202  O   VAL A  32      -9.467  44.256 -18.277  1.00 30.31           O
ATOM    203  CB  VAL A  32      -6.707  42.244 -18.639  1.00 30.00           C
ATOM    204  CG1 VAL A  32      -6.768  42.423 -17.128  1.00 24.19           C
ATOM    205  CG2 VAL A  32      -6.522  40.743 -18.897  1.00 27.34           C
ATOM    206  N   SER A  33      -7.625  45.178 -19.148  1.00 32.36           N
ATOM    207  CA  SER A  33      -8.023  46.503 -18.721  1.00 37.23           C
ATOM    208  C   SER A  33      -8.708  47.292 -19.824  1.00 39.14           C
ATOM    209  O   SER A  33      -9.611  48.030 -19.444  1.00 41.45           O
ATOM    210  CB  SER A  33      -6.829  47.334 -18.241  1.00 36.08           C
ATOM    211  OG  SER A  33      -5.902  47.375 -19.316  1.00 41.82           O
ATOM    212  N   GLU A  34      -8.327  47.161 -21.092  1.00 43.67           N
ATOM    213  CA  GLU A  34      -8.982  47.952 -22.136  1.00 43.37           C
ATOM    214  C   GLU A  34     -10.441  47.588 -22.349  1.00 39.62           C
ATOM    215  O   GLU A  34     -11.179  48.538 -22.653  1.00 39.26           O
ATOM    216  CB  GLU A  34      -8.206  47.961 -23.449  1.00 46.36           C
ATOM    217  CG  GLU A  34      -6.969  48.835 -23.422  1.00 55.87           C
ATOM    218  CD  GLU A  34      -6.059  48.713 -24.623  1.00 62.97           C
ATOM    219  OE1 GLU A  34      -6.361  47.951 -25.572  1.00 69.42           O
ATOM    220  OE2 GLU A  34      -4.981  49.360 -24.652  1.00 64.60           O
ATOM    221  N   LYS A  35     -10.886  46.348 -22.180  1.00 33.76           N
ATOM    222  CA  LYS A  35     -12.296  46.084 -22.380  1.00 35.04           C
ATOM    223  C   LYS A  35     -13.020  45.663 -21.093  1.00 35.07           C
ATOM    224  O   LYS A  35     -14.222  45.952 -21.006  1.00 35.53           O
ATOM    225  CB  LYS A  35     -12.650  45.002 -23.378  1.00 35.79           C
ATOM    226  CG  LYS A  35     -11.816  44.649 -24.560  1.00 41.57           C
ATOM    227  CD  LYS A  35     -12.514  43.777 -25.592  1.00 47.42           C
ATOM    228  CE  LYS A  35     -13.719  43.024 -25.053  1.00 49.97           C
ATOM    229  NZ  LYS A  35     -14.637  42.533 -26.107  1.00 53.85           N
ATOM    230  N   TYR A  36     -12.355  44.956 -20.175  1.00 31.05           N
ATOM    231  CA  TYR A  36     -13.060  44.514 -18.975  1.00 25.61           C
ATOM    232  C   TYR A  36     -12.824  45.375 -17.754  1.00 24.02           C
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ATOM    233  O   TYR A  36     -13.404  45.105 -16.712  1.00 25.48           O
ATOM    234  CB  TYR A  36     -12.827  43.023 -18.707  1.00 25.32           C
ATOM    235  CG  TYR A  36     -13.009  42.198 -19.974  1.00 27.28           C
ATOM    236  CD1 TYR A  36     -11.966  41.462 -20.528  1.00 24.23           C
ATOM    237  CD2 TYR A  36     -14.217  42.194 -20.638  1.00 27.99           C
ATOM    238  CE1 TYR A  36     -12.161  40.746 -21.679  1.00 22.67           C
ATOM    239  CE2 TYR A  36     -14.417  41.475 -21.797  1.00 25.19           C
ATOM    240  CZ  TYR A  36     -13.371  40.758 -22.311  1.00 23.69           C
ATOM    241  OH  TYR A  36     -13.554  40.042 -23.477  1.00 32.19           O
ATOM    242  N   GLY A  37     -12.071  46.455 -17.801  1.00 24.99           N
ATOM    243  CA  GLY A  37     -11.867  47.367 -16.709  1.00 29.80           C
ATOM    244  C   GLY A  37     -11.207  46.796 -15.461  1.00 34.68           C
ATOM    245  O   GLY A  37     -11.439  47.284 -14.347  1.00 34.94           O
ATOM    246  N   ILE A  38     -10.400  45.748 -15.620  1.00 30.62           N
ATOM    247  CA  ILE A  38      -9.678  45.167 -14.509  1.00 29.37           C
ATOM    248  C   ILE A  38      -8.389  45.953 -14.278  1.00 29.08           C
ATOM    249  O   ILE A  38      -7.821  46.379 -15.290  1.00 30.64           O
ATOM    250  CB  ILE A  38      -9.410  43.692 -14.856  1.00 28.84           C
ATOM    251  CG1 ILE A  38     -10.761  43.013 -15.072  1.00 27.16           C
ATOM    252  CG2 ILE A  38      -8.565  43.066 -13.750  1.00 27.90           C
ATOM    253  CD1 ILE A  38     -10.735  41.510 -15.159  1.00 28.50           C
ATOM    254  N   LEU A  39      -8.038  46.387 -13.072  1.00 23.48           N
ATOM    255  CA  LEU A  39      -6.792  47.093 -12.892  1.00 23.30           C
ATOM    256  C   LEU A  39      -5.626  46.172 -13.271  1.00 26.36           C
ATOM    257  O   LEU A  39      -5.526  45.051 -12.774  1.00 20.78           O
ATOM    258  CB  LEU A  39      -6.646  47.639 -11.477  1.00 27.06           C
ATOM    259  CG  LEU A  39      -7.722  48.661 -11.076  1.00 29.42           C
ATOM    260  CD1 LEU A  39      -7.443  49.254  -9.715  1.00 23.06           C
ATOM    261  CD2 LEU A  39      -7.821  49.755 -12.122  1.00 32.01           C
ATOM    262  N   GLN A  40      -4.758  46.670 -14.161  1.00 23.12           N
ATOM    263  CA  GLN A  40      -3.629  45.897 -14.644  1.00 24.59           C
ATOM    264  C   GLN A  40      -2.341  46.697 -14.635  1.00 24.86           C
ATOM    265  O   GLN A  40      -2.324  47.888 -14.947  1.00 23.68           O
ATOM    266  CB  GLN A  40      -4.021  45.395 -16.044  1.00 24.25           C
ATOM    267  CG  GLN A  40      -2.936  44.737 -16.891  1.00 23.96           C
ATOM    268  CD  GLN A  40      -3.482  44.198 -18.208  1.00 26.65           C
ATOM    269  OE1 GLN A  40      -4.417  44.765 -18.805  1.00 28.60           O
ATOM    270  NE2 GLN A  40      -2.931  43.087 -18.699  1.00 17.95           N
ATOM    271  N   ASN A  41      -1.222  46.092 -14.239  1.00 26.73           N
ATOM    272  CA  ASN A  41       0.085  46.761 -14.263  1.00 25.60           C
ATOM    273  C   ASN A  41       0.439  47.170 -15.706  1.00 33.49           C
ATOM    274  O   ASN A  41       0.272  46.440 -16.712  1.00 30.92           O
ATOM    275  CB  ASN A  41       1.170  45.827 -13.743  1.00 20.63           C
ATOM    276  CG  ASN A  41       1.075  45.521 -12.269  1.00 22.71           C
ATOM    277  OD1 ASN A  41       0.741  46.400 -11.469  1.00 26.20           O
ATOM    278  ND2 ASN A  41       1.404  44.312 -11.836  1.00 19.69           N
ATOM    279  N   TRP A  42       0.971  48.388 -15.828  1.00 34.58           N
ATOM    280  CA  TRP A  42       1.373  48.887 -17.136  1.00 33.99           C
ATOM    281  C   TRP A  42       2.201  47.858 -17.884  1.00 35.83           C
ATOM    282  O   TRP A  42       3.107  47.195 -17.397  1.00 35.45           O
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ATOM    283  CB  TRP A  42       2.094  50.183 -16.908  1.00 42.61           C
ATOM    284  CG  TRP A  42       2.527  50.958 -18.112  1.00 49.90           C
ATOM    285  CD1 TRP A  42       1.760  51.614 -19.029  1.00 51.69           C
ATOM    286  CD2 TRP A  42       3.887  51.167 -18.499  1.00 52.69           C
ATOM    287  NE1 TRP A  42       2.556  52.208 -19.978  1.00 55.06           N
ATOM    288  CE2 TRP A  42       3.864  51.948 -19.667  1.00 55.07           C
ATOM    289  CE3 TRP A  42       5.111  50.761 -17.961  1.00 55.85           C
ATOM    290  CZ2 TRP A  42       5.033  52.352 -20.293  1.00 58.29           C
ATOM    291  CZ3 TRP A  42       6.270  51.160 -18.608  1.00 62.05           C
ATOM    292  CH2 TRP A  42       6.227  51.945 -19.773  1.00 61.22           C
ATOM    293  N   MET A  43       1.868  47.640 -19.148  1.00 37.79           N
ATOM    294  CA  MET A  43       2.461  46.733 -20.106  1.00 36.12           C
ATOM    295  C   MET A  43       2.293  45.262 -19.803  1.00 34.07           C
ATOM    296  O   MET A  43       3.087  44.414 -20.226  1.00 32.57           O
ATOM    297  CB  MET A  43       3.950  47.068 -20.289  1.00 39.94           C
ATOM    298  CG  MET A  43       4.170  48.321 -21.123  1.00 44.88           C
ATOM    299  SD  MET A  43       5.939  48.681 -21.260  1.00 54.10           S
ATOM    300  CE  MET A  43       6.309  47.618 -22.679  1.00 53.35           C
ATOM    301  N   ASP A  44       1.337  44.931 -18.948  1.00 32.32           N
ATOM    302  CA  ASP A  44       1.034  43.617 -18.441  1.00 27.82           C
ATOM    303  C   ASP A  44       2.206  42.970 -17.714  1.00 30.86           C
ATOM    304  O   ASP A  44       2.313  41.736 -17.663  1.00 32.09           O
ATOM    305  CB  ASP A  44       0.484  42.702 -19.526  1.00 24.41           C
ATOM    306  CG  ASP A  44      -0.042  41.387 -18.972  1.00 26.70           C
ATOM    307  OD1 ASP A  44      -0.606  41.462 -17.864  1.00 27.77           O
ATOM    308  OD2 ASP A  44       0.114  40.278 -19.521  1.00 27.48           O
ATOM    309  N   LYS A  45       3.123  43.757 -17.156  1.00 26.74           N
ATOM    310  CA  LYS A  45       4.198  43.186 -16.344  1.00 26.52           C
ATOM    311  C   LYS A  45       3.658  42.527 -15.092  1.00 20.85           C
ATOM    312  O   LYS A  45       2.658  42.914 -14.494  1.00 23.61           O
ATOM    313  CB  LYS A  45       5.168  44.341 -16.055  1.00 33.03           C
ATOM    314  CG  LYS A  45       6.049  44.551 -17.279  1.00 39.91           C
ATOM    315  CD  LYS A  45       7.025  45.696 -17.148  1.00 48.05           C
ATOM    316  CE  LYS A  45       7.791  45.848 -18.460  1.00 56.69           C
ATOM    317  NZ  LYS A  45       8.593  44.604 -18.721  1.00 62.67           N
ATOM    318  N   PHE A  46       4.259  41.463 -14.616  1.00 20.63           N
ATOM    319  CA  PHE A  46       3.829  40.749 -13.426  1.00 22.47           C
ATOM    320  C   PHE A  46       3.735  41.673 -12.216  1.00 23.13           C
ATOM    321  O   PHE A  46       2.694  41.721 -11.571  1.00 18.68           O
ATOM    322  CB  PHE A  46       4.733  39.570 -13.072  1.00 19.87           C
ATOM    323  CG  PHE A  46       4.072  38.595 -12.144  1.00 23.21           C
ATOM    324  CD1 PHE A  46       2.722  38.280 -12.254  1.00 24.85           C
ATOM    325  CD2 PHE A  46       4.807  37.971 -11.155  1.00 23.81           C
ATOM    326  CE1 PHE A  46       2.149  37.353 -11.413  1.00 25.33           C
ATOM    327  CE2 PHE A  46       4.219  37.050 -10.295  1.00 21.43           C
ATOM    328  CZ  PHE A  46       2.899  36.731 -10.435  1.00 22.09           C
ATOM    329  N   ARG A  47       4.854  42.334 -11.903  1.00 24.93           N
ATOM    330  CA  ARG A  47       4.850  43.278 -10.788  1.00 26.98           C
ATOM    331  C   ARG A  47       4.820  44.690 -11.365  1.00 30.13           C
ATOM    332  O   ARG A  47       5.523  44.970 -12.330  1.00 31.79           O
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ATOM    333  CB  ARG A  47       6.093  43.114  -9.919  1.00 24.81           C
ATOM    334  CG  ARG A  47       6.177  41.769  -9.282  1.00 26.53           C
ATOM    335  CD  ARG A  47       7.305  41.578  -8.265  1.00 35.14           C
ATOM    336  NE  ARG A  47       6.998  40.239  -7.727  1.00 44.34           N
ATOM    337  CZ  ARG A  47       7.434  39.116  -8.306  1.00 45.21           C
ATOM    338  NH1 ARG A  47       7.033  37.954  -7.809  1.00 41.51           N
ATOM    339  NH2 ARG A  47       8.297  39.267  -9.307  1.00 42.14           N
ATOM    340  N   GLY A  48       3.999  45.577 -10.833  1.00 33.56           N
ATOM    341  CA  GLY A  48       3.986  46.948 -11.325  1.00 33.44           C
ATOM    342  C   GLY A  48       3.337  47.862 -10.299  1.00 37.38           C
ATOM    343  O   GLY A  48       3.276  47.575  -9.101  1.00 40.09           O
ATOM    344  N   GLU A  49       2.749  48.929 -10.815  1.00 36.01           N
ATOM    345  CA  GLU A  49       2.129  49.949  -9.969  1.00 35.55           C
ATOM    346  C   GLU A  49       0.763  49.563  -9.435  1.00 31.79           C
ATOM    347  O   GLU A  49       0.236  50.227  -8.542  1.00 32.04           O
ATOM    348  CB  GLU A  49       2.085  51.254 -10.767  1.00 37.32           C
ATOM    349  CG  GLU A  49       1.029  51.342 -11.829  1.00 43.56           C
ATOM    350  CD  GLU A  49       1.176  50.539 -13.092  1.00 47.82           C
ATOM    351  OE1 GLU A  49       2.181  49.829 -13.317  1.00 50.25           O
ATOM    352  OE2 GLU A  49       0.237  50.616 -13.926  1.00 50.20           O
ATOM    353  N   GLU A  50       0.134  48.504  -9.919  1.00 27.08           N
ATOM    354  CA  GLU A  50      -1.169  48.118  -9.402  1.00 22.21           C
ATOM    355  C   GLU A  50      -0.984  47.016  -8.382  1.00 20.02           C
ATOM    356  O   GLU A  50      -1.553  47.050  -7.308  1.00 19.43           O
ATOM    357  CB  GLU A  50      -2.077  47.619 -10.522  1.00 24.28           C
ATOM    358  CG  GLU A  50      -2.413  48.629 -11.573  1.00 26.78           C
ATOM    359  CD  GLU A  50      -3.135  49.834 -11.014  1.00 33.86           C
ATOM    360  OE1 GLU A  50      -2.831  50.966 -11.468  1.00 45.76           O
ATOM    361  OE2 GLU A  50      -4.007  49.719 -10.142  1.00 30.31           O
ATOM    362  N   ILE A  51      -0.210  45.988  -8.761  1.00 21.15           N
ATOM    363  CA  ILE A  51      -0.040  44.902  -7.789  1.00 21.17           C
ATOM    364  C   ILE A  51       1.301  44.217  -7.883  1.00 22.07           C
ATOM    365  O   ILE A  51       2.007  44.231  -8.901  1.00 25.24           O
ATOM    366  CB  ILE A  51      -1.273  43.987  -7.888  1.00 21.71           C
ATOM    367  CG1 ILE A  51      -1.210  42.871  -6.841  1.00 13.52           C
ATOM    368  CG2 ILE A  51      -1.458  43.452  -9.308  1.00 22.33           C
ATOM    369  CD1 ILE A  51      -2.477  42.074  -6.815  1.00 12.19           C
ATOM    370  N   ALA A  52       1.706  43.636  -6.754  1.00 19.36           N
ATOM    371  CA  ALA A  52       2.976  42.922  -6.714  1.00 21.81           C
ATOM    372  C   ALA A  52       2.806  41.832  -5.654  1.00 22.45           C
ATOM    373  O   ALA A  52       2.329  42.180  -4.572  1.00 23.63           O
ATOM    374  CB  ALA A  52       4.210  43.737  -6.400  1.00 18.84           C
ATOM    375  N   ILE A  53       3.071  40.604  -6.075  1.00 19.86           N
ATOM    376  CA  ILE A  53       3.009  39.541  -5.071  1.00 22.64           C
ATOM    377  C   ILE A  53       4.429  39.079  -4.827  1.00 21.87           C
ATOM    378  O   ILE A  53       5.220  38.999  -5.759  1.00 23.76           O
ATOM    379  CB  ILE A  53       2.044  38.432  -5.512  1.00 24.97           C
ATOM    380  CG1 ILE A  53       1.913  37.355  -4.424  1.00 21.78           C
ATOM    381  CG2 ILE A  53       2.443  37.886  -6.872  1.00 22.15           C
ATOM    382  CD1 ILE A  53       0.773  36.361  -4.594  1.00 14.35           C
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ATOM    383  N   LEU A  54       4.789  38.792  -3.602  1.00 23.76           N
ATOM    384  CA  LEU A  54       6.117  38.309  -3.239  1.00 23.25           C
ATOM    385  C   LEU A  54       5.956  36.866  -2.764  1.00 22.88           C
ATOM    386  O   LEU A  54       5.353  36.578  -1.729  1.00 30.32           O
ATOM    387  CB  LEU A  54       6.740  39.189  -2.163  1.00 24.12           C
ATOM    388  CG  LEU A  54       6.892  40.691  -2.449  1.00 29.71           C
ATOM    389  CD1 LEU A  54       7.515  41.451  -1.273  1.00 27.59           C
ATOM    390  CD2 LEU A  54       7.741  40.951  -3.681  1.00 29.94           C
ATOM    391  N   TYR A  55       6.421  35.891  -3.498  1.00 19.55           N
ATOM    392  CA  TYR A  55       6.363  34.487  -3.127  1.00 19.40           C
ATOM    393  C   TYR A  55       7.496  34.104  -2.195  1.00 22.64           C
ATOM    394  O   TYR A  55       8.660  34.283  -2.534  1.00 21.02           O
ATOM    395  CB  TYR A  55       6.496  33.673  -4.420  1.00 16.20           C
ATOM    396  CG  TYR A  55       5.289  33.779  -5.337  1.00 19.65           C
ATOM    397  CD1 TYR A  55       5.453  34.046  -6.689  1.00 17.09           C
ATOM    398  CD2 TYR A  55       3.985  33.630  -4.851  1.00 14.52           C
ATOM    399  CE1 TYR A  55       4.354  34.110  -7.530  1.00 19.32           C
ATOM    400  CE2 TYR A  55       2.892  33.707  -5.665  1.00 13.56           C
ATOM    401  CZ  TYR A  55       3.093  33.947  -7.008  1.00 19.40           C
ATOM    402  OH  TYR A  55       2.016  34.008  -7.847  1.00 21.94           O
ATOM    403  N   ASP A  56       7.228  33.662  -0.969  1.00 25.48           N
ATOM    404  CA  ASP A  56       8.292  33.285  -0.024  1.00 25.79           C
ATOM    405  C   ASP A  56       9.515  34.171  -0.002  1.00 23.91           C
ATOM    406  O   ASP A  56      10.643  33.709  -0.153  1.00 25.48           O
ATOM    407  CB  ASP A  56       8.669  31.838  -0.383  1.00 22.69           C
ATOM    408  CG  ASP A  56       9.548  31.138   0.623  1.00 25.26           C
ATOM    409  OD1 ASP A  56       9.453  31.450   1.824  1.00 21.98           O
ATOM    410  OD2 ASP A  56      10.366  30.281   0.210  1.00 30.45           O
ATOM    411  N   PRO A  57       9.389  35.473   0.237  1.00 23.57           N
ATOM    412  CA  PRO A  57      10.528  36.379   0.199  1.00 24.32           C
ATOM    413  C   PRO A  57      11.355  36.272   1.459  1.00 25.05           C
ATOM    414  O   PRO A  57      10.817  35.743   2.435  1.00 23.96           O
ATOM    415  CB  PRO A  57       9.894  37.764   0.058  1.00 23.06           C
ATOM    416  CG  PRO A  57       8.617  37.606   0.791  1.00 22.32           C
ATOM    417  CD  PRO A  57       8.138  36.205   0.509  1.00 18.56           C
ATOM    418  N   GLY A  58      12.587  36.770   1.433  1.00 26.20           N
ATOM    419  CA  GLY A  58      13.421  36.727   2.633  1.00 24.72           C
ATOM    420  C   GLY A  58      13.912  35.304   2.862  1.00 27.27           C
ATOM    421  O   GLY A  58      14.117  34.491   1.960  1.00 30.11           O
ATOM    422  N   MET A  59      14.122  34.959   4.111  1.00 27.64           N
ATOM    423  CA  MET A  59      14.604  33.645   4.511  1.00 30.14           C
ATOM    424  C   MET A  59      13.812  33.201   5.741  1.00 31.04           C
ATOM    425  O   MET A  59      14.265  33.139   6.885  1.00 30.66           O
ATOM    426  CB  MET A  59      16.117  33.655   4.656  1.00 31.38           C
ATOM    427  CG  MET A  59      16.799  32.324   4.465  1.00 41.13           C
ATOM    428  SD  MET A  59      18.417  32.173   5.275  1.00 50.87           S
ATOM    429  CE  MET A  59      19.297  33.514   4.480  1.00 51.15           C
ATOM    430  N   PHE A  60      12.490  33.118   5.505  1.00 27.16           N
ATOM    431  CA  PHE A  60      11.544  32.672   6.513  1.00 24.33           C
ATOM    432  C   PHE A  60      11.958  31.271   6.940  1.00 24.09           C
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ATOM    433  O   PHE A  60      12.214  30.441   6.071  1.00 32.57           O
ATOM    434  CB  PHE A  60      10.114  32.558   5.981  1.00 22.99           C
ATOM    435  CG  PHE A  60       9.322  33.829   6.105  1.00 28.22           C
ATOM    436  CD1 PHE A  60       9.008  34.572   4.987  1.00 25.86           C
ATOM    437  CD2 PHE A  60       8.906  34.284   7.359  1.00 28.10           C
ATOM    438  CE1 PHE A  60       8.306  35.753   5.105  1.00 28.98           C
ATOM    439  CE2 PHE A  60       8.198  35.462   7.457  1.00 28.76           C
ATOM    440  CZ  PHE A  60       7.897  36.209   6.341  1.00 28.68           C
ATOM    441  N   PRO A  61      11.943  30.985   8.221  1.00 21.52           N
ATOM    442  CA  PRO A  61      12.263  29.637   8.681  1.00 19.79           C
ATOM    443  C   PRO A  61      11.244  28.655   8.119  1.00 21.52           C
ATOM    444  O   PRO A  61      10.035  28.913   8.134  1.00 23.31           O
ATOM    445  CB  PRO A  61      12.272  29.760  10.188  1.00 18.74           C
ATOM    446  CG  PRO A  61      12.279  31.219  10.520  1.00 17.43           C
ATOM    447  CD  PRO A  61      11.680  31.926   9.334  1.00 17.90           C
ATOM    448  N   ALA A  62      11.673  27.525   7.558  1.00 19.33           N
ATOM    449  CA  ALA A  62      10.747  26.530   7.069  1.00 17.38           C
ATOM    450  C   ALA A  62      11.418  25.154   7.043  1.00 24.19           C
ATOM    451  O   ALA A  62      12.635  25.065   7.171  1.00 27.35           O
ATOM    452  CB  ALA A  62      10.256  26.831   5.670  1.00 20.95           C
ATOM    453  N   LEU A  63      10.605  24.136   6.826  1.00 23.94           N
ATOM    454  CA  LEU A  63      11.046  22.774   6.700  1.00 28.56           C
ATOM    455  C   LEU A  63      10.862  22.314   5.259  1.00 30.69           C
ATOM    456  O   LEU A  63       9.739  22.220   4.771  1.00 30.94           O
ATOM    457  CB  LEU A  63      10.231  21.864   7.627  1.00 30.47           C
ATOM    458  CG  LEU A  63      10.528  22.081   9.108  1.00 32.40           C
ATOM    459  CD1 LEU A  63       9.462  21.389   9.932  1.00 28.74           C
ATOM    460  CD2 LEU A  63      11.963  21.652   9.420  1.00 34.39           C
ATOM    461  N   LEU A  64      11.956  22.045   4.574  1.00 32.62           N
ATOM    462  CA  LEU A  64      11.853  21.638   3.178  1.00 35.93           C
ATOM    463  C   LEU A  64      12.351  20.216   3.021  1.00 40.24           C
ATOM    464  O   LEU A  64      13.036  19.716   3.905  1.00 39.87           O
ATOM    465  CB  LEU A  64      12.663  22.631   2.350  1.00 37.71           C
ATOM    466  CG  LEU A  64      12.183  24.083   2.321  1.00 39.71           C
ATOM    467  CD1 LEU A  64      13.233  24.988   1.706  1.00 38.82           C
ATOM    468  CD2 LEU A  64      10.876  24.200   1.530  1.00 37.70           C
ATOM    469  N   LYS A  65      12.124  19.603   1.873  1.00 45.22           N
ATOM    470  CA  LYS A  65      12.592  18.251   1.611  1.00 46.08           C
ATOM    471  C   LYS A  65      13.286  18.107   0.265  1.00 43.66           C
ATOM    472  O   LYS A  65      12.806  18.539  -0.776  1.00 33.32           O
ATOM    473  CB  LYS A  65      11.362  17.345   1.714  1.00 53.28           C
ATOM    474  CG  LYS A  65      11.517  15.884   1.391  1.00 64.30           C
ATOM    475  CD  LYS A  65      10.214  15.106   1.418  1.00 71.11           C
ATOM    476  CE  LYS A  65      10.101  14.096   0.276  1.00 76.19           C
ATOM    477  NZ  LYS A  65       8.956  13.144   0.444  1.00 76.84           N
ATOM    478  N   ASP A  66      14.449  17.468   0.272  1.00 47.36           N
ATOM    479  CA  ASP A  66      15.209  17.165  -0.923  1.00 54.63           C
ATOM    480  C   ASP A  66      14.361  16.107  -1.672  1.00 59.53           C
ATOM    481  O   ASP A  66      13.858  15.193  -0.990  1.00 58.60           O
ATOM    482  CB  ASP A  66      16.458  16.364  -0.602  1.00 59.49           C
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ATOM    483  CG  ASP A  66      17.569  16.853   0.257  1.00 65.84           C
ATOM    484  OD1 ASP A  66      18.222  15.993   0.905  1.00 68.78           O
ATOM    485  OD2 ASP A  66      17.897  18.055   0.323  1.00 68.11           O
ATOM    486  N   PRO A  67      14.648  15.899  -2.954  1.00 62.60           N
ATOM    487  CA  PRO A  67      14.167  14.743  -3.703  1.00 64.68           C
ATOM    488  C   PRO A  67      14.810  13.500  -3.098  1.00 67.61           C
ATOM    489  O   PRO A  67      14.201  12.451  -2.958  1.00 63.12           O
ATOM    490  CB  PRO A  67      14.591  14.955  -5.135  1.00 61.89           C
ATOM    491  CG  PRO A  67      15.056  16.353  -5.219  1.00 63.40           C
ATOM    492  CD  PRO A  67      15.322  16.872  -3.835  1.00 63.38           C
ATOM    493  N   ASN A  68      16.059  13.658  -2.644  1.00 75.09           N
ATOM    494  CA  ASN A  68      16.754  12.661  -1.845  1.00 79.98           C
ATOM    495  C   ASN A  68      15.811  12.279  -0.702  1.00 79.35           C
ATOM    496  O   ASN A  68      15.453  11.109  -0.589  1.00 81.14           O
ATOM    497  CB  ASN A  68      18.087  13.143  -1.271  1.00 83.88           C
ATOM    498  CG  ASN A  68      19.149  13.330  -2.335  1.00 87.71           C
ATOM    499  OD1 ASN A  68      19.201  12.496  -3.244  1.00 89.75           O
ATOM    500  ND2 ASN A  68      19.937  14.398  -2.272  1.00 88.19           N
ATOM    501  N   GLY A  69      15.333  13.232   0.095  1.00 76.97           N
ATOM    502  CA  GLY A  69      14.331  12.885   1.104  1.00 71.46           C
ATOM    503  C   GLY A  69      14.729  13.419   2.470  1.00 65.80           C
ATOM    504  O   GLY A  69      13.999  13.291   3.444  1.00 65.03           O
ATOM    505  N   ASN A  70      15.895  14.051   2.506  1.00 62.15           N
ATOM    506  CA  ASN A  70      16.352  14.665   3.741  1.00 58.31           C
ATOM    507  C   ASN A  70      15.619  15.984   3.981  1.00 55.69           C
ATOM    508  O   ASN A  70      15.331  16.784   3.101  1.00 53.98           O
ATOM    509  CB  ASN A  70      17.860  14.850   3.737  1.00 61.11           C
ATOM    510  CG  ASN A  70      18.555  13.533   3.422  1.00 63.47           C
ATOM    511  OD1 ASN A  70      17.976  12.463   3.611  1.00 63.78           O
ATOM    512  ND2 ASN A  70      19.790  13.613   2.946  1.00 64.56           N
ATOM    513  N   VAL A  71      15.265  16.157   5.250  1.00 48.87           N
ATOM    514  CA  VAL A  71      14.573  17.346   5.687  1.00 42.97           C
ATOM    515  C   VAL A  71      15.595  18.455   5.837  1.00 41.90           C
ATOM    516  O   VAL A  71      16.661  18.216   6.397  1.00 45.27           O
ATOM    517  CB  VAL A  71      13.826  17.029   6.988  1.00 40.94           C
ATOM    518  CG1 VAL A  71      13.068  18.237   7.488  1.00 39.91           C
ATOM    519  CG2 VAL A  71      12.887  15.857   6.712  1.00 39.81           C
ATOM    520  N   VAL A  72      15.380  19.598   5.205  1.00 38.91           N
ATOM    521  CA  VAL A  72      16.287  20.721   5.367  1.00 39.13           C
ATOM    522  C   VAL A  72      15.549  21.755   6.218  1.00 33.82           C
ATOM    523  O   VAL A  72      14.385  22.039   5.967  1.00 31.61           O
ATOM    524  CB  VAL A  72      16.778  21.403   4.081  1.00 42.54           C
ATOM    525  CG1 VAL A  72      17.863  20.632   3.337  1.00 41.36           C
ATOM    526  CG2 VAL A  72      15.629  21.597   3.106  1.00 42.35           C
ATOM    527  N   ALA A  73      16.228  22.271   7.221  1.00 30.53           N
ATOM    528  CA  ALA A  73      15.640  23.291   8.072  1.00 28.93           C
ATOM    529  C   ALA A  73      16.210  24.631   7.587  1.00 31.55           C
ATOM    530  O   ALA A  73      17.301  24.978   8.051  1.00 36.58           O
ATOM    531  CB  ALA A  73      15.939  23.122   9.546  1.00 21.22           C
ATOM    532  N   ARG A  74      15.518  25.290   6.674  1.00 28.13           N
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ATOM    533  CA  ARG A  74      15.943  26.614   6.226  1.00 27.31           C
ATOM    534  C   ARG A  74      15.849  27.578   7.404  1.00 25.71           C
ATOM    535  O   ARG A  74      14.811  27.584   8.077  1.00 23.88           O
ATOM    536  CB  ARG A  74      14.983  27.097   5.124  1.00 27.25           C
ATOM    537  CG  ARG A  74      15.458  28.245   4.271  1.00 23.63           C
ATOM    538  CD  ARG A  74      14.473  28.672   3.216  1.00 32.50           C
ATOM    539  NE  ARG A  74      13.273  29.354   3.728  1.00 32.78           N
ATOM    540  CZ  ARG A  74      12.246  29.653   2.936  1.00 30.30           C
ATOM    541  NH1 ARG A  74      12.271  29.351   1.647  1.00 27.97           N
ATOM    542  NH2 ARG A  74      11.173  30.259   3.415  1.00 30.90           N
ATOM    543  N   ASN A  75      16.894  28.306   7.715  1.00 24.43           N
ATOM    544  CA  ASN A  75      16.955  29.298   8.772  1.00 25.13           C
ATOM    545  C   ASN A  75      16.276  28.914  10.080  1.00 27.46           C
ATOM    546  O   ASN A  75      15.487  29.658  10.666  1.00 25.01           O
ATOM    547  CB  ASN A  75      16.446  30.648   8.299  1.00 26.05           C
ATOM    548  CG  ASN A  75      16.707  31.802   9.235  1.00 28.98           C
ATOM    549  OD1 ASN A  75      16.231  32.933   9.084  1.00 32.85           O
ATOM    550  ND2 ASN A  75      17.471  31.579  10.278  1.00 30.96           N
ATOM    551  N   GLY A  76      16.606  27.712  10.564  1.00 25.66           N
ATOM    552  CA  GLY A  76      16.103  27.203  11.801  1.00 24.63           C
ATOM    553  C   GLY A  76      15.092  26.090  11.680  1.00 26.90           C
ATOM    554  O   GLY A  76      14.944  25.315  12.640  1.00 29.77           O
ATOM    555  N   GLY A  77      14.267  26.142  10.640  1.00 25.45           N
ATOM    556  CA  GLY A  77      13.142  25.218  10.556  1.00 29.39           C
ATOM    557  C   GLY A  77      11.922  25.844  11.218  1.00 30.19           C
ATOM    558  O   GLY A  77      10.919  26.084  10.530  1.00 34.75           O
ATOM    559  N   VAL A  78      11.998  26.079  12.527  1.00 28.86           N
ATOM    560  CA  VAL A  78      10.877  26.685  13.244  1.00 24.87           C
ATOM    561  C   VAL A  78      11.259  28.099  13.630  1.00 27.51           C
ATOM    562  O   VAL A  78      12.416  28.510  13.766  1.00 28.66           O
ATOM    563  CB  VAL A  78      10.414  25.824  14.416  1.00 27.44           C
ATOM    564  CG1 VAL A  78       9.648  24.605  13.901  1.00 23.11           C
ATOM    565  CG2 VAL A  78      11.601  25.403  15.276  1.00 28.26           C
ATOM    566  N   PRO A  79      10.257  28.968  13.774  1.00 28.01           N
ATOM    567  CA  PRO A  79      10.486  30.376  14.035  1.00 23.80           C
ATOM    568  C   PRO A  79      11.417  30.616  15.197  1.00 29.15           C
ATOM    569  O   PRO A  79      12.344  31.437  15.129  1.00 29.91           O
ATOM    570  CB  PRO A  79       9.109  30.951  14.240  1.00 21.92           C
ATOM    571  CG  PRO A  79       8.131  29.850  14.123  1.00 26.25           C
ATOM    572  CD  PRO A  79       8.821  28.641  13.566  1.00 26.14           C
ATOM    573  N   GLN A  80      11.237  29.890  16.305  1.00 28.72           N
ATOM    574  CA  GLN A  80      11.984  30.082  17.531  1.00 25.88           C
ATOM    575  C   GLN A  80      13.468  29.787  17.391  1.00 27.85           C
ATOM    576  O   GLN A  80      14.221  30.252  18.251  1.00 25.69           O
ATOM    577  CB  GLN A  80      11.419  29.316  18.716  1.00 25.14           C
ATOM    578  CG  GLN A  80      11.192  27.857  18.589  1.00 22.44           C
ATOM    579  CD  GLN A  80       9.935  27.379  17.914  1.00 23.52           C
ATOM    580  OE1 GLN A  80       9.368  26.354  18.348  1.00 28.46           O
ATOM    581  NE2 GLN A  80       9.519  28.055  16.865  1.00 17.84           N
ATOM    582  N   LEU A  81      13.856  29.042  16.351  1.00 26.95           N
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ATOM    583  CA  LEU A  81      15.234  28.768  16.053  1.00 24.06           C
ATOM    584  C   LEU A  81      15.805  29.692  14.994  1.00 25.49           C
ATOM    585  O   LEU A  81      17.025  29.654  14.776  1.00 36.50           O
ATOM    586  CB  LEU A  81      15.431  27.323  15.588  1.00 25.74           C
ATOM    587  CG  LEU A  81      15.192  26.246  16.663  1.00 27.91           C
ATOM    588  CD1 LEU A  81      15.694  24.893  16.171  1.00 25.35           C
ATOM    589  CD2 LEU A  81      15.821  26.572  18.000  1.00 16.71           C
ATOM    590  N   GLY A  82      15.056  30.560  14.340  1.00 22.60           N
ATOM    591  CA  GLY A  82      15.574  31.409  13.310  1.00 18.20           C
ATOM    592  C   GLY A  82      16.312  32.680  13.537  1.00 21.80           C
ATOM    593  O   GLY A  82      16.128  33.364  14.548  1.00 22.19           O
ATOM    594  N   ASN A  83      17.096  33.092  12.513  1.00 23.51           N
ATOM    595  CA  ASN A  83      17.817  34.364  12.587  1.00 22.84           C
ATOM    596  C   ASN A  83      16.980  35.459  11.933  1.00 24.91           C
ATOM    597  O   ASN A  83      16.906  35.708  10.723  1.00 23.16           O
ATOM    598  CB  ASN A  83      19.245  34.249  12.074  1.00 22.27           C
ATOM    599  CG  ASN A  83      20.054  35.530  12.153  1.00 31.42           C
ATOM    600  OD1 ASN A  83      19.471  36.635  12.160  1.00 36.88           O
ATOM    601  ND2 ASN A  83      21.391  35.544  12.212  1.00 26.40           N
ATOM    602  N   LEU A  84      16.301  36.221  12.785  1.00 23.94           N
ATOM    603  CA  LEU A  84      15.448  37.320  12.345  1.00 25.13           C
ATOM    604  C   LEU A  84      16.199  38.330  11.497  1.00 26.62           C
ATOM    605  O   LEU A  84      15.751  38.744  10.428  1.00 28.74           O
ATOM    606  CB  LEU A  84      14.817  38.041  13.532  1.00 25.09           C
ATOM    607  CG  LEU A  84      13.503  38.759  13.298  1.00 28.49           C
ATOM    608  CD1 LEU A  84      12.832  39.087  14.609  1.00 28.50           C
ATOM    609  CD2 LEU A  84      13.702  40.060  12.560  1.00 34.71           C
ATOM    610  N   THR A  85      17.371  38.754  11.969  1.00 32.80           N
ATOM    611  CA  THR A  85      18.071  39.819  11.255  1.00 34.56           C
ATOM    612  C   THR A  85      18.621  39.317   9.933  1.00 30.85           C
ATOM    613  O   THR A  85      18.571  40.058   8.950  1.00 31.51           O
ATOM    614  CB  THR A  85      19.114  40.589  12.063  1.00 35.22           C
ATOM    615  OG1 THR A  85      20.396  40.422  11.454  1.00 35.32           O
ATOM    616  CG2 THR A  85      19.134  40.170  13.514  1.00 34.55           C
ATOM    617  N   LYS A  86      18.962  38.046   9.847  1.00 33.88           N
ATOM    618  CA  LYS A  86      19.384  37.494   8.554  1.00 36.89           C
ATOM    619  C   LYS A  86      18.190  37.418   7.608  1.00 34.78           C
ATOM    620  O   LYS A  86      18.344  37.645   6.411  1.00 34.04           O
ATOM    621  CB  LYS A  86      20.011  36.126   8.743  1.00 38.19           C
ATOM    622  CG  LYS A  86      20.599  35.525   7.489  1.00 44.36           C
ATOM    623  CD  LYS A  86      20.830  34.031   7.681  1.00 51.05           C
ATOM    624  CE  LYS A  86      21.786  33.753   8.823  1.00 56.58           C
ATOM    625  NZ  LYS A  86      22.931  34.713   8.920  1.00 56.32           N
ATOM    626  N   HIS A  87      16.998  37.120   8.130  1.00 34.35           N
ATOM    627  CA  HIS A  87      15.801  37.077   7.290  1.00 32.39           C
ATOM    628  C   HIS A  87      15.527  38.478   6.745  1.00 33.94           C
ATOM    629  O   HIS A  87      15.323  38.600   5.544  1.00 34.00           O
ATOM    630  CB  HIS A  87      14.566  36.585   8.021  1.00 30.12           C
ATOM    631  CG  HIS A  87      13.236  36.808   7.378  1.00 32.77           C
ATOM    632  ND1 HIS A  87      12.238  37.576   7.953  1.00 32.81           N
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ATOM    633  CD2 HIS A  87      12.699  36.387   6.210  1.00 31.04           C
ATOM    634  CE1 HIS A  87      11.194  37.579   7.155  1.00 33.86           C
ATOM    635  NE2 HIS A  87      11.435  36.859   6.073  1.00 30.60           N
ATOM    636  N   LEU A  88      15.585  39.486   7.623  1.00 32.76           N
ATOM    637  CA  LEU A  88      15.247  40.833   7.202  1.00 32.05           C
ATOM    638  C   LEU A  88      16.256  41.461   6.246  1.00 37.17           C
ATOM    639  O   LEU A  88      15.790  42.308   5.462  1.00 33.33           O
ATOM    640  CB  LEU A  88      14.985  41.677   8.431  1.00 27.90           C
ATOM    641  CG  LEU A  88      13.788  41.415   9.324  1.00 28.18           C
ATOM    642  CD1 LEU A  88      13.846  42.446  10.450  1.00 29.94           C
ATOM    643  CD2 LEU A  88      12.455  41.566   8.607  1.00 23.68           C
ATOM    644  N   GLN A  89      17.556  41.112   6.240  1.00 36.49           N
ATOM    645  CA  GLN A  89      18.403  41.729   5.223  1.00 41.57           C
ATOM    646  C   GLN A  89      18.018  41.143   3.848  1.00 36.63           C
ATOM    647  O   GLN A  89      17.905  41.860   2.864  1.00 32.72           O
ATOM    648  CB  GLN A  89      19.894  41.504   5.326  1.00 50.69           C
ATOM    649  CG  GLN A  89      20.488  41.380   6.710  1.00 65.22           C
ATOM    650  CD  GLN A  89      21.964  41.039   6.562  1.00 72.41           C
ATOM    651  OE1 GLN A  89      22.641  41.695   5.765  1.00 78.56           O
ATOM    652  NE2 GLN A  89      22.406  40.037   7.307  1.00 75.27           N
ATOM    653  N   VAL A  90      17.841  39.825   3.806  1.00 31.07           N
ATOM    654  CA  VAL A  90      17.473  39.161   2.564  1.00 32.76           C
ATOM    655  C   VAL A  90      16.138  39.724   2.098  1.00 35.42           C
ATOM    656  O   VAL A  90      15.988  40.102   0.929  1.00 32.49           O
ATOM    657  CB  VAL A  90      17.488  37.633   2.713  1.00 33.52           C
ATOM    658  CG1 VAL A  90      17.051  36.899   1.459  1.00 22.63           C
ATOM    659  CG2 VAL A  90      18.885  37.154   3.144  1.00 26.91           C
ATOM    660  N   PHE A  91      15.176  39.865   3.018  1.00 34.40           N
ATOM    661  CA  PHE A  91      13.868  40.411   2.662  1.00 32.79           C
ATOM    662  C   PHE A  91      13.986  41.816   2.084  1.00 35.08           C
ATOM    663  O   PHE A  91      13.370  42.103   1.047  1.00 29.28           O
ATOM    664  CB  PHE A  91      12.899  40.372   3.853  1.00 31.38           C
ATOM    665  CG  PHE A  91      11.583  41.017   3.530  1.00 26.09           C
ATOM    666  CD1 PHE A  91      10.699  40.310   2.733  1.00 30.65           C
ATOM    667  CD2 PHE A  91      11.228  42.275   3.939  1.00 22.12           C
ATOM    668  CE1 PHE A  91       9.473  40.822   2.339  1.00 24.26           C
ATOM    669  CE2 PHE A  91      10.010  42.804   3.549  1.00 26.28           C
ATOM    670  CZ  PHE A  91       9.132  42.087   2.753  1.00 23.03           C
ATOM    671  N   ARG A  92      14.789  42.684   2.708  1.00 38.24           N
ATOM    672  CA  ARG A  92      14.954  44.050   2.227  1.00 41.19           C
ATOM    673  C   ARG A  92      15.631  44.087   0.863  1.00 42.90           C
ATOM    674  O   ARG A  92      15.300  44.949   0.038  1.00 38.42           O
ATOM    675  CB  ARG A  92      15.626  44.966   3.250  1.00 44.75           C
ATOM    676  CG  ARG A  92      14.937  44.949   4.614  1.00 55.89           C
ATOM    677  CD  ARG A  92      15.276  46.103   5.536  1.00 62.85           C
ATOM    678  NE  ARG A  92      14.540  46.061   6.794  1.00 72.18           N
ATOM    679  CZ  ARG A  92      14.918  45.457   7.915  1.00 77.45           C
ATOM    680  NH1 ARG A  92      16.086  44.821   7.940  1.00 80.30           N
ATOM    681  NH2 ARG A  92      14.164  45.480   9.008  1.00 77.76           N
ATOM    682  N   ASP A  93      16.532  43.153   0.560  1.00 44.68           N
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ATOM    683  CA  ASP A  93      17.214  43.169  -0.731  1.00 46.77           C
ATOM    684  C   ASP A  93      16.377  42.603  -1.861  1.00 47.84           C
ATOM    685  O   ASP A  93      16.447  43.098  -2.988  1.00 50.00           O
ATOM    686  CB  ASP A  93      18.580  42.499  -0.625  1.00 48.77           C
ATOM    687  CG  ASP A  93      19.323  42.931   0.572  0.00 98.09           C
ATOM    688  OD1 ASP A  93      19.138  44.136   0.859  0.00 98.35           O
ATOM    689  OD2 ASP A  93      20.171  42.219   1.145  0.00103.28           O
ATOM    690  N   HIS A  94      15.546  41.609  -1.622  1.00 50.93           N
ATOM    691  CA  HIS A  94      14.565  41.167  -2.611  1.00 52.89           C
ATOM    692  C   HIS A  94      13.621  42.322  -2.943  1.00 50.66           C
ATOM    693  O   HIS A  94      13.570  42.755  -4.092  1.00 49.50           O
ATOM    694  CB  HIS A  94      13.834  39.960  -2.024  1.00 59.26           C
ATOM    695  CG  HIS A  94      14.724  38.755  -2.059  1.00 65.63           C
ATOM    696  ND1 HIS A  94      16.037  38.839  -2.474  1.00 66.82           N
ATOM    697  CD2 HIS A  94      14.500  37.461  -1.718  1.00 69.18           C
ATOM    698  CE1 HIS A  94      16.590  37.642  -2.404  1.00 68.96           C
ATOM    699  NE2 HIS A  94      15.679  36.791  -1.948  1.00 71.10           N
ATOM    700  N   LEU A  95      12.945  42.873  -1.944  1.00 45.54           N
ATOM    701  CA  LEU A  95      12.028  43.979  -2.058  1.00 43.12           C
ATOM    702  C   LEU A  95      12.585  45.129  -2.878  1.00 43.52           C
ATOM    703  O   LEU A  95      11.967  45.524  -3.876  1.00 43.60           O
ATOM    704  CB  LEU A  95      11.591  44.494  -0.685  1.00 39.78           C
ATOM    705  CG  LEU A  95      10.232  45.191  -0.657  1.00 35.95           C
ATOM    706  CD1 LEU A  95       9.451  44.823   0.595  1.00 38.24           C
ATOM    707  CD2 LEU A  95      10.413  46.695  -0.633  1.00 38.25           C
ATOM    708  N   ILE A  96      13.794  45.582  -2.605  1.00 45.96           N
ATOM    709  CA  ILE A  96      14.423  46.606  -3.429  1.00 50.70           C
ATOM    710  C   ILE A  96      14.319  46.255  -4.911  1.00 52.07           C
ATOM    711  O   ILE A  96      14.026  47.129  -5.726  1.00 49.10           O
ATOM    712  CB  ILE A  96      15.900  46.817  -3.045  1.00 53.10           C
ATOM    713  CG1 ILE A  96      15.990  47.836  -1.902  1.00 56.42           C
ATOM    714  CG2 ILE A  96      16.743  47.312  -4.212  1.00 55.18           C
ATOM    715  CD1 ILE A  96      17.410  48.063  -1.423  1.00 59.18           C
ATOM    716  N   ASN A  97      14.670  45.024  -5.284  1.00 55.18           N
ATOM    717  CA  ASN A  97      14.709  44.636  -6.686  1.00 56.64           C
ATOM    718  C   ASN A  97      13.341  44.299  -7.247  1.00 53.57           C
ATOM    719  O   ASN A  97      13.045  44.678  -8.376  1.00 54.16           O
ATOM    720  CB  ASN A  97      15.652  43.453  -6.883  1.00 63.00           C
ATOM    721  CG  ASN A  97      17.097  43.853  -6.629  1.00 67.09           C
ATOM    722  OD1 ASN A  97      17.511  44.972  -6.952  1.00 67.69           O
ATOM    723  ND2 ASN A  97      17.829  42.907  -6.049  1.00 69.17           N
ATOM    724  N   GLN A  98      12.527  43.628  -6.453  1.00 46.91           N
ATOM    725  CA  GLN A  98      11.184  43.234  -6.839  1.00 41.62           C
ATOM    726  C   GLN A  98      10.266  44.426  -7.022  1.00 37.77           C
ATOM    727  O   GLN A  98       9.418  44.454  -7.903  1.00 29.78           O
ATOM    728  CB  GLN A  98      10.606  42.315  -5.770  1.00 48.47           C
ATOM    729  CG  GLN A  98      11.288  40.980  -5.534  1.00 54.61           C
ATOM    730  CD  GLN A  98      10.651  39.920  -6.421  1.00 61.86           C
ATOM    731  OE1 GLN A  98      10.391  38.813  -5.953  1.00 61.49           O
ATOM    732  NE2 GLN A  98      10.355  40.312  -7.667  1.00 65.25           N
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ATOM    733  N   ILE A  99      10.323  45.433  -6.147  1.00 36.40           N
ATOM    734  CA  ILE A  99       9.486  46.623  -6.260  1.00 32.47           C
ATOM    735  C   ILE A  99      10.412  47.836  -6.209  1.00 31.54           C
ATOM    736  O   ILE A  99      10.514  48.516  -5.198  1.00 31.41           O
ATOM    737  CB  ILE A  99       8.391  46.731  -5.187  1.00 31.08           C
ATOM    738  CG1 ILE A  99       7.490  45.493  -5.125  1.00 30.84           C
ATOM    739  CG2 ILE A  99       7.522  47.964  -5.467  1.00 24.26           C
ATOM    740  CD1 ILE A  99       6.539  45.440  -3.951  1.00 33.29           C
ATOM    741  N   PRO A 100      11.104  48.123  -7.303  1.00 32.92           N
ATOM    742  CA  PRO A 100      12.112  49.155  -7.402  1.00 29.66           C
ATOM    743  C   PRO A 100      11.669  50.568  -7.103  1.00 31.11           C
ATOM    744  O   PRO A 100      12.464  51.413  -6.686  1.00 37.68           O
ATOM    745  CB  PRO A 100      12.625  49.029  -8.836  1.00 29.06           C
ATOM    746  CG  PRO A 100      11.567  48.342  -9.632  1.00 27.35           C
ATOM    747  CD  PRO A 100      10.921  47.434  -8.625  1.00 35.78           C
ATOM    748  N   ASP A 101      10.428  50.921  -7.332  1.00 31.46           N
ATOM    749  CA  ASP A 101       9.820  52.194  -7.111  1.00 30.51           C
ATOM    750  C   ASP A 101       9.419  52.424  -5.657  1.00 30.41           C
ATOM    751  O   ASP A 101       8.320  52.018  -5.279  1.00 27.41           O
ATOM    752  CB  ASP A 101       8.520  52.325  -7.924  1.00 34.87           C
ATOM    753  CG  ASP A 101       8.054  53.767  -7.976  1.00 43.54           C
ATOM    754  OD1 ASP A 101       8.438  54.606  -7.124  1.00 46.19           O
ATOM    755  OD2 ASP A 101       7.292  54.115  -8.905  1.00 46.80           O
ATOM    756  N   LYS A 102      10.067  53.373  -5.005  1.00 31.88           N
ATOM    757  CA  LYS A 102       9.813  53.813  -3.660  1.00 34.35           C
ATOM    758  C   LYS A 102       8.398  54.323  -3.417  1.00 31.50           C
ATOM    759  O   LYS A 102       7.939  54.177  -2.285  1.00 27.20           O
ATOM    760  CB  LYS A 102      10.750  54.948  -3.212  1.00 40.50           C
ATOM    761  CG  LYS A 102      12.173  54.504  -3.011  1.00 49.47           C
ATOM    762  CD  LYS A 102      13.100  55.594  -2.496  1.00 57.73           C
ATOM    763  CE  LYS A 102      14.516  55.217  -2.942  1.00 64.17           C
ATOM    764  NZ  LYS A 102      15.553  55.426  -1.888  1.00 68.67           N
ATOM    765  N   SER A 103       7.736  54.878  -4.417  1.00 28.05           N
ATOM    766  CA  SER A 103       6.385  55.385  -4.242  1.00 27.61           C
ATOM    767  C   SER A 103       5.284  54.439  -4.653  1.00 27.92           C
ATOM    768  O   SER A 103       4.084  54.770  -4.712  1.00 31.84           O
ATOM    769  CB  SER A 103       6.298  56.722  -4.993  1.00 30.04           C
ATOM    770  OG  SER A 103       7.238  57.549  -4.262  1.00 39.55           O
ATOM    771  N   PHE A 104       5.671  53.189  -4.868  1.00 21.28           N
ATOM    772  CA  PHE A 104       4.672  52.192  -5.236  1.00 22.39           C
ATOM    773  C   PHE A 104       3.452  52.295  -4.326  1.00 24.28           C
ATOM    774  O   PHE A 104       3.506  52.045  -3.114  1.00 25.29           O
ATOM    775  CB  PHE A 104       5.385  50.852  -5.122  1.00 17.77           C
ATOM    776  CG  PHE A 104       4.472  49.668  -5.136  1.00 19.33           C
ATOM    777  CD1 PHE A 104       3.659  49.426  -6.224  1.00 18.04           C
ATOM    778  CD2 PHE A 104       4.447  48.792  -4.053  1.00 18.38           C
ATOM    779  CE1 PHE A 104       2.809  48.333  -6.235  1.00 18.97           C
ATOM    780  CE2 PHE A 104       3.647  47.683  -4.073  1.00 16.10           C
ATOM    781  CZ  PHE A 104       2.828  47.456  -5.162  1.00 21.31           C
ATOM    782  N   PRO A 105       2.320  52.656  -4.903  1.00 20.79           N
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ATOM    783  CA  PRO A 105       1.072  52.802  -4.166  1.00 16.89           C
ATOM    784  C   PRO A 105       0.113  51.652  -4.380  1.00 17.07           C
ATOM    785  O   PRO A 105      -1.047  51.803  -4.007  1.00 20.69           O
ATOM    786  CB  PRO A 105       0.532  54.052  -4.885  1.00 17.16           C
ATOM    787  CG  PRO A 105       0.789  53.730  -6.324  1.00 11.52           C
ATOM    788  CD  PRO A 105       2.125  52.999  -6.336  1.00 14.64           C
ATOM    789  N   GLY A 106       0.487  50.582  -5.064  1.00 18.79           N
ATOM    790  CA  GLY A 106      -0.411  49.487  -5.372  1.00 18.97           C
ATOM    791  C   GLY A 106      -0.666  48.528  -4.227  1.00 20.63           C
ATOM    792  O   GLY A 106      -0.270  48.795  -3.097  1.00 25.21           O
ATOM    793  N   VAL A 107      -1.286  47.389  -4.466  1.00 18.77           N
ATOM    794  CA  VAL A 107      -1.484  46.326  -3.514  1.00 19.16           C
ATOM    795  C   VAL A 107      -0.204  45.474  -3.472  1.00 21.43           C
ATOM    796  O   VAL A 107       0.276  45.006  -4.493  1.00 22.79           O
ATOM    797  CB  VAL A 107      -2.652  45.385  -3.862  1.00 20.57           C
ATOM    798  CG1 VAL A 107      -2.834  44.276  -2.826  1.00 12.43           C
ATOM    799  CG2 VAL A 107      -3.941  46.180  -4.008  1.00 19.90           C
ATOM    800  N   GLY A 108       0.346  45.305  -2.283  1.00 21.71           N
ATOM    801  CA  GLY A 108       1.539  44.562  -2.001  1.00 20.84           C
ATOM    802  C   GLY A 108       1.186  43.339  -1.168  1.00 25.13           C
ATOM    803  O   GLY A 108       0.817  43.458   0.000  1.00 29.98           O
ATOM    804  N   VAL A 109       1.445  42.168  -1.711  1.00 25.79           N
ATOM    805  CA  VAL A 109       1.055  40.889  -1.159  1.00 24.96           C
ATOM    806  C   VAL A 109       2.191  39.959  -0.776  1.00 27.96           C
ATOM    807  O   VAL A 109       2.912  39.525  -1.681  1.00 26.26           O
ATOM    808  CB  VAL A 109       0.248  40.149  -2.271  1.00 24.21           C
ATOM    809  CG1 VAL A 109      -0.138  38.742  -1.839  1.00 23.28           C
ATOM    810  CG2 VAL A 109      -0.973  40.945  -2.680  1.00 16.88           C
ATOM    811  N   ILE A 110       2.362  39.611   0.506  1.00 30.04           N
ATOM    812  CA  ILE A 110       3.444  38.678   0.811  1.00 28.08           C
ATOM    813  C   ILE A 110       2.838  37.281   0.833  1.00 25.86           C
ATOM    814  O   ILE A 110       1.858  37.106   1.540  1.00 27.62           O
ATOM    815  CB  ILE A 110       4.147  38.926   2.137  1.00 31.51           C
ATOM    816  CG1 ILE A 110       4.888  40.263   2.095  1.00 31.30           C
ATOM    817  CG2 ILE A 110       5.100  37.780   2.462  1.00 30.97           C
ATOM    818  CD1 ILE A 110       4.189  41.370   2.820  1.00 31.16           C
ATOM    819  N   ASP A 111       3.332  36.371   0.024  1.00 25.11           N
ATOM    820  CA  ASP A 111       2.786  35.005   0.028  1.00 26.00           C
ATOM    821  C   ASP A 111       3.742  34.185   0.894  1.00 21.59           C
ATOM    822  O   ASP A 111       4.820  33.850   0.400  1.00 25.58           O
ATOM    823  CB  ASP A 111       2.607  34.424  -1.373  1.00 23.37           C
ATOM    824  CG  ASP A 111       1.899  33.089  -1.365  1.00 25.68           C
ATOM    825  OD1 ASP A 111       1.728  32.513  -0.254  1.00 26.67           O
ATOM    826  OD2 ASP A 111       1.486  32.599  -2.443  1.00 22.47           O
ATOM    827  N   PHE A 112       3.370  33.965   2.140  1.00 14.94           N
ATOM    828  CA  PHE A 112       4.205  33.224   3.077  1.00 15.07           C
ATOM    829  C   PHE A 112       3.309  32.131   3.660  1.00 16.82           C
ATOM    830  O   PHE A 112       2.333  32.405   4.351  1.00 15.94           O
ATOM    831  CB  PHE A 112       4.806  34.111   4.177  1.00 23.84           C
ATOM    832  CG  PHE A 112       5.046  33.376   5.472  1.00 25.81           C
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ATOM    833  CD1 PHE A 112       6.152  32.554   5.611  1.00 26.05           C
ATOM    834  CD2 PHE A 112       4.147  33.486   6.521  1.00 28.03           C
ATOM    835  CE1 PHE A 112       6.367  31.858   6.787  1.00 27.86           C
ATOM    836  CE2 PHE A 112       4.360  32.791   7.701  1.00 28.81           C
ATOM    837  CZ  PHE A 112       5.468  31.978   7.836  1.00 28.24           C
ATOM    838  N   GLU A 113       3.559  30.903   3.232  1.00 17.83           N
ATOM    839  CA  GLU A 113       2.720  29.779   3.596  1.00 19.13           C
ATOM    840  C   GLU A 113       3.431  28.684   4.367  1.00 19.80           C
ATOM    841  O   GLU A 113       2.766  27.675   4.636  1.00 25.10           O
ATOM    842  CB  GLU A 113       2.089  29.174   2.324  1.00 12.73           C
ATOM    843  CG  GLU A 113       1.112  30.155   1.684  1.00 22.09           C
ATOM    844  CD  GLU A 113       0.508  29.673   0.374  1.00 26.74           C
ATOM    845  OE1 GLU A 113      -0.353  28.753   0.391  1.00 26.91           O
ATOM    846  OE2 GLU A 113       0.924  30.184  -0.690  1.00 21.67           O
ATOM    847  N   SER A 114       4.684  28.842   4.757  1.00 19.18           N
ATOM    848  CA  SER A 114       5.396  27.789   5.457  1.00 22.47           C
ATOM    849  C   SER A 114       4.740  27.259   6.718  1.00 21.25           C
ATOM    850  O   SER A 114       4.958  26.100   7.013  1.00 25.75           O
ATOM    851  CB  SER A 114       6.813  28.270   5.861  1.00 23.51           C
ATOM    852  OG  SER A 114       7.342  29.081   4.838  1.00 23.70           O
ATOM    853  N   TRP A 115       4.200  28.061   7.608  1.00 21.51           N
ATOM    854  CA  TRP A 115       3.613  27.676   8.869  1.00 22.74           C
ATOM    855  C   TRP A 115       2.617  28.788   9.255  1.00 20.41           C
ATOM    856  O   TRP A 115       2.795  29.906   8.811  1.00 20.86           O
ATOM    857  CB  TRP A 115       4.599  27.534  10.055  1.00 18.57           C
ATOM    858  CG  TRP A 115       5.751  28.477  10.111  1.00 15.73           C
ATOM    859  CD1 TRP A 115       6.974  28.141   9.585  1.00 21.01           C
ATOM    860  CD2 TRP A 115       5.905  29.799  10.611  1.00 14.08           C
ATOM    861  NE1 TRP A 115       7.873  29.169   9.736  1.00 22.12           N
ATOM    862  CE2 TRP A 115       7.238  30.198  10.382  1.00 18.45           C
ATOM    863  CE3 TRP A 115       5.058  30.721  11.214  1.00 16.17           C
ATOM    864  CZ2 TRP A 115       7.745  31.453  10.721  1.00 17.66           C
ATOM    865  CZ3 TRP A 115       5.564  31.996  11.565  1.00 12.19           C
ATOM    866  CH2 TRP A 115       6.872  32.343  11.323  1.00 14.41           C
ATOM    867  N   ARG A 116       1.686  28.504  10.127  1.00 21.83           N
ATOM    868  CA  ARG A 116       0.777  29.480  10.694  1.00 23.77           C
ATOM    869  C   ARG A 116       1.322  29.897  12.057  1.00 26.16           C
ATOM    870  O   ARG A 116       1.981  29.113  12.734  1.00 27.96           O
ATOM    871  CB  ARG A 116      -0.610  28.854  10.795  1.00 26.58           C
ATOM    872  CG  ARG A 116      -1.225  28.803   9.412  1.00 32.37           C
ATOM    873  CD  ARG A 116      -2.041  27.566   9.172  1.00 38.03           C
ATOM    874  NE  ARG A 116      -2.282  27.459   7.727  1.00 43.78           N
ATOM    875  CZ  ARG A 116      -2.979  26.419   7.263  1.00 45.18           C
ATOM    876  NH1 ARG A 116      -3.453  25.499   8.096  1.00 42.42           N
ATOM    877  NH2 ARG A 116      -3.130  26.376   5.951  1.00 45.95           N
ATOM    878  N   PRO A 117       1.010  31.114  12.487  1.00 23.28           N
ATOM    879  CA  PRO A 117       1.532  31.664  13.708  1.00 21.97           C
ATOM    880  C   PRO A 117       0.899  31.158  14.982  1.00 24.02           C
ATOM    881  O   PRO A 117       1.358  31.397  16.096  1.00 27.35           O
ATOM    882  CB  PRO A 117       1.361  33.161  13.490  1.00 24.25           C
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ATOM    883  CG  PRO A 117       0.162  33.301  12.606  1.00 24.54           C
ATOM    884  CD  PRO A 117       0.234  32.109  11.697  1.00 24.95           C
ATOM    885  N   ILE A 118      -0.220  30.499  14.904  1.00 26.18           N
ATOM    886  CA  ILE A 118      -0.947  29.857  15.974  1.00 26.73           C
ATOM    887  C   ILE A 118      -0.568  28.381  15.937  1.00 29.88           C
ATOM    888  O   ILE A 118      -0.842  27.732  14.921  1.00 32.34           O
ATOM    889  CB  ILE A 118      -2.452  30.008  15.700  1.00 28.19           C
ATOM    890  CG1 ILE A 118      -2.790  31.507  15.685  1.00 27.59           C
ATOM    891  CG2 ILE A 118      -3.279  29.201  16.664  1.00 24.16           C
ATOM    892  CD1 ILE A 118      -2.534  32.216  16.990  1.00 27.31           C
ATOM    893  N   PHE A 119       0.031  27.900  17.018  1.00 24.62           N
ATOM    894  CA  PHE A 119       0.524  26.549  17.123  1.00 21.90           C
ATOM    895  C   PHE A 119      -0.498  25.485  16.798  1.00 24.54           C
ATOM    896  O   PHE A 119      -0.306  24.580  15.981  1.00 26.05           O
ATOM    897  CB  PHE A 119       1.038  26.384  18.559  1.00 25.96           C
ATOM    898  CG  PHE A 119       1.993  25.240  18.723  1.00 27.02           C
ATOM    899  CD1 PHE A 119       3.218  25.252  18.089  1.00 28.74           C
ATOM    900  CD2 PHE A 119       1.664  24.148  19.496  1.00 29.36           C
ATOM    901  CE1 PHE A 119       4.102  24.196  18.230  1.00 30.36           C
ATOM    902  CE2 PHE A 119       2.543  23.106  19.654  1.00 28.32           C
ATOM    903  CZ  PHE A 119       3.765  23.130  19.024  1.00 29.46           C
ATOM    904  N   ARG A 120      -1.702  25.639  17.331  1.00 24.08           N
ATOM    905  CA  ARG A 120      -2.801  24.729  17.076  1.00 27.10           C
ATOM    906  C   ARG A 120      -3.103  24.602  15.582  1.00 27.46           C
ATOM    907  O   ARG A 120      -3.569  23.542  15.133  1.00 26.67           O
ATOM    908  CB  ARG A 120      -4.045  25.210  17.868  1.00 26.00           C
ATOM    909  CG  ARG A 120      -5.158  24.167  17.855  1.00 25.70           C
ATOM    910  CD  ARG A 120      -6.477  24.716  18.347  1.00 23.82           C
ATOM    911  NE  ARG A 120      -7.018  25.807  17.550  1.00 27.38           N
ATOM    912  CZ  ARG A 120      -7.929  25.685  16.593  1.00 25.34           C
ATOM    913  NH1 ARG A 120      -8.449  24.509  16.280  1.00 22.01           N
ATOM    914  NH2 ARG A 120      -8.324  26.765  15.926  1.00 27.01           N
ATOM    915  N   GLN A 121      -2.935  25.665  14.796  1.00 21.10           N
ATOM    916  CA  GLN A 121      -3.379  25.631  13.411  1.00 23.47           C
ATOM    917  C   GLN A 121      -2.435  24.899  12.487  1.00 24.64           C
ATOM    918  O   GLN A 121      -2.787  24.726  11.318  1.00 23.87           O
ATOM    919  CB  GLN A 121      -3.627  27.056  12.875  1.00 19.31           C
ATOM    920  CG  GLN A 121      -5.030  27.541  13.167  1.00 16.86           C
ATOM    921  CD  GLN A 121      -5.218  29.018  12.902  1.00 22.20           C
ATOM    922  OE1 GLN A 121      -5.747  29.715  13.781  1.00 22.51           O
ATOM    923  NE2 GLN A 121      -4.780  29.486  11.728  1.00 19.55           N
ATOM    924  N   ASN A 122      -1.260  24.479  12.947  1.00 26.50           N
ATOM    925  CA  ASN A 122      -0.316  23.781  12.076  1.00 26.81           C
ATOM    926  C   ASN A 122      -0.636  22.295  12.046  1.00 25.18           C
ATOM    927  O   ASN A 122       0.162  21.488  12.506  1.00 22.39           O
ATOM    928  CB  ASN A 122       1.120  24.025  12.543  1.00 26.33           C
ATOM    929  CG  ASN A 122       1.570  25.462  12.452  1.00 28.17           C
ATOM    930  OD1 ASN A 122       1.832  25.972  11.361  1.00 28.54           O
ATOM    931  ND2 ASN A 122       1.648  26.157  13.580  1.00 30.82           N
ATOM    932  N   TRP A 123      -1.807  21.920  11.561  1.00 25.31           N
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ATOM    933  CA  TRP A 123      -2.264  20.563  11.506  1.00 24.12           C
ATOM    934  C   TRP A 123      -1.837  19.890  10.188  1.00 27.35           C
ATOM    935  O   TRP A 123      -1.275  20.459   9.256  1.00 30.61           O
ATOM    936  CB  TRP A 123      -3.754  20.469  11.554  1.00 25.97           C
ATOM    937  CG  TRP A 123      -4.701  21.414  12.130  1.00 31.65           C
ATOM    938  CD1 TRP A 123      -5.093  21.467  13.440  1.00 39.58           C
ATOM    939  CD2 TRP A 123      -5.459  22.438  11.477  1.00 33.92           C
ATOM    940  NE1 TRP A 123      -6.026  22.461  13.670  1.00 40.36           N
ATOM    941  CE2 TRP A 123      -6.263  23.077  12.467  1.00 38.82           C
ATOM    942  CE3 TRP A 123      -5.527  22.874  10.165  1.00 27.32           C
ATOM    943  CZ2 TRP A 123      -7.129  24.138  12.207  1.00 35.10           C
ATOM    944  CZ3 TRP A 123      -6.394  23.931   9.917  1.00 34.96           C
ATOM    945  CH2 TRP A 123      -7.173  24.544  10.903  1.00 34.03           C
ATOM    946  N   ALA A 124      -2.306  18.665  10.038  1.00 25.09           N
ATOM    947  CA  ALA A 124      -2.087  17.869   8.833  1.00 23.68           C
ATOM    948  C   ALA A 124      -0.681  18.013   8.306  1.00 26.97           C
ATOM    949  O   ALA A 124       0.257  17.750   9.080  1.00 35.34           O
ATOM    950  CB  ALA A 124      -3.163  18.183   7.847  1.00 10.16           C
ATOM    951  N   SER A 125      -0.432  18.453   7.084  1.00 31.79           N
ATOM    952  CA  SER A 125       0.969  18.541   6.652  1.00 33.84           C
ATOM    953  C   SER A 125       1.744  19.628   7.363  1.00 33.37           C
ATOM    954  O   SER A 125       2.948  19.639   7.102  1.00 32.96           O
ATOM    955  CB  SER A 125       1.097  18.686   5.144  1.00 36.92           C
ATOM    956  OG  SER A 125       0.894  20.038   4.762  1.00 45.19           O
ATOM    957  N   LEU A 126       1.201  20.506   8.209  1.00 31.69           N
ATOM    958  CA  LEU A 126       2.073  21.455   8.901  1.00 31.10           C
ATOM    959  C   LEU A 126       2.504  20.905  10.252  1.00 35.93           C
ATOM    960  O   LEU A 126       3.346  21.525  10.909  1.00 37.07           O
ATOM    961  CB  LEU A 126       1.460  22.844   9.009  1.00 25.55           C
ATOM    962  CG  LEU A 126       1.143  23.453   7.634  1.00 24.38           C
ATOM    963  CD1 LEU A 126       0.287  24.675   7.764  1.00 20.06           C
ATOM    964  CD2 LEU A 126       2.408  23.818   6.874  1.00 25.17           C
ATOM    965  N   GLN A 127       2.180  19.636  10.526  1.00 37.02           N
ATOM    966  CA  GLN A 127       2.493  18.963  11.766  1.00 39.37           C
ATOM    967  C   GLN A 127       3.956  18.882  12.153  1.00 35.65           C
ATOM    968  O   GLN A 127       4.287  19.184  13.316  1.00 31.45           O
ATOM    969  CB  GLN A 127       1.832  17.591  11.794  1.00 46.53           C
ATOM    970  CG  GLN A 127       1.580  17.044  13.189  1.00 55.02           C
ATOM    971  CD  GLN A 127       0.711  15.799  13.101  1.00 64.18           C
ATOM    972  OE1 GLN A 127      -0.435  15.829  12.646  1.00 68.03           O
ATOM    973  NE2 GLN A 127       1.276  14.676  13.536  1.00 68.59           N
ATOM    974  N   PRO A 128       4.883  18.627  11.236  1.00 28.82           N
ATOM    975  CA  PRO A 128       6.309  18.596  11.492  1.00 26.01           C
ATOM    976  C   PRO A 128       6.810  19.793  12.266  1.00 24.38           C
ATOM    977  O   PRO A 128       7.722  19.681  13.085  1.00 26.65           O
ATOM    978  CB  PRO A 128       6.938  18.532  10.105  1.00 26.02           C
ATOM    979  CG  PRO A 128       5.927  17.769   9.326  1.00 24.91           C
ATOM    980  CD  PRO A 128       4.604  18.268   9.832  1.00 27.45           C
ATOM    981  N   TYR A 129       6.191  20.945  12.090  1.00 25.65           N
ATOM    982  CA  TYR A 129       6.432  22.136  12.866  1.00 29.44           C
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ATOM    983  C   TYR A 129       6.006  21.970  14.316  1.00 28.46           C
ATOM    984  O   TYR A 129       6.629  22.632  15.147  1.00 32.21           O
ATOM    985  CB  TYR A 129       5.713  23.343  12.252  1.00 30.99           C
ATOM    986  CG  TYR A 129       6.274  23.716  10.897  1.00 28.60           C
ATOM    987  CD1 TYR A 129       5.641  23.335   9.725  1.00 23.83           C
ATOM    988  CD2 TYR A 129       7.454  24.452  10.834  1.00 30.30           C
ATOM    989  CE1 TYR A 129       6.164  23.672   8.494  1.00 24.41           C
ATOM    990  CE2 TYR A 129       7.982  24.824   9.607  1.00 29.63           C
ATOM    991  CZ  TYR A 129       7.312  24.449   8.455  1.00 28.63           C
ATOM    992  OH  TYR A 129       7.853  24.787   7.242  1.00 26.46           O
ATOM    993  N   LYS A 130       5.023  21.150  14.649  1.00 32.41           N
ATOM    994  CA  LYS A 130       4.687  20.943  16.069  1.00 34.22           C
ATOM    995  C   LYS A 130       5.633  19.916  16.660  1.00 32.56           C
ATOM    996  O   LYS A 130       6.147  20.139  17.746  1.00 33.64           O
ATOM    997  CB  LYS A 130       3.242  20.507  16.339  1.00 31.55           C
ATOM    998  CG  LYS A 130       2.260  21.584  15.902  1.00 29.70           C
ATOM    999  CD  LYS A 130       0.909  20.993  15.619  1.00 29.97           C
ATOM   1000  CE  LYS A 130       0.130  20.920  16.917  1.00 37.38           C
ATOM   1001  NZ  LYS A 130      -1.331  20.821  16.665  1.00 39.36           N
ATOM   1002  N   LYS A 131       5.890  18.838  15.930  1.00 36.97           N
ATOM   1003  CA  LYS A 131       6.819  17.819  16.390  1.00 38.26           C
ATOM   1004  C   LYS A 131       8.186  18.421  16.745  1.00 37.01           C
ATOM   1005  O   LYS A 131       8.664  18.332  17.879  1.00 34.66           O
ATOM   1006  CB  LYS A 131       7.065  16.739  15.338  1.00 38.93           C
ATOM   1007  CG  LYS A 131       6.143  15.547  15.362  1.00 41.68           C
ATOM   1008  CD  LYS A 131       5.943  14.812  14.126  0.00 95.85           C
ATOM   1009  CE  LYS A 131       4.643  14.101  13.785  0.00102.06           C
ATOM   1010  NZ  LYS A 131       4.871  12.902  12.935  0.00109.68           N
ATOM   1011  N   LEU A 132       8.750  19.097  15.743  1.00 32.56           N
ATOM   1012  CA  LEU A 132      10.086  19.662  15.880  1.00 30.52           C
ATOM   1013  C   LEU A 132      10.198  20.622  17.049  1.00 30.56           C
ATOM   1014  O   LEU A 132      11.189  20.578  17.765  1.00 29.75           O
ATOM   1015  CB  LEU A 132      10.539  20.374  14.603  1.00 25.58           C
ATOM   1016  CG  LEU A 132      11.890  21.087  14.720  1.00 24.38           C
ATOM   1017  CD1 LEU A 132      12.982  20.127  15.146  1.00 19.79           C
ATOM   1018  CD2 LEU A 132      12.208  21.810  13.433  1.00 26.49           C
ATOM   1019  N   SER A 133       9.188  21.467  17.214  1.00 35.35           N
ATOM   1020  CA  SER A 133       9.143  22.430  18.296  1.00 36.05           C
ATOM   1021  C   SER A 133       9.169  21.726  19.651  1.00 35.50           C
ATOM   1022  O   SER A 133       9.795  22.259  20.578  1.00 33.17           O
ATOM   1023  CB  SER A 133       7.892  23.313  18.215  1.00 35.64           C
ATOM   1024  OG  SER A 133       8.169  24.386  17.348  1.00 39.22           O
ATOM   1025  N   VAL A 134       8.442  20.612  19.723  1.00 29.41           N
ATOM   1026  CA  VAL A 134       8.416  19.845  20.976  1.00 28.24           C
ATOM   1027  C   VAL A 134       9.742  19.154  21.162  1.00 31.30           C
ATOM   1028  O   VAL A 134      10.314  19.111  22.242  1.00 39.06           O
ATOM   1029  CB  VAL A 134       7.211  18.885  20.937  1.00 27.48           C
ATOM   1030  CG1 VAL A 134       7.384  17.669  21.818  1.00 24.38           C
ATOM   1031  CG2 VAL A 134       5.915  19.633  21.255  1.00 18.58           C
ATOM   1032  N   GLU A 135      10.334  18.597  20.121  1.00 40.40           N
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ATOM   1033  CA  GLU A 135      11.617  17.919  20.214  1.00 45.94           C
ATOM   1034  C   GLU A 135      12.724  18.851  20.690  1.00 42.68           C
ATOM   1035  O   GLU A 135      13.584  18.418  21.471  1.00 42.47           O
ATOM   1036  CB  GLU A 135      12.052  17.276  18.904  1.00 51.97           C
ATOM   1037  CG  GLU A 135      11.257  16.064  18.468  1.00 62.48           C
ATOM   1038  CD  GLU A 135      11.514  15.753  17.000  1.00 71.77           C
ATOM   1039  OE1 GLU A 135      12.500  16.264  16.415  1.00 74.44           O
ATOM   1040  OE2 GLU A 135      10.711  14.987  16.418  1.00 77.00           O
ATOM   1041  N   VAL A 136      12.768  20.092  20.230  1.00 38.03           N
ATOM   1042  CA  VAL A 136      13.827  20.992  20.699  1.00 34.98           C
ATOM   1043  C   VAL A 136      13.804  21.141  22.222  1.00 36.85           C
ATOM   1044  O   VAL A 136      14.866  21.200  22.850  1.00 32.09           O
ATOM   1045  CB  VAL A 136      13.746  22.347  19.992  1.00 29.55           C
ATOM   1046  CG1 VAL A 136      14.261  23.511  20.821  1.00 31.93           C
ATOM   1047  CG2 VAL A 136      14.563  22.276  18.715  1.00 29.14           C
ATOM   1048  N   VAL A 137      12.623  21.261  22.814  1.00 33.78           N
ATOM   1049  CA  VAL A 137      12.489  21.426  24.244  1.00 39.98           C
ATOM   1050  C   VAL A 137      12.896  20.161  24.996  1.00 41.50           C
ATOM   1051  O   VAL A 137      13.711  20.249  25.929  1.00 38.08           O
ATOM   1052  CB  VAL A 137      11.051  21.874  24.573  1.00 41.24           C
ATOM   1053  CG1 VAL A 137      10.780  21.813  26.066  1.00 41.04           C
ATOM   1054  CG2 VAL A 137      10.859  23.282  24.017  1.00 37.85           C
ATOM   1055  N   ARG A 138      12.407  18.999  24.561  1.00 38.09           N
ATOM   1056  CA  ARG A 138      12.829  17.748  25.180  1.00 42.36           C
ATOM   1057  C   ARG A 138      14.340  17.561  25.224  1.00 42.69           C
ATOM   1058  O   ARG A 138      14.897  17.198  26.273  1.00 41.92           O
ATOM   1059  CB  ARG A 138      12.179  16.544  24.498  1.00 43.52           C
ATOM   1060  CG  ARG A 138      10.826  16.594  23.961  0.00 96.35           C
ATOM   1061  CD  ARG A 138      10.320  15.346  23.273  0.00109.94           C
ATOM   1062  NE  ARG A 138       8.874  15.328  23.116  0.00118.14           N
ATOM   1063  CZ  ARG A 138       7.970  15.129  24.060  0.00118.70           C
ATOM   1064  NH1 ARG A 138       8.374  14.909  25.302  0.00117.43           N
ATOM   1065  NH2 ARG A 138       6.673  15.144  23.779  0.00119.53           N
ATOM   1066  N   ARG A 139      15.087  17.828  24.163  1.00 42.06           N
ATOM   1067  CA  ARG A 139      16.537  17.716  24.148  1.00 42.81           C
ATOM   1068  C   ARG A 139      17.195  18.627  25.193  1.00 46.23           C
ATOM   1069  O   ARG A 139      18.260  18.316  25.750  1.00 44.96           O
ATOM   1070  CB  ARG A 139      17.088  18.029  22.764  1.00 41.64           C
ATOM   1071  CG  ARG A 139      16.638  17.201  21.568  1.00 42.60           C
ATOM   1072  CD  ARG A 139      17.443  17.586  20.331  1.00 44.56           C
ATOM   1073  NE  ARG A 139      16.706  17.804  19.110  1.00 46.40           N
ATOM   1074  CZ  ARG A 139      15.853  16.982  18.517  1.00 50.37           C
ATOM   1075  NH1 ARG A 139      15.281  17.362  17.377  1.00 52.27           N
ATOM   1076  NH2 ARG A 139      15.561  15.788  19.024  1.00 52.10           N
ATOM   1077  N   GLU A 140      16.602  19.787  25.440  1.00 46.59           N
ATOM   1078  CA  GLU A 140      17.062  20.784  26.364  1.00 52.79           C
ATOM   1079  C   GLU A 140      16.756  20.392  27.809  1.00 52.46           C
ATOM   1080  O   GLU A 140      17.475  20.750  28.727  1.00 52.88           O
ATOM   1081  CB  GLU A 140      16.356  22.127  26.156  1.00 60.28           C
ATOM   1082  CG  GLU A 140      16.837  23.016  25.042  1.00 66.63           C
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ATOM   1083  CD  GLU A 140      16.377  24.454  25.206  1.00 72.14           C
ATOM   1084  OE1 GLU A 140      15.787  24.792  26.259  1.00 73.69           O
ATOM   1085  OE2 GLU A 140      16.648  25.234  24.265  1.00 73.31           O
ATOM   1086  N   HIS A 141      15.563  19.870  28.038  1.00 51.20           N
ATOM   1087  CA  HIS A 141      15.033  19.518  29.335  1.00 48.46           C
ATOM   1088  C   HIS A 141      14.555  18.078  29.380  1.00 50.52           C
ATOM   1089  O   HIS A 141      13.368  17.798  29.213  1.00 49.56           O
ATOM   1090  CB  HIS A 141      13.805  20.391  29.666  1.00 46.95           C
ATOM   1091  CG  HIS A 141      14.156  21.845  29.582  1.00 48.55           C
ATOM   1092  ND1 HIS A 141      15.225  22.360  30.284  1.00 48.56           N
ATOM   1093  CD2 HIS A 141      13.668  22.864  28.857  1.00 49.66           C
ATOM   1094  CE1 HIS A 141      15.352  23.649  30.036  1.00 47.37           C
ATOM   1095  NE2 HIS A 141      14.403  23.984  29.185  1.00 49.00           N
ATOM   1096  N   PRO A 142      15.477  17.153  29.618  1.00 50.33           N
ATOM   1097  CA  PRO A 142      15.173  15.737  29.643  1.00 49.71           C
ATOM   1098  C   PRO A 142      14.239  15.344  30.771  1.00 54.37           C
ATOM   1099  O   PRO A 142      13.380  14.466  30.587  1.00 53.13           O
ATOM   1100  CB  PRO A 142      16.522  15.058  29.764  1.00 47.05           C
ATOM   1101  CG  PRO A 142      17.537  16.083  29.393  1.00 48.44           C
ATOM   1102  CD  PRO A 142      16.927  17.413  29.766  1.00 49.45           C
ATOM   1103  N   PHE A 143      14.338  16.052  31.899  1.00 58.13           N
ATOM   1104  CA  PHE A 143      13.508  15.718  33.047  1.00 62.68           C
ATOM   1105  C   PHE A 143      12.132  16.341  33.051  1.00 60.23           C
ATOM   1106  O   PHE A 143      11.289  15.868  33.820  1.00 60.72           O
ATOM   1107  CB  PHE A 143      14.276  16.034  34.340  1.00 70.10           C
ATOM   1108  CG  PHE A 143      15.630  15.369  34.331  1.00 75.08           C
ATOM   1109  CD1 PHE A 143      16.785  16.120  34.239  1.00 77.73           C
ATOM   1110  CD2 PHE A 143      15.734  13.992  34.381  1.00 77.92           C
ATOM   1111  CE1 PHE A 143      18.025  15.511  34.222  1.00 80.29           C
ATOM   1112  CE2 PHE A 143      16.971  13.376  34.370  1.00 80.66           C
ATOM   1113  CZ  PHE A 143      18.121  14.135  34.294  1.00 80.75           C
ATOM   1114  N   TRP A 144      11.841  17.338  32.226  1.00 60.29           N
ATOM   1115  CA  TRP A 144      10.494  17.914  32.190  1.00 55.94           C
ATOM   1116  C   TRP A 144       9.481  16.869  31.711  1.00 53.64           C
ATOM   1117  O   TRP A 144       9.821  16.025  30.896  1.00 48.61           O
ATOM   1118  CB  TRP A 144      10.393  19.137  31.289  1.00 50.99           C
ATOM   1119  CG  TRP A 144      11.062  20.380  31.786  1.00 48.50           C
ATOM   1120  CD1 TRP A 144      11.981  20.486  32.783  1.00 46.23           C
ATOM   1121  CD2 TRP A 144      10.962  21.695  31.204  1.00 47.88           C
ATOM   1122  NE1 TRP A 144      12.413  21.783  32.888  1.00 46.75           N
ATOM   1123  CE2 TRP A 144      11.821  22.542  31.919  1.00 44.66           C
ATOM   1124  CE3 TRP A 144      10.215  22.234  30.146  1.00 45.79           C
ATOM   1125  CZ2 TRP A 144      11.955  23.896  31.632  1.00 43.73           C
ATOM   1126  CZ3 TRP A 144      10.337  23.580  29.877  1.00 43.82           C
ATOM   1127  CH2 TRP A 144      11.199  24.399  30.611  1.00 42.92           C
ATOM   1128  N   ASP A 145       8.262  16.970  32.218  1.00 54.34           N
ATOM   1129  CA  ASP A 145       7.171  16.102  31.825  1.00 58.76           C
ATOM   1130  C   ASP A 145       6.506  16.639  30.558  1.00 57.99           C
ATOM   1131  O   ASP A 145       6.613  17.820  30.265  1.00 58.29           O
ATOM   1132  CB  ASP A 145       6.117  15.984  32.928  1.00 63.84           C
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ATOM   1133  CG  ASP A 145       5.342  17.277  33.127  1.00 70.66           C
ATOM   1134  OD1 ASP A 145       4.310  17.443  32.436  1.00 68.62           O
ATOM   1135  OD2 ASP A 145       5.773  18.113  33.958  1.00 75.43           O
ATOM   1136  N   ASP A 146       5.715  15.821  29.897  1.00 58.79           N
ATOM   1137  CA  ASP A 146       5.045  16.131  28.662  1.00 61.80           C
ATOM   1138  C   ASP A 146       4.438  17.516  28.633  1.00 62.03           C
ATOM   1139  O   ASP A 146       4.896  18.422  27.934  1.00 63.07           O
ATOM   1140  CB  ASP A 146       3.956  15.089  28.382  1.00 69.97           C
ATOM   1141  CG  ASP A 146       4.572  13.710  28.170  1.00 77.53           C
ATOM   1142  OD1 ASP A 146       5.734  13.647  27.702  1.00 76.67           O
ATOM   1143  OD2 ASP A 146       3.919  12.682  28.472  1.00 81.92           O
ATOM   1144  N   GLN A 147       3.439  17.713  29.466  1.00 60.85           N
ATOM   1145  CA  GLN A 147       2.683  18.953  29.596  1.00 55.45           C
ATOM   1146  C   GLN A 147       3.587  20.163  29.684  1.00 47.23           C
ATOM   1147  O   GLN A 147       3.367  21.141  28.971  1.00 44.17           O
ATOM   1148  CB  GLN A 147       1.766  18.826  30.802  1.00 58.74           C
ATOM   1149  CG  GLN A 147       0.538  19.689  30.915  1.00 64.11           C
ATOM   1150  CD  GLN A 147       0.257  19.960  32.389  1.00 70.64           C
ATOM   1151  OE1 GLN A 147       0.954  20.777  32.996  1.00 70.56           O
ATOM   1152  NE2 GLN A 147      -0.703  19.224  32.942  1.00 73.67           N
ATOM   1153  N   ARG A 148       4.630  20.104  30.498  1.00 44.94           N
ATOM   1154  CA  ARG A 148       5.528  21.244  30.627  1.00 45.32           C
ATOM   1155  C   ARG A 148       6.197  21.564  29.291  1.00 43.82           C
ATOM   1156  O   ARG A 148       6.352  22.728  28.957  1.00 38.30           O
ATOM   1157  CB  ARG A 148       6.593  21.042  31.708  1.00 45.00           C
ATOM   1158  CG  ARG A 148       7.243  22.376  32.067  1.00 47.00           C
ATOM   1159  CD  ARG A 148       8.169  22.261  33.273  1.00 51.42           C
ATOM   1160  NE  ARG A 148       8.921  23.485  33.439  1.00 56.33           N
ATOM   1161  CZ  ARG A 148       9.839  23.833  34.322  1.00 60.12           C
ATOM   1162  NH1 ARG A 148      10.408  25.040  34.233  1.00 60.03           N
ATOM   1163  NH2 ARG A 148      10.267  22.986  35.247  1.00 60.52           N
ATOM   1164  N   VAL A 149       6.647  20.530  28.597  1.00 42.32           N
ATOM   1165  CA  VAL A 149       7.303  20.586  27.316  1.00 40.07           C
ATOM   1166  C   VAL A 149       6.446  21.198  26.215  1.00 40.15           C
ATOM   1167  O   VAL A 149       6.899  22.127  25.560  1.00 36.41           O
ATOM   1168  CB  VAL A 149       7.697  19.154  26.889  1.00 37.95           C
ATOM   1169  CG1 VAL A 149       8.298  19.106  25.492  1.00 39.17           C
ATOM   1170  CG2 VAL A 149       8.667  18.575  27.893  1.00 34.98           C
ATOM   1171  N   GLU A 150       5.237  20.681  26.033  1.00 43.91           N
ATOM   1172  CA  GLU A 150       4.351  21.126  24.984  1.00 53.00           C
ATOM   1173  C   GLU A 150       4.003  22.599  25.180  1.00 51.37           C
ATOM   1174  O   GLU A 150       4.127  23.475  24.326  1.00 52.54           O
ATOM   1175  CB  GLU A 150       3.083  20.272  24.840  1.00 59.83           C
ATOM   1176  CG  GLU A 150       2.508  20.449  23.440  1.00 73.28           C
ATOM   1177  CD  GLU A 150       1.052  20.116  23.228  1.00 81.43           C
ATOM   1178  OE1 GLU A 150       0.392  20.850  22.446  1.00 84.75           O
ATOM   1179  OE2 GLU A 150       0.531  19.138  23.813  1.00 83.17           O
ATOM   1180  N   GLN A 151       3.719  22.938  26.407  1.00 48.08           N
ATOM   1181  CA  GLN A 151       3.373  24.280  26.830  1.00 50.52           C
ATOM   1182  C   GLN A 151       4.436  25.265  26.399  1.00 43.73           C
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ATOM   1183  O   GLN A 151       4.134  26.353  25.916  1.00 48.89           O
ATOM   1184  CB  GLN A 151       3.188  24.227  28.351  1.00 56.36           C
ATOM   1185  CG  GLN A 151       3.132  25.516  29.112  1.00 67.54           C
ATOM   1186  CD  GLN A 151       3.039  25.345  30.620  1.00 75.25           C
ATOM   1187  OE1 GLN A 151       3.978  24.953  31.328  1.00 76.19           O
ATOM   1188  NE2 GLN A 151       1.862  25.656  31.167  1.00 76.41           N
ATOM   1189  N   GLU A 152       5.695  24.921  26.562  1.00 34.91           N
ATOM   1190  CA  GLU A 152       6.846  25.758  26.301  1.00 29.77           C
ATOM   1191  C   GLU A 152       7.207  25.767  24.826  1.00 29.37           C
ATOM   1192  O   GLU A 152       7.739  26.742  24.307  1.00 26.30           O
ATOM   1193  CB  GLU A 152       7.996  25.314  27.206  1.00 27.33           C
ATOM   1194  CG  GLU A 152       9.350  25.922  26.991  1.00 31.09           C
ATOM   1195  CD  GLU A 152       9.493  27.385  27.305  1.00 37.27           C
ATOM   1196  OE1 GLU A 152       8.586  28.004  27.900  1.00 38.45           O
ATOM   1197  OE2 GLU A 152      10.564  27.947  26.954  1.00 42.24           O
ATOM   1198  N   ALA A 153       6.947  24.634  24.167  1.00 28.15           N
ATOM   1199  CA  ALA A 153       7.120  24.565  22.720  1.00 27.69           C
ATOM   1200  C   ALA A 153       6.188  25.595  22.082  1.00 29.41           C
ATOM   1201  O   ALA A 153       6.601  26.504  21.389  1.00 29.98           O
ATOM   1202  CB  ALA A 153       6.872  23.151  22.268  1.00 23.90           C
ATOM   1203  N   LYS A 154       4.904  25.510  22.367  1.00 31.56           N
ATOM   1204  CA  LYS A 154       3.880  26.406  21.909  1.00 32.33           C
ATOM   1205  C   LYS A 154       4.233  27.850  22.226  1.00 30.72           C
ATOM   1206  O   LYS A 154       4.146  28.699  21.351  1.00 31.99           O
ATOM   1207  CB  LYS A 154       2.559  26.054  22.599  1.00 33.07           C
ATOM   1208  CG  LYS A 154       1.450  27.068  22.337  1.00 38.41           C
ATOM   1209  CD  LYS A 154       0.580  27.140  23.574  1.00 45.58           C
ATOM   1210  CE  LYS A 154      -0.881  27.343  23.255  1.00 50.90           C
ATOM   1211  NZ  LYS A 154      -1.201  28.775  23.011  1.00 57.89           N
ATOM   1212  N   ARG A 155       4.613  28.154  23.450  1.00 31.40           N
ATOM   1213  CA  ARG A 155       4.977  29.496  23.877  1.00 31.73           C
ATOM   1214  C   ARG A 155       6.053  30.053  22.962  1.00 32.04           C
ATOM   1215  O   ARG A 155       5.934  31.154  22.449  1.00 37.17           O
ATOM   1216  CB  ARG A 155       5.449  29.531  25.336  1.00 32.00           C
ATOM   1217  CG  ARG A 155       5.739  30.914  25.880  1.00 33.58           C
ATOM   1218  CD  ARG A 155       6.542  30.909  27.160  1.00 36.40           C
ATOM   1219  NE  ARG A 155       7.989  30.715  27.026  1.00 35.06           N
ATOM   1220  CZ  ARG A 155       8.770  31.631  26.467  1.00 36.92           C
ATOM   1221  NH1 ARG A 155      10.088  31.516  26.342  1.00 37.10           N
ATOM   1222  NH2 ARG A 155       8.180  32.728  25.988  1.00 38.73           N
ATOM   1223  N   ARG A 156       7.107  29.296  22.745  1.00 33.92           N
ATOM   1224  CA  ARG A 156       8.222  29.652  21.912  1.00 36.83           C
ATOM   1225  C   ARG A 156       7.869  29.876  20.445  1.00 34.34           C
ATOM   1226  O   ARG A 156       8.296  30.870  19.838  1.00 30.71           O
ATOM   1227  CB  ARG A 156       9.297  28.562  22.051  1.00 42.60           C
ATOM   1228  CG  ARG A 156      10.115  28.750  23.326  1.00 46.84           C
ATOM   1229  CD  ARG A 156      11.231  27.720  23.353  1.00 54.10           C
ATOM   1230  NE  ARG A 156      11.949  27.755  24.621  1.00 61.01           N
ATOM   1231  CZ  ARG A 156      12.860  26.861  24.992  1.00 62.37           C
ATOM   1232  NH1 ARG A 156      13.170  25.852  24.201  1.00 59.47           N
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ATOM   1233  NH2 ARG A 156      13.461  26.975  26.169  1.00 66.20           N
ATOM   1234  N   PHE A 157       7.132  28.938  19.867  1.00 29.33           N
ATOM   1235  CA  PHE A 157       6.729  28.999  18.471  1.00 28.15           C
ATOM   1236  C   PHE A 157       5.845  30.231  18.280  1.00 27.68           C
ATOM   1237  O   PHE A 157       6.104  31.061  17.393  1.00 21.91           O
ATOM   1238  CB  PHE A 157       6.052  27.703  18.053  1.00 27.62           C
ATOM   1239  CG  PHE A 157       5.564  27.652  16.637  1.00 30.90           C
ATOM   1240  CD1 PHE A 157       6.345  27.072  15.637  1.00 27.43           C
ATOM   1241  CD2 PHE A 157       4.315  28.189  16.307  1.00 28.96           C
ATOM   1242  CE1 PHE A 157       5.886  27.040  14.335  1.00 23.00           C
ATOM   1243  CE2 PHE A 157       3.871  28.143  15.002  1.00 27.35           C
ATOM   1244  CZ  PHE A 157       4.655  27.571  14.017  1.00 23.01           C
ATOM   1245  N   GLU A 158       4.882  30.391  19.196  1.00 22.63           N
ATOM   1246  CA  GLU A 158       3.968  31.537  19.068  1.00 21.46           C
ATOM   1247  C   GLU A 158       4.590  32.901  19.234  1.00 22.01           C
ATOM   1248  O   GLU A 158       4.426  33.750  18.356  1.00 20.34           O
ATOM   1249  CB  GLU A 158       2.745  31.310  19.951  1.00 16.53           C
ATOM   1250  CG  GLU A 158       1.789  30.394  19.202  1.00 19.07           C
ATOM   1251  CD  GLU A 158       0.477  30.128  19.895  1.00 27.85           C
ATOM   1252  OE1 GLU A 158       0.118  30.842  20.861  1.00 34.46           O
ATOM   1253  OE2 GLU A 158      -0.204  29.178  19.452  1.00 27.61           O
ATOM   1254  N   LYS A 159       5.512  33.059  20.174  1.00 28.42           N
ATOM   1255  CA  LYS A 159       6.222  34.312  20.353  1.00 25.83           C
ATOM   1256  C   LYS A 159       6.999  34.702  19.103  1.00 27.70           C
ATOM   1257  O   LYS A 159       6.852  35.804  18.597  1.00 24.68           O
ATOM   1258  CB  LYS A 159       7.176  34.202  21.536  1.00 24.05           C
ATOM   1259  CG  LYS A 159       7.918  35.518  21.711  1.00 30.30           C
ATOM   1260  CD  LYS A 159       9.028  35.418  22.739  1.00 35.46           C
ATOM   1261  CE  LYS A 159       9.763  36.754  22.820  1.00 37.41           C
ATOM   1262  NZ  LYS A 159      10.140  37.008  24.240  1.00 40.84           N
ATOM   1263  N   TYR A 160       7.832  33.795  18.625  1.00 28.52           N
ATOM   1264  CA  TYR A 160       8.655  33.972  17.446  1.00 28.61           C
ATOM   1265  C   TYR A 160       7.916  33.877  16.130  1.00 30.18           C
ATOM   1266  O   TYR A 160       8.414  34.380  15.119  1.00 34.87           O
ATOM   1267  CB  TYR A 160       9.772  32.891  17.497  1.00 28.69           C
ATOM   1268  CG  TYR A 160      10.683  33.321  18.635  1.00 29.69           C
ATOM   1269  CD1 TYR A 160      10.564  32.857  19.936  1.00 25.25           C
ATOM   1270  CD2 TYR A 160      11.569  34.356  18.342  1.00 28.44           C
ATOM   1271  CE1 TYR A 160      11.348  33.378  20.938  1.00 21.72           C
ATOM   1272  CE2 TYR A 160      12.360  34.890  19.343  1.00 29.24           C
ATOM   1273  CZ  TYR A 160      12.254  34.367  20.617  1.00 28.18           C
ATOM   1274  OH  TYR A 160      13.113  34.927  21.531  1.00 33.44           O
ATOM   1275  N   GLY A 161       6.769  33.216  16.063  1.00 26.82           N
ATOM   1276  CA  GLY A 161       5.961  33.216  14.843  1.00 22.58           C
ATOM   1277  C   GLY A 161       5.434  34.644  14.676  1.00 22.78           C
ATOM   1278  O   GLY A 161       5.492  35.258  13.611  1.00 24.25           O
ATOM   1279  N   GLN A 162       4.931  35.215  15.771  1.00 24.01           N
ATOM   1280  CA  GLN A 162       4.426  36.579  15.670  1.00 26.52           C
ATOM   1281  C   GLN A 162       5.553  37.528  15.268  1.00 29.06           C
ATOM   1282  O   GLN A 162       5.462  38.286  14.304  1.00 33.14           O
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ATOM   1283  CB  GLN A 162       3.800  36.986  16.980  1.00 24.83           C
ATOM   1284  CG  GLN A 162       3.479  38.478  17.013  1.00 27.42           C
ATOM   1285  CD  GLN A 162       2.646  38.822  18.219  1.00 23.66           C
ATOM   1286  OE1 GLN A 162       2.366  39.988  18.439  1.00 29.78           O
ATOM   1287  NE2 GLN A 162       2.243  37.793  18.939  1.00 26.80           N
ATOM   1288  N   LEU A 163       6.676  37.437  15.950  1.00 27.94           N
ATOM   1289  CA  LEU A 163       7.846  38.239  15.680  1.00 27.89           C
ATOM   1290  C   LEU A 163       8.277  38.165  14.228  1.00 27.58           C
ATOM   1291  O   LEU A 163       8.287  39.234  13.608  1.00 27.30           O
ATOM   1292  CB  LEU A 163       8.961  37.866  16.656  1.00 33.47           C
ATOM   1293  CG  LEU A 163      10.206  38.755  16.556  1.00 40.18           C
ATOM   1294  CD1 LEU A 163       9.869  40.178  16.956  1.00 37.67           C
ATOM   1295  CD2 LEU A 163      11.344  38.191  17.396  1.00 40.96           C
ATOM   1296  N   PHE A 164       8.417  36.990  13.612  1.00 24.52           N
ATOM   1297  CA  PHE A 164       8.813  36.939  12.221  1.00 22.39           C
ATOM   1298  C   PHE A 164       7.800  37.578  11.289  1.00 23.60           C
ATOM   1299  O   PHE A 164       8.187  38.207  10.306  1.00 25.65           O
ATOM   1300  CB  PHE A 164       9.118  35.522  11.751  1.00 25.83           C
ATOM   1301  CG  PHE A 164      10.584  35.186  11.843  1.00 28.44           C
ATOM   1302  CD1 PHE A 164      11.155  34.853  13.063  1.00 26.68           C
ATOM   1303  CD2 PHE A 164      11.379  35.209  10.710  1.00 28.89           C
ATOM   1304  CE1 PHE A 164      12.488  34.549  13.173  1.00 26.84           C
ATOM   1305  CE2 PHE A 164      12.724  34.893  10.807  1.00 28.30           C
ATOM   1306  CZ  PHE A 164      13.273  34.565  12.034  1.00 29.71           C
ATOM   1307  N   MET A 165       6.516  37.410  11.534  1.00 24.13           N
ATOM   1308  CA  MET A 165       5.488  37.994  10.707  1.00 24.48           C
ATOM   1309  C   MET A 165       5.356  39.492  10.931  1.00 26.35           C
ATOM   1310  O   MET A 165       5.180  40.231   9.967  1.00 28.63           O
ATOM   1311  CB  MET A 165       4.124  37.325  10.945  1.00 21.14           C
ATOM   1312  CG  MET A 165       4.074  35.964  10.292  1.00 20.68           C
ATOM   1313  SD  MET A 165       2.561  35.081  10.472  1.00 22.91           S
ATOM   1314  CE  MET A 165       1.466  35.888   9.305  1.00 26.63           C
ATOM   1315  N   GLU A 166       5.431  39.948  12.173  1.00 30.43           N
ATOM   1316  CA  GLU A 166       5.180  41.356  12.437  1.00 32.57           C
ATOM   1317  C   GLU A 166       6.352  42.186  11.922  1.00 32.14           C
ATOM   1318  O   GLU A 166       6.156  43.258  11.326  1.00 27.00           O
ATOM   1319  CB  GLU A 166       4.870  41.587  13.905  1.00 38.15           C
ATOM   1320  CG  GLU A 166       4.140  42.897  14.183  1.00 51.21           C
ATOM   1321  CD  GLU A 166       3.769  43.084  15.643  1.00 58.44           C
ATOM   1322  OE1 GLU A 166       3.983  42.149  16.456  1.00 61.76           O
ATOM   1323  OE2 GLU A 166       3.245  44.152  16.030  1.00 61.26           O
ATOM   1324  N   GLU A 167       7.561  41.677  12.142  1.00 30.87           N
ATOM   1325  CA  GLU A 167       8.762  42.377  11.726  1.00 32.19           C
ATOM   1326  C   GLU A 167       8.913  42.469  10.213  1.00 30.35           C
ATOM   1327  O   GLU A 167       9.428  43.508   9.764  1.00 28.57           O
ATOM   1328  CB  GLU A 167      10.007  41.752  12.356  1.00 38.59           C
ATOM   1329  CG  GLU A 167      10.150  41.922  13.851  1.00 43.16           C
ATOM   1330  CD  GLU A 167      10.041  43.358  14.334  1.00 48.78           C
ATOM   1331  OE1 GLU A 167      10.652  44.238  13.683  1.00 49.25           O
ATOM   1332  OE2 GLU A 167       9.346  43.588  15.361  1.00 49.52           O
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ATOM   1333  N   THR A 168       8.541  41.426   9.462  1.00 22.54           N
ATOM   1334  CA  THR A 168       8.623  41.507   8.014  1.00 24.07           C
ATOM   1335  C   THR A 168       7.666  42.531   7.403  1.00 24.87           C
ATOM   1336  O   THR A 168       7.981  43.250   6.452  1.00 22.64           O
ATOM   1337  CB  THR A 168       8.318  40.149   7.351  1.00 27.99           C
ATOM   1338  OG1 THR A 168       9.092  39.157   8.036  1.00 29.76           O
ATOM   1339  CG2 THR A 168       8.664  40.168   5.871  1.00 22.83           C
ATOM   1340  N   LEU A 169       6.463  42.601   7.928  1.00 23.62           N
ATOM   1341  CA  LEU A 169       5.422  43.518   7.515  1.00 24.41           C
ATOM   1342  C   LEU A 169       5.797  44.956   7.836  1.00 27.38           C
ATOM   1343  O   LEU A 169       5.612  45.858   7.019  1.00 24.00           O
ATOM   1344  CB  LEU A 169       4.132  43.149   8.242  1.00 23.82           C
ATOM   1345  CG  LEU A 169       2.852  43.883   7.875  1.00 22.30           C
ATOM   1346  CD1 LEU A 169       2.639  43.871   6.378  1.00 22.38           C
ATOM   1347  CD2 LEU A 169       1.674  43.211   8.583  1.00 22.37           C
ATOM   1348  N   LYS A 170       6.467  45.175   8.974  1.00 29.18           N
ATOM   1349  CA  LYS A 170       6.901  46.532   9.301  1.00 30.67           C
ATOM   1350  C   LYS A 170       8.032  46.912   8.358  1.00 31.32           C
ATOM   1351  O   LYS A 170       8.169  48.075   7.997  1.00 29.80           O
ATOM   1352  CB  LYS A 170       7.334  46.689  10.756  1.00 37.73           C
ATOM   1353  CG  LYS A 170       6.175  46.487  11.715  1.00 50.43           C
ATOM   1354  CD  LYS A 170       6.541  46.595  13.187  1.00 56.21           C
ATOM   1355  CE  LYS A 170       5.235  46.645  13.990  1.00 61.25           C
ATOM   1356  NZ  LYS A 170       5.454  46.657  15.463  1.00 63.12           N
ATOM   1357  N   ALA A 171       8.824  45.928   7.931  1.00 31.46           N
ATOM   1358  CA  ALA A 171       9.926  46.246   7.019  1.00 33.04           C
ATOM   1359  C   ALA A 171       9.349  46.672   5.675  1.00 32.63           C
ATOM   1360  O   ALA A 171       9.756  47.698   5.129  1.00 33.77           O
ATOM   1361  CB  ALA A 171      10.906  45.101   6.915  1.00 29.04           C
ATOM   1362  N   ALA A 172       8.312  45.986   5.214  1.00 29.67           N
ATOM   1363  CA  ALA A 172       7.680  46.310   3.942  1.00 28.26           C
ATOM   1364  C   ALA A 172       7.158  47.741   3.979  1.00 28.30           C
ATOM   1365  O   ALA A 172       7.485  48.632   3.192  1.00 20.55           O
ATOM   1366  CB  ALA A 172       6.561  45.307   3.668  1.00 28.58           C
ATOM   1367  N   LYS A 173       6.415  48.007   5.070  1.00 28.94           N
ATOM   1368  CA  LYS A 173       5.808  49.312   5.280  1.00 26.13           C
ATOM   1369  C   LYS A 173       6.849  50.407   5.388  1.00 24.98           C
ATOM   1370  O   LYS A 173       6.642  51.510   4.880  1.00 27.98           O
ATOM   1371  CB  LYS A 173       4.857  49.269   6.474  1.00 28.15           C
ATOM   1372  CG  LYS A 173       3.644  48.365   6.239  1.00 29.54           C
ATOM   1373  CD  LYS A 173       2.794  48.318   7.494  1.00 30.13           C
ATOM   1374  CE  LYS A 173       1.829  49.494   7.510  1.00 38.87           C
ATOM   1375  NZ  LYS A 173       1.332  49.751   8.899  1.00 43.44           N
ATOM   1376  N   ARG A 174       7.959  50.158   6.047  1.00 25.76           N
ATOM   1377  CA  ARG A 174       9.040  51.135   6.196  1.00 30.25           C
ATOM   1378  C   ARG A 174       9.562  51.461   4.789  1.00 33.50           C
ATOM   1379  O   ARG A 174       9.523  52.603   4.360  1.00 33.05           O
ATOM   1380  CB  ARG A 174      10.150  50.642   6.993  0.00 56.44           C
ATOM   1381  CG  ARG A 174       9.732  50.415   8.434  0.00 77.59           C
ATOM   1382  CD  ARG A 174      10.942  50.164   9.315  0.00 91.43           C
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ATOM   1383  NE  ARG A 174      10.575  49.952  10.710  0.00103.19           N
ATOM   1384  CZ  ARG A 174      11.448  49.707  11.679  0.00109.86           C
ATOM   1385  NH1 ARG A 174      12.744  49.644  11.402  0.00113.07           N
ATOM   1386  NH2 ARG A 174      11.027  49.527  12.923  0.00112.84           N
ATOM   1387  N   MET A 175       9.932  50.433   4.042  1.00 32.32           N
ATOM   1388  CA  MET A 175      10.470  50.543   2.721  1.00 31.82           C
ATOM   1389  C   MET A 175       9.541  51.109   1.686  1.00 29.08           C
ATOM   1390  O   MET A 175       9.989  51.855   0.823  1.00 25.86           O
ATOM   1391  CB  MET A 175      10.988  49.145   2.326  1.00 38.13           C
ATOM   1392  CG  MET A 175      12.516  49.126   2.527  1.00 46.21           C
ATOM   1393  SD  MET A 175      13.186  47.549   1.942  1.00 50.32           S
ATOM   1394  CE  MET A 175      12.472  46.568   3.263  1.00 44.98           C
ATOM   1395  N   ARG A 176       8.280  50.719   1.652  1.00 28.97           N
ATOM   1396  CA  ARG A 176       7.311  51.196   0.646  1.00 30.36           C
ATOM   1397  C   ARG A 176       6.067  51.735   1.332  1.00 32.35           C
ATOM   1398  O   ARG A 176       5.028  51.056   1.400  1.00 33.41           O
ATOM   1399  CB  ARG A 176       6.911  49.988  -0.213  1.00 21.07           C
ATOM   1400  CG  ARG A 176       8.060  49.367  -0.981  1.00 24.83           C
ATOM   1401  CD  ARG A 176       8.612  50.370  -1.981  1.00 26.65           C
ATOM   1402  NE  ARG A 176       9.804  50.029  -2.689  1.00 30.61           N
ATOM   1403  CZ  ARG A 176      11.090  50.215  -2.438  1.00 27.52           C
ATOM   1404  NH1 ARG A 176      11.953  49.777  -3.350  1.00 23.72           N
ATOM   1405  NH2 ARG A 176      11.502  50.830  -1.340  1.00 24.09           N
ATOM   1406  N   PRO A 177       6.139  52.949   1.875  1.00 29.30           N
ATOM   1407  CA  PRO A 177       5.114  53.388   2.799  1.00 28.50           C
ATOM   1408  C   PRO A 177       3.791  53.690   2.162  1.00 28.16           C
ATOM   1409  O   PRO A 177       2.823  53.816   2.921  1.00 35.18           O
ATOM   1410  CB  PRO A 177       5.746  54.539   3.565  1.00 26.69           C
ATOM   1411  CG  PRO A 177       6.844  55.026   2.696  1.00 21.90           C
ATOM   1412  CD  PRO A 177       7.305  53.849   1.880  1.00 23.63           C
ATOM   1413  N   ALA A 178       3.703  53.773   0.845  1.00 24.66           N
ATOM   1414  CA  ALA A 178       2.403  54.075   0.243  1.00 21.81           C
ATOM   1415  C   ALA A 178       1.716  52.821  -0.268  1.00 20.56           C
ATOM   1416  O   ALA A 178       0.608  52.937  -0.768  1.00 21.73           O
ATOM   1417  CB  ALA A 178       2.543  55.133  -0.824  1.00 16.17           C
ATOM   1418  N   ALA A 179       2.331  51.654  -0.182  1.00 20.10           N
ATOM   1419  CA  ALA A 179       1.665  50.436  -0.613  1.00 22.07           C
ATOM   1420  C   ALA A 179       0.641  49.997   0.432  1.00 24.16           C
ATOM   1421  O   ALA A 179       0.654  50.342   1.626  1.00 17.34           O
ATOM   1422  CB  ALA A 179       2.679  49.303  -0.741  1.00 28.51           C
ATOM   1423  N   ASN A 180      -0.186  49.086  -0.060  1.00 26.91           N
ATOM   1424  CA  ASN A 180      -1.217  48.436   0.766  1.00 26.47           C
ATOM   1425  C   ASN A 180      -0.822  46.985   1.008  1.00 27.15           C
ATOM   1426  O   ASN A 180      -1.032  46.193   0.093  1.00 25.42           O
ATOM   1427  CB  ASN A 180      -2.517  48.500  -0.014  1.00 25.08           C
ATOM   1428  CG  ASN A 180      -3.325  49.706   0.367  1.00 24.95           C
ATOM   1429  OD1 ASN A 180      -3.968  50.343  -0.425  1.00 27.27           O
ATOM   1430  ND2 ASN A 180      -3.343  50.058   1.642  1.00 33.65           N
ATOM   1431  N   TRP A 181      -0.093  46.727   2.082  1.00 26.52           N
ATOM   1432  CA  TRP A 181       0.458  45.426   2.385  1.00 24.24           C
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ATOM   1433  C   TRP A 181      -0.487  44.490   3.112  1.00 22.16           C
ATOM   1434  O   TRP A 181      -1.317  44.855   3.950  1.00 21.99           O
ATOM   1435  CB  TRP A 181       1.726  45.612   3.242  1.00 25.09           C
ATOM   1436  CG  TRP A 181       2.843  46.188   2.425  1.00 24.07           C
ATOM   1437  CD1 TRP A 181       3.261  47.486   2.441  1.00 26.71           C
ATOM   1438  CD2 TRP A 181       3.680  45.497   1.491  1.00 20.04           C
ATOM   1439  NE1 TRP A 181       4.314  47.654   1.572  1.00 24.35           N
ATOM   1440  CE2 TRP A 181       4.576  46.458   0.964  1.00 23.08           C
ATOM   1441  CE3 TRP A 181       3.742  44.184   1.036  1.00 12.33           C
ATOM   1442  CZ2 TRP A 181       5.528  46.151  -0.011  1.00 23.36           C
ATOM   1443  CZ3 TRP A 181       4.725  43.902   0.099  1.00 19.08           C
ATOM   1444  CH2 TRP A 181       5.601  44.854  -0.435  1.00 15.70           C
ATOM   1445  N   GLY A 182      -0.355  43.216   2.760  1.00 18.91           N
ATOM   1446  CA  GLY A 182      -1.273  42.239   3.411  1.00 16.92           C
ATOM   1447  C   GLY A 182      -0.686  40.865   3.137  1.00 16.49           C
ATOM   1448  O   GLY A 182       0.107  40.718   2.195  1.00 17.26           O
ATOM   1449  N   TYR A 183      -0.980  39.928   4.036  1.00 16.48           N
ATOM   1450  CA  TYR A 183      -0.433  38.588   3.835  1.00 17.70           C
ATOM   1451  C   TYR A 183      -1.418  37.762   3.030  1.00 19.43           C
ATOM   1452  O   TYR A 183      -2.625  37.846   3.321  1.00 17.63           O
ATOM   1453  CB  TYR A 183      -0.135  37.987   5.177  1.00 20.05           C
ATOM   1454  CG  TYR A 183       1.187  38.293   5.823  1.00 22.71           C
ATOM   1455  CD1 TYR A 183       1.383  39.345   6.713  1.00 18.76           C
ATOM   1456  CD2 TYR A 183       2.258  37.447   5.516  1.00 22.95           C
ATOM   1457  CE1 TYR A 183       2.621  39.541   7.283  1.00 16.32           C
ATOM   1458  CE2 TYR A 183       3.505  37.656   6.080  1.00 18.67           C
ATOM   1459  CZ  TYR A 183       3.656  38.698   6.958  1.00 14.94           C
ATOM   1460  OH  TYR A 183       4.898  38.872   7.488  1.00 18.79           O
ATOM   1461  N   TYR A 184      -0.938  37.067   1.999  1.00 20.71           N
ATOM   1462  CA  TYR A 184      -1.863  36.206   1.233  1.00 21.95           C
ATOM   1463  C   TYR A 184      -2.578  35.246   2.178  1.00 19.84           C
ATOM   1464  O   TYR A 184      -1.919  34.716   3.063  1.00 21.06           O
ATOM   1465  CB  TYR A 184      -1.076  35.409   0.179  1.00 19.58           C
ATOM   1466  CG  TYR A 184      -1.855  34.242  -0.398  1.00 20.41           C
ATOM   1467  CD1 TYR A 184      -3.003  34.465  -1.156  1.00 20.44           C
ATOM   1468  CD2 TYR A 184      -1.490  32.922  -0.133  1.00 15.80           C
ATOM   1469  CE1 TYR A 184      -3.757  33.426  -1.679  1.00 14.81           C
ATOM   1470  CE2 TYR A 184      -2.215  31.876  -0.645  1.00 13.92           C
ATOM   1471  CZ  TYR A 184      -3.323  32.137  -1.433  1.00 16.33           C
ATOM   1472  OH  TYR A 184      -4.060  31.080  -1.925  1.00 20.71           O
ATOM   1473  N   ALA A 185      -3.855  34.995   2.050  1.00 20.23           N
ATOM   1474  CA  ALA A 185      -4.658  34.034   2.792  1.00 21.94           C
ATOM   1475  C   ALA A 185      -5.132  34.351   4.201  1.00 20.44           C
ATOM   1476  O   ALA A 185      -5.922  33.582   4.728  1.00 17.63           O
ATOM   1477  CB  ALA A 185      -3.983  32.657   2.794  1.00 16.93           C
ATOM   1478  N   TYR A 186      -4.788  35.435   4.859  1.00 23.21           N
ATOM   1479  CA  TYR A 186      -5.244  35.796   6.198  1.00 20.77           C
ATOM   1480  C   TYR A 186      -6.419  36.739   6.014  1.00 23.83           C
ATOM   1481  O   TYR A 186      -6.375  37.569   5.113  1.00 21.69           O
ATOM   1482  CB  TYR A 186      -4.108  36.394   7.041  1.00 18.88           C
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ATOM   1483  CG  TYR A 186      -3.098  35.341   7.463  1.00 17.43           C
ATOM   1484  CD1 TYR A 186      -2.089  34.928   6.585  1.00 17.62           C
ATOM   1485  CD2 TYR A 186      -3.167  34.745   8.711  1.00 16.11           C
ATOM   1486  CE1 TYR A 186      -1.170  33.950   6.922  1.00 16.57           C
ATOM   1487  CE2 TYR A 186      -2.250  33.762   9.073  1.00 19.81           C
ATOM   1488  CZ  TYR A 186      -1.255  33.383   8.182  1.00 23.34           C
ATOM   1489  OH  TYR A 186      -0.339  32.409   8.557  1.00 26.12           O
ATOM   1490  N   PRO A 187      -7.485  36.535   6.776  1.00 28.99           N
ATOM   1491  CA  PRO A 187      -7.545  35.495   7.800  1.00 28.01           C
ATOM   1492  C   PRO A 187      -8.050  34.159   7.284  1.00 23.04           C
ATOM   1493  O   PRO A 187      -8.895  34.117   6.403  1.00 20.73           O
ATOM   1494  CB  PRO A 187      -8.573  36.078   8.786  1.00 27.75           C
ATOM   1495  CG  PRO A 187      -9.567  36.716   7.859  1.00 29.95           C
ATOM   1496  CD  PRO A 187      -8.763  37.288   6.711  1.00 28.22           C
ATOM   1497  N   TYR A 188      -7.641  33.071   7.877  1.00 21.23           N
ATOM   1498  CA  TYR A 188      -8.157  31.751   7.636  1.00 21.97           C
ATOM   1499  C   TYR A 188      -9.514  31.588   8.294  1.00 22.00           C
ATOM   1500  O   TYR A 188      -9.890  32.299   9.206  1.00 24.46           O
ATOM   1501  CB  TYR A 188      -7.170  30.760   8.285  1.00 27.38           C
ATOM   1502  CG  TYR A 188      -5.977  30.571   7.363  1.00 28.41           C
ATOM   1503  CD1 TYR A 188      -4.782  31.237   7.592  1.00 25.96           C
ATOM   1504  CD2 TYR A 188      -6.101  29.744   6.245  1.00 25.84           C
ATOM   1505  CE1 TYR A 188      -3.717  31.064   6.723  1.00 24.92           C
ATOM   1506  CE2 TYR A 188      -5.028  29.555   5.400  1.00 23.68           C
ATOM   1507  CZ  TYR A 188      -3.846  30.221   5.636  1.00 23.65           C
ATOM   1508  OH  TYR A 188      -2.789  30.051   4.776  1.00 22.12           O
ATOM   1509  N   CYS A 189     -10.294  30.641   7.840  1.00 25.92           N
ATOM   1510  CA  CYS A 189     -11.658  30.338   8.238  1.00 23.60           C
ATOM   1511  C   CYS A 189     -11.850  28.832   8.309  1.00 23.61           C
ATOM   1512  O   CYS A 189     -12.383  28.273   9.281  1.00 26.23           O
ATOM   1513  CB  CYS A 189     -12.571  31.051   7.254  1.00 21.82           C
ATOM   1514  SG  CYS A 189     -14.315  30.573   7.170  1.00 18.48           S
ATOM   1515  N   TYR A 190     -11.232  28.053   7.434  1.00 22.54           N
ATOM   1516  CA  TYR A 190     -11.302  26.594   7.421  1.00 22.82           C
ATOM   1517  C   TYR A 190     -12.739  26.102   7.444  1.00 24.59           C
ATOM   1518  O   TYR A 190     -13.029  25.209   8.222  1.00 30.32           O
ATOM   1519  CB  TYR A 190     -10.581  25.898   8.590  1.00 18.92           C
ATOM   1520  CG  TYR A 190      -9.197  26.438   8.874  1.00 18.93           C
ATOM   1521  CD1 TYR A 190      -8.973  27.287   9.951  1.00 16.41           C
ATOM   1522  CD2 TYR A 190      -8.147  26.190   7.997  1.00 13.03           C
ATOM   1523  CE1 TYR A 190      -7.717  27.835  10.161  1.00 18.18           C
ATOM   1524  CE2 TYR A 190      -6.899  26.727   8.207  1.00 16.72           C
ATOM   1525  CZ  TYR A 190      -6.678  27.551   9.293  1.00 21.15           C
ATOM   1526  OH  TYR A 190      -5.410  28.053   9.509  1.00 21.07           O
ATOM   1527  N   ASN A 191     -13.636  26.634   6.647  1.00 28.03           N
ATOM   1528  CA  ASN A 191     -15.005  26.233   6.434  1.00 27.83           C
ATOM   1529  C   ASN A 191     -15.009  25.195   5.315  1.00 34.70           C
ATOM   1530  O   ASN A 191     -14.086  25.260   4.502  1.00 34.65           O
ATOM   1531  CB  ASN A 191     -15.884  27.405   6.042  1.00 24.96           C
ATOM   1532  CG  ASN A 191     -15.502  28.159   4.784  1.00 27.80           C
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ATOM   1533  OD1 ASN A 191     -14.392  28.081   4.245  1.00 28.12           O
ATOM   1534  ND2 ASN A 191     -16.444  28.952   4.269  1.00 21.51           N
ATOM   1535  N   LEU A 192     -15.918  24.228   5.300  1.00 43.35           N
ATOM   1536  CA  LEU A 192     -15.944  23.164   4.280  1.00 46.14           C
ATOM   1537  C   LEU A 192     -14.584  22.471   4.257  1.00 49.84           C
ATOM   1538  O   LEU A 192     -13.863  22.336   3.272  1.00 47.74           O
ATOM   1539  CB  LEU A 192     -16.333  23.733   2.915  1.00 43.51           C
ATOM   1540  CG  LEU A 192     -17.714  24.383   2.827  1.00 42.49           C
ATOM   1541  CD1 LEU A 192     -17.856  25.270   1.603  1.00 42.64           C
ATOM   1542  CD2 LEU A 192     -18.807  23.325   2.787  1.00 40.23           C
ATOM   1543  N   THR A 193     -14.212  22.016   5.451  1.00 55.39           N
ATOM   1544  CA  THR A 193     -12.905  21.365   5.674  1.00 59.82           C
ATOM   1545  C   THR A 193     -13.181  20.193   6.586  1.00 69.80           C
ATOM   1546  O   THR A 193     -14.325  20.012   7.016  1.00 66.18           O
ATOM   1547  CB  THR A 193     -12.044  22.511   6.248  1.00 55.05           C
ATOM   1548  OG1 THR A 193     -10.845  22.691   5.486  1.00 49.87           O
ATOM   1549  CG2 THR A 193     -11.647  22.382   7.701  1.00 53.30           C
ATOM   1550  N   PRO A 194     -12.187  19.367   6.874  1.00 80.16           N
ATOM   1551  CA  PRO A 194     -12.340  18.234   7.774  1.00 85.84           C
ATOM   1552  C   PRO A 194     -12.418  18.740   9.209  1.00 90.77           C
ATOM   1553  O   PRO A 194     -13.162  18.209  10.034  1.00 93.10           O
ATOM   1554  CB  PRO A 194     -11.079  17.421   7.531  1.00 84.90           C
ATOM   1555  CG  PRO A 194     -10.056  18.461   7.211  1.00 84.08           C
ATOM   1556  CD  PRO A 194     -10.791  19.482   6.384  1.00 82.28           C
ATOM   1557  N   ASN A 195     -11.678  19.813   9.504  1.00 94.13           N
ATOM   1558  CA  ASN A 195     -11.741  20.447  10.814  1.00 96.07           C
ATOM   1559  C   ASN A 195     -13.127  21.068  10.999  1.00 97.08           C
ATOM   1560  O   ASN A 195     -13.753  20.823  12.031  1.00 98.69           O
ATOM   1561  CB  ASN A 195     -10.686  21.517  11.040  1.00 95.91           C
ATOM   1562  CG  ASN A 195      -9.263  21.112  10.751  1.00 95.48           C
ATOM   1563  OD1 ASN A 195      -8.650  20.278  11.412  1.00 94.31           O
ATOM   1564  ND2 ASN A 195      -8.712  21.739   9.717  1.00 97.14           N
ATOM   1565  N   GLN A 196     -13.583  21.838  10.017  1.00 95.91           N
ATOM   1566  CA  GLN A 196     -14.900  22.471  10.084  1.00 94.44           C
ATOM   1567  C   GLN A 196     -15.716  22.211   8.826  1.00 92.10           C
ATOM   1568  O   GLN A 196     -15.586  22.873   7.795  1.00 93.96           O
ATOM   1569  CB  GLN A 196     -14.746  23.972  10.325  1.00 93.56           C
ATOM   1570  CG  GLN A 196     -16.043  24.750  10.211  1.00 92.80           C
ATOM   1571  CD  GLN A 196     -16.975  24.535  11.379  1.00 91.86           C
ATOM   1572  OE1 GLN A 196     -16.708  23.716  12.257  1.00 92.94           O
ATOM   1573  NE2 GLN A 196     -18.078  25.269  11.412  1.00 90.78           N
ATOM   1574  N   PRO A 197     -16.512  21.140   8.839  1.00 87.28           N
ATOM   1575  CA  PRO A 197     -17.202  20.622   7.677  1.00 82.99           C
ATOM   1576  C   PRO A 197     -18.500  21.271   7.239  1.00 75.17           C
ATOM   1577  O   PRO A 197     -19.315  20.679   6.524  1.00 75.82           O
ATOM   1578  CB  PRO A 197     -17.410  19.140   7.991  1.00 85.43           C
ATOM   1579  CG  PRO A 197     -16.684  18.869   9.260  1.00 88.07           C
ATOM   1580  CD  PRO A 197     -16.619  20.195   9.985  1.00 87.42           C
ATOM   1581  N   SER A 198     -18.747  22.507   7.614  1.00 64.32           N
ATOM   1582  CA  SER A 198     -19.908  23.266   7.199  1.00 54.32           C
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ATOM   1583  C   SER A 198     -19.368  24.528   6.525  1.00 47.87           C
ATOM   1584  O   SER A 198     -18.165  24.775   6.543  1.00 44.36           O
ATOM   1585  CB  SER A 198     -20.805  23.654   8.370  1.00 55.61           C
ATOM   1586  OG  SER A 198     -20.132  24.360   9.388  1.00 46.46           O
ATOM   1587  N   ALA A 199     -20.247  25.375   6.029  1.00 41.77           N
ATOM   1588  CA  ALA A 199     -19.857  26.637   5.438  1.00 39.40           C
ATOM   1589  C   ALA A 199     -19.505  27.697   6.473  1.00 39.07           C
ATOM   1590  O   ALA A 199     -19.310  28.850   6.088  1.00 39.28           O
ATOM   1591  CB  ALA A 199     -21.019  27.147   4.600  1.00 37.53           C
ATOM   1592  N   GLN A 200     -19.568  27.442   7.763  1.00 41.12           N
ATOM   1593  CA  GLN A 200     -19.237  28.423   8.792  1.00 42.98           C
ATOM   1594  C   GLN A 200     -17.772  28.278   9.154  1.00 37.81           C
ATOM   1595  O   GLN A 200     -17.246  27.171   9.029  1.00 38.24           O
ATOM   1596  CB  GLN A 200     -20.148  28.211  10.009  1.00 51.83           C
ATOM   1597  CG  GLN A 200     -21.633  28.212   9.667  1.00 63.80           C
ATOM   1598  CD  GLN A 200     -22.555  27.444  10.586  1.00 70.66           C
ATOM   1599  OE1 GLN A 200     -22.543  27.538  11.821  1.00 73.20           O
ATOM   1600  NE2 GLN A 200     -23.454  26.637  10.005  1.00 72.70           N
ATOM   1601  N   CYS A 201     -17.065  29.330   9.538  1.00 31.89           N
ATOM   1602  CA  CYS A 201     -15.658  29.185   9.921  1.00 27.97           C
ATOM   1603  C   CYS A 201     -15.537  28.361  11.198  1.00 25.74           C
ATOM   1604  O   CYS A 201     -16.443  28.327  12.029  1.00 22.17           O
ATOM   1605  CB  CYS A 201     -14.984  30.552  10.095  1.00 24.48           C
ATOM   1606  SG  CYS A 201     -15.126  31.651   8.637  1.00 19.50           S
ATOM   1607  N   GLU A 202     -14.434  27.654  11.388  1.00 27.03           N
ATOM   1608  CA  GLU A 202     -14.276  26.871  12.624  1.00 28.36           C
ATOM   1609  C   GLU A 202     -14.244  27.870  13.771  1.00 28.00           C
ATOM   1610  O   GLU A 202     -13.491  28.848  13.740  1.00 30.93           O
ATOM   1611  CB  GLU A 202     -13.034  25.994  12.545  1.00 28.63           C
ATOM   1612  CG  GLU A 202     -12.740  25.139  13.747  1.00 32.46           C
ATOM   1613  CD  GLU A 202     -11.312  25.204  14.242  1.00 38.17           C
ATOM   1614  OE1 GLU A 202     -10.651  26.255  14.055  1.00 43.72           O
ATOM   1615  OE2 GLU A 202     -10.782  24.238  14.842  1.00 39.56           O
ATOM   1616  N   ALA A 203     -15.061  27.691  14.789  1.00 28.47           N
ATOM   1617  CA  ALA A 203     -15.168  28.591  15.927  1.00 27.33           C
ATOM   1618  C   ALA A 203     -13.901  28.974  16.674  1.00 24.42           C
ATOM   1619  O   ALA A 203     -13.811  30.146  17.085  1.00 25.53           O
ATOM   1620  CB  ALA A 203     -16.169  28.001  16.918  1.00 21.11           C
ATOM   1621  N   THR A 204     -12.918  28.105  16.861  1.00 23.40           N
ATOM   1622  CA  THR A 204     -11.701  28.478  17.568  1.00 25.25           C
ATOM   1623  C   THR A 204     -10.835  29.382  16.691  1.00 31.08           C
ATOM   1624  O   THR A 204     -10.113  30.248  17.204  1.00 30.93           O
ATOM   1625  CB  THR A 204     -10.897  27.259  18.029  1.00 24.66           C
ATOM   1626  OG1 THR A 204     -11.715  26.475  18.884  1.00 26.29           O
ATOM   1627  CG2 THR A 204      -9.665  27.654  18.849  1.00 25.40           C
ATOM   1628  N   THR A 205     -10.914  29.153  15.366  1.00 29.42           N
ATOM   1629  CA  THR A 205     -10.219  30.037  14.442  1.00 28.62           C
ATOM   1630  C   THR A 205     -10.722  31.460  14.611  1.00 27.35           C
ATOM   1631  O   THR A 205      -9.932  32.399  14.724  1.00 25.92           O
ATOM   1632  CB  THR A 205     -10.207  29.510  12.998  1.00 26.29           C
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ATOM   1633  OG1 THR A 205      -9.298  28.389  13.031  1.00 23.39           O
ATOM   1634  CG2 THR A 205      -9.628  30.507  11.988  1.00 17.33           C
ATOM   1635  N   MET A 206     -12.029  31.656  14.710  1.00 29.40           N
ATOM   1636  CA  MET A 206     -12.567  32.988  15.001  1.00 28.89           C
ATOM   1637  C   MET A 206     -11.962  33.578  16.266  1.00 29.02           C
ATOM   1638  O   MET A 206     -11.319  34.643  16.204  1.00 26.38           O
ATOM   1639  CB  MET A 206     -14.085  32.861  15.011  1.00 27.79           C
ATOM   1640  CG  MET A 206     -14.604  32.545  13.609  1.00 32.87           C
ATOM   1641  SD  MET A 206     -16.407  32.498  13.527  1.00 26.55           S
ATOM   1642  CE  MET A 206     -16.681  34.267  13.439  1.00 37.21           C
ATOM   1643  N   GLN A 207     -11.961  32.901  17.418  1.00 28.01           N
ATOM   1644  CA  GLN A 207     -11.301  33.460  18.600  1.00 30.59           C
ATOM   1645  C   GLN A 207      -9.814  33.702  18.332  1.00 29.28           C
ATOM   1646  O   GLN A 207      -9.242  34.698  18.780  1.00 27.22           O
ATOM   1647  CB  GLN A 207     -11.470  32.609  19.842  1.00 32.68           C
ATOM   1648  CG  GLN A 207     -12.893  32.277  20.250  1.00 46.96           C
ATOM   1649  CD  GLN A 207     -12.932  31.115  21.237  1.00 55.16           C
ATOM   1650  OE1 GLN A 207     -13.829  30.259  21.189  1.00 57.68           O
ATOM   1651  NE2 GLN A 207     -11.923  31.032  22.111  1.00 54.48           N
ATOM   1652  N   GLU A 208      -9.141  32.828  17.595  1.00 26.76           N
ATOM   1653  CA  GLU A 208      -7.729  33.037  17.293  1.00 27.37           C
ATOM   1654  C   GLU A 208      -7.527  34.252  16.397  1.00 24.38           C
ATOM   1655  O   GLU A 208      -6.599  35.037  16.595  1.00 25.90           O
ATOM   1656  CB  GLU A 208      -7.135  31.742  16.718  1.00 24.60           C
ATOM   1657  CG  GLU A 208      -6.786  30.778  17.837  1.00 18.28           C
ATOM   1658  CD  GLU A 208      -6.763  29.341  17.417  1.00 24.31           C
ATOM   1659  OE1 GLU A 208      -7.011  29.007  16.245  1.00 26.14           O
ATOM   1660  OE2 GLU A 208      -6.525  28.478  18.290  1.00 30.05           O
ATOM   1661  N   ASN A 209      -8.446  34.541  15.493  1.00 20.27           N
ATOM   1662  CA  ASN A 209      -8.335  35.721  14.658  1.00 20.98           C
ATOM   1663  C   ASN A 209      -8.508  36.980  15.489  1.00 20.20           C
ATOM   1664  O   ASN A 209      -7.716  37.890  15.255  1.00 16.10           O
ATOM   1665  CB  ASN A 209      -9.225  35.728  13.427  1.00 19.94           C
ATOM   1666  CG  ASN A 209      -8.991  34.670  12.383  1.00 20.29           C
ATOM   1667  OD1 ASN A 209      -7.909  34.076  12.266  1.00 22.96           O
ATOM   1668  ND2 ASN A 209     -10.010  34.388  11.566  1.00 16.07           N
ATOM   1669  N   ASP A 210      -9.337  37.016  16.527  1.00 27.44           N
ATOM   1670  CA  ASP A 210      -9.467  38.196  17.379  1.00 27.39           C
ATOM   1671  C   ASP A 210      -8.202  38.415  18.205  1.00 26.29           C
ATOM   1672  O   ASP A 210      -7.816  39.557  18.478  1.00 27.77           O
ATOM   1673  CB  ASP A 210     -10.637  38.132  18.343  1.00 27.87           C
ATOM   1674  CG  ASP A 210     -11.990  38.022  17.692  1.00 29.70           C
ATOM   1675  OD1 ASP A 210     -12.196  38.590  16.598  1.00 33.57           O
ATOM   1676  OD2 ASP A 210     -12.854  37.360  18.296  1.00 32.10           O
ATOM   1677  N   LYS A 211      -7.539  37.316  18.534  1.00 22.37           N
ATOM   1678  CA  LYS A 211      -6.279  37.379  19.262  1.00 27.72           C
ATOM   1679  C   LYS A 211      -5.142  37.848  18.389  1.00 24.45           C
ATOM   1680  O   LYS A 211      -4.088  38.231  18.866  1.00 30.16           O
ATOM   1681  CB  LYS A 211      -6.038  36.004  19.889  1.00 37.66           C
ATOM   1682  CG  LYS A 211      -4.813  35.783  20.719  1.00 48.04           C
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ATOM   1683  CD  LYS A 211      -4.550  34.347  21.134  1.00 60.15           C
ATOM   1684  CE  LYS A 211      -3.467  33.673  20.295  1.00 67.24           C
ATOM   1685  NZ  LYS A 211      -3.073  32.314  20.798  1.00 69.88           N
ATOM   1686  N   MET A 212      -5.234  37.829  17.077  1.00 26.29           N
ATOM   1687  CA  MET A 212      -4.280  38.251  16.102  1.00 23.92           C
ATOM   1688  C   MET A 212      -4.510  39.670  15.610  1.00 26.28           C
ATOM   1689  O   MET A 212      -4.111  40.063  14.506  1.00 31.16           O
ATOM   1690  CB  MET A 212      -4.185  37.300  14.905  1.00 23.39           C
ATOM   1691  CG  MET A 212      -3.336  36.067  15.191  1.00 23.84           C
ATOM   1692  SD  MET A 212      -3.491  34.783  13.941  1.00 17.63           S
ATOM   1693  CE  MET A 212      -2.874  35.593  12.470  1.00 19.59           C
ATOM   1694  N   SER A 213      -4.954  40.560  16.471  1.00 26.76           N
ATOM   1695  CA  SER A 213      -5.031  41.983  16.211  1.00 29.11           C
ATOM   1696  C   SER A 213      -3.696  42.597  15.825  1.00 27.73           C
ATOM   1697  O   SER A 213      -3.687  43.595  15.114  1.00 24.50           O
ATOM   1698  CB  SER A 213      -5.538  42.700  17.489  1.00 32.03           C
ATOM   1699  OG  SER A 213      -6.949  42.455  17.351  1.00 40.53           O
ATOM   1700  N   TRP A 214      -2.585  42.061  16.331  1.00 24.91           N
ATOM   1701  CA  TRP A 214      -1.289  42.601  15.977  1.00 24.64           C
ATOM   1702  C   TRP A 214      -1.088  42.498  14.474  1.00 29.10           C
ATOM   1703  O   TRP A 214      -0.661  43.516  13.933  1.00 30.54           O
ATOM   1704  CB  TRP A 214      -0.187  41.923  16.793  1.00 28.16           C
ATOM   1705  CG  TRP A 214      -0.219  40.427  16.709  1.00 30.62           C
ATOM   1706  CD1 TRP A 214      -0.849  39.560  17.541  1.00 26.67           C
ATOM   1707  CD2 TRP A 214       0.383  39.640  15.662  1.00 30.30           C
ATOM   1708  NE1 TRP A 214      -0.642  38.274  17.102  1.00 29.05           N
ATOM   1709  CE2 TRP A 214       0.078  38.302  15.930  1.00 30.24           C
ATOM   1710  CE3 TRP A 214       1.147  39.938  14.536  1.00 32.32           C
ATOM   1711  CZ2 TRP A 214       0.518  37.269  15.102  1.00 32.06           C
ATOM   1712  CZ3 TRP A 214       1.574  38.918  13.704  1.00 30.99           C
ATOM   1713  CH2 TRP A 214       1.273  37.588  14.010  1.00 29.24           C
ATOM   1714  N   LEU A 215      -1.528  41.440  13.782  1.00 27.45           N
ATOM   1715  CA  LEU A 215      -1.398  41.361  12.338  1.00 27.79           C
ATOM   1716  C   LEU A 215      -2.409  42.219  11.582  1.00 28.05           C
ATOM   1717  O   LEU A 215      -2.038  43.108  10.815  1.00 25.24           O
ATOM   1718  CB  LEU A 215      -1.522  39.912  11.891  1.00 32.06           C
ATOM   1719  CG  LEU A 215      -1.297  39.569  10.419  1.00 32.23           C
ATOM   1720  CD1 LEU A 215       0.186  39.737  10.143  1.00 36.15           C
ATOM   1721  CD2 LEU A 215      -1.765  38.156  10.111  1.00 31.40           C
ATOM   1722  N   PHE A 216      -3.702  42.036  11.801  1.00 26.30           N
ATOM   1723  CA  PHE A 216      -4.747  42.768  11.117  1.00 28.13           C
ATOM   1724  C   PHE A 216      -4.698  44.262  11.355  1.00 31.76           C
ATOM   1725  O   PHE A 216      -5.006  44.996  10.404  1.00 34.44           O
ATOM   1726  CB  PHE A 216      -6.143  42.194  11.429  1.00 24.64           C
ATOM   1727  CG  PHE A 216      -6.148  40.727  11.095  1.00 26.99           C
ATOM   1728  CD1 PHE A 216      -6.289  39.783  12.115  1.00 25.49           C
ATOM   1729  CD2 PHE A 216      -5.848  40.288   9.808  1.00 26.24           C
ATOM   1730  CE1 PHE A 216      -6.237  38.430  11.805  1.00 22.48           C
ATOM   1731  CE2 PHE A 216      -5.748  38.934   9.525  1.00 20.91           C
ATOM   1732  CZ  PHE A 216      -5.963  38.009  10.520  1.00 17.73           C
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ATOM   1733  N   GLU A 217      -4.275  44.725  12.533  1.00 31.37           N
ATOM   1734  CA  GLU A 217      -4.109  46.156  12.757  1.00 27.64           C
ATOM   1735  C   GLU A 217      -2.982  46.696  11.887  1.00 27.94           C
ATOM   1736  O   GLU A 217      -3.247  47.770  11.330  1.00 31.93           O
ATOM   1737  CB  GLU A 217      -3.887  46.566  14.208  1.00 28.62           C
ATOM   1738  CG  GLU A 217      -5.113  46.716  15.102  1.00 26.34           C
ATOM   1739  CD  GLU A 217      -6.080  47.827  14.719  1.00 28.15           C
ATOM   1740  OE1 GLU A 217      -7.131  47.941  15.407  1.00 24.10           O
ATOM   1741  OE2 GLU A 217      -5.828  48.593  13.744  1.00 24.42           O
ATOM   1742  N   SER A 218      -1.856  46.005  11.714  1.00 22.87           N
ATOM   1743  CA  SER A 218      -0.822  46.598  10.873  1.00 26.28           C
ATOM   1744  C   SER A 218      -0.964  46.406   9.376  1.00 28.06           C
ATOM   1745  O   SER A 218      -0.292  47.140   8.632  1.00 28.55           O
ATOM   1746  CB  SER A 218       0.585  46.178  11.316  1.00 25.73           C
ATOM   1747  OG  SER A 218       0.460  44.936  11.968  1.00 36.41           O
ATOM   1748  N   GLU A 219      -1.792  45.498   8.903  1.00 29.29           N
ATOM   1749  CA  GLU A 219      -2.007  45.340   7.475  1.00 29.89           C
ATOM   1750  C   GLU A 219      -3.032  46.393   6.988  1.00 27.63           C
ATOM   1751  O   GLU A 219      -3.826  46.912   7.765  1.00 27.97           O
ATOM   1752  CB  GLU A 219      -2.690  44.025   7.099  1.00 27.62           C
ATOM   1753  CG  GLU A 219      -2.019  42.768   7.503  1.00 26.52           C
ATOM   1754  CD  GLU A 219      -2.534  41.555   6.769  1.00 28.29           C
ATOM   1755  OE1 GLU A 219      -3.753  41.316   6.654  1.00 28.32           O
ATOM   1756  OE2 GLU A 219      -1.615  40.830   6.326  1.00 31.86           O
ATOM   1757  N   ASP A 220      -2.981  46.614   5.697  1.00 21.67           N
ATOM   1758  CA  ASP A 220      -3.861  47.517   5.014  1.00 25.33           C
ATOM   1759  C   ASP A 220      -4.981  46.727   4.314  1.00 24.96           C
ATOM   1760  O   ASP A 220      -6.078  47.236   4.056  1.00 21.20           O
ATOM   1761  CB  ASP A 220      -3.090  48.272   3.936  1.00 29.39           C
ATOM   1762  CG  ASP A 220      -2.044  49.254   4.413  1.00 34.52           C
ATOM   1763  OD1 ASP A 220      -2.478  50.214   5.094  1.00 31.73           O
ATOM   1764  OD2 ASP A 220      -0.836  49.043   4.110  1.00 34.16           O
ATOM   1765  N   VAL A 221      -4.665  45.475   3.992  1.00 22.66           N
ATOM   1766  CA  VAL A 221      -5.621  44.682   3.221  1.00 27.40           C
ATOM   1767  C   VAL A 221      -5.731  43.242   3.664  1.00 27.80           C
ATOM   1768  O   VAL A 221      -4.733  42.591   4.001  1.00 28.40           O
ATOM   1769  CB  VAL A 221      -5.202  44.905   1.746  1.00 30.25           C
ATOM   1770  CG1 VAL A 221      -3.768  44.476   1.457  1.00 26.67           C
ATOM   1771  CG2 VAL A 221      -6.111  44.142   0.799  1.00 33.28           C
ATOM   1772  N   LEU A 222      -6.961  42.710   3.799  1.00 27.91           N
ATOM   1773  CA  LEU A 222      -7.101  41.298   4.219  1.00 26.15           C
ATOM   1774  C   LEU A 222      -7.369  40.527   2.931  1.00 26.47           C
ATOM   1775  O   LEU A 222      -8.100  40.940   2.029  1.00 25.03           O
ATOM   1776  CB  LEU A 222      -8.084  41.047   5.329  1.00 24.12           C
ATOM   1777  CG  LEU A 222      -8.332  42.200   6.301  1.00 25.86           C
ATOM   1778  CD1 LEU A 222      -9.423  41.843   7.301  1.00 28.52           C
ATOM   1779  CD2 LEU A 222      -7.091  42.633   7.035  1.00 21.44           C
ATOM   1780  N   LEU A 223      -6.714  39.377   2.810  1.00 24.93           N
ATOM   1781  CA  LEU A 223      -6.638  38.598   1.595  1.00 24.38           C
ATOM   1782  C   LEU A 223      -6.970  37.121   1.698  1.00 24.59           C
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ATOM   1783  O   LEU A 223      -6.154  36.237   1.418  1.00 23.43           O
ATOM   1784  CB  LEU A 223      -5.168  38.783   1.118  1.00 22.74           C
ATOM   1785  CG  LEU A 223      -4.632  40.191   0.842  1.00 20.16           C
ATOM   1786  CD1 LEU A 223      -3.134  40.200   0.594  1.00 20.20           C
ATOM   1787  CD2 LEU A 223      -5.311  40.794  -0.376  1.00 20.42           C
ATOM   1788  N   PRO A 224      -8.217  36.800   2.049  1.00 22.37           N
ATOM   1789  CA  PRO A 224      -8.671  35.428   2.167  1.00 18.41           C
ATOM   1790  C   PRO A 224      -8.681  34.729   0.821  1.00 18.65           C
ATOM   1791  O   PRO A 224      -9.058  35.287  -0.212  1.00 21.43           O
ATOM   1792  CB  PRO A 224     -10.050  35.571   2.786  1.00 21.16           C
ATOM   1793  CG  PRO A 224     -10.531  36.933   2.421  1.00 23.38           C
ATOM   1794  CD  PRO A 224      -9.300  37.779   2.312  1.00 19.86           C
ATOM   1795  N   SER A 225      -8.219  33.490   0.764  1.00 18.79           N
ATOM   1796  CA  SER A 225      -8.142  32.722  -0.464  1.00 18.04           C
ATOM   1797  C   SER A 225      -9.480  32.051  -0.669  1.00 17.68           C
ATOM   1798  O   SER A 225     -10.041  31.502   0.282  1.00 23.88           O
ATOM   1799  CB  SER A 225      -7.053  31.664  -0.423  1.00 18.23           C
ATOM   1800  OG  SER A 225      -7.199  30.862  -1.591  1.00 23.30           O
ATOM   1801  N   VAL A 226     -10.111  32.273  -1.808  1.00 17.52           N
ATOM   1802  CA  VAL A 226     -11.465  31.733  -1.965  1.00 16.49           C
ATOM   1803  C   VAL A 226     -11.525  30.817  -3.175  1.00 15.53           C
ATOM   1804  O   VAL A 226     -12.521  30.826  -3.879  1.00 12.07           O
ATOM   1805  CB  VAL A 226     -12.536  32.819  -2.035  1.00 16.07           C
ATOM   1806  CG1 VAL A 226     -12.625  33.558  -0.703  1.00 10.85           C
ATOM   1807  CG2 VAL A 226     -12.258  33.783  -3.190  1.00 13.76           C
ATOM   1808  N   TYR A 227     -10.468  30.048  -3.352  1.00 14.57           N
ATOM   1809  CA  TYR A 227     -10.375  29.103  -4.466  1.00 21.70           C
ATOM   1810  C   TYR A 227     -11.510  28.110  -4.415  1.00 22.57           C
ATOM   1811  O   TYR A 227     -11.726  27.686  -3.272  1.00 29.80           O
ATOM   1812  CB  TYR A 227      -8.972  28.432  -4.440  1.00 17.99           C
ATOM   1813  CG  TYR A 227      -7.826  29.433  -4.612  1.00 17.21           C
ATOM   1814  CD1 TYR A 227      -8.094  30.766  -4.935  1.00 14.20           C
ATOM   1815  CD2 TYR A 227      -6.496  29.070  -4.460  1.00 14.83           C
ATOM   1816  CE1 TYR A 227      -7.115  31.705  -5.103  1.00 15.11           C
ATOM   1817  CE2 TYR A 227      -5.475  30.004  -4.627  1.00 18.30           C
ATOM   1818  CZ  TYR A 227      -5.789  31.307  -4.952  1.00 17.81           C
ATOM   1819  OH  TYR A 227      -4.838  32.271  -5.144  1.00 12.51           O
ATOM   1820  N   LEU A 228     -12.237  27.767  -5.481  1.00 25.36           N
ATOM   1821  CA  LEU A 228     -13.280  26.748  -5.344  1.00 27.23           C
ATOM   1822  C   LEU A 228     -12.826  25.308  -5.563  1.00 25.82           C
ATOM   1823  O   LEU A 228     -11.823  25.002  -6.202  1.00 22.29           O
ATOM   1824  CB  LEU A 228     -14.451  26.920  -6.323  1.00 22.35           C
ATOM   1825  CG  LEU A 228     -14.903  28.361  -6.583  1.00 22.79           C
ATOM   1826  CD1 LEU A 228     -15.883  28.416  -7.751  1.00 16.98           C
ATOM   1827  CD2 LEU A 228     -15.450  28.975  -5.318  1.00 12.95           C
ATOM   1828  N   ARG A 229     -13.658  24.380  -5.071  1.00 27.00           N
ATOM   1829  CA  ARG A 229     -13.435  22.961  -5.376  1.00 28.28           C
ATOM   1830  C   ARG A 229     -14.618  22.465  -6.207  1.00 26.47           C
ATOM   1831  O   ARG A 229     -15.761  22.876  -6.091  1.00 28.52           O
ATOM   1832  CB  ARG A 229     -13.192  22.047  -4.183  1.00 30.98           C
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ATOM   1833  CG  ARG A 229     -12.176  22.663  -3.225  1.00 34.81           C
ATOM   1834  CD  ARG A 229     -11.710  21.715  -2.161  1.00 39.00           C
ATOM   1835  NE  ARG A 229     -12.736  21.501  -1.157  1.00 41.76           N
ATOM   1836  CZ  ARG A 229     -13.004  22.302  -0.144  1.00 42.91           C
ATOM   1837  NH1 ARG A 229     -12.323  23.417   0.076  1.00 45.80           N
ATOM   1838  NH2 ARG A 229     -13.987  21.916   0.658  1.00 44.04           N
ATOM   1839  N   TRP A 230     -14.310  21.574  -7.126  1.00 29.08           N
ATOM   1840  CA  TRP A 230     -15.294  21.001  -8.015  1.00 30.84           C
ATOM   1841  C   TRP A 230     -16.142  20.044  -7.190  1.00 29.30           C
ATOM   1842  O   TRP A 230     -17.365  20.037  -7.319  1.00 29.13           O
ATOM   1843  CB  TRP A 230     -14.684  20.271  -9.244  1.00 29.30           C
ATOM   1844  CG  TRP A 230     -15.806  20.226 -10.245  1.00 32.76           C
ATOM   1845  CD1 TRP A 230     -16.183  21.229 -11.099  1.00 35.82           C
ATOM   1846  CD2 TRP A 230     -16.781  19.193 -10.397  1.00 32.20           C
ATOM   1847  NE1 TRP A 230     -17.322  20.871 -11.792  1.00 34.84           N
ATOM   1848  CE2 TRP A 230     -17.698  19.622 -11.374  1.00 32.13           C
ATOM   1849  CE3 TRP A 230     -16.967  17.964  -9.778  1.00 31.72           C
ATOM   1850  CZ2 TRP A 230     -18.769  18.851 -11.788  1.00 35.37           C
ATOM   1851  CZ3 TRP A 230     -18.058  17.211 -10.154  1.00 37.42           C
ATOM   1852  CH2 TRP A 230     -18.927  17.628 -11.180  1.00 40.26           C
ATOM   1853  N   ASN A 231     -15.506  19.291  -6.305  1.00 25.93           N
ATOM   1854  CA  ASN A 231     -16.236  18.316  -5.513  1.00 33.16           C
ATOM   1855  C   ASN A 231     -16.962  18.932  -4.360  1.00 32.46           C
ATOM   1856  O   ASN A 231     -16.719  18.646  -3.184  1.00 39.19           O
ATOM   1857  CB  ASN A 231     -15.296  17.175  -5.070  1.00 39.47           C
ATOM   1858  CG  ASN A 231     -15.446  16.112  -6.167  1.00 50.81           C
ATOM   1859  OD1 ASN A 231     -16.560  15.614  -6.402  1.00 52.47           O
ATOM   1860  ND2 ASN A 231     -14.380  15.777  -6.883  1.00 52.59           N
ATOM   1861  N   LEU A 232     -17.962  19.740  -4.613  1.00 26.93           N
ATOM   1862  CA  LEU A 232     -18.807  20.477  -3.717  1.00 22.96           C
ATOM   1863  C   LEU A 232     -20.114  20.769  -4.461  1.00 23.75           C
ATOM   1864  O   LEU A 232     -20.066  20.873  -5.698  1.00 21.88           O
ATOM   1865  CB  LEU A 232     -18.163  21.831  -3.357  1.00 21.00           C
ATOM   1866  CG  LEU A 232     -16.992  21.928  -2.385  1.00 20.15           C
ATOM   1867  CD1 LEU A 232     -16.500  23.343  -2.080  1.00 14.25           C
ATOM   1868  CD2 LEU A 232     -17.344  21.234  -1.072  1.00 13.39           C
ATOM   1869  N   THR A 233     -21.242  20.891  -3.772  1.00 21.84           N
ATOM   1870  CA  THR A 233     -22.461  21.239  -4.522  1.00 20.53           C
ATOM   1871  C   THR A 233     -22.330  22.709  -4.933  1.00 23.67           C
ATOM   1872  O   THR A 233     -21.380  23.395  -4.515  1.00 23.85           O
ATOM   1873  CB  THR A 233     -23.694  21.043  -3.645  1.00 20.73           C
ATOM   1874  OG1 THR A 233     -23.642  22.025  -2.577  1.00 17.75           O
ATOM   1875  CG2 THR A 233     -23.716  19.617  -3.101  1.00 14.71           C
ATOM   1876  N   SER A 234     -23.254  23.226  -5.738  1.00 17.99           N
ATOM   1877  CA  SER A 234     -23.223  24.623  -6.087  1.00 19.83           C
ATOM   1878  C   SER A 234     -23.435  25.517  -4.879  1.00 21.51           C
ATOM   1879  O   SER A 234     -22.768  26.548  -4.824  1.00 27.86           O
ATOM   1880  CB  SER A 234     -24.268  24.995  -7.150  1.00 22.05           C
ATOM   1881  OG  SER A 234     -23.871  24.259  -8.302  1.00 29.62           O
ATOM   1882  N   GLY A 235     -24.354  25.185  -3.992  1.00 20.50           N
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ATOM   1883  CA  GLY A 235     -24.545  25.948  -2.765  1.00 19.84           C
ATOM   1884  C   GLY A 235     -23.255  26.019  -1.963  1.00 21.56           C
ATOM   1885  O   GLY A 235     -22.808  27.112  -1.597  1.00 21.46           O
ATOM   1886  N   GLU A 236     -22.580  24.875  -1.808  1.00 21.31           N
ATOM   1887  CA  GLU A 236     -21.358  24.843  -1.030  1.00 21.73           C
ATOM   1888  C   GLU A 236     -20.265  25.719  -1.602  1.00 21.88           C
ATOM   1889  O   GLU A 236     -19.561  26.323  -0.811  1.00 28.81           O
ATOM   1890  CB  GLU A 236     -20.856  23.423  -0.869  1.00 22.42           C
ATOM   1891  CG  GLU A 236     -21.754  22.596   0.018  1.00 21.34           C
ATOM   1892  CD  GLU A 236     -21.321  21.158  -0.130  1.00 25.84           C
ATOM   1893  OE1 GLU A 236     -21.526  20.605   0.945  1.00 33.08           O
ATOM   1894  OE2 GLU A 236     -20.814  20.592  -1.097  1.00 31.81           O
ATOM   1895  N   ARG A 237     -20.123  25.846  -2.904  1.00 23.40           N
ATOM   1896  CA  ARG A 237     -19.190  26.715  -3.564  1.00 21.20           C
ATOM   1897  C   ARG A 237     -19.456  28.183  -3.218  1.00 24.99           C
ATOM   1898  O   ARG A 237     -18.498  28.942  -3.001  1.00 19.65           O
ATOM   1899  CB  ARG A 237     -19.235  26.533  -5.083  1.00 18.80           C
ATOM   1900  CG  ARG A 237     -18.559  25.284  -5.591  1.00 17.56           C
ATOM   1901  CD  ARG A 237     -18.850  25.049  -7.070  1.00 19.08           C
ATOM   1902  NE  ARG A 237     -18.599  23.676  -7.456  1.00 24.97           N
ATOM   1903  CZ  ARG A 237     -18.849  23.068  -8.610  1.00 28.28           C
ATOM   1904  NH1 ARG A 237     -19.373  23.720  -9.643  1.00 29.24           N
ATOM   1905  NH2 ARG A 237     -18.532  21.786  -8.827  1.00 22.45           N
ATOM   1906  N   VAL A 238     -20.745  28.559  -3.180  1.00 26.72           N
ATOM   1907  CA  VAL A 238     -21.095  29.927  -2.791  1.00 29.65           C
ATOM   1908  C   VAL A 238     -20.798  30.129  -1.307  1.00 28.95           C
ATOM   1909  O   VAL A 238     -20.131  31.065  -0.890  1.00 33.06           O
ATOM   1910  CB  VAL A 238     -22.561  30.276  -3.072  1.00 32.71           C
ATOM   1911  CG1 VAL A 238     -22.963  31.613  -2.442  1.00 29.63           C
ATOM   1912  CG2 VAL A 238     -22.831  30.327  -4.579  1.00 33.81           C
ATOM   1913  N   GLY A 239     -21.104  29.157  -0.473  1.00 26.55           N
ATOM   1914  CA  GLY A 239     -20.857  29.153   0.950  1.00 27.34           C
ATOM   1915  C   GLY A 239     -19.370  29.158   1.293  1.00 27.43           C
ATOM   1916  O   GLY A 239     -18.970  29.684   2.328  1.00 20.55           O
ATOM   1917  N   LEU A 240     -18.557  28.556   0.414  1.00 26.59           N
ATOM   1918  CA  LEU A 240     -17.120  28.540   0.605  1.00 23.45           C
ATOM   1919  C   LEU A 240     -16.637  29.992   0.586  1.00 24.00           C
ATOM   1920  O   LEU A 240     -15.961  30.466   1.489  1.00 20.71           O
ATOM   1921  CB  LEU A 240     -16.422  27.700  -0.458  1.00 26.75           C
ATOM   1922  CG  LEU A 240     -14.941  27.376  -0.167  1.00 30.90           C
ATOM   1923  CD1 LEU A 240     -14.421  26.233  -1.023  1.00 29.11           C
ATOM   1924  CD2 LEU A 240     -14.081  28.610  -0.427  1.00 30.11           C
ATOM   1925  N   VAL A 241     -16.886  30.678  -0.531  1.00 22.40           N
ATOM   1926  CA  VAL A 241     -16.552  32.085  -0.660  1.00 20.79           C
ATOM   1927  C   VAL A 241     -17.192  32.946   0.425  1.00 24.97           C
ATOM   1928  O   VAL A 241     -16.521  33.722   1.114  1.00 25.72           O
ATOM   1929  CB  VAL A 241     -16.987  32.573  -2.054  1.00 20.10           C
ATOM   1930  CG1 VAL A 241     -16.867  34.081  -2.193  1.00 14.48           C
ATOM   1931  CG2 VAL A 241     -16.177  31.853  -3.134  1.00 16.84           C
ATOM   1932  N   GLY A 242     -18.506  32.853   0.626  1.00 22.47           N
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ATOM   1933  CA  GLY A 242     -19.213  33.683   1.573  1.00 21.83           C
ATOM   1934  C   GLY A 242     -18.680  33.659   2.988  1.00 24.42           C
ATOM   1935  O   GLY A 242     -18.560  34.732   3.582  1.00 30.66           O
ATOM   1936  N   GLY A 243     -18.446  32.507   3.596  1.00 20.49           N
ATOM   1937  CA  GLY A 243     -17.976  32.371   4.949  1.00 19.38           C
ATOM   1938  C   GLY A 243     -16.625  33.011   5.170  1.00 24.59           C
ATOM   1939  O   GLY A 243     -16.321  33.616   6.193  1.00 28.70           O
ATOM   1940  N   ARG A 244     -15.759  32.933   4.170  1.00 27.10           N
ATOM   1941  CA  ARG A 244     -14.416  33.493   4.236  1.00 25.31           C
ATOM   1942  C   ARG A 244     -14.370  35.006   4.133  1.00 23.00           C
ATOM   1943  O   ARG A 244     -13.530  35.663   4.753  1.00 23.34           O
ATOM   1944  CB  ARG A 244     -13.621  32.837   3.092  1.00 23.84           C
ATOM   1945  CG  ARG A 244     -13.083  31.493   3.546  1.00 15.59           C
ATOM   1946  CD  ARG A 244     -12.666  30.676   2.341  1.00 19.02           C
ATOM   1947  NE  ARG A 244     -12.572  29.298   2.842  1.00 26.92           N
ATOM   1948  CZ  ARG A 244     -11.696  28.416   2.371  1.00 21.57           C
ATOM   1949  NH1 ARG A 244     -11.764  27.250   2.960  1.00 22.09           N
ATOM   1950  NH2 ARG A 244     -10.872  28.792   1.427  1.00 20.11           N
ATOM   1951  N   VAL A 245     -15.228  35.564   3.298  1.00 19.33           N
ATOM   1952  CA  VAL A 245     -15.311  37.002   3.152  1.00 20.20           C
ATOM   1953  C   VAL A 245     -16.057  37.613   4.325  1.00 20.96           C
ATOM   1954  O   VAL A 245     -15.558  38.656   4.787  1.00 24.06           O
ATOM   1955  CB  VAL A 245     -15.972  37.430   1.827  1.00 20.30           C
ATOM   1956  CG1 VAL A 245     -15.962  38.957   1.752  1.00 16.04           C
ATOM   1957  CG2 VAL A 245     -15.267  36.795   0.642  1.00 11.73           C
ATOM   1958  N   LYS A 246     -17.091  36.973   4.882  1.00 19.69           N
ATOM   1959  CA  LYS A 246     -17.714  37.614   6.049  1.00 26.32           C
ATOM   1960  C   LYS A 246     -16.684  37.716   7.180  1.00 25.99           C
ATOM   1961  O   LYS A 246     -16.617  38.709   7.893  1.00 30.45           O
ATOM   1962  CB  LYS A 246     -18.950  36.955   6.648  1.00 34.24           C
ATOM   1963  CG  LYS A 246     -19.875  36.171   5.774  1.00 43.97           C
ATOM   1964  CD  LYS A 246     -21.316  36.148   6.263  1.00 52.36           C
ATOM   1965  CE  LYS A 246     -22.283  35.907   5.097  1.00 55.74           C
ATOM   1966  NZ  LYS A 246     -22.058  34.612   4.387  1.00 53.67           N
ATOM   1967  N   GLU A 247     -15.943  36.636   7.417  1.00 22.42           N
ATOM   1968  CA  GLU A 247     -14.935  36.614   8.455  1.00 24.66           C
ATOM   1969  C   GLU A 247     -13.932  37.746   8.274  1.00 25.03           C
ATOM   1970  O   GLU A 247     -13.661  38.466   9.246  1.00 21.89           O
ATOM   1971  CB  GLU A 247     -14.318  35.219   8.464  1.00 25.20           C
ATOM   1972  CG  GLU A 247     -13.217  34.939   9.453  1.00 22.27           C
ATOM   1973  CD  GLU A 247     -13.517  35.242  10.888  1.00 22.57           C
ATOM   1974  OE1 GLU A 247     -14.678  35.447  11.312  1.00 23.64           O
ATOM   1975  OE2 GLU A 247     -12.563  35.320  11.696  1.00 24.20           O
ATOM   1976  N   ALA A 248     -13.431  37.980   7.054  1.00 23.27           N
ATOM   1977  CA  ALA A 248     -12.515  39.071   6.777  1.00 21.39           C
ATOM   1978  C   ALA A 248     -13.184  40.399   7.140  1.00 23.00           C
ATOM   1979  O   ALA A 248     -12.531  41.163   7.858  1.00 21.63           O
ATOM   1980  CB  ALA A 248     -12.059  39.132   5.341  1.00 19.66           C
ATOM   1981  N   LEU A 249     -14.427  40.590   6.694  1.00 21.25           N
ATOM   1982  CA  LEU A 249     -15.227  41.762   6.998  1.00 16.60           C
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ATOM   1983  C   LEU A 249     -15.453  41.945   8.488  1.00 20.31           C
ATOM   1984  O   LEU A 249     -15.374  43.050   9.038  1.00 24.51           O
ATOM   1985  CB  LEU A 249     -16.591  41.725   6.285  1.00 15.26           C
ATOM   1986  CG  LEU A 249     -16.558  41.899   4.744  1.00 16.64           C
ATOM   1987  CD1 LEU A 249     -17.845  41.441   4.075  1.00 11.23           C
ATOM   1988  CD2 LEU A 249     -16.259  43.344   4.386  1.00 10.64           C
ATOM   1989  N   ARG A 250     -15.728  40.868   9.208  1.00 22.58           N
ATOM   1990  CA  ARG A 250     -15.844  40.880  10.649  1.00 23.45           C
ATOM   1991  C   ARG A 250     -14.624  41.529  11.305  1.00 27.11           C
ATOM   1992  O   ARG A 250     -14.706  42.384  12.178  1.00 26.27           O
ATOM   1993  CB  ARG A 250     -15.937  39.442  11.162  1.00 21.38           C
ATOM   1994  CG  ARG A 250     -16.475  39.346  12.578  1.00 16.17           C
ATOM   1995  CD  ARG A 250     -16.508  37.902  13.022  1.00 19.09           C
ATOM   1996  NE  ARG A 250     -15.540  37.574  14.052  1.00 30.00           N
ATOM   1997  CZ  ARG A 250     -14.260  37.346  13.894  1.00 36.76           C
ATOM   1998  NH1 ARG A 250     -13.805  37.450  12.653  1.00 46.72           N
ATOM   1999  NH2 ARG A 250     -13.386  37.034  14.825  1.00 36.71           N
ATOM   2000  N   ILE A 251     -13.461  41.005  10.945  1.00 29.24           N
ATOM   2001  CA  ILE A 251     -12.184  41.458  11.448  1.00 31.54           C
ATOM   2002  C   ILE A 251     -11.955  42.901  11.021  1.00 34.01           C
ATOM   2003  O   ILE A 251     -11.502  43.707  11.823  1.00 33.72           O
ATOM   2004  CB  ILE A 251     -11.003  40.632  10.882  1.00 28.48           C
ATOM   2005  CG1 ILE A 251     -11.243  39.140  10.982  1.00 25.80           C
ATOM   2006  CG2 ILE A 251      -9.703  41.075  11.510  1.00 18.52           C
ATOM   2007  CD1 ILE A 251     -11.027  38.352  12.211  1.00 24.51           C
ATOM   2008  N   ALA A 252     -12.188  43.162   9.737  1.00 39.34           N
ATOM   2009  CA  ALA A 252     -12.026  44.494   9.163  1.00 42.73           C
ATOM   2010  C   ALA A 252     -12.825  45.603   9.836  1.00 42.98           C
ATOM   2011  O   ALA A 252     -12.286  46.710   9.879  1.00 42.38           O
ATOM   2012  CB  ALA A 252     -12.370  44.497   7.677  1.00 40.73           C
ATOM   2013  N   ARG A 253     -14.019  45.363  10.352  1.00 44.37           N
ATOM   2014  CA  ARG A 253     -14.793  46.390  11.015  1.00 49.80           C
ATOM   2015  C   ARG A 253     -14.432  46.594  12.470  1.00 48.95           C
ATOM   2016  O   ARG A 253     -14.920  47.544  13.080  1.00 51.68           O
ATOM   2017  CB  ARG A 253     -16.291  46.091  10.856  1.00 61.04           C
ATOM   2018  CG  ARG A 253     -16.718  46.385   9.419  1.00 71.31           C
ATOM   2019  CD  ARG A 253     -17.733  45.365   8.945  1.00 80.98           C
ATOM   2020  NE  ARG A 253     -18.151  45.623   7.561  1.00 89.44           N
ATOM   2021  CZ  ARG A 253     -18.984  44.809   6.911  1.00 93.46           C
ATOM   2022  NH1 ARG A 253     -19.448  43.718   7.519  1.00 95.70           N
ATOM   2023  NH2 ARG A 253     -19.352  45.084   5.668  1.00 94.77           N
ATOM   2024  N   GLN A 254     -13.596  45.769  13.069  1.00 46.27           N
ATOM   2025  CA  GLN A 254     -13.129  45.931  14.426  1.00 41.89           C
ATOM   2026  C   GLN A 254     -11.801  46.706  14.433  1.00 37.82           C
ATOM   2027  O   GLN A 254     -11.314  47.028  15.514  1.00 35.82           O
ATOM   2028  CB  GLN A 254     -12.850  44.604  15.110  1.00 45.89           C
ATOM   2029  CG  GLN A 254     -14.059  43.860  15.634  1.00 54.10           C
ATOM   2030  CD  GLN A 254     -13.702  42.420  15.983  1.00 58.02           C
ATOM   2031  OE1 GLN A 254     -14.608  41.611  16.202  1.00 61.40           O
ATOM   2032  NE2 GLN A 254     -12.414  42.087  16.021  1.00 60.01           N
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ATOM   2033  N   MET A 255     -11.130  46.775  13.279  1.00 32.35           N
ATOM   2034  CA  MET A 255      -9.838  47.448  13.225  1.00 30.54           C
ATOM   2035  C   MET A 255     -10.062  48.910  13.603  1.00 29.30           C
ATOM   2036  O   MET A 255     -11.165  49.458  13.592  1.00 23.65           O
ATOM   2037  CB  MET A 255      -9.064  47.178  11.946  1.00 32.52           C
ATOM   2038  CG  MET A 255      -8.745  45.710  11.700  1.00 32.09           C
ATOM   2039  SD  MET A 255      -7.860  44.845  12.994  1.00 24.11           S
ATOM   2040  CE  MET A 255      -9.068  44.433  14.216  1.00 24.59           C
ATOM   2041  N   THR A 256      -8.981  49.531  14.027  1.00 28.79           N
ATOM   2042  CA  THR A 256      -8.984  50.841  14.684  1.00 29.62           C
ATOM   2043  C   THR A 256      -7.959  51.840  14.237  1.00 30.76           C
ATOM   2044  O   THR A 256      -8.116  53.046  14.402  1.00 31.35           O
ATOM   2045  CB  THR A 256      -8.745  50.320  16.142  1.00 30.32           C
ATOM   2046  OG1 THR A 256      -9.980  50.435  16.856  1.00 28.82           O
ATOM   2047  CG2 THR A 256      -7.535  50.816  16.874  1.00 24.56           C
ATOM   2048  N   THR A 257      -6.848  51.380  13.669  1.00 29.76           N
ATOM   2049  CA  THR A 257      -5.795  52.229  13.175  1.00 28.36           C
ATOM   2050  C   THR A 257      -6.187  52.848  11.838  1.00 27.57           C
ATOM   2051  O   THR A 257      -5.754  53.981  11.618  1.00 25.91           O
ATOM   2052  CB  THR A 257      -4.443  51.481  13.050  1.00 27.62           C
ATOM   2053  OG1 THR A 257      -4.586  50.303  12.251  1.00 32.17           O
ATOM   2054  CG2 THR A 257      -3.988  51.088  14.434  1.00 17.64           C
ATOM   2055  N   SER A 258      -6.908  52.120  10.977  1.00 25.12           N
ATOM   2056  CA  SER A 258      -7.305  52.725   9.709  1.00 24.26           C
ATOM   2057  C   SER A 258      -8.365  51.912   8.986  1.00 26.14           C
ATOM   2058  O   SER A 258      -8.801  50.914   9.524  1.00 26.30           O
ATOM   2059  CB  SER A 258      -6.106  52.884   8.765  1.00 25.62           C
ATOM   2060  OG  SER A 258      -5.748  51.657   8.143  1.00 18.69           O
ATOM   2061  N   ARG A 259      -8.806  52.335   7.806  1.00 29.41           N
ATOM   2062  CA  ARG A 259      -9.773  51.546   7.058  1.00 32.68           C
ATOM   2063  C   ARG A 259      -8.976  50.331   6.569  1.00 31.73           C
ATOM   2064  O   ARG A 259      -7.758  50.415   6.428  1.00 27.06           O
ATOM   2065  CB  ARG A 259     -10.385  52.329   5.914  1.00 41.69           C
ATOM   2066  CG  ARG A 259     -11.770  51.933   5.476  1.00 52.30           C
ATOM   2067  CD  ARG A 259     -11.800  51.118   4.205  1.00 64.29           C
ATOM   2068  NE  ARG A 259     -12.451  51.778   3.089  1.00 75.39           N
ATOM   2069  CZ  ARG A 259     -12.106  52.960   2.587  1.00 83.95           C
ATOM   2070  NH1 ARG A 259     -11.099  53.663   3.106  1.00 88.13           N
ATOM   2071  NH2 ARG A 259     -12.754  53.497   1.553  1.00 85.34           N
ATOM   2072  N   LYS A 260      -9.639  49.191   6.454  1.00 27.17           N
ATOM   2073  CA  LYS A 260      -8.998  47.976   5.993  1.00 26.32           C
ATOM   2074  C   LYS A 260      -9.743  47.526   4.742  1.00 27.33           C
ATOM   2075  O   LYS A 260     -10.974  47.474   4.821  1.00 33.79           O
ATOM   2076  CB  LYS A 260      -9.076  46.859   7.040  1.00 16.84           C
ATOM   2077  CG  LYS A 260      -8.394  47.215   8.337  1.00 21.49           C
ATOM   2078  CD  LYS A 260      -6.907  47.532   8.112  1.00 20.18           C
ATOM   2079  CE  LYS A 260      -6.349  48.051   9.420  1.00 17.36           C
ATOM   2080  NZ  LYS A 260      -5.130  48.871   9.291  1.00 18.92           N
ATOM   2081  N   LYS A 261      -9.060  47.179   3.683  1.00 24.40           N
ATOM   2082  CA  LYS A 261      -9.735  46.721   2.480  1.00 26.01           C
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ATOM   2083  C   LYS A 261      -9.786  45.199   2.452  1.00 25.78           C
ATOM   2084  O   LYS A 261      -8.793  44.531   2.763  1.00 28.37           O
ATOM   2085  CB  LYS A 261      -9.016  47.191   1.213  1.00 27.66           C
ATOM   2086  CG  LYS A 261      -9.010  48.701   1.068  1.00 34.65           C
ATOM   2087  CD  LYS A 261      -8.385  49.120  -0.253  1.00 39.53           C
ATOM   2088  CE  LYS A 261      -8.735  50.579  -0.570  1.00 40.46           C
ATOM   2089  NZ  LYS A 261      -7.511  51.172  -1.202  1.00 44.53           N
ATOM   2090  N   VAL A 262     -10.945  44.686   2.078  1.00 22.09           N
ATOM   2091  CA  VAL A 262     -11.086  43.236   1.914  1.00 23.65           C
ATOM   2092  C   VAL A 262     -11.014  42.985   0.402  1.00 23.62           C
ATOM   2093  O   VAL A 262     -11.867  43.496  -0.325  1.00 20.26           O
ATOM   2094  CB  VAL A 262     -12.403  42.715   2.486  1.00 19.65           C
ATOM   2095  CG1 VAL A 262     -12.455  41.200   2.465  1.00 17.50           C
ATOM   2096  CG2 VAL A 262     -12.581  43.261   3.883  1.00 18.33           C
ATOM   2097  N   LEU A 263     -10.008  42.244  -0.012  1.00 21.94           N
ATOM   2098  CA  LEU A 263      -9.789  41.945  -1.423  1.00 21.48           C
ATOM   2099  C   LEU A 263      -9.456  40.458  -1.514  1.00 21.73           C
ATOM   2100  O   LEU A 263      -8.287  40.084  -1.397  1.00 25.46           O
ATOM   2101  CB  LEU A 263      -8.590  42.734  -1.937  1.00 18.71           C
ATOM   2102  CG  LEU A 263      -8.577  44.242  -2.126  1.00 19.35           C
ATOM   2103  CD1 LEU A 263      -7.254  44.704  -2.770  1.00 14.18           C
ATOM   2104  CD2 LEU A 263      -9.766  44.668  -2.978  1.00 13.37           C
ATOM   2105  N   PRO A 264     -10.456  39.610  -1.617  1.00 16.61           N
ATOM   2106  CA  PRO A 264     -10.231  38.182  -1.643  1.00 19.07           C
ATOM   2107  C   PRO A 264      -9.510  37.710  -2.900  1.00 23.95           C
ATOM   2108  O   PRO A 264      -9.612  38.304  -3.980  1.00 22.98           O
ATOM   2109  CB  PRO A 264     -11.627  37.626  -1.475  1.00 21.20           C
ATOM   2110  CG  PRO A 264     -12.613  38.684  -1.768  1.00 16.92           C
ATOM   2111  CD  PRO A 264     -11.880  39.998  -1.683  1.00 18.40           C
ATOM   2112  N   TYR A 265      -8.698  36.655  -2.754  1.00 22.59           N
ATOM   2113  CA  TYR A 265      -7.907  36.061  -3.811  1.00 19.24           C
ATOM   2114  C   TYR A 265      -8.750  35.010  -4.520  1.00 24.40           C
ATOM   2115  O   TYR A 265      -9.307  34.091  -3.931  1.00 26.94           O
ATOM   2116  CB  TYR A 265      -6.587  35.488  -3.298  1.00 22.15           C
ATOM   2117  CG  TYR A 265      -5.354  36.256  -3.716  1.00 21.58           C
ATOM   2118  CD1 TYR A 265      -4.986  37.441  -3.082  1.00 22.49           C
ATOM   2119  CD2 TYR A 265      -4.546  35.795  -4.747  1.00 20.71           C
ATOM   2120  CE1 TYR A 265      -3.859  38.146  -3.476  1.00 20.81           C
ATOM   2121  CE2 TYR A 265      -3.451  36.509  -5.196  1.00 20.46           C
ATOM   2122  CZ  TYR A 265      -3.120  37.696  -4.552  1.00 22.04           C
ATOM   2123  OH  TYR A 265      -2.058  38.439  -5.010  1.00 19.10           O
ATOM   2124  N   TYR A 266      -8.974  35.217  -5.811  1.00 25.08           N
ATOM   2125  CA  TYR A 266      -9.861  34.392  -6.617  1.00 22.15           C
ATOM   2126  C   TYR A 266      -9.060  33.739  -7.731  1.00 22.64           C
ATOM   2127  O   TYR A 266      -8.143  34.358  -8.293  1.00 26.34           O
ATOM   2128  CB  TYR A 266     -10.965  35.317  -7.131  1.00 27.01           C
ATOM   2129  CG  TYR A 266     -12.197  34.702  -7.748  1.00 28.69           C
ATOM   2130  CD1 TYR A 266     -13.329  34.434  -6.984  1.00 28.37           C
ATOM   2131  CD2 TYR A 266     -12.213  34.345  -9.092  1.00 27.53           C
ATOM   2132  CE1 TYR A 266     -14.446  33.841  -7.537  1.00 27.81           C
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ATOM   2133  CE2 TYR A 266     -13.330  33.767  -9.664  1.00 29.29           C
ATOM   2134  CZ  TYR A 266     -14.440  33.519  -8.874  1.00 30.84           C
ATOM   2135  OH  TYR A 266     -15.556  32.955  -9.434  1.00 30.44           O
ATOM   2136  N   TRP A 267      -9.282  32.467  -7.967  1.00 18.35           N
ATOM   2137  CA  TRP A 267      -8.665  31.655  -8.973  1.00 20.83           C
ATOM   2138  C   TRP A 267      -9.755  31.175  -9.955  1.00 27.33           C
ATOM   2139  O   TRP A 267     -10.861  30.788  -9.560  1.00 21.84           O
ATOM   2140  CB  TRP A 267      -7.951  30.429  -8.390  1.00 22.39           C
ATOM   2141  CG  TRP A 267      -6.998  29.710  -9.312  1.00 24.68           C
ATOM   2142  CD1 TRP A 267      -6.518  30.172 -10.522  1.00 20.14           C
ATOM   2143  CD2 TRP A 267      -6.351  28.456  -9.083  1.00 23.66           C
ATOM   2144  NE1 TRP A 267      -5.638  29.272 -11.049  1.00 21.28           N
ATOM   2145  CE2 TRP A 267      -5.500  28.212 -10.192  1.00 23.46           C
ATOM   2146  CE3 TRP A 267      -6.397  27.508  -8.057  1.00 27.04           C
ATOM   2147  CZ2 TRP A 267      -4.720  27.061 -10.316  1.00 22.40           C
ATOM   2148  CZ3 TRP A 267      -5.629  26.356  -8.161  1.00 30.18           C
ATOM   2149  CH2 TRP A 267      -4.796  26.139  -9.301  1.00 30.31           C
ATOM   2150  N   TYR A 268      -9.406  31.153 -11.248  1.00 27.78           N
ATOM   2151  CA  TYR A 268     -10.303  30.685 -12.278  1.00 26.68           C
ATOM   2152  C   TYR A 268     -10.204  29.189 -12.525  1.00 26.25           C
ATOM   2153  O   TYR A 268     -10.894  28.735 -13.450  1.00 28.75           O
ATOM   2154  CB  TYR A 268     -10.087  31.454 -13.604  1.00 28.67           C
ATOM   2155  CG  TYR A 268      -8.698  31.207 -14.143  1.00 24.90           C
ATOM   2156  CD1 TYR A 268      -8.484  30.153 -15.023  1.00 24.00           C
ATOM   2157  CD2 TYR A 268      -7.625  31.974 -13.698  1.00 21.70           C
ATOM   2158  CE1 TYR A 268      -7.195  29.896 -15.470  1.00 24.05           C
ATOM   2159  CE2 TYR A 268      -6.347  31.714 -14.155  1.00 19.86           C
ATOM   2160  CZ  TYR A 268      -6.141  30.678 -15.039  1.00 20.54           C
ATOM   2161  OH  TYR A 268      -4.883  30.383 -15.492  1.00 19.88           O
ATOM   2162  N   LYS A 269      -9.442  28.403 -11.781  1.00 24.43           N
ATOM   2163  CA  LYS A 269      -9.484  26.948 -11.950  1.00 24.16           C
ATOM   2164  C   LYS A 269     -10.079  26.339 -10.663  1.00 24.41           C
ATOM   2165  O   LYS A 269     -10.053  26.985  -9.620  1.00 25.95           O
ATOM   2166  CB  LYS A 269      -8.165  26.256 -12.154  1.00 22.09           C
ATOM   2167  CG  LYS A 269      -7.170  26.627 -13.206  1.00 25.32           C
ATOM   2168  CD  LYS A 269      -7.620  26.189 -14.578  1.00 33.50           C
ATOM   2169  CE  LYS A 269      -6.496  26.126 -15.595  1.00 32.82           C
ATOM   2170  NZ  LYS A 269      -7.019  25.569 -16.884  1.00 38.43           N
ATOM   2171  N   TYR A 270     -10.688  25.174 -10.766  1.00 23.34           N
ATOM   2172  CA  TYR A 270     -11.141  24.404  -9.625  1.00 22.22           C
ATOM   2173  C   TYR A 270      -9.858  23.811  -9.047  1.00 25.91           C
ATOM   2174  O   TYR A 270      -9.064  23.176  -9.727  1.00 31.12           O
ATOM   2175  CB  TYR A 270     -12.130  23.296  -9.970  1.00 20.69           C
ATOM   2176  CG  TYR A 270     -13.397  23.847 -10.579  1.00 23.17           C
ATOM   2177  CD1 TYR A 270     -13.603  23.888 -11.966  1.00 16.29           C
ATOM   2178  CD2 TYR A 270     -14.389  24.336  -9.718  1.00 22.35           C
ATOM   2179  CE1 TYR A 270     -14.781  24.414 -12.459  1.00 15.26           C
ATOM   2180  CE2 TYR A 270     -15.575  24.860 -10.224  1.00 17.96           C
ATOM   2181  CZ  TYR A 270     -15.745  24.895 -11.591  1.00 19.52           C
ATOM   2182  OH  TYR A 270     -16.927  25.424 -12.068  1.00 24.32           O
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ATOM   2183  N   GLN A 271      -9.613  24.012  -7.780  1.00 28.98           N
ATOM   2184  CA  GLN A 271      -8.412  23.540  -7.102  1.00 30.96           C
ATOM   2185  C   GLN A 271      -8.149  22.060  -7.135  1.00 29.56           C
ATOM   2186  O   GLN A 271      -6.999  21.618  -7.246  1.00 30.52           O
ATOM   2187  CB  GLN A 271      -8.563  24.099  -5.695  1.00 36.08           C
ATOM   2188  CG  GLN A 271      -7.420  23.741  -4.779  1.00 42.97           C
ATOM   2189  CD  GLN A 271      -7.581  24.597  -3.532  1.00 44.53           C
ATOM   2190  OE1 GLN A 271      -6.590  25.240  -3.195  1.00 50.44           O
ATOM   2191  NE2 GLN A 271      -8.786  24.571  -2.986  1.00 45.20           N
ATOM   2192  N   ASP A 272      -9.162  21.221  -7.076  1.00 31.29           N
ATOM   2193  CA  ASP A 272      -9.093  19.773  -7.117  1.00 28.29           C
ATOM   2194  C   ASP A 272      -9.299  19.228  -8.519  1.00 26.98           C
ATOM   2195  O   ASP A 272      -9.788  18.121  -8.674  1.00 29.15           O
ATOM   2196  CB  ASP A 272     -10.194  19.125  -6.270  1.00 30.12           C
ATOM   2197  CG  ASP A 272     -11.553  19.756  -6.496  1.00 35.97           C
ATOM   2198  OD1 ASP A 272     -12.533  19.177  -5.969  1.00 42.29           O
ATOM   2199  OD2 ASP A 272     -11.719  20.813  -7.140  1.00 31.96           O
ATOM   2200  N   ARG A 273      -9.136  20.064  -9.519  1.00 33.04           N
ATOM   2201  CA  ARG A 273      -9.490  19.712 -10.887  1.00 35.43           C
ATOM   2202  C   ARG A 273      -9.053  20.827 -11.828  1.00 39.94           C
ATOM   2203  O   ARG A 273      -9.797  21.425 -12.593  1.00 39.43           O
ATOM   2204  CB  ARG A 273     -10.982  19.525 -10.872  1.00 33.68           C
ATOM   2205  CG  ARG A 273     -11.521  18.343 -11.623  1.00 40.55           C
ATOM   2206  CD  ARG A 273     -12.878  18.750 -12.213  1.00 47.63           C
ATOM   2207  NE  ARG A 273     -13.140  17.988 -13.412  1.00 54.14           N
ATOM   2208  CZ  ARG A 273     -14.287  17.872 -14.052  1.00 59.24           C
ATOM   2209  NH1 ARG A 273     -14.289  17.114 -15.146  1.00 60.54           N
ATOM   2210  NH2 ARG A 273     -15.373  18.489 -13.613  1.00 61.43           N
ATOM   2211  N   ARG A 274      -7.752  21.118 -11.771  1.00 43.31           N
ATOM   2212  CA  ARG A 274      -7.103  22.152 -12.551  1.00 47.82           C
ATOM   2213  C   ARG A 274      -7.297  22.173 -14.049  1.00 46.48           C
ATOM   2214  O   ARG A 274      -7.184  23.252 -14.636  1.00 49.93           O
ATOM   2215  CB  ARG A 274      -5.587  22.092 -12.272  1.00 48.05           C
ATOM   2216  CG  ARG A 274      -5.350  22.323 -10.779  1.00 49.38           C
ATOM   2217  CD  ARG A 274      -3.873  22.587 -10.594  1.00 53.17           C
ATOM   2218  NE  ARG A 274      -3.381  23.763 -11.338  1.00 49.78           N
ATOM   2219  CZ  ARG A 274      -2.219  24.297 -10.948  1.00 46.80           C
ATOM   2220  NH1 ARG A 274      -1.738  25.359 -11.572  1.00 48.72           N
ATOM   2221  NH2 ARG A 274      -1.572  23.747  -9.928  1.00 43.75           N
ATOM   2222  N   ASP A 275      -7.610  21.098 -14.725  1.00 43.96           N
ATOM   2223  CA  ASP A 275      -7.906  21.068 -16.141  1.00 47.56           C
ATOM   2224  C   ASP A 275      -9.186  21.837 -16.464  1.00 45.01           C
ATOM   2225  O   ASP A 275      -9.357  22.307 -17.585  1.00 45.51           O
ATOM   2226  CB  ASP A 275      -8.100  19.606 -16.598  1.00 53.86           C
ATOM   2227  CG  ASP A 275      -9.021  18.876 -15.631  1.00 60.38           C
ATOM   2228  OD1 ASP A 275      -8.602  18.512 -14.505  1.00 63.02           O
ATOM   2229  OD2 ASP A 275     -10.200  18.676 -15.981  1.00 64.90           O
ATOM   2230  N   THR A 276     -10.091  21.943 -15.505  1.00 38.89           N
ATOM   2231  CA  THR A 276     -11.346  22.633 -15.651  1.00 33.73           C
ATOM   2232  C   THR A 276     -11.324  24.075 -15.176  1.00 33.21           C
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ATOM   2233  O   THR A 276     -10.936  24.391 -14.052  1.00 33.60           O
ATOM   2234  CB  THR A 276     -12.436  21.856 -14.872  1.00 31.26           C
ATOM   2235  OG1 THR A 276     -12.436  20.529 -15.397  1.00 36.64           O
ATOM   2236  CG2 THR A 276     -13.814  22.416 -15.115  1.00 20.13           C
ATOM   2237  N   ASP A 277     -11.846  24.960 -16.032  1.00 32.01           N
ATOM   2238  CA  ASP A 277     -11.952  26.374 -15.669  1.00 26.74           C
ATOM   2239  C   ASP A 277     -13.300  26.542 -14.986  1.00 31.08           C
ATOM   2240  O   ASP A 277     -14.190  25.692 -15.147  1.00 31.14           O
ATOM   2241  CB  ASP A 277     -11.770  27.272 -16.872  1.00 26.27           C
ATOM   2242  CG  ASP A 277     -10.429  27.127 -17.564  1.00 27.39           C
ATOM   2243  OD1 ASP A 277      -9.365  27.193 -16.917  1.00 30.83           O
ATOM   2244  OD2 ASP A 277     -10.356  26.935 -18.794  1.00 31.46           O
ATOM   2245  N   LEU A 278     -13.450  27.580 -14.162  1.00 31.48           N
ATOM   2246  CA  LEU A 278     -14.725  27.751 -13.474  1.00 28.09           C
ATOM   2247  C   LEU A 278     -15.832  27.875 -14.513  1.00 28.89           C
ATOM   2248  O   LEU A 278     -15.698  28.453 -15.577  1.00 27.58           O
ATOM   2249  CB  LEU A 278     -14.712  28.981 -12.585  1.00 30.82           C
ATOM   2250  CG  LEU A 278     -14.435  28.838 -11.089  1.00 29.35           C
ATOM   2251  CD1 LEU A 278     -13.407  27.771 -10.767  1.00 24.81           C
ATOM   2252  CD2 LEU A 278     -14.013  30.183 -10.508  1.00 28.28           C
ATOM   2253  N   SER A 279     -16.968  27.291 -14.199  1.00 29.26           N
ATOM   2254  CA  SER A 279     -18.155  27.378 -15.034  1.00 26.10           C
ATOM   2255  C   SER A 279     -18.663  28.810 -15.012  1.00 25.35           C
ATOM   2256  O   SER A 279     -18.392  29.527 -14.036  1.00 26.03           O
ATOM   2257  CB  SER A 279     -19.113  26.346 -14.430  1.00 22.04           C
ATOM   2258  OG  SER A 279     -19.886  26.873 -13.373  1.00 25.25           O
ATOM   2259  N   ARG A 280     -19.430  29.263 -15.997  1.00 24.48           N
ATOM   2260  CA  ARG A 280     -20.028  30.597 -15.961  1.00 25.26           C
ATOM   2261  C   ARG A 280     -21.060  30.700 -14.830  1.00 22.13           C
ATOM   2262  O   ARG A 280     -21.162  31.721 -14.129  1.00 18.07           O
ATOM   2263  CB  ARG A 280     -20.634  30.958 -17.316  1.00 25.83           C
ATOM   2264  CG  ARG A 280     -21.783  31.939 -17.258  1.00 29.42           C
ATOM   2265  CD  ARG A 280     -22.212  32.495 -18.596  1.00 34.66           C
ATOM   2266  NE  ARG A 280     -22.444  33.897 -18.918  0.00 80.00           N
ATOM   2267  CZ  ARG A 280     -23.184  34.319 -19.938  0.00 80.00           C
ATOM   2268  NH1 ARG A 280     -23.553  33.466 -20.885  0.00 80.00           N
ATOM   2269  NH2 ARG A 280     -23.554  35.590 -20.009  0.00 80.00           N
ATOM   2270  N   ALA A 281     -21.801  29.621 -14.587  1.00 18.74           N
ATOM   2271  CA  ALA A 281     -22.706  29.599 -13.438  1.00 23.15           C
ATOM   2272  C   ALA A 281     -21.906  29.848 -12.156  1.00 25.17           C
ATOM   2273  O   ALA A 281     -22.343  30.724 -11.420  1.00 23.74           O
ATOM   2274  CB  ALA A 281     -23.483  28.314 -13.293  1.00 22.16           C
ATOM   2275  N   ASP A 282     -20.806  29.124 -11.912  1.00 24.30           N
ATOM   2276  CA  ASP A 282     -20.025  29.373 -10.722  1.00 27.45           C
ATOM   2277  C   ASP A 282     -19.437  30.787 -10.676  1.00 26.23           C
ATOM   2278  O   ASP A 282     -19.327  31.300  -9.556  1.00 28.77           O
ATOM   2279  CB  ASP A 282     -18.853  28.420 -10.473  1.00 28.02           C
ATOM   2280  CG  ASP A 282     -19.276  27.068  -9.957  1.00 27.73           C
ATOM   2281  OD1 ASP A 282     -20.375  26.989  -9.364  1.00 28.15           O
ATOM   2282  OD2 ASP A 282     -18.499  26.110 -10.180  1.00 29.59           O
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ATOM   2283  N   LEU A 283     -19.027  31.383 -11.768  1.00 26.60           N
ATOM   2284  CA  LEU A 283     -18.446  32.720 -11.771  1.00 27.30           C
ATOM   2285  C   LEU A 283     -19.430  33.778 -11.297  1.00 30.67           C
ATOM   2286  O   LEU A 283     -19.153  34.648 -10.465  1.00 33.31           O
ATOM   2287  CB  LEU A 283     -18.007  33.085 -13.190  1.00 30.16           C
ATOM   2288  CG  LEU A 283     -16.662  32.526 -13.669  1.00 31.93           C
ATOM   2289  CD1 LEU A 283     -16.461  32.853 -15.146  1.00 26.40           C
ATOM   2290  CD2 LEU A 283     -15.551  33.105 -12.790  1.00 29.81           C
ATOM   2291  N   GLU A 284     -20.652  33.718 -11.818  1.00 31.35           N
ATOM   2292  CA  GLU A 284     -21.667  34.694 -11.481  1.00 29.95           C
ATOM   2293  C   GLU A 284     -22.142  34.577 -10.055  1.00 28.04           C
ATOM   2294  O   GLU A 284     -22.370  35.620  -9.450  1.00 26.96           O
ATOM   2295  CB  GLU A 284     -22.858  34.591 -12.445  1.00 33.69           C
ATOM   2296  CG  GLU A 284     -22.339  34.638 -13.870  1.00 44.97           C
ATOM   2297  CD  GLU A 284     -23.410  34.885 -14.909  1.00 51.72           C
ATOM   2298  OE1 GLU A 284     -24.568  34.471 -14.675  1.00 57.53           O
ATOM   2299  OE2 GLU A 284     -23.034  35.471 -15.950  1.00 51.85           O
ATOM   2300  N   ALA A 285     -22.356  33.364  -9.546  1.00 30.16           N
ATOM   2301  CA  ALA A 285     -22.898  33.252  -8.187  1.00 27.61           C
ATOM   2302  C   ALA A 285     -21.821  33.657  -7.178  1.00 24.70           C
ATOM   2303  O   ALA A 285     -22.140  34.418  -6.273  1.00 22.50           O
ATOM   2304  CB  ALA A 285     -23.470  31.888  -7.912  1.00 22.30           C
ATOM   2305  N   THR A 286     -20.588  33.198  -7.382  1.00 22.10           N
ATOM   2306  CA  THR A 286     -19.533  33.537  -6.432  1.00 23.99           C
ATOM   2307  C   THR A 286     -19.101  34.999  -6.520  1.00 25.68           C
ATOM   2308  O   THR A 286     -19.128  35.635  -5.445  1.00 22.29           O
ATOM   2309  CB  THR A 286     -18.352  32.551  -6.477  1.00 21.25           C
ATOM   2310  OG1 THR A 286     -17.688  32.652  -7.732  1.00 17.07           O
ATOM   2311  CG2 THR A 286     -18.841  31.109  -6.311  1.00 21.68           C
ATOM   2312  N   LEU A 287     -19.014  35.628  -7.698  1.00 24.11           N
ATOM   2313  CA  LEU A 287     -18.678  37.043  -7.775  1.00 23.20           C
ATOM   2314  C   LEU A 287     -19.791  37.941  -7.227  1.00 22.79           C
ATOM   2315  O   LEU A 287     -19.515  39.022  -6.679  1.00 19.52           O
ATOM   2316  CB  LEU A 287     -18.294  37.535  -9.164  1.00 22.46           C
ATOM   2317  CG  LEU A 287     -17.125  36.873  -9.885  1.00 26.76           C
ATOM   2318  CD1 LEU A 287     -16.839  37.576 -11.204  1.00 29.48           C
ATOM   2319  CD2 LEU A 287     -15.848  36.801  -9.071  1.00 29.74           C
ATOM   2320  N   ARG A 288     -21.020  37.476  -7.276  1.00 23.29           N
ATOM   2321  CA  ARG A 288     -22.182  38.214  -6.766  1.00 32.62           C
ATOM   2322  C   ARG A 288     -22.165  38.170  -5.242  1.00 31.40           C
ATOM   2323  O   ARG A 288     -22.581  39.078  -4.545  1.00 32.10           O
ATOM   2324  CB  ARG A 288     -23.414  37.577  -7.350  1.00 37.97           C
ATOM   2325  CG  ARG A 288     -24.819  38.084  -7.246  1.00 44.25           C
ATOM   2326  CD  ARG A 288     -25.686  37.276  -8.222  1.00 53.55           C
ATOM   2327  NE  ARG A 288     -25.963  37.956  -9.476  1.00 59.96           N
ATOM   2328  CZ  ARG A 288     -26.012  37.453 -10.699  1.00 63.05           C
ATOM   2329  NH1 ARG A 288     -25.730  36.180 -10.956  1.00 63.51           N
ATOM   2330  NH2 ARG A 288     -26.313  38.252 -11.721  1.00 64.16           N
ATOM   2331  N   LYS A 289     -21.639  37.082  -4.698  1.00 32.01           N
ATOM   2332  CA  LYS A 289     -21.514  36.862  -3.267  1.00 31.76           C
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ATOM   2333  C   LYS A 289     -20.478  37.819  -2.666  1.00 31.54           C
ATOM   2334  O   LYS A 289     -20.734  38.472  -1.646  1.00 24.58           O
ATOM   2335  CB  LYS A 289     -21.122  35.424  -3.002  1.00 30.35           C
ATOM   2336  CG  LYS A 289     -21.042  34.909  -1.610  1.00 30.22           C
ATOM   2337  CD  LYS A 289     -22.051  35.348  -0.595  1.00 32.36           C
ATOM   2338  CE  LYS A 289     -23.488  35.497  -1.007  1.00 33.16           C
ATOM   2339  NZ  LYS A 289     -24.337  35.955   0.150  1.00 36.24           N
ATOM   2340  N   ILE A 290     -19.385  37.954  -3.436  1.00 27.28           N
ATOM   2341  CA  ILE A 290     -18.324  38.856  -3.011  1.00 30.02           C
ATOM   2342  C   ILE A 290     -18.844  40.285  -2.978  1.00 32.38           C
ATOM   2343  O   ILE A 290     -18.743  41.033  -2.013  1.00 32.66           O
ATOM   2344  CB  ILE A 290     -17.107  38.685  -3.927  1.00 30.01           C
ATOM   2345  CG1 ILE A 290     -16.413  37.342  -3.636  1.00 28.53           C
ATOM   2346  CG2 ILE A 290     -16.128  39.835  -3.754  1.00 28.77           C
ATOM   2347  CD1 ILE A 290     -15.260  37.066  -4.605  1.00 24.81           C
ATOM   2348  N   THR A 291     -19.467  40.688  -4.074  1.00 34.89           N
ATOM   2349  CA  THR A 291     -20.058  41.999  -4.269  1.00 32.88           C
ATOM   2350  C   THR A 291     -21.188  42.286  -3.308  1.00 29.85           C
ATOM   2351  O   THR A 291     -21.143  43.301  -2.633  1.00 27.07           O
ATOM   2352  CB  THR A 291     -20.535  42.088  -5.734  1.00 35.94           C
ATOM   2353  OG1 THR A 291     -19.372  42.324  -6.550  1.00 37.73           O
ATOM   2354  CG2 THR A 291     -21.566  43.161  -5.932  1.00 35.25           C
ATOM   2355  N   ASP A 292     -22.165  41.417  -3.102  1.00 32.61           N
ATOM   2356  CA  ASP A 292     -23.240  41.661  -2.161  1.00 32.32           C
ATOM   2357  C   ASP A 292     -22.694  41.716  -0.744  1.00 36.15           C
ATOM   2358  O   ASP A 292     -23.268  42.426   0.069  1.00 36.98           O
ATOM   2359  CB  ASP A 292     -24.328  40.599  -2.190  1.00 37.89           C
ATOM   2360  CG  ASP A 292     -25.069  40.333  -3.472  1.00 41.39           C
ATOM   2361  OD1 ASP A 292     -25.059  41.155  -4.425  1.00 46.02           O
ATOM   2362  OD2 ASP A 292     -25.719  39.266  -3.558  1.00 39.20           O
ATOM   2363  N   LEU A 293     -21.621  40.993  -0.388  1.00 35.69           N
ATOM   2364  CA  LEU A 293     -21.136  41.051   0.986  1.00 30.63           C
ATOM   2365  C   LEU A 293     -20.495  42.380   1.330  1.00 28.81           C
ATOM   2366  O   LEU A 293     -20.344  42.646   2.531  1.00 31.14           O
ATOM   2367  CB  LEU A 293     -20.197  39.895   1.336  1.00 31.78           C
ATOM   2368  CG  LEU A 293     -20.854  38.582   1.771  1.00 29.94           C
ATOM   2369  CD1 LEU A 293     -19.899  37.413   1.735  1.00 30.19           C
ATOM   2370  CD2 LEU A 293     -21.438  38.735   3.167  1.00 28.51           C
ATOM   2371  N   GLY A 294     -20.094  43.164   0.351  1.00 27.05           N
ATOM   2372  CA  GLY A 294     -19.539  44.488   0.560  1.00 27.29           C
ATOM   2373  C   GLY A 294     -18.024  44.563   0.591  1.00 26.53           C
ATOM   2374  O   GLY A 294     -17.467  45.445   1.242  1.00 26.36           O
ATOM   2375  N   ALA A 295     -17.323  43.658  -0.093  1.00 24.21           N
ATOM   2376  CA  ALA A 295     -15.869  43.703  -0.120  1.00 20.42           C
ATOM   2377  C   ALA A 295     -15.471  44.875  -1.024  1.00 23.56           C
ATOM   2378  O   ALA A 295     -16.309  45.388  -1.747  1.00 25.96           O
ATOM   2379  CB  ALA A 295     -15.296  42.412  -0.653  1.00 19.80           C
ATOM   2380  N   ASP A 296     -14.201  45.233  -1.088  1.00 22.72           N
ATOM   2381  CA  ASP A 296     -13.725  46.332  -1.892  1.00 23.68           C
ATOM   2382  C   ASP A 296     -13.336  45.945  -3.297  1.00 26.51           C
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ATOM   2383  O   ASP A 296     -12.946  46.832  -4.060  1.00 26.37           O
ATOM   2384  CB  ASP A 296     -12.537  46.986  -1.144  1.00 25.75           C
ATOM   2385  CG  ASP A 296     -13.053  47.335   0.256  1.00 26.03           C
ATOM   2386  OD1 ASP A 296     -13.883  48.272   0.322  1.00 31.31           O
ATOM   2387  OD2 ASP A 296     -12.684  46.689   1.243  1.00 21.78           O
ATOM   2388  N   GLY A 297     -13.537  44.683  -3.666  1.00 27.55           N
ATOM   2389  CA  GLY A 297     -13.116  44.186  -4.977  1.00 27.02           C
ATOM   2390  C   GLY A 297     -12.537  42.793  -4.793  1.00 26.72           C
ATOM   2391  O   GLY A 297     -12.812  42.181  -3.758  1.00 29.55           O
ATOM   2392  N   PHE A 298     -11.752  42.299  -5.740  1.00 27.34           N
ATOM   2393  CA  PHE A 298     -11.131  40.976  -5.604  1.00 23.96           C
ATOM   2394  C   PHE A 298      -9.883  40.929  -6.470  1.00 22.83           C
ATOM   2395  O   PHE A 298      -9.596  41.857  -7.217  1.00 21.27           O
ATOM   2396  CB  PHE A 298     -12.063  39.797  -5.861  1.00 23.10           C
ATOM   2397  CG  PHE A 298     -12.699  39.750  -7.214  1.00 23.57           C
ATOM   2398  CD1 PHE A 298     -12.221  38.924  -8.205  1.00 26.58           C
ATOM   2399  CD2 PHE A 298     -13.791  40.540  -7.515  1.00 27.49           C
ATOM   2400  CE1 PHE A 298     -12.780  38.867  -9.463  1.00 24.62           C
ATOM   2401  CE2 PHE A 298     -14.369  40.508  -8.761  1.00 29.23           C
ATOM   2402  CZ  PHE A 298     -13.859  39.676  -9.736  1.00 27.60           C
ATOM   2403  N   ILE A 299      -9.081  39.874  -6.304  1.00 25.00           N
ATOM   2404  CA  ILE A 299      -7.830  39.708  -7.043  1.00 19.25           C
ATOM   2405  C   ILE A 299      -7.859  38.381  -7.777  1.00 19.29           C
ATOM   2406  O   ILE A 299      -7.918  37.296  -7.174  1.00 20.28           O
ATOM   2407  CB  ILE A 299      -6.618  39.767  -6.080  1.00 19.31           C
ATOM   2408  CG1 ILE A 299      -6.463  41.161  -5.452  1.00 19.44           C
ATOM   2409  CG2 ILE A 299      -5.331  39.392  -6.783  1.00 14.11           C
ATOM   2410  CD1 ILE A 299      -5.745  41.265  -4.139  1.00 15.56           C
ATOM   2411  N   ILE A 300      -7.735  38.422  -9.094  1.00 18.66           N
ATOM   2412  CA  ILE A 300      -7.677  37.222  -9.913  1.00 19.51           C
ATOM   2413  C   ILE A 300      -6.226  36.762 -10.059  1.00 25.60           C
ATOM   2414  O   ILE A 300      -5.376  37.461 -10.622  1.00 23.94           O
ATOM   2415  CB  ILE A 300      -8.223  37.480 -11.322  1.00 20.69           C
ATOM   2416  CG1 ILE A 300      -9.625  38.069 -11.237  1.00 21.12           C
ATOM   2417  CG2 ILE A 300      -8.173  36.191 -12.126  1.00 19.35           C
ATOM   2418  CD1 ILE A 300     -10.133  38.827 -12.430  1.00 13.92           C
ATOM   2419  N   TRP A 301      -5.974  35.550  -9.565  1.00 24.47           N
ATOM   2420  CA  TRP A 301      -4.664  34.940  -9.584  1.00 17.95           C
ATOM   2421  C   TRP A 301      -4.597  33.750 -10.549  1.00 20.91           C
ATOM   2422  O   TRP A 301      -5.628  33.133 -10.805  1.00 18.56           O
ATOM   2423  CB  TRP A 301      -4.413  34.358  -8.172  1.00 13.42           C
ATOM   2424  CG  TRP A 301      -3.056  33.721  -8.070  1.00 15.38           C
ATOM   2425  CD1 TRP A 301      -1.880  34.397  -7.962  1.00 13.09           C
ATOM   2426  CD2 TRP A 301      -2.717  32.334  -8.147  1.00 14.37           C
ATOM   2427  NE1 TRP A 301      -0.853  33.514  -7.906  1.00 15.76           N
ATOM   2428  CE2 TRP A 301      -1.323  32.233  -8.027  1.00 14.63           C
ATOM   2429  CE3 TRP A 301      -3.455  31.160  -8.325  1.00 15.40           C
ATOM   2430  CZ2 TRP A 301      -0.623  31.022  -8.068  1.00 12.51           C
ATOM   2431  CZ3 TRP A 301      -2.769  29.950  -8.329  1.00 15.31           C
ATOM   2432  CH2 TRP A 301      -1.371  29.888  -8.203  1.00 10.78           C
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ATOM   2433  N   GLY A 302      -3.383  33.341 -10.934  1.00 16.36           N
ATOM   2434  CA  GLY A 302      -3.209  32.147 -11.694  1.00 17.55           C
ATOM   2435  C   GLY A 302      -1.811  31.584 -11.590  1.00 22.46           C
ATOM   2436  O   GLY A 302      -0.865  32.295 -11.238  1.00 27.57           O
ATOM   2437  N   SER A 303      -1.652  30.300 -11.880  1.00 24.06           N
ATOM   2438  CA  SER A 303      -0.320  29.712 -11.840  1.00 28.63           C
ATOM   2439  C   SER A 303       0.372  29.850 -13.194  1.00 28.92           C
ATOM   2440  O   SER A 303      -0.259  29.549 -14.223  1.00 30.15           O
ATOM   2441  CB  SER A 303      -0.456  28.225 -11.470  1.00 27.52           C
ATOM   2442  OG  SER A 303       0.817  27.631 -11.685  1.00 30.83           O
ATOM   2443  N   SER A 304       1.681  30.048 -13.239  1.00 26.44           N
ATOM   2444  CA  SER A 304       2.420  30.049 -14.494  1.00 32.97           C
ATOM   2445  C   SER A 304       2.472  28.680 -15.174  1.00 33.54           C
ATOM   2446  O   SER A 304       2.637  28.602 -16.388  1.00 30.43           O
ATOM   2447  CB  SER A 304       3.828  30.623 -14.288  1.00 31.97           C
ATOM   2448  OG  SER A 304       4.474  29.962 -13.214  1.00 34.37           O
ATOM   2449  N   ASP A 305       2.089  27.584 -14.540  1.00 33.71           N
ATOM   2450  CA  ASP A 305       1.999  26.266 -15.105  1.00 32.84           C
ATOM   2451  C   ASP A 305       0.699  26.093 -15.890  1.00 36.48           C
ATOM   2452  O   ASP A 305       0.537  25.056 -16.555  1.00 40.72           O
ATOM   2453  CB  ASP A 305       1.965  25.214 -14.009  1.00 33.99           C
ATOM   2454  CG  ASP A 305       3.145  25.082 -13.103  1.00 38.33           C
ATOM   2455  OD1 ASP A 305       4.308  25.357 -13.447  1.00 42.92           O
ATOM   2456  OD2 ASP A 305       2.904  24.645 -11.952  1.00 45.66           O
ATOM   2457  N   ASP A 306      -0.248  27.027 -15.779  1.00 30.09           N
ATOM   2458  CA  ASP A 306      -1.482  26.843 -16.545  1.00 29.92           C
ATOM   2459  C   ASP A 306      -1.428  27.606 -17.857  1.00 30.79           C
ATOM   2460  O   ASP A 306      -2.334  27.515 -18.691  1.00 30.53           O
ATOM   2461  CB  ASP A 306      -2.699  27.172 -15.687  1.00 31.76           C
ATOM   2462  CG  ASP A 306      -2.757  26.202 -14.501  1.00 34.60           C
ATOM   2463  OD1 ASP A 306      -2.423  25.016 -14.739  1.00 37.29           O
ATOM   2464  OD2 ASP A 306      -3.071  26.572 -13.360  1.00 25.88           O
ATOM   2465  N   ILE A 307      -0.365  28.376 -18.084  1.00 26.45           N
ATOM   2466  CA  ILE A 307      -0.206  29.154 -19.298  1.00 28.70           C
ATOM   2467  C   ILE A 307       1.275  29.131 -19.698  1.00 30.67           C
ATOM   2468  O   ILE A 307       1.816  30.180 -20.054  1.00 27.60           O
ATOM   2469  CB  ILE A 307      -0.709  30.601 -19.198  1.00 30.40           C
ATOM   2470  CG1 ILE A 307      -0.218  31.264 -17.899  1.00 27.94           C
ATOM   2471  CG2 ILE A 307      -2.229  30.744 -19.297  1.00 29.62           C
ATOM   2472  CD1 ILE A 307      -0.463  32.763 -17.936  1.00 26.22           C
ATOM   2473  N   ASN A 308       1.898  27.939 -19.619  1.00 29.56           N
ATOM   2474  CA  ASN A 308       3.328  27.881 -19.901  1.00 29.89           C
ATOM   2475  C   ASN A 308       3.662  27.303 -21.269  1.00 33.07           C
ATOM   2476  O   ASN A 308       4.729  26.693 -21.457  1.00 29.82           O
ATOM   2477  CB  ASN A 308       4.110  27.139 -18.819  1.00 25.88           C
ATOM   2478  CG  ASN A 308       3.762  25.676 -18.670  1.00 25.33           C
ATOM   2479  OD1 ASN A 308       3.086  25.055 -19.479  1.00 22.90           O
ATOM   2480  ND2 ASN A 308       4.236  25.001 -17.620  1.00 24.67           N
ATOM   2481  N   THR A 309       2.768  27.454 -22.241  1.00 31.49           N
ATOM   2482  CA  THR A 309       2.966  26.991 -23.600  1.00 29.50           C
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ATOM   2483  C   THR A 309       2.055  27.873 -24.466  1.00 34.00           C
ATOM   2484  O   THR A 309       1.068  28.444 -23.996  1.00 38.68           O
ATOM   2485  CB  THR A 309       2.513  25.572 -23.988  1.00 27.97           C
ATOM   2486  OG1 THR A 309       1.059  25.551 -24.002  1.00 32.04           O
ATOM   2487  CG2 THR A 309       2.980  24.450 -23.094  1.00 19.61           C
ATOM   2488  N   LYS A 310       2.359  27.937 -25.750  1.00 35.66           N
ATOM   2489  CA  LYS A 310       1.549  28.702 -26.680  1.00 31.87           C
ATOM   2490  C   LYS A 310       0.093  28.229 -26.664  1.00 28.69           C
ATOM   2491  O   LYS A 310      -0.875  28.996 -26.604  1.00 30.37           O
ATOM   2492  CB  LYS A 310       2.113  28.574 -28.091  1.00 29.36           C
ATOM   2493  CG  LYS A 310       1.894  29.892 -28.837  1.00 35.61           C
ATOM   2494  CD  LYS A 310       1.125  29.638 -30.120  1.00 39.31           C
ATOM   2495  CE  LYS A 310       1.787  30.353 -31.289  1.00 38.74           C
ATOM   2496  NZ  LYS A 310       1.334  29.726 -32.553  1.00 36.91           N
ATOM   2497  N   ALA A 311      -0.129  26.930 -26.723  1.00 21.12           N
ATOM   2498  CA  ALA A 311      -1.444  26.315 -26.774  1.00 22.55           C
ATOM   2499  C   ALA A 311      -2.309  26.743 -25.589  1.00 30.10           C
ATOM   2500  O   ALA A 311      -3.469  27.118 -25.757  1.00 32.64           O
ATOM   2501  CB  ALA A 311      -1.325  24.799 -26.778  1.00  9.46           C
ATOM   2502  N   LYS A 312      -1.714  26.670 -24.395  1.00 29.80           N
ATOM   2503  CA  LYS A 312      -2.408  27.056 -23.190  1.00 28.09           C
ATOM   2504  C   LYS A 312      -2.705  28.546 -23.138  1.00 31.63           C
ATOM   2505  O   LYS A 312      -3.830  28.940 -22.788  1.00 36.22           O
ATOM   2506  CB  LYS A 312      -1.575  26.657 -21.986  1.00 29.26           C
ATOM   2507  CG  LYS A 312      -1.499  25.162 -21.759  1.00 27.44           C
ATOM   2508  CD  LYS A 312      -0.312  24.923 -20.843  1.00 30.45           C
ATOM   2509  CE  LYS A 312      -0.444  23.531 -20.236  1.00 31.97           C
ATOM   2510  NZ  LYS A 312       0.550  23.367 -19.152  1.00 31.54           N
ATOM   2511  N   CYS A 313      -1.739  29.387 -23.507  1.00 28.71           N
ATOM   2512  CA  CYS A 313      -1.995  30.822 -23.515  1.00 26.56           C
ATOM   2513  C   CYS A 313      -3.198  31.123 -24.409  1.00 28.99           C
ATOM   2514  O   CYS A 313      -4.067  31.885 -23.980  1.00 29.80           O
ATOM   2515  CB  CYS A 313      -0.810  31.626 -24.022  1.00 24.46           C
ATOM   2516  SG  CYS A 313       0.633  31.631 -22.930  1.00 21.60           S
ATOM   2517  N   LEU A 314      -3.238  30.537 -25.611  1.00 28.28           N
ATOM   2518  CA  LEU A 314      -4.377  30.790 -26.485  1.00 30.78           C
ATOM   2519  C   LEU A 314      -5.683  30.354 -25.835  1.00 28.11           C
ATOM   2520  O   LEU A 314      -6.597  31.175 -25.839  1.00 27.41           O
ATOM   2521  CB  LEU A 314      -4.298  30.112 -27.860  1.00 29.45           C
ATOM   2522  CG  LEU A 314      -3.413  30.886 -28.845  1.00 28.48           C
ATOM   2523  CD1 LEU A 314      -3.149  30.039 -30.072  1.00 29.10           C
ATOM   2524  CD2 LEU A 314      -4.051  32.223 -29.171  1.00 31.49           C
ATOM   2525  N   GLN A 315      -5.713  29.157 -25.255  1.00 25.40           N
ATOM   2526  CA  GLN A 315      -6.939  28.704 -24.601  1.00 23.97           C
ATOM   2527  C   GLN A 315      -7.353  29.607 -23.456  1.00 27.03           C
ATOM   2528  O   GLN A 315      -8.544  29.889 -23.342  1.00 29.22           O
ATOM   2529  CB  GLN A 315      -6.854  27.250 -24.144  1.00 20.07           C
ATOM   2530  CG  GLN A 315      -8.160  26.740 -23.580  1.00 28.47           C
ATOM   2531  CD  GLN A 315      -8.330  26.983 -22.093  1.00 32.67           C
ATOM   2532  OE1 GLN A 315      -7.320  27.224 -21.427  1.00 37.35           O
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ATOM   2533  NE2 GLN A 315      -9.548  26.902 -21.574  1.00 33.47           N
ATOM   2534  N   PHE A 316      -6.421  30.102 -22.639  1.00 27.87           N
ATOM   2535  CA  PHE A 316      -6.799  30.980 -21.542  1.00 26.69           C
ATOM   2536  C   PHE A 316      -7.396  32.283 -22.060  1.00 29.48           C
ATOM   2537  O   PHE A 316      -8.367  32.801 -21.521  1.00 23.44           O
ATOM   2538  CB  PHE A 316      -5.585  31.257 -20.665  1.00 23.36           C
ATOM   2539  CG  PHE A 316      -5.929  32.228 -19.577  1.00 21.59           C
ATOM   2540  CD1 PHE A 316      -6.790  31.828 -18.558  1.00 22.96           C
ATOM   2541  CD2 PHE A 316      -5.402  33.502 -19.577  1.00 20.94           C
ATOM   2542  CE1 PHE A 316      -7.113  32.690 -17.529  1.00 22.23           C
ATOM   2543  CE2 PHE A 316      -5.757  34.384 -18.556  1.00 26.64           C
ATOM   2544  CZ  PHE A 316      -6.604  33.984 -17.532  1.00 24.88           C
ATOM   2545  N   ARG A 317      -6.775  32.808 -23.115  1.00 33.23           N
ATOM   2546  CA  ARG A 317      -7.216  34.012 -23.803  1.00 35.36           C
ATOM   2547  C   ARG A 317      -8.664  33.831 -24.238  1.00 32.27           C
ATOM   2548  O   ARG A 317      -9.528  34.653 -23.951  1.00 27.48           O
ATOM   2549  CB  ARG A 317      -6.282  34.219 -24.981  1.00 42.95           C
ATOM   2550  CG  ARG A 317      -6.590  35.319 -25.949  1.00 48.44           C
ATOM   2551  CD  ARG A 317      -5.888  36.632 -25.632  1.00 53.98           C
ATOM   2552  NE  ARG A 317      -5.708  37.314 -26.912  1.00 59.78           N
ATOM   2553  CZ  ARG A 317      -5.124  38.472 -27.140  1.00 64.12           C
ATOM   2554  NH1 ARG A 317      -4.623  39.215 -26.163  1.00 62.31           N
ATOM   2555  NH2 ARG A 317      -5.079  38.837 -28.420  1.00 68.55           N
ATOM   2556  N   GLU A 318      -8.983  32.702 -24.868  1.00 35.36           N
ATOM   2557  CA  GLU A 318     -10.357  32.407 -25.242  1.00 38.21           C
ATOM   2558  C   GLU A 318     -11.265  32.452 -24.035  1.00 34.76           C
ATOM   2559  O   GLU A 318     -12.260  33.163 -24.091  1.00 31.73           O
ATOM   2560  CB  GLU A 318     -10.472  31.112 -26.013  1.00 48.41           C
ATOM   2561  CG  GLU A 318     -10.730  31.422 -27.491  1.00 61.92           C
ATOM   2562  CD  GLU A 318     -11.153  30.160 -28.225  1.00 71.07           C
ATOM   2563  OE1 GLU A 318     -11.097  29.070 -27.610  1.00 72.70           O
ATOM   2564  OE2 GLU A 318     -11.535  30.261 -29.412  1.00 77.75           O
ATOM   2565  N   TYR A 319     -10.953  31.784 -22.932  1.00 35.85           N
ATOM   2566  CA  TYR A 319     -11.768  31.834 -21.710  1.00 29.43           C
ATOM   2567  C   TYR A 319     -11.842  33.254 -21.164  1.00 27.20           C
ATOM   2568  O   TYR A 319     -12.912  33.799 -20.879  1.00 22.79           O
ATOM   2569  CB  TYR A 319     -11.182  30.892 -20.685  1.00 28.89           C
ATOM   2570  CG  TYR A 319     -11.904  30.867 -19.356  1.00 34.41           C
ATOM   2571  CD1 TYR A 319     -13.124  30.202 -19.207  1.00 31.84           C
ATOM   2572  CD2 TYR A 319     -11.317  31.454 -18.235  1.00 27.52           C
ATOM   2573  CE1 TYR A 319     -13.730  30.140 -17.965  1.00 31.60           C
ATOM   2574  CE2 TYR A 319     -11.936  31.384 -17.015  1.00 28.31           C
ATOM   2575  CZ  TYR A 319     -13.140  30.746 -16.879  1.00 30.39           C
ATOM   2576  OH  TYR A 319     -13.746  30.680 -15.652  1.00 32.86           O
ATOM   2577  N   LEU A 320     -10.698  33.953 -21.127  1.00 25.79           N
ATOM   2578  CA  LEU A 320     -10.733  35.348 -20.729  1.00 26.32           C
ATOM   2579  C   LEU A 320     -11.851  36.066 -21.489  1.00 28.80           C
ATOM   2580  O   LEU A 320     -12.782  36.595 -20.883  1.00 29.57           O
ATOM   2581  CB  LEU A 320      -9.402  36.061 -20.932  1.00 23.36           C
ATOM   2582  CG  LEU A 320      -9.345  37.550 -20.591  1.00 24.67           C
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ATOM   2583  CD1 LEU A 320      -9.775  37.845 -19.154  1.00 23.47           C
ATOM   2584  CD2 LEU A 320      -7.939  38.081 -20.816  1.00 27.01           C
ATOM   2585  N   ASN A 321     -11.785  36.092 -22.816  1.00 30.48           N
ATOM   2586  CA  ASN A 321     -12.797  36.801 -23.596  1.00 28.90           C
ATOM   2587  C   ASN A 321     -14.182  36.210 -23.635  1.00 30.30           C
ATOM   2588  O   ASN A 321     -15.126  36.998 -23.757  1.00 32.22           O
ATOM   2589  CB  ASN A 321     -12.228  37.091 -24.991  1.00 22.42           C
ATOM   2590  CG  ASN A 321     -11.124  38.131 -24.889  1.00 26.09           C
ATOM   2591  OD1 ASN A 321     -11.474  39.294 -24.623  1.00 27.56           O
ATOM   2592  ND2 ASN A 321      -9.842  37.788 -25.059  1.00 22.18           N
ATOM   2593  N   ASN A 322     -14.426  34.931 -23.486  1.00 32.40           N
ATOM   2594  CA  ASN A 322     -15.756  34.377 -23.595  1.00 36.30           C
ATOM   2595  C   ASN A 322     -16.457  34.158 -22.269  1.00 40.71           C
ATOM   2596  O   ASN A 322     -17.677  33.927 -22.281  1.00 43.87           O
ATOM   2597  CB  ASN A 322     -15.646  33.025 -24.317  1.00 40.87           C
ATOM   2598  CG  ASN A 322     -15.567  33.123 -25.816  1.00 46.70           C
ATOM   2599  OD1 ASN A 322     -14.508  33.177 -26.434  1.00 49.95           O
ATOM   2600  ND2 ASN A 322     -16.721  33.138 -26.493  1.00 54.11           N
ATOM   2601  N   GLU A 323     -15.729  34.100 -21.150  1.00 40.00           N
ATOM   2602  CA  GLU A 323     -16.327  33.782 -19.874  1.00 35.20           C
ATOM   2603  C   GLU A 323     -15.936  34.672 -18.709  1.00 37.11           C
ATOM   2604  O   GLU A 323     -16.775  35.388 -18.152  1.00 43.23           O
ATOM   2605  CB  GLU A 323     -15.995  32.355 -19.459  1.00 36.40           C
ATOM   2606  CG  GLU A 323     -16.646  31.251 -20.248  1.00 41.96           C
ATOM   2607  CD  GLU A 323     -18.150  31.344 -20.325  1.00 46.59           C
ATOM   2608  OE1 GLU A 323     -18.787  32.055 -19.515  1.00 49.19           O
ATOM   2609  OE2 GLU A 323     -18.691  30.686 -21.239  1.00 49.35           O
ATOM   2610  N   LEU A 324     -14.684  34.601 -18.298  1.00 32.44           N
ATOM   2611  CA  LEU A 324     -14.185  35.361 -17.168  1.00 27.43           C
ATOM   2612  C   LEU A 324     -14.335  36.856 -17.335  1.00 24.54           C
ATOM   2613  O   LEU A 324     -14.889  37.516 -16.465  1.00 25.40           O
ATOM   2614  CB  LEU A 324     -12.730  34.923 -16.903  1.00 27.94           C
ATOM   2615  CG  LEU A 324     -12.043  35.555 -15.685  1.00 27.38           C
ATOM   2616  CD1 LEU A 324     -12.602  34.989 -14.390  1.00 25.83           C
ATOM   2617  CD2 LEU A 324     -10.539  35.356 -15.794  1.00 31.18           C
ATOM   2618  N   GLY A 325     -13.792  37.479 -18.367  1.00 25.37           N
ATOM   2619  CA  GLY A 325     -13.908  38.909 -18.581  1.00 27.91           C
ATOM   2620  C   GLY A 325     -15.341  39.405 -18.491  1.00 29.49           C
ATOM   2621  O   GLY A 325     -15.696  40.266 -17.697  1.00 27.60           O
ATOM   2622  N   PRO A 326     -16.217  38.871 -19.335  1.00 31.45           N
ATOM   2623  CA  PRO A 326     -17.612  39.274 -19.375  1.00 31.81           C
ATOM   2624  C   PRO A 326     -18.285  39.184 -18.025  1.00 31.90           C
ATOM   2625  O   PRO A 326     -18.949  40.112 -17.577  1.00 32.64           O
ATOM   2626  CB  PRO A 326     -18.220  38.354 -20.427  1.00 33.40           C
ATOM   2627  CG  PRO A 326     -17.084  37.938 -21.299  1.00 32.57           C
ATOM   2628  CD  PRO A 326     -15.893  37.871 -20.386  1.00 31.86           C
ATOM   2629  N   ALA A 327     -18.133  38.094 -17.299  1.00 33.93           N
ATOM   2630  CA  ALA A 327     -18.683  37.906 -15.961  1.00 32.26           C
ATOM   2631  C   ALA A 327     -18.161  39.027 -15.073  1.00 33.24           C
ATOM   2632  O   ALA A 327     -18.907  39.777 -14.445  1.00 35.00           O
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ATOM   2633  CB  ALA A 327     -18.262  36.542 -15.430  1.00 27.16           C
ATOM   2634  N   VAL A 328     -16.843  39.204 -15.077  1.00 30.77           N
ATOM   2635  CA  VAL A 328     -16.255  40.278 -14.280  1.00 33.73           C
ATOM   2636  C   VAL A 328     -16.908  41.600 -14.646  1.00 31.10           C
ATOM   2637  O   VAL A 328     -17.256  42.349 -13.752  1.00 29.27           O
ATOM   2638  CB  VAL A 328     -14.721  40.372 -14.351  1.00 31.78           C
ATOM   2639  CG1 VAL A 328     -14.243  41.681 -13.758  1.00 32.16           C
ATOM   2640  CG2 VAL A 328     -14.099  39.209 -13.586  1.00 31.33           C
ATOM   2641  N   LYS A 329     -17.017  41.924 -15.920  1.00 36.26           N
ATOM   2642  CA  LYS A 329     -17.632  43.156 -16.356  1.00 37.78           C
ATOM   2643  C   LYS A 329     -19.116  43.242 -16.031  1.00 34.49           C
ATOM   2644  O   LYS A 329     -19.504  44.365 -15.733  1.00 33.58           O
ATOM   2645  CB  LYS A 329     -17.481  43.411 -17.867  1.00 43.80           C
ATOM   2646  CG  LYS A 329     -17.534  44.910 -18.133  1.00 47.39           C
ATOM   2647  CD  LYS A 329     -17.456  45.186 -19.615  1.00 55.52           C
ATOM   2648  CE  LYS A 329     -17.308  46.689 -19.859  1.00 60.74           C
ATOM   2649  NZ  LYS A 329     -17.279  46.933 -21.333  1.00 64.66           N
ATOM   2650  N   ARG A 330     -19.928  42.216 -16.162  1.00 32.98           N
ATOM   2651  CA  ARG A 330     -21.339  42.338 -15.858  1.00 41.93           C
ATOM   2652  C   ARG A 330     -21.584  42.391 -14.347  1.00 51.33           C
ATOM   2653  O   ARG A 330     -22.300  43.304 -13.942  1.00 52.96           O
ATOM   2654  CB  ARG A 330     -22.236  41.233 -16.416  1.00 37.68           C
ATOM   2655  CG  ARG A 330     -21.991  41.134 -18.006  0.00 49.12           C
ATOM   2656  CD  ARG A 330     -22.996  40.149 -18.574  0.00 53.56           C
ATOM   2657  NE  ARG A 330     -22.921  40.060 -20.027  0.00 55.17           N
ATOM   2658  CZ  ARG A 330     -23.690  39.267 -20.763  0.00 57.63           C
ATOM   2659  NH1 ARG A 330     -24.594  38.491 -20.179  0.00 59.72           N
ATOM   2660  NH2 ARG A 330     -23.556  39.250 -22.082  0.00 57.17           N
ATOM   2661  N   ILE A 331     -21.071  41.439 -13.574  1.00 59.85           N
ATOM   2662  CA  ILE A 331     -21.303  41.447 -12.128  1.00 65.95           C
ATOM   2663  C   ILE A 331     -20.406  42.517 -11.527  1.00 69.19           C
ATOM   2664  O   ILE A 331     -20.675  43.689 -11.788  1.00 73.22           O
ATOM   2665  CB  ILE A 331     -21.114  40.096 -11.433  1.00 67.56           C
ATOM   2666  CG1 ILE A 331     -22.028  39.001 -12.002  1.00 65.50           C
ATOM   2667  CG2 ILE A 331     -21.384  40.208  -9.930  1.00 68.01           C
ATOM   2668  CD1 ILE A 331     -21.490  38.312 -13.231  1.00 65.91           C
ATOM   2669  N   ALA A 332     -19.333  42.173 -10.852  1.00 73.66           N
ATOM   2670  CA  ALA A 332     -18.384  43.140 -10.323  1.00 77.79           C
ATOM   2671  C   ALA A 332     -18.290  44.418 -11.147  1.00 79.20           C
ATOM   2672  O   ALA A 332     -18.454  45.549 -10.702  1.00 80.39           O
ATOM   2673  CB  ALA A 332     -17.020  42.445 -10.301  1.00 79.85           C
ATOM   2674  N   LEU A 333     -17.978  44.771 -12.119  0.00103.77           N
ATOM   2675  CA  LEU A 333     -17.956  46.179 -12.579  0.00109.41           C
ATOM   2676  C   LEU A 333     -19.212  46.583 -13.352  0.00111.13           C
ATOM   2677  O   LEU A 333     -20.047  47.332 -12.843  0.00112.12           O
ATOM   2678  CB  LEU A 333     -16.661  46.411 -13.382  0.00110.18           C
ATOM   2679  CG  LEU A 333     -15.390  45.884 -12.695  0.00111.86           C
ATOM   2680  CD1 LEU A 333     -14.235  45.827 -13.674  0.00112.16           C
ATOM   2681  CD2 LEU A 333     -15.030  46.726 -11.480  0.00109.72           C
TER    2682      LEU A 333
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HETATM 2683  O4  GCU B   1      -1.949  28.854  -1.891  1.00 51.12           O
HETATM 2684  C1  NAG B   2      -1.394  28.586  -3.092  1.00 41.03           C
HETATM 2685  C2  NAG B   2      -0.221  29.369  -3.584  1.00 37.33           C
HETATM 2686  C3  NAG B   2       0.211  28.790  -4.924  1.00 38.78           C
HETATM 2687  C4  NAG B   2      -0.386  27.398  -5.126  1.00 45.78           C
HETATM 2688  C5  NAG B   2      -1.913  27.534  -5.204  1.00 49.40           C
HETATM 2689  C6  NAG B   2      -2.628  26.237  -5.496  1.00 54.74           C
HETATM 2690  C7  NAG B   2      -1.423  31.537  -4.155  1.00 27.95           C
HETATM 2691  C8  NAG B   2      -1.249  33.028  -4.169  1.00 22.85           C
HETATM 2692  N2  NAG B   2      -0.378  30.835  -3.614  1.00 34.30           N
HETATM 2693  O3  NAG B   2       1.595  28.798  -5.030  1.00 34.66           O
HETATM 2694  O4  NAG B   2       0.040  26.779  -6.345  1.00 44.74           O
HETATM 2695  O5  NAG B   2      -2.358  28.127  -3.988  1.00 44.30           O
HETATM 2696  O6  NAG B   2      -3.836  25.972  -4.766  1.00 58.98           O
HETATM 2697  O7  NAG B   2      -2.436  31.001  -4.597  1.00 32.20           O
HETATM 2698  C1  GCU B   3       2.279  29.479  -5.895  1.00 32.90           C
HETATM 2699  C2  GCU B   3       3.736  29.289  -5.477  1.00 30.00           C
HETATM 2700  C3  GCU B   3       4.654  30.063  -6.386  1.00 32.30           C
HETATM 2701  C4  GCU B   3       4.440  29.632  -7.827  1.00 28.03           C
HETATM 2702  C5  GCU B   3       2.981  29.868  -8.231  1.00 27.23           C
HETATM 2703  C6  GCU B   3       2.597  29.376  -9.580  1.00 29.33           C
HETATM 2704  O2  GCU B   3       3.830  29.814  -4.152  1.00 37.21           O
HETATM 2705  O3  GCU B   3       6.035  29.901  -6.029  1.00 35.00           O
HETATM 2706  O4  GCU B   3       5.338  30.278  -8.687  1.00 29.44           O
HETATM 2707  O5  GCU B   3       2.140  29.282  -7.274  1.00 29.75           O
HETATM 2708  O6A GCU B   3       2.379  28.150  -9.726  1.00 34.69           O
HETATM 2709  O6B GCU B   3       2.523  30.230 -10.486  1.00 25.77           O
HETATM 2710  C1  NAG B   4       6.006  29.550  -9.580  1.00 31.18           C
HETATM 2711  C2  NAG B   4       6.817  30.504 -10.462  1.00 31.44           C
HETATM 2712  C3  NAG B   4       7.604  29.720 -11.498  1.00 35.41           C
HETATM 2713  C4  NAG B   4       8.426  28.623 -10.806  1.00 38.36           C
HETATM 2714  C5  NAG B   4       7.558  27.757  -9.913  1.00 37.67           C
HETATM 2715  C6  NAG B   4       8.309  26.721  -9.113  1.00 37.61           C
HETATM 2716  C7  NAG B   4       6.044  32.849 -10.775  1.00 26.28           C
HETATM 2717  C8  NAG B   4       5.062  33.803 -11.433  1.00 25.67           C
HETATM 2718  N2  NAG B   4       5.910  31.515 -11.028  1.00 27.79           N
HETATM 2719  O3  NAG B   4       8.569  30.541 -12.111  1.00 41.32           O
HETATM 2720  O4  NAG B   4       9.004  27.781 -11.807  1.00 45.70           O
HETATM 2721  O5  NAG B   4       6.875  28.601  -8.983  1.00 37.22           O
HETATM 2722  O6  NAG B   4       9.061  27.229  -8.014  1.00 33.43           O
HETATM 2723  O7  NAG B   4       6.906  33.311 -10.056  1.00 30.43           O
HETATM 2724  C1  GCU B   5       8.433  31.116 -13.284  1.00 43.02           C
HETATM 2725  C2  GCU B   5       9.323  32.357 -13.343  1.00 47.37           C
HETATM 2726  C3  GCU B   5       9.277  33.050 -14.683  1.00 51.08           C
HETATM 2727  C4  GCU B   5       9.494  32.050 -15.808  1.00 50.97           C
HETATM 2728  C5  GCU B   5       8.647  30.790 -15.569  1.00 50.90           C
HETATM 2729  C6  GCU B   5       8.830  29.723 -16.579  1.00 51.54           C
HETATM 2730  O2  GCU B   5       8.947  33.280 -12.333  1.00 45.52           O
HETATM 2731  O3  GCU B   5      10.308  34.045 -14.790  1.00 54.30           O
HETATM 2732  O4  GCU B   5       9.028  32.672 -17.010  1.00 54.64           O
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HETATM 2733  O5  GCU B   5       8.924  30.235 -14.296  1.00 47.19           O
HETATM 2734  O6A GCU B   5       8.786  28.558 -16.130  1.00 47.41           O
HETATM 2735  O6B GCU B   5       8.974  30.229 -17.712  1.00 53.66           O
HETATM 2736  O   HOH A 406      -4.302  39.104   4.577  1.00 25.81           O
HETATM 2737  O   HOH A 407      -1.706  43.410 -13.472  1.00 17.19           O
HETATM 2738  O   HOH A 408      -3.902  28.970 -13.218  1.00  8.51           O
HETATM 2739  O   HOH A 409      11.340  33.122   3.007  1.00 26.11           O
HETATM 2740  O   HOH A 410     -24.640  34.729  -5.063  1.00 27.54           O
HETATM 2741  O   HOH A 411      -7.593  31.936   3.202  1.00 19.01           O
HETATM 2742  O   HOH A 412     -11.362  28.705  -7.777  1.00 27.56           O
HETATM 2743  O   HOH A 413     -10.021  29.381   5.288  1.00 19.71           O
HETATM 2744  O   HOH A 414       2.062  39.266 -16.031  1.00 40.89           O
HETATM 2745  O   HOH A 415     -22.836  25.357 -10.525  1.00 24.94           O
HETATM 2746  O   HOH A 416      -4.080  32.083  11.547  1.00 13.21           O
HETATM 2747  O   HOH A 417      23.019  37.459  10.904  1.00 40.18           O
HETATM 2748  O   HOH A 418      -0.028  40.614 -11.657  1.00 23.06           O
HETATM 2749  O   HOH A 419     -11.618  34.082   5.948  1.00 24.36           O
HETATM 2750  O   HOH A 420       0.725  34.483   3.375  1.00 12.64           O
HETATM 2751  O   HOH A 421       1.648  31.607   6.684  1.00 23.15           O
HETATM 2752  O   HOH A 422      15.393  19.010  32.802  1.00 49.66           O
HETATM 2753  O   HOH A 423      10.755  24.832  20.548  1.00 29.50           O
HETATM 2754  O   HOH A 424      -5.880  32.746  13.462  1.00 30.81           O
HETATM 2755  O   HOH A 425     -18.283  33.634   8.060  1.00 21.43           O
HETATM 2756  O   HOH A 426      -7.822  28.233 -18.804  1.00 28.49           O
HETATM 2757  O   HOH A 427      -4.837  28.852 -18.080  1.00 37.13           O
HETATM 2758  O   HOH A 428     -11.737  46.915 -11.684  1.00 22.31           O
HETATM 2759  O   HOH A 429       2.988  40.189  -9.074  1.00 35.23           O
HETATM 2760  O   HOH A 430       1.798  25.280 -27.727  1.00 23.40           O
HETATM 2761  O   HOH A 431      -8.170  40.700  15.145  1.00 30.55           O
HETATM 2762  O   HOH A 432      -1.079  54.644  -1.431  1.00 32.85           O
HETATM 2763  O   HOH A 433     -10.084  31.956   4.830  1.00  9.31           O
HETATM 2764  O   HOH A 434      -5.969  33.707  10.398  1.00 20.62           O
HETATM 2765  O   HOH A 435     -20.749  41.498   5.357  1.00 49.80           O
HETATM 2766  O   HOH A 436      -0.465  31.602 -33.083  1.00 26.69           O
HETATM 2767  O   HOH A 437      -2.160  27.284  19.613  1.00 19.29           O
HETATM 2768  O   HOH A 438       6.404  40.866 -15.691  1.00 23.16           O
HETATM 2769  O   HOH A 439     -17.211  35.122  10.489  1.00 32.48           O
HETATM 2770  O   HOH A 440       1.678  33.876  17.221  1.00 35.70           O
HETATM 2771  O   HOH A 441       8.614  36.965  -5.618  1.00 24.00           O
HETATM 2772  O   HOH A 442     -11.933  31.654  -6.543  1.00 28.70           O
HETATM 2773  O   HOH A 443      -3.403  55.311  12.646  1.00 22.34           O
HETATM 2774  O   HOH A 444       7.581  41.988 -22.523  1.00 32.04           O
HETATM 2775  O   HOH A 445       5.372  53.107  -1.652  1.00 21.79           O
HETATM 2776  O   HOH A 446      11.067  45.393  10.835  1.00 29.89           O
HETATM 2777  O   HOH A 447       2.563  53.237   5.612  1.00 25.89           O
HETATM 2778  O   HOH A 448       1.755  22.813 -26.457  1.00 33.00           O
HETATM 2779  O   HOH A 449       7.539  41.840 -13.303  1.00 40.56           O
HETATM 2780  O   HOH A 450     -25.518  36.601  -3.060  1.00 32.52           O
HETATM 2781  O   HOH A 451     -17.689  39.964  16.177  1.00 34.93           O
HETATM 2782  O   HOH A 452      -0.819  35.682  18.138  1.00 55.23           O
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HETATM 2783  O   HOH A 453       6.714  55.404   6.767  1.00 35.63           O
HETATM 2784  O   HOH A 454      -6.953  29.349   2.387  1.00 36.36           O
HETATM 2785  O   HOH A 455       6.112  38.042  19.871  1.00 37.07           O
HETATM 2786  O   HOH A 456      -9.674  41.864  18.725  1.00 40.03           O
HETATM 2787  O   HOH A 457     -16.719  25.194  14.864  1.00 46.33           O
HETATM 2788  O   HOH A 458      -7.783  21.686  17.733  1.00 66.81           O
HETATM 2789  O   HOH A 459      -2.286  49.987 -16.659  1.00 57.27           O
HETATM 2790  O   HOH A 460      -8.199  26.825   3.700  1.00 54.14           O
HETATM 2791  O   HOH A 461      -5.145  49.115 -15.071  1.00 34.00           O
HETATM 2792  O   HOH A 462       9.322  34.942 -28.758  1.00 24.89           O
HETATM 2793  O   HOH A 463       7.033  35.649 -22.476  1.00 22.82           O
HETATM 2794  O   HOH A 464      -0.305  42.016 -15.328  1.00 35.27           O
HETATM 2795  O   HOH A 465      -4.464  25.224 -18.509  1.00 37.88           O
HETATM 2796  O   HOH A 466       3.983  26.665 -27.244  1.00 42.07           O
HETATM 2797  O   HOH A 467      -0.824  44.595 -22.100  1.00 39.58           O
HETATM 2798  O   HOH A 468       2.919  48.901  11.131  1.00 58.17           O
HETATM 2799  O   HOH A 469      13.448  26.436  21.582  1.00 38.20           O
HETATM 2800  O   HOH A 470       4.865  53.153   6.955  1.00 38.52           O
HETATM 2801  O   HOH A 471      -4.723  28.544  20.172  1.00 48.02           O
HETATM 2802  O   HOH A 472     -18.687  31.575   9.749  1.00 48.97           O
HETATM 2803  O   HOH A 473      -2.315  54.012  15.048  1.00 39.60           O
HETATM 2804  O   HOH A 474     -10.921  48.569  -3.548  1.00 40.80           O
HETATM 2805  O   HOH A 475      16.274  22.689  13.857  1.00 64.49           O
HETATM 2806  O   HOH A 476     -23.318  34.107   1.962  1.00 66.43           O
HETATM 2807  O   HOH A 477     -24.756  28.647  -7.842  1.00 31.94           O
HETATM 2808  O   HOH A 478       7.572  41.044 -18.626  1.00 50.17           O
HETATM 2809  O   HOH A 479     -19.942  27.515 -18.249  1.00 30.87           O
HETATM 2810  O   HOH A 480      10.269  36.824  -3.334  1.00 34.03           O
HETATM 2811  O   HOH A 481      25.152  38.368  12.068  1.00 30.23           O
HETATM 2812  O   HOH A 482       1.559  50.890   4.443  1.00 50.90           O
HETATM 2813  O   HOH A 483     -22.270  27.765  -7.335  1.00 27.04           O
HETATM 2814  O   HOH A 484     -12.482  36.429  21.394  1.00 48.78           O
HETATM 2815  O   HOH A 485     -22.449  27.217 -16.511  1.00 28.17           O
HETATM 2816  O   HOH A 486       2.274  35.234  20.293  1.00 61.72           O
HETATM 2817  O   HOH A 487       6.159  27.502 -29.233  1.00 42.45           O
HETATM 2818  O   HOH A 488     -11.768  49.145   8.205  1.00 37.04           O
HETATM 2819  O   HOH A 489      -2.104  51.572  -8.143  1.00 44.09           O
HETATM 2820  O   HOH A 490      13.939  28.964  21.381  1.00 39.85           O
HETATM 2821  O   HOH A 491       3.385  57.304  -3.448  1.00 26.77           O
HETATM 2822  O   HOH A 492     -17.247  28.958 -18.470  1.00 47.74           O
HETATM 2823  O   HOH A 493      -5.027  52.275  -9.189  1.00 57.12           O
HETATM 2824  O   HOH A 494       6.895  30.934   2.801  1.00 52.99           O
HETATM 2825  O   HOH A 495      16.652  26.535   0.573  1.00 57.69           O
HETATM 2826  O   HOH A 496       2.463  20.253 -19.048  1.00 65.77           O
HETATM 2827  O   HOH A 497      13.294  32.427   0.091  1.00 54.73           O
HETATM 2828  O   HOH A 498      23.732  36.237  13.065  1.00 50.02           O
HETATM 2829  O   HOH A 499     -26.244  33.913  -9.479  1.00 39.77           O
HETATM 2830  O   HOH A 500      -7.166  18.470   9.897  1.00 51.19           O
HETATM 2831  O   HOH A 501      19.655  27.954   6.228  1.00 32.95           O
HETATM 2832  O   HOH A 502       9.832  55.027   5.608  1.00 49.42           O
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HETATM 2833  O   HOH A 503     -21.641  37.293 -17.735  1.00 54.28           O
HETATM 2834  O   HOH A 504     -18.112  47.204   4.404  1.00 53.68           O
HETATM 2835  O   HOH A 505       1.171  45.857 -23.412  1.00 46.36           O
HETATM 2836  O   HOH A 506      -3.648  46.051  18.536  1.00 57.16           O
HETATM 2837  O   HOH A 507      -3.844  21.070  15.981  1.00 47.70           O
HETATM 2838  O   HOH A 508      -6.864  33.289 -28.278  1.00 34.60           O
HETATM 2839  O   HOH A 509      -3.862  23.161  -6.212  1.00 69.22           O
HETATM 2840  O   HOH A 510       0.176  22.872 -24.235  1.00 37.18           O
HETATM 2841  O   HOH A 511      -5.435  35.505 -29.673  1.00 51.78           O
HETATM 2842  O   HOH A 512      -8.738  24.721 -19.029  1.00 51.70           O
HETATM 2843  O   HOH A 513       7.863  49.443  -8.532  1.00 61.51           O
HETATM 2844  O   HOH A 514      17.063  35.715  15.600  1.00 31.00           O
HETATM 2845  O   HOH A 515     -13.132  26.464 -20.494  1.00 37.08           O
HETATM 2846  O   HOH A 516     -21.040  33.175   6.804  1.00 48.10           O
HETATM 2847  O   HOH A 517       9.776  34.690  -6.884  1.00 48.16           O
HETATM 2848  O   HOH A 518      -7.517  49.145  -3.598  1.00 52.19           O
HETATM 2849  O   HOH A 519      10.488  15.467  28.481  1.00 42.87           O
HETATM 2850  O   HOH A 520     -21.182  30.019 -20.696  1.00 40.90           O
HETATM 2851  O   HOH A 521      18.386  38.079  15.778  1.00 50.21           O
HETATM 2852  O   HOH A 522     -25.345  31.108 -10.926  1.00 30.58           O
HETATM 2853  O   HOH A 523     -20.829  32.476 -21.319  1.00 45.44           O
HETATM 2854  O   HOH A 524       9.355  38.397 -19.238  1.00 49.23           O
HETATM 2855  O   HOH A 525     -19.236  36.744  10.850  1.00 50.06           O
HETATM 2856  O   HOH A 526     -13.882  40.229  18.608  1.00 48.45           O
HETATM 2857  O   HOH A 527     -26.357  28.666 -10.153  1.00 50.37           O
HETATM 2858  O   HOH A 528      12.299  33.498  25.139  1.00 25.50           O
HETATM 2859  O   HOH A 529       1.943  32.781 -10.449  1.00 16.51           O
HETATM 2860  O   HOH A 530      -5.033  22.672  -0.418  1.00 34.58           O
HETATM 2861  O   HOH A 531      17.837  15.591  -3.634  1.00 45.54           O
HETATM 2862  O   HOH A 532      13.212  12.198  -6.142  1.00 40.59           O
HETATM 2863  O   HOH A 533     -16.116  26.668 -18.452  1.00 51.06           O
HETATM 2864  O   HOH A 534      -8.840  25.287   1.458  1.00 20.42           O
HETATM 2865  O   HOH A 535     -21.267  30.493   4.770  1.00 40.87           O
HETATM 2866  O   HOH A 536      -1.329  37.495  20.799  1.00 57.56           O
HETATM 2867  O   HOH A 537       7.025  27.379  -6.398  1.00 36.37           O
CONECT  115 2516
CONECT 1514 1606
CONECT 1606 1514
CONECT 2516  115
CONECT 2683 2684
CONECT 2684 2683 2685 2695
CONECT 2685 2684 2686 2692
CONECT 2686 2685 2687 2693
CONECT 2687 2686 2688 2694
CONECT 2688 2687 2689 2695
CONECT 2689 2688 2696
CONECT 2690 2691 2692 2697
CONECT 2691 2690
CONECT 2692 2685 2690
CONECT 2693 2686 2698
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CONECT 2694 2687
CONECT 2695 2684 2688
CONECT 2696 2689
CONECT 2697 2690
CONECT 2698 2693 2699 2707
CONECT 2699 2698 2700 2704
CONECT 2700 2699 2701 2705
CONECT 2701 2700 2702 2706
CONECT 2702 2701 2703 2707
CONECT 2703 2702 2708 2709
CONECT 2704 2699
CONECT 2705 2700
CONECT 2706 2701 2710
CONECT 2707 2698 2702
CONECT 2708 2703
CONECT 2709 2703
CONECT 2710 2706 2711 2721
CONECT 2711 2710 2712 2718
CONECT 2712 2711 2713 2719
CONECT 2713 2712 2714 2720
CONECT 2714 2713 2715 2721
CONECT 2715 2714 2722
CONECT 2716 2717 2718 2723
CONECT 2717 2716
CONECT 2718 2711 2716
CONECT 2719 2712 2724
CONECT 2720 2713
CONECT 2721 2710 2714
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CONECT 2723 2716
CONECT 2724 2719 2725 2733
CONECT 2725 2724 2726 2730
CONECT 2726 2725 2727 2731
CONECT 2727 2726 2728 2732
CONECT 2728 2727 2729 2733
CONECT 2729 2728 2734 2735
CONECT 2730 2725
CONECT 2731 2726
CONECT 2732 2727
CONECT 2733 2724 2728
CONECT 2734 2729
CONECT 2735 2729
MASTER      390    0    5   17   12    0    0    6 2866    1   57   27
END
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