Supporting information

Probing the Structural Requirements of Non-electrophilic Naphthalene-Based Nrf2 Activators

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S1 X-ray structure parameters of the Kelch domain from human Keap1 in complex with compound **12e**

REMARK Date 2014-12-15 Time 07:53:17 EST -0500 (1418647997.49 s)
REMARK PHENIX refinement
REMARK
REMARK ********** INPUT FILES AND LABELS **********
REMARK Reflections:
REMARK file name : /Keap1-Kelch/Kelech-X-ray/P2_243.sca
REMARK labels : ['I,SIGI']
REMARK R-free flags:
REMARK file name : None
REMARK label : R-free-flags
REMARK test_flag_value: 1
REMARK Model file name(s):
REMARK /Keap1-Kelch/Kelech-X-ray/Kelch1_refine_35-coot-new.pdb
REMARK
REMARK ********** REFINEMENT SUMMARY: QUICK FACTS **********
REMARK Start: r_work = 0.1722 r_free = 0.2281 bonds = 0.004 angles = 0.690
REMARK Final: r_work = 0.1707 r_free = 0.2287 bonds = 0.002 angles = 0.656
REMARK
****
REMARK
REMARK ********** REFINEMENT STATISTICS STEP BY STEP **********
REMARK leading digit, like 1_, means number of macro-cycle
REMARK 0 : statistics at the very beginning when nothing is done yet
REMARK 1_bss: bulk solvent correction and/or (anisotropic) scaling
REMARK 1_xyz: refinement of coordinates
REMARK 1_adp: refinement of ADPs (Atomic Displacement Parameters)
REMARK 1_occ: refinement of occupancies
REMARK ----------
REMARK R-factors, x-ray target values and norm of gradient of x-ray target
REMARK stage r-work r-free xray_target_w xray_target_t
REMARK 0 : 0.2428 0.2872 3.557282e+00 3.719003e+00
REMARK 1_bss: 0.1722 0.2281 3.387221e+00 3.596589e+00
REMARK 1_ohs: 0.1722 0.2281 3.387221e+00 3.596589e+00
REMARK 1_fit: 0.1721 0.2279 3.387741e+00 3.596411e+00
REMARK 1_xyz: 0.1709 0.2278 3.384380e+00 3.595955e+00
REMARK 1_adp: 0.1715 0.2282 3.386448e+00 3.596656e+00
REMARK 1_occ: 0.1715 0.2282 3.386457e+00 3.596681e+00
REMARK 2_bss: 0.1715 0.2288 3.387824e+00 3.598027e+00
REMARK 2_ohs: 0.1715 0.2288 3.387824e+00 3.598027e+00

REMARK 2_fit: 0.1745 0.2269 3.390618e+00 3.593311e+00
REMARK 2_xyz: 0.1732 0.2275 3.388582e+00 3.595748e+00
REMARK 2_adp: 0.1727 0.2275 3.387567e+00 3.595839e+00
REMARK 2_occ: 0.1727 0.2275 3.387611e+00 3.595960e+00
REMARK 3_bss: 0.1725 0.2265 3.386088e+00 3.594207e+00
REMARK 3_ohs: 0.1725 0.2265 3.386088e+00 3.594207e+00
REMARK 3_fit: 0.1718 0.2283 3.387633e+00 3.595668e+00
REMARK 3_xyz: 0.1710 0.2286 3.386978e+00 3.598446e+00
REMARK 3_adp: 0.1708 0.2287 3.385531e+00 3.598387e+00
REMARK 3_occ: 0.1708 0.2287 3.385566e+00 3.598478e+00
REMARK 3_bss: 0.1707 0.2287 3.385087e+00 3.598529e+00
REMARK 3_ohs: 0.1707 0.2287 3.385087e+00 3.598529e+00
REMARK --
REMARK stage   <pher>   fom alpha   beta
REMARK 0   : 28.235 0.7856 0.1404   368.599
REMARK 1_bss: 23.230 0.8358 0.9437   192.929
REMARK 1_ohs: 23.230 0.8358 0.9437   192.929
REMARK 1_fit: 23.285 0.8353 0.9441   194.604
REMARK 1_xyz: 23.205 0.8365 0.9447   196.072
REMARK 1_adp: 23.176 0.8370 0.9397   196.656
REMARK 1_occ: 23.176 0.8369 0.9397   196.672
REMARK 2_bss: 23.218 0.8366 0.9432   197.892
REMARK 2_ohs: 23.218 0.8366 0.9432   197.892
REMARK 2_fit: 22.965 0.8389 0.9445   192.505
REMARK 2_xyz: 23.040 0.8383 0.9436   194.027
REMARK 2_adp: 23.042 0.8382 0.9375   193.946
REMARK 2_occ: 23.045 0.8382 0.9375   194.024
REMARK 3_bss: 22.987 0.8387 0.9442   192.592
REMARK 3_ohs: 22.987 0.8387 0.9442   192.592
REMARK 3_fit: 23.069 0.8381 0.9434   195.561
REMARK 3_xyz: 23.109 0.8379 0.9429   197.997
REMARK 3_adp: 23.097 0.8381 0.9379   198.059
REMARK 3_occ: 23.099 0.8380 0.9379   198.116
REMARK 3_bss: 23.099 0.8380 0.9429   198.094
REMARK 3_ohs: 23.099 0.8380 0.9429   198.094
REMARK --
REMARK stage   angl   bond   chir   dihe   plan   repu geom_target
REMARK 0   :   0.690 0.004 0.045 14.219 0.002 3.902   4.6408e-02
REMARK 1_bss: 0.690 0.004 0.045 14.219 0.002 3.902   4.6408e-02
REMARK 1_ohs: 0.690 0.004 0.045 14.219 0.002 3.902   4.6408e-02
REMARK 1_fit: 0.717 0.005 0.047 14.314 0.002 3.902   5.0524e-02
REMARK 1_xyz: 0.663 0.002 0.041 14.161 0.002 3.902   4.2160e-02
REMARK 1_adp: 0.663 0.002 0.041 14.161 0.002 3.902   4.2160e-02
REMARK 1_occ: 0.663 0.002 0.041 14.161 0.002 3.902   4.2160e-02
REMARK 2_bss: 0.663 0.002 0.041 14.161 0.002 3.902   4.2160e-02
REMARK 2_ohs: 0.663 0.002 0.041 14.161 0.002 3.902   4.2160e-02

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REMARK   2_fit:  0.700  0.004  0.045 14.169  0.002  3.903   4.5406e-02
REMARK   2_xyz:  0.660  0.002  0.041 13.998  0.002  3.903   4.1477e-02
REMARK   2_adp:  0.660  0.002  0.041 13.998  0.002  3.903   4.1477e-02
REMARK   2_occ:  0.660  0.002  0.041 13.998  0.002  3.903   4.1477e-02
REMARK   3_bss:  0.660  0.002  0.041 13.998  0.002  3.903   4.1477e-02
REMARK   3_ohs:  0.660  0.002  0.041 13.998  0.002  3.903   4.1477e-02
REMARK   3_fit:  0.685  0.004  0.044 14.079  0.002  3.903   4.4446e-02
REMARK   3_xyz:  0.656  0.002  0.041 13.908  0.002  3.902   4.0908e-02
REMARK   3_adp:  0.656  0.002  0.041 13.908  0.002  3.902   4.0908e-02
REMARK   3_occ:  0.656  0.002  0.041 13.908  0.002  3.902   4.0908e-02
REMARK   3_bss:  0.656  0.002  0.041 13.908  0.002  3.902   4.0908e-02
REMARK   3_ohs:  0.656  0.002  0.041 13.908  0.002  3.902   4.0908e-02
REMARK ---------------------------------------------------------------------
REMARK                    Maximal deviations:
REMARK  stage      angl  bond  chir  dihe  plan  repu      |grad|
REMARK   0    :  6.852  0.116  0.280 91.738  0.018  1.316   3.8297e-02
REMARK   1_bss:  6.852  0.116  0.280 91.738  0.018  1.316   3.8297e-02
REMARK   1_ohs:  6.852  0.116  0.280 91.738  0.018  1.316   3.8297e-02
REMARK   1_fit:  6.852  0.116  0.280 91.738  0.018  1.316   5.2815e-02
REMARK   1_xyz:  5.508  0.026  0.129 91.065  0.017  2.108   3.3053e-02
REMARK   1_adp:  5.508  0.026  0.129 91.065  0.017  2.108   3.3053e-02
REMARK   1_occ:  5.508  0.026  0.129 91.065  0.017  2.108   3.3053e-02
REMARK   2_bss:  5.508  0.026  0.129 91.065  0.017  2.108   3.3053e-02
REMARK   2_ohs:  5.508  0.026  0.129 91.065  0.017  2.108   3.3053e-02
REMARK   2_fit:  8.306  0.052  0.241 91.065  0.017  1.850   4.6556e-02
REMARK   2_xyz:  5.410  0.027  0.133 90.888  0.017  2.064   1.8799e-02
REMARK   2_adp:  5.410  0.027  0.133 90.888  0.017  2.064   1.8799e-02
REMARK   2_occ:  5.410  0.027  0.133 90.888  0.017  2.064   1.8799e-02
REMARK   3_bss:  5.410  0.027  0.133 90.888  0.017  2.064   1.8799e-02
REMARK   3_ohs:  5.410  0.027  0.133 90.888  0.017  2.064   1.8799e-02
REMARK   3_fit:  5.410  0.083  0.250 90.888  0.017  2.064   3.6263e-02
REMARK   3_xyz:  5.267  0.026  0.126 90.712  0.016  2.006   1.8940e-02
REMARK   3_adp:  5.267  0.026  0.126 90.712  0.016  2.006   1.8940e-02
REMARK   3_occ:  5.267  0.026  0.126 90.712  0.016  2.006   1.8940e-02
REMARK   3_bss:  5.267  0.026  0.126 90.712  0.016  2.006   1.8940e-02
REMARK   3_ohs:  5.267  0.026  0.126 90.712  0.016  2.006   1.8940e-02
REMARK ---------------------------------------------------------------------
REMARK          |-----overall-----|---macromolecule----|------solvent-------|
REMARK  stage    b_max  b_min  b_ave  b_max  b_min  b_ave  b_max  b_min  b_ave
REMARK   0    : 67.43   4.93  17.60  67.43   6.78  17.44  37.19   4.93  20.17
REMARK   1_bss: 67.43   4.93  17.60  67.43   6.78  17.44  37.19   4.93  20.17
REMARK   1_ohs: 67.43   4.93  17.60  67.43   6.78  17.44  37.19   4.93  20.17
REMARK   1_fit: 67.43   4.93  17.60  67.43   6.78  17.44  37.19   4.93  20.17
REMARK   1_xyz: 67.43   4.93  17.60  67.43   6.78  17.44  37.19   4.93  20.17
REMARK   1_adp: 62.33   5.73  17.38  62.33   6.94  17.27  37.22   5.73  19.13
REMARK   1_occ: 62.33   5.73  17.38  62.33   6.94  17.27  37.22   5.73  19.13
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REMARK 2_bss: 62.33 5.73 17.38 62.33 6.94 17.27 37.22 5.73 19.13
REMARK 2_ohs: 62.33 5.73 17.38 62.33 6.94 17.27 37.22 5.73 19.13
REMARK 2_fit: 62.33 5.73 17.38 62.33 6.94 17.27 37.22 5.73 19.13
REMARK 2_xyz: 62.33 5.73 17.38 62.33 6.94 17.27 37.22 5.73 19.13
REMARK 2_adp: 77.20 5.51 17.10 77.20 7.22 17.00 37.20 5.51 18.74
REMARK 2_occ: 77.20 5.51 17.10 77.20 7.22 17.00 37.20 5.51 18.74
REMARK 3_bss: 77.20 5.51 17.10 77.20 7.22 17.00 37.20 5.51 18.74
REMARK 3_ohs: 77.20 5.51 17.10 77.20 7.22 17.00 37.20 5.51 18.74
REMARK 3_fit: 77.20 5.51 17.10 77.20 7.22 17.00 37.20 5.51 18.74
REMARK 3_xyz: 77.20 5.51 17.10 77.20 7.22 17.00 37.20 5.51 18.74
REMARK 3_adp: 77.77 5.27 16.93 77.77 6.48 16.84 37.33 5.27 18.42
REMARK 3_occ: 77.77 5.27 16.93 77.77 6.48 16.84 37.33 5.27 18.42
REMARK 3_bss: 77.77 5.27 16.93 77.77 6.48 16.84 37.33 5.27 18.42
REMARK 3_ohs: 77.77 5.27 16.93 77.77 6.48 16.84 37.33 5.27 18.42
REMARK --
REMARK stage   Deviation of refined
REMARK   model from start model
REMARK   max   min   mean
REMARK 0   :   0.000   0.000   0.000
REMARK 1_bss: 0.000   0.000   0.000
REMARK 1_ohs: 0.000   0.000   0.000
REMARK 1_fit: 2.399   0.000   0.004
REMARK 1_xyz: 2.543   0.001   0.018
REMARK 1_adp: 2.543   0.001   0.017
REMARK 1_occ: 2.543   0.001   0.017
REMARK 2_bss: 2.543   0.001   0.017
REMARK 2_ohs: 2.543   0.001   0.017
REMARK 2_fit: 5.626   0.001   0.021
REMARK 2_xyz: 5.609   0.001   0.030
REMARK 2_adp: 5.609   0.001   0.028
REMARK 2_occ: 5.609   0.001   0.028
REMARK 3_bss: 5.609   0.001   0.028
REMARK 3_ohs: 5.609   0.001   0.028
REMARK 3_fit: 3.085   0.001   0.026
REMARK 3_xyz: 3.086   0.001   0.035
REMARK 3_adp: 3.086   0.001   0.034
REMARK 3_occ: 3.086   0.001   0.034
REMARK 3_bss: 3.086   0.001   0.034
REMARK 3_ohs: 3.086   0.001   0.034
REMARK --
REMARK MODEL CONTENT.
REMARK ELEMENT   ATOM RECORD COUNT   OCCUPANCY SUM
REMARK   H   28   0.00
REMARK   C   1398   1396.00
REMARK   S   17   17.00
REMARK   O   571   570.00

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REMARK       N                  403         403.00
REMARK   TOTAL                 2417        2386.00
REMARK ----------------------------------------------------------------------
REMARK r_free_flags.md5.hexdigest 07b90d280aaf381a55dfade0f7792dd2
REMARK
REMARK IF THIS FILE IS FOR PDB DEPOSITION: REMOVE ALL FROM THIS LINE UP.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : PHENIX (phenix.refine: 1.8_1069)
REMARK   3   AUTHORS     : Adams,Afonine,Chen,Davis,Echols,Gildea,Gopal,
REMARK   3               : Grosse-Kunstleve,Headd,Hung,Immormino,Ioerger,McCoy,
REMARK   3               : McKee,Moriarty,Pai,Read,Richardson,Richardson,Romo,
REMARK   3               : Sacchettini,Sauter,Smith,Storoni,Terwilliger,Zwart
REMARK   3
REMARK   3  REFINEMENT TARGET : ML
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.428
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 27.771
REMARK   3   MIN(FOBS/SIGMA_FOBS)              : 1.40
REMARK   3   COMPLETENESS FOR RANGE        (%) : 94.99
REMARK   3   NUMBER OF REFLECTIONS             : 9401
REMARK   3   NUMBER OF REFLECTIONS (NON-ANOMALOUS) : 9401
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   R VALUE     (WORKING + TEST SET) : 0.1765
REMARK   3   R VALUE           (WORKING SET) : 0.1707
REMARK   3   FREE R VALUE                     : 0.2287
REMARK   3   FREE R VALUE TEST SET SIZE   (%) : 10.00
REMARK   3   FREE R VALUE TEST SET COUNT      : 940
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT (IN BINS).
REMARK   3   BIN  RESOLUTION RANGE  COMPL.    NWORK NFREE   RWORK  RFREE
REMARK   3     1 27.7729 -  4.6375    0.97     1273   141  0.1643 0.2017
REMARK   3     2  4.6375 -  3.6837    0.93     1199   133  0.1387 0.1950
REMARK   3     3  3.6837 -  3.2188    0.95     1191   132  0.1515 0.1972
REMARK   3     4  3.2188 -  2.9249    0.95     1205   134  0.2048 0.2668
REMARK   3     5  2.9249 -  2.7154    0.96     1214   136  0.1973 0.2904
REMARK   3     6  2.7154 -  2.5554    0.96     1203   134  0.2091 0.2542
REMARK   3     7  2.5554 -  2.4275    0.92     1176   130  0.2004 0.3021
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED        : FLAT BULK SOLVENT MODEL
REMARK   3   SOLVENT RADIUS     : 1.11
REMARK   3   SHRINKAGE RADIUS   : 0.90
REMARK   3   GRID STEP FACTOR   : 4.00
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REMARK   3
REMARK   3  ERROR ESTIMATES.
REMARK   3   COORDINATE ERROR (MAXIMUM-LIKELIHOOD BASED)     : 0.26
REMARK   3   PHASE ERROR (DEGREES, MAXIMUM-LIKELIHOOD BASED) : 23.10
REMARK   3
REMARK   3  STRUCTURE FACTORS CALCULATION ALGORITHM : FFT
REMARK   3
REMARK   3  DEVIATIONS FROM IDEAL VALUES.
REMARK   3              RMSD     MAX  COUNT
REMARK   3   BOND      :  0.002   0.026   2303
REMARK   3   ANGLE     :  0.656   5.267   3143
REMARK   3   CHIRALITY :  0.041   0.126    329
REMARK   3   PLANARITY :  0.002   0.016    414
REMARK   3   DIHEDRAL  : 13.908  90.712    840
REMARK   3   MIN NONBONDED DISTANCE : 2.006
REMARK   3
REMARK   3  MOLPROBITY STATISTICS.
REMARK   3   ALL-ATOM CLASHSCORE : 22.59
REMARK   3   RAMACHANDRAN PLOT:
REMARK   3    OUTLIERS : 0.00  %
REMARK   3    ALLOWED  : 3.16  %
REMARK   3    FAVORED  : 96.84 %
REMARK   3   ROTAMER OUTLIERS : 0.43 %
REMARK   3   CBETA DEVIATIONS : 0
REMARK   3
REMARK   3  ATOMIC DISPLACEMENT PARAMETERS.
REMARK   3   WILSON B : 28.42
REMARK   3   RMS(B_ISO_OR_EQUIVALENT_BONDED) : 3.06
REMARK   3   ATOMS         NUMBER OF ATOMS
REMARK   3                ISO.  ANISO.
REMARK   3    ALL        :   2417       0
REMARK   3    ALL (NO H) :   2389       0
REMARK   3    SOLVENT    :    143       0
REMARK   3    NON-SOLVENT :   2246       0
REMARK   3    HYDROGENS  :     28       0
REMARK   3
CRYST1   38.470   51.521   67.238  90.00 101.27  90.00 P 1 21 1
SCALE1      0.025994  0.000000  0.005179        0.00000
SCALE2      0.000000  0.019410  0.000000        0.00000
SCALE3      0.000000  0.000000  0.015165        0.00000
ATOM      1  O   VAL A 324     -18.771  24.761 -15.567  1.00 55.25           O
ATOM      2  N   VAL A 324     -19.713  24.978 -18.948  1.00 50.49           N
ATOM      3  CA  VAL A 324     -18.728  25.274 -17.915  1.00 43.26           C
ATOM      4  C   VAL A 324     -18.904  24.344 -16.718  1.00 46.23           C
ATOM      5  CB  VAL A 324     -18.825  26.742 -17.446  1.00 53.00           C
ATOM      6  CG1 VAL A 324     -20.117  26.972 -16.669  1.00 41.44           C
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ATOM      7  CG2 VAL A 324     -17.612  27.117 -16.605  1.00 57.21           C
ATOM      8  N   GLY A 325     -19.202  23.079 -16.995  1.00 34.53           N
ATOM      9  CA  GLY A 325     -19.413  22.103 -15.944  1.00 24.56           C
ATOM     10  C   GLY A 325     -18.161  21.316 -15.609  1.00 19.94           C
ATOM     11  O   GLY A 325     -17.198  21.860 -15.073  1.00 26.29           O
ATOM     12  N   ARG A 326     -18.179  20.026 -15.926  1.00 14.52           N
ATOM     13  CA  ARG A 326     -17.056  19.148 -15.626  1.00 14.91           C
ATOM     14  C   ARG A 326     -16.035  19.162 -16.755  1.00 13.51           C
ATOM     15  O   ARG A 326     -16.381  19.348 -17.920  1.00 14.92           O
ATOM     16  CB  ARG A 326     -17.548  17.721 -15.373  1.00 16.70           C
ATOM     17  CG  ARG A 326     -18.604  17.623 -14.281  1.00 13.55           C
ATOM     18  CD  ARG A 326     -19.143  16.210 -14.141  1.00 13.60           C
ATOM     19  NE  ARG A 326     -18.788  15.622 -12.852  1.00 20.32           N
ATOM     20  CZ  ARG A 326     -18.105  14.491 -12.707  1.00 22.67           C
ATOM     21  NH1 ARG A 326     -17.705  13.810 -13.773  1.00 18.13           N
ATOM     22  NH2 ARG A 326     -17.826  14.036 -11.491  1.00 25.61           N
ATOM     23  N   LEU A 327     -14.772  18.970 -16.399  1.00 12.04           N
ATOM     24  CA  LEU A 327     -13.699  18.977 -17.378  1.00 13.15           C
ATOM     25  C   LEU A 327     -13.003  17.622 -17.424  1.00 10.76           C
ATOM     26  O   LEU A 327     -13.144  16.809 -16.513  1.00 11.48           O
ATOM     27  CB  LEU A 327     -12.690  20.073 -17.042  1.00 11.39           C
ATOM     28  CG  LEU A 327     -13.281  21.473 -16.886  1.00 11.03           C
ATOM     29  CD1 LEU A 327     -12.208  22.461 -16.466  1.00  9.94           C
ATOM     30  CD2 LEU A 327     -13.947  21.913 -18.178  1.00 15.42           C
ATOM     31  N   ILE A 328     -12.258  17.387 -18.497  1.00 11.95           N
ATOM     32  CA  ILE A 328     -11.474  16.169 -18.635  1.00 10.15           C
ATOM     33  C   ILE A 328     -10.016  16.468 -18.315  1.00  9.41           C
ATOM     34  O   ILE A 328      -9.373  17.268 -18.994  1.00  8.30           O
ATOM     35  CB  ILE A 328     -11.590  15.587 -20.055  1.00 12.37           C
ATOM     36  CG1 ILE A 328     -13.039  15.179 -20.339  1.00 10.42           C
ATOM     37  CG2 ILE A 328     -10.651  14.400 -20.226  1.00  9.87           C
ATOM     38  CD1 ILE A 328     -13.284  14.718 -21.761  1.00 10.20           C
ATOM     39  N   TYR A 329      -9.500  15.827 -17.272  1.00 10.45           N
ATOM     40  CA  TYR A 329      -8.144  16.090 -16.803  1.00 11.17           C
ATOM     41  C   TYR A 329      -7.159  15.023 -17.262  1.00 10.15           C
ATOM     42  O   TYR A 329      -7.366  13.832 -17.026  1.00 13.80           O
ATOM     43  CB  TYR A 329      -8.118  16.175 -15.274  1.00 11.51           C
ATOM     44  CG  TYR A 329      -8.808  17.389 -14.699  1.00 11.83           C
ATOM     45  CD1 TYR A 329     -10.186  17.413 -14.519  1.00 15.44           C
ATOM     46  CD2 TYR A 329      -8.079  18.507 -14.319  1.00 15.11           C
ATOM     47  CE1 TYR A 329     -10.818  18.523 -13.985  1.00  9.96           C
ATOM     48  CE2 TYR A 329      -8.700  19.619 -13.785  1.00 12.68           C
ATOM     49  CZ  TYR A 329     -10.067  19.622 -13.619  1.00 12.82           C
ATOM     50  OH  TYR A 329     -10.679  20.733 -13.086  1.00 15.22           O
ATOM     51  N   THR A 330      -6.083  15.455 -17.910  1.00  9.59           N
ATOM     52  CA  THR A 330      -5.010  14.544 -18.288  1.00 10.82           C
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ATOM     53  C   THR A 330     -3.739  14.873 -17.510  1.00 14.95           C
ATOM     54  O   THR A 330     -3.315  16.028 -17.452  1.00 14.93           O
ATOM     55  CB  THR A 330     -4.726  14.577 -19.803  1.00 13.69           C
ATOM     56  OG1 THR A 330     -3.719  13.608 -20.122  1.00 15.46           O
ATOM     57  CG2 THR A 330     -4.250  15.954 -20.236  1.00 15.62           C
ATOM     58  N   ALA A 331     -3.140  13.851 -16.906  1.00 11.95           N
ATOM     59  CA  ALA A 331     -1.951  14.037 -16.084  1.00  8.66           C
ATOM     60  C   ALA A 331     -0.855  13.050 -16.463  1.00 11.06           C
ATOM     61  O   ALA A 331     -1.124  11.873 -16.709  1.00 10.08           O
ATOM     62  CB  ALA A 331     -2.302  13.897 -14.610  1.00 10.26           C
ATOM     63  N   GLY A 332      0.382  13.535 -16.505  1.00  8.71           N
ATOM     64  CA  GLY A 332      1.518  12.691 -16.826  1.00  9.03           C
ATOM     65  C   GLY A 332      1.568  12.307 -18.292  1.00 15.48           C
ATOM     66  O   GLY A 332      1.234  13.107 -19.168  1.00 17.63           O
ATOM     67  N   GLY A 333      1.982  11.074 -18.560  1.00 14.93           N
ATOM     68  CA  GLY A 333      2.136  10.604 -19.923  1.00 13.90           C
ATOM     69  C   GLY A 333      3.601  10.442 -20.274  1.00 16.44           C
ATOM     70  O   GLY A 333      4.472  10.635 -19.423  1.00 13.02           O
ATOM     71  N   TYR A 334      3.879  10.092 -21.526  1.00 16.04           N
ATOM     72  CA  TYR A 334      5.252   9.854 -21.949  1.00 11.42           C
ATOM     73  C   TYR A 334      5.569  10.370 -23.348  1.00 15.14           C
ATOM     74  O   TYR A 334      4.821  10.140 -24.300  1.00 15.12           O
ATOM     75  CB  TYR A 334      5.591   8.365 -21.871  1.00 12.72           C
ATOM     76  CG  TYR A 334      6.977   8.040 -22.383  1.00 15.06           C
ATOM     77  CD1 TYR A 334      8.065   8.000 -21.521  1.00 13.25           C
ATOM     78  CD2 TYR A 334      7.200   7.787 -23.730  1.00 14.52           C
ATOM     79  CE1 TYR A 334      9.333   7.710 -21.984  1.00 12.18           C
ATOM     80  CE2 TYR A 334      8.465   7.495 -24.201  1.00 15.58           C
ATOM     81  CZ  TYR A 334      9.528   7.458 -23.324  1.00 15.54           C
ATOM     82  OH  TYR A 334     10.791   7.170 -23.789  1.00 17.47           O
ATOM     83  N   PHE A 335      6.691  11.073 -23.454  1.00 14.20           N
ATOM     84  CA  PHE A 335      7.282  11.412 -24.741  1.00 14.59           C
ATOM     85  C   PHE A 335      8.759  11.719 -24.545  1.00 16.10           C
ATOM     86  O   PHE A 335      9.117  12.759 -23.995  1.00 16.21           O
ATOM     87  CB  PHE A 335      6.570  12.591 -25.402  1.00 11.94           C
ATOM     88  CG  PHE A 335      7.079  12.898 -26.780  1.00 15.69           C
ATOM     89  CD1 PHE A 335      6.848  12.022 -27.827  1.00 13.07           C
ATOM     90  CD2 PHE A 335      7.798  14.055 -27.029  1.00 17.92           C
ATOM     91  CE1 PHE A 335      7.318  12.296 -29.093  1.00 16.96           C
ATOM     92  CE2 PHE A 335      8.271  14.335 -28.293  1.00 13.15           C
ATOM     93  CZ  PHE A 335      8.031  13.454 -29.327  1.00 19.67           C
ATOM     94  N   ARG A 336      9.609  10.799 -24.991  1.00 15.65           N
ATOM     95  CA  ARG A 336     11.043  10.875 -24.733  1.00 18.93           C
ATOM     96  C   ARG A 336     11.336  10.567 -23.267  1.00 15.38           C
ATOM     97  O   ARG A 336     12.335   9.927 -22.942  1.00 14.43           O
ATOM     98  CB  ARG A 336     11.603  12.250 -25.102  1.00 21.76           C
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ATOM     99  CG  ARG A 336      13.110  12.346 -24.916  1.00 28.40           C
ATOM    100  CD  ARG A 336      13.604  13.783 -24.901  1.00 26.41           C
ATOM    101  NE  ARG A 336      15.016  13.848 -24.532  1.00 27.31           N
ATOM    102  CZ  ARG A 336      15.939  14.525 -25.207  1.00 25.17           C
ATOM    103  NH1 ARG A 336      15.602  15.209 -26.292  1.00 33.45           N
ATOM    104  NH2 ARG A 336      17.199  14.520 -24.795  1.00 24.39           N
ATOM    105  N   GLN A 337      10.454  11.032 -22.388  1.00 15.33           N
ATOM    106  CA  GLN A 337      10.557  10.761 -20.959  1.00 13.29           C
ATOM    107  C   GLN A 337       9.206  10.967 -20.274  1.00 13.30           C
ATOM    108  O   GLN A 337       8.250  11.426 -20.899  1.00 12.76           O
ATOM    109  CB  GLN A 337      11.631  11.645 -20.319  1.00 14.98           C
ATOM    110  CG  GLN A 337      11.530  13.117 -20.686  1.00 16.36           C
ATOM    111  CD  GLN A 337      12.758  13.909 -20.270  1.00 26.78           C
ATOM    112  OE1 GLN A 337      13.494  13.508 -19.366  1.00 26.61           O
ATOM    113  NE2 GLN A 337      12.990  15.035 -20.937  1.00 25.73           N
ATOM    114  N   SER A 338       9.127  10.616 -18.994  1.00 14.25           N
ATOM    115  CA  SER A 338       7.896  10.795 -18.230  1.00 11.56           C
ATOM    116  C   SER A 338       7.526  12.272 -18.143  1.00 12.53           C
ATOM    117  O   SER A 338       8.386  13.123 -17.914  1.00 16.74           O
ATOM    118  CB  SER A 338       8.039  10.195 -16.833  1.00 11.84           C
ATOM    119  OG  SER A 338       8.258   8.797 -16.907  1.00 13.12           O
ATOM    120  N   LEU A 339       6.244  12.574 -18.321  1.00 11.85           N
ATOM    121  CA  LEU A 339       5.798  13.960 -18.424  1.00 12.56           C
ATOM    122  C   LEU A 339       5.126  14.465 -17.153  1.00 11.09           C
ATOM    123  O   LEU A 339       4.658  13.681 -16.328  1.00 12.32           O
ATOM    124  CB  LEU A 339       4.861  14.128 -19.623  1.00 12.13           C
ATOM    125  CG  LEU A 339       5.443  13.688 -20.968  1.00 11.78           C
ATOM    126  CD1 LEU A 339       4.424  13.864 -22.086  1.00 13.29           C
ATOM    127  CD2 LEU A 339       6.726  14.448 -21.275  1.00  8.05           C
ATOM    128  N   SER A 340       5.073  15.785 -17.008  1.00 15.14           N
ATOM    129  CA  SER A 340       4.526  16.404 -15.804  1.00 15.02           C
ATOM    130  C   SER A 340       3.236  17.169 -16.070  1.00 13.03           C
ATOM    131  O   SER A 340       2.616  17.686 -15.143  1.00 13.62           O
ATOM    132  CB  SER A 340       5.560  17.339 -15.173  1.00 12.51           C
ATOM    133  OG  SER A 340       6.687  16.614 -14.711  1.00 19.37           O
ATOM    134  N   TYR A 341       2.830  17.231 -17.334  1.00 15.23           N
ATOM    135  CA  TYR A 341       1.676  18.033 -17.733  1.00 13.04           C
ATOM    136  C   TYR A 341       0.385  17.639 -17.020  1.00 12.53           C
ATOM    137  O   TYR A 341       0.066  16.456 -16.888  1.00 17.14           O
ATOM    138  CB  TYR A 341       1.452  17.935 -19.246  1.00 11.93           C
ATOM    139  CG  TYR A 341       2.685  18.182 -20.085  1.00 14.52           C
ATOM    140  CD1 TYR A 341       3.645  19.106 -19.695  1.00 17.44           C
ATOM    141  CD2 TYR A 341       2.888  17.485 -21.269  1.00 14.40           C
ATOM    142  CE1 TYR A 341       4.774  19.330 -20.465  1.00 18.98           C
ATOM    143  CE2 TYR A 341       4.010  17.701 -22.043  1.00 13.77           C
ATOM    144  CZ  TYR A 341       4.950  18.623 -21.639  1.00 19.87           C
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ATOM    145  OH  TYR A 341       6.068  18.835 -22.413  1.00 20.23           O
ATOM    146  N   LEU A 342      -0.349  18.645 -16.558  1.00  9.54           N
ATOM    147  CA  LEU A 342      -1.745  18.474 -16.177  1.00 11.91           C
ATOM    148  C   LEU A 342      -2.557  19.453 -17.012  1.00 12.37           C
ATOM    149  O   LEU A 342      -2.300  20.657 -16.993  1.00 11.27           O
ATOM    150  CB  LEU A 342      -1.963  18.745 -14.687  1.00 12.59           C
ATOM    151  CG  LEU A 342      -3.428  18.714 -14.231  1.00  7.60           C
ATOM    152  CD1 LEU A 342      -4.010  17.311 -14.342  1.00  6.89           C
ATOM    153  CD2 LEU A 342      -3.584  19.251 -12.813  1.00  9.40           C
ATOM    154  N   GLU A 343      -3.526  18.935 -17.757  1.00 10.38           N
ATOM    155  CA  GLU A 343      -4.297  19.767 -18.669  1.00 11.23           C
ATOM    156  C   GLU A 343      -5.776  19.399 -18.657  1.00 15.37           C
ATOM    157  O   GLU A 343      -6.141  18.232 -18.810  1.00 17.31           O
ATOM    158  CB  GLU A 343      -3.724  19.674 -20.087  1.00 10.02           C
ATOM    159  CG  GLU A 343      -2.349  20.322 -20.234  1.00 12.22           C
ATOM    160  CD  GLU A 343      -1.719  20.081 -21.594  1.00 10.76           C
ATOM    161  OE1 GLU A 343      -1.383  18.918 -21.900  1.00 18.01           O
ATOM    162  OE2 GLU A 343      -1.555  21.055 -22.357  1.00  9.76           O
ATOM    163  N   ALA A 344      -6.623  20.404 -18.467  1.00 12.48           N
ATOM    164  CA  ALA A 344      -8.062  20.191 -18.440  1.00  8.58           C
ATOM    165  C   ALA A 344      -8.684  20.560 -19.779  1.00 12.79           C
ATOM    166  O   ALA A 344      -8.527  21.682 -20.266  1.00 12.39           O
ATOM    167  CB  ALA A 344      -8.697  20.992 -17.317  1.00  8.32           C
ATOM    168  N   TYR A 345      -9.383  19.602 -20.375  1.00 13.43           N
ATOM    169  CA  TYR A 345     -10.067  19.829 -21.638  1.00 11.88           C
ATOM    170  C   TYR A 345     -11.544  20.103 -21.396  1.00 13.07           C
ATOM    171  O   TYR A 345     -12.179  19.450 -20.565  1.00  9.82           O
ATOM    172  CB  TYR A 345      -9.893  18.631 -22.575  1.00 11.12           C
ATOM    173  CG  TYR A 345     -10.618  18.781 -23.897  1.00 18.27           C
ATOM    174  CD1 TYR A 345     -10.205  19.719 -24.834  1.00 14.62           C
ATOM    175  CD2 TYR A 345     -11.711  17.982 -24.209  1.00 12.27           C
ATOM    176  CE1 TYR A 345     -10.861  19.859 -26.041  1.00 14.76           C
ATOM    177  CE2 TYR A 345     -12.372  18.115 -25.416  1.00 11.73           C
ATOM    178  CZ  TYR A 345     -11.943  19.056 -26.328  1.00 13.30           C
ATOM    179  OH  TYR A 345     -12.596  19.199 -27.532  1.00 15.46           O
ATOM    180  N   ASN A 346     -12.075  21.082 -22.121  1.00 11.88           N
ATOM    181  CA  ASN A 346     -13.479  21.453 -22.026  1.00 13.65           C
ATOM    182  C   ASN A 346     -14.205  21.032 -23.298  1.00 15.26           C
ATOM    183  O   ASN A 346     -14.145  21.724 -24.313  1.00 14.94           O
ATOM    184  CB  ASN A 346     -13.607  22.964 -21.807  1.00 17.97           C
ATOM    185  CG  ASN A 346     -15.014  23.388 -21.427  1.00 19.70           C
ATOM    186  OD1 ASN A 346     -15.994  22.721 -21.764  1.00 21.23           O
ATOM    187  ND2 ASN A 346     -15.120  24.508 -20.723  1.00 18.07           N
ATOM    188  N   PRO A 347     -14.892  19.883 -23.247  1.00 17.19           N
ATOM    189  CA  PRO A 347     -15.503  19.267 -24.430  1.00 16.38           C
ATOM    190  C   PRO A 347     -16.465  20.196 -25.161  1.00 17.91           C
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ATOM    191  O   PRO A 347     -16.550  20.135 -26.387  1.00 20.11           O
ATOM    192  CB  PRO A 347     -16.267  18.073 -23.846  1.00 14.62           C
ATOM    193  CG  PRO A 347     -15.570  17.771 -22.559  1.00 13.28           C
ATOM    194  CD  PRO A 347     -15.139  19.100 -22.024  1.00 12.57           C
ATOM    195  N   SER A 348     -17.173  21.043 -24.422  1.00 16.19           N
ATOM    196  CA  SER A 348     -18.182  21.915 -25.018  1.00 19.46           C
ATOM    197  C   SER A 348     -17.587  23.016 -25.898  1.00 21.91           C
ATOM    198  O   SER A 348     -18.022  23.205 -27.034  1.00 25.08           O
ATOM    199  CB  SER A 348     -19.087  22.518 -23.939  1.00 16.94           C
ATOM    200  OG  SER A 348     -18.323  23.101 -22.900  1.00 30.01           O
ATOM    201  N   ASN A 349     -16.599  23.741 -25.383  1.00 20.12           N
ATOM    202  CA  ASN A 349     -15.979  24.804 -26.169  1.00 22.27           C
ATOM    203  C   ASN A 349     -14.663  24.377 -26.823  1.00 22.70           C
ATOM    204  O   ASN A 349     -14.049  25.143 -27.569  1.00 20.66           O
ATOM    205  CB  ASN A 349     -15.811  26.085 -25.347  1.00 19.45           C
ATOM    206  CG  ASN A 349     -14.911  25.899 -24.150  1.00 22.77           C
ATOM    207  OD1 ASN A 349     -14.149  24.937 -24.078  1.00 24.69           O
ATOM    208  ND2 ASN A 349     -14.988  26.826 -23.202  1.00 22.13           N
ATOM    209  N   GLY A 350     -14.245  23.147 -26.538  1.00 19.40           N
ATOM    210  CA  GLY A 350     -13.127  22.523 -27.226  1.00 15.64           C
ATOM    211  C   GLY A 350     -11.751  23.076 -26.904  1.00 16.72           C
ATOM    212  O   GLY A 350     -10.840  22.994 -27.727  1.00 17.83           O
ATOM    213  N   THR A 351     -11.586  23.619 -25.704  1.00 15.75           N
ATOM    214  CA  THR A 351     -10.323  24.247 -25.332  1.00 12.92           C
ATOM    215  C   THR A 351      -9.535  23.463 -24.282  1.00 13.33           C
ATOM    216  O   THR A 351     -10.082  22.621 -23.571  1.00 15.88           O
ATOM    217  CB  THR A 351     -10.546  25.681 -24.830  1.00 16.16           C
ATOM    218  OG1 THR A 351     -11.502  25.669 -23.763  1.00 19.23           O
ATOM    219  CG2 THR A 351     -11.068  26.558 -25.957  1.00 17.97           C
ATOM    220  N   TRP A 352      -8.241  23.747 -24.201  1.00 13.02           N
ATOM    221  CA  TRP A 352      -7.373  23.130 -23.209  1.00 14.09           C
ATOM    222  C   TRP A 352      -6.848  24.172 -22.230  1.00 14.48           C
ATOM    223  O   TRP A 352      -6.487  25.280 -22.628  1.00 13.54           O
ATOM    224  CB  TRP A 352      -6.191  22.443 -23.890  1.00 11.76           C
ATOM    225  CG  TRP A 352      -6.539  21.168 -24.586  1.00 11.41           C
ATOM    226  CD1 TRP A 352      -6.861  21.015 -25.901  1.00 11.53           C
ATOM    227  CD2 TRP A 352      -6.584  19.859 -24.005  1.00  9.90           C
ATOM    228  NE1 TRP A 352      -7.108  19.691 -26.176  1.00 13.48           N
ATOM    229  CE2 TRP A 352      -6.946  18.962 -25.029  1.00 13.05           C
ATOM    230  CE3 TRP A 352      -6.358  19.360 -22.718  1.00 10.97           C
ATOM    231  CZ2 TRP A 352      -7.086  17.593 -24.805  1.00 10.77           C
ATOM    232  CZ3 TRP A 352      -6.498  18.002 -22.499  1.00 10.50           C
ATOM    233  CH2 TRP A 352      -6.858  17.135 -23.537  1.00 10.65           C
ATOM    234  N   LEU A 353      -6.799  23.811 -20.951  1.00 12.67           N
ATOM    235  CA  LEU A 353      -6.257  24.703 -19.931  1.00 12.75           C
ATOM    236  C   LEU A 353      -5.071  24.067 -19.214  1.00 14.71           C
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ATOM    237  O   LEU A 353     -5.197  23.003 -18.606  1.00 14.28           O
ATOM    238  CB  LEU A 353     -7.335  25.090 -18.917  1.00 14.71           C
ATOM    239  CG  LEU A 353     -6.874  26.018 -17.791  1.00 17.85           C
ATOM    240  CD1 LEU A 353     -6.539  27.399 -18.335  1.00 16.82           C
ATOM    241  CD2 LEU A 353     -7.923  26.105 -16.691  1.00 11.74           C
ATOM    242  N   ARG A 354     -3.919  24.725 -19.293  1.00 16.24           N
ATOM    243  CA  ARG A 354     -2.710  24.246 -18.634  1.00 11.59           C
ATOM    244  C   ARG A 354     -2.776  24.528 -17.138  1.00 11.50           C
ATOM    245  O   ARG A 354     -2.969  25.670 -16.722  1.00 11.84           O
ATOM    246  CB  ARG A 354     -1.476  24.914 -19.239  1.00 12.60           C
ATOM    247  CG  ARG A 354     -0.155  24.441 -18.655  1.00 12.98           C
ATOM    248  CD  ARG A 354      0.156  23.013 -19.065  1.00 13.41           C
ATOM    249  NE  ARG A 354      1.445  22.566 -18.542  1.00 18.31           N
ATOM    250  CZ  ARG A 354      2.617  22.858 -19.097  1.00 18.88           C
ATOM    251  NH1 ARG A 354      2.668  23.605 -20.191  1.00 12.75           N
ATOM    252  NH2 ARG A 354      3.741  22.409 -18.554  1.00 16.64           N
ATOM    253  N   LEU A 355     -2.618  23.482 -16.334  1.00 10.40           N
ATOM    254  CA  LEU A 355     -2.704  23.612 -14.885  1.00  9.17           C
ATOM    255  C   LEU A 355     -1.352  23.344 -14.232  1.00 12.41           C
ATOM    256  O   LEU A 355     -0.347  23.174 -14.923  1.00 12.35           O
ATOM    257  CB  LEU A 355     -3.766  22.662 -14.331  1.00 10.66           C
ATOM    258  CG  LEU A 355     -5.179  22.858 -14.890  1.00 11.19           C
ATOM    259  CD1 LEU A 355     -6.145  21.818 -14.328  1.00 11.39           C
ATOM    260  CD2 LEU A 355     -5.674  24.264 -14.599  1.00  9.29           C
ATOM    261  N   ALA A 356     -1.329  23.310 -12.903  1.00  9.98           N
ATOM    262  CA  ALA A 356     -0.089  23.086 -12.164  1.00  8.88           C
ATOM    263  C   ALA A 356      0.534  21.738 -12.507  1.00 11.59           C
ATOM    264  O   ALA A 356     -0.152  20.716 -12.540  1.00 11.24           O
ATOM    265  CB  ALA A 356     -0.333  23.188 -10.668  1.00  9.01           C
ATOM    266  N   ASP A 357      1.840  21.748 -12.761  1.00 11.29           N
ATOM    267  CA  ASP A 357      2.577  20.533 -13.092  1.00 12.36           C
ATOM    268  C   ASP A 357      2.557  19.518 -11.953  1.00 13.40           C
ATOM    269  O   ASP A 357      2.433  19.882 -10.781  1.00 10.14           O
ATOM    270  CB  ASP A 357      4.032  20.871 -13.432  1.00 10.52           C
ATOM    271  CG  ASP A 357      4.214  21.313 -14.872  1.00 13.01           C
ATOM    272  OD1 ASP A 357      3.202  21.539 -15.569  1.00 13.70           O
ATOM    273  OD2 ASP A 357      5.379  21.439 -15.304  1.00 13.83           O
ATOM    274  N   LEU A 358      2.674  18.243 -12.307  1.00 11.64           N
ATOM    275  CA  LEU A 358      2.940  17.204 -11.325  1.00 12.08           C
ATOM    276  C   LEU A 358      4.279  17.517 -10.672  1.00 14.08           C
ATOM    277  O   LEU A 358      5.206  17.979 -11.340  1.00 12.87           O
ATOM    278  CB  LEU A 358      3.010  15.831 -11.996  1.00 10.88           C
ATOM    279  CG  LEU A 358      1.706  15.167 -12.434  1.00 10.75           C
ATOM    280  CD1 LEU A 358      1.994  13.888 -13.210  1.00 10.63           C
ATOM    281  CD2 LEU A 358      0.832  14.873 -11.226  1.00 11.80           C
ATOM    282  N   GLN A 359      4.384  17.271  -9.372  1.00  9.64           N
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ATOM    283  CA  GLN A 359       5.632  17.523  -8.666  1.00 11.95           C
ATOM    284  C   GLN A 359       6.683  16.513  -9.109  1.00 11.45           C
ATOM    285  O   GLN A 359       7.885  16.763  -9.017  1.00 13.72           O
ATOM    286  CB  GLN A 359       5.416  17.477  -7.152  1.00 12.64           C
ATOM    287  CG  GLN A 359       4.367  18.465  -6.666  1.00 11.02           C
ATOM    288  CD  GLN A 359       4.325  18.587  -5.158  1.00 15.43           C
ATOM    289  OE1 GLN A 359       4.380  19.689  -4.614  1.00 18.04           O
ATOM    290  NE2 GLN A 359       4.218  17.455  -4.474  1.00 15.41           N
ATOM    291  N   VAL A 360       6.214  15.372  -9.600  1.00 12.20           N
ATOM    292  CA  VAL A 360       7.085  14.352 -10.167  1.00 10.59           C
ATOM    293  C   VAL A 360       6.474  13.827 -11.460  1.00 13.44           C
ATOM    294  O   VAL A 360       5.329  13.372 -11.468  1.00 13.87           O
ATOM    295  CB  VAL A 360       7.290  13.177  -9.193  1.00 11.29           C
ATOM    296  CG1 VAL A 360       8.096  12.070  -9.857  1.00 12.36           C
ATOM    297  CG2 VAL A 360       7.971  13.653  -7.921  1.00  6.48           C
ATOM    298  N   PRO A 361       7.233  13.896 -12.563  1.00 15.18           N
ATOM    299  CA  PRO A 361       6.746  13.391 -13.851  1.00 12.98           C
ATOM    300  C   PRO A 361       6.584  11.874 -13.812  1.00 13.45           C
ATOM    301  O   PRO A 361       7.436  11.179 -13.256  1.00 13.62           O
ATOM    302  CB  PRO A 361       7.860  13.787 -14.825  1.00 13.06           C
ATOM    303  CG  PRO A 361       9.086  13.882 -13.977  1.00 13.60           C
ATOM    304  CD  PRO A 361       8.613  14.405 -12.651  1.00 13.83           C
ATOM    305  N   ARG A 362       5.500  11.367 -14.390  1.00 15.54           N
ATOM    306  CA  ARG A 362       5.245   9.932 -14.374  1.00 13.62           C
ATOM    307  C   ARG A 362       4.464   9.479 -15.597  1.00 11.55           C
ATOM    308  O   ARG A 362       3.532  10.150 -16.037  1.00 10.18           O
ATOM    309  CB  ARG A 362       4.498   9.540 -13.098  1.00 14.61           C
ATOM    310  CG  ARG A 362       4.914  10.359 -11.887  1.00 17.96           C
ATOM    311  CD  ARG A 362       4.891   9.548 -10.606  1.00 14.79           C
ATOM    312  NE  ARG A 362       3.543   9.329 -10.091  1.00 13.64           N
ATOM    313  CZ  ARG A 362       2.834  10.249  -9.447  1.00 18.54           C
ATOM    314  NH1 ARG A 362       3.338  11.462  -9.261  1.00 22.08           N
ATOM    315  NH2 ARG A 362       1.618   9.963  -8.998  1.00 13.89           N
ATOM    316  N   SER A 363       4.861   8.339 -16.149  1.00 11.71           N
ATOM    317  CA  SER A 363       4.124   7.721 -17.241  1.00 10.67           C
ATOM    318  C   SER A 363       3.538   6.408 -16.750  1.00 12.76           C
ATOM    319  O   SER A 363       3.965   5.876 -15.726  1.00 15.11           O
ATOM    320  CB  SER A 363       5.039   7.466 -18.437  1.00 12.47           C
ATOM    321  OG  SER A 363       6.042   6.521 -18.111  1.00 14.66           O
ATOM    322  N   GLY A 364       2.561   5.886 -17.478  1.00 12.60           N
ATOM    323  CA  GLY A 364       1.935   4.634 -17.102  1.00 12.14           C
ATOM    324  C   GLY A 364       1.291   4.708 -15.732  1.00 10.08           C
ATOM    325  O   GLY A 364       1.216   3.707 -15.019  1.00 11.79           O
ATOM    326  N   LEU A 365       0.835   5.900 -15.361  1.00  8.54           N
ATOM    327  CA  LEU A 365       0.120   6.086 -14.103  1.00 10.85           C
ATOM    328  C   LEU A 365      -1.379   5.988 -14.345  1.00 10.71           C
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ATOM    329  O   LEU A 365     -1.824   5.810 -15.478  1.00 11.23           O
ATOM    330  CB  LEU A 365      0.443   7.447 -13.485  1.00  9.42           C
ATOM    331  CG  LEU A 365     -0.146   8.658 -14.213  1.00 10.05           C
ATOM    332  CD1 LEU A 365     -0.181   9.880 -13.308  1.00  9.66           C
ATOM    333  CD2 LEU A 365      0.640   8.953 -15.481  1.00  9.63           C
ATOM    334  N   ALA A 366     -2.155   6.113 -13.276  1.00  8.74           N
ATOM    335  CA  ALA A 366     -3.606   6.106 -13.386  1.00 11.60           C
ATOM    336  C   ALA A 366     -4.198   7.318 -12.681  1.00  9.67           C
ATOM    337  O   ALA A 366     -3.662   7.787 -11.681  1.00 10.28           O
ATOM    338  CB  ALA A 366     -4.179   4.822 -12.807  1.00 10.00           C
ATOM    339  N   GLY A 367     -5.303   7.827 -13.210  1.00 10.31           N
ATOM    340  CA  GLY A 367     -6.000   8.928 -12.574  1.00 10.69           C
ATOM    341  C   GLY A 367     -7.359   8.504 -12.053  1.00 11.49           C
ATOM    342  O   GLY A 367     -7.927   7.510 -12.503  1.00 12.51           O
ATOM    343  N   CYS A 368     -7.876   9.252 -11.088  1.00  9.13           N
ATOM    344  CA  CYS A 368     -9.227   9.028 -10.597  1.00 10.70           C
ATOM    345  C   CYS A 368     -9.702  10.244  -9.814  1.00 13.94           C
ATOM    346  O   CYS A 368     -8.928  11.167  -9.562  1.00 10.28           O
ATOM    347  CB  CYS A 368     -9.303   7.762  -9.738  1.00 11.65           C
ATOM    348  SG  CYS A 368     -8.329   7.800  -8.210  1.00 16.83           S
ATOM    349  N   VAL A 369    -10.977  10.243  -9.441  1.00 13.84           N
ATOM    350  CA  VAL A 369    -11.558  11.368  -8.722  1.00 12.41           C
ATOM    351  C   VAL A 369    -12.384  10.917  -7.528  1.00 12.27           C
ATOM    352  O   VAL A 369    -13.214  10.014  -7.633  1.00 11.26           O
ATOM    353  CB  VAL A 369    -12.447  12.229  -9.636  1.00 16.69           C
ATOM    354  CG1 VAL A 369    -13.331  13.146  -8.801  1.00 11.11           C
ATOM    355  CG2 VAL A 369    -11.591  13.027 -10.615  1.00 11.10           C
ATOM    356  N   VAL A 370    -12.141  11.561  -6.392  1.00 13.04           N
ATOM    357  CA  VAL A 370    -12.895  11.310  -5.175  1.00 12.72           C
ATOM    358  C   VAL A 370    -13.161  12.639  -4.481  1.00 13.12           C
ATOM    359  O   VAL A 370    -12.233  13.392  -4.191  1.00 13.66           O
ATOM    360  CB  VAL A 370    -12.122  10.392  -4.208  1.00 13.41           C
ATOM    361  CG1 VAL A 370    -12.960  10.103  -2.974  1.00 11.13           C
ATOM    362  CG2 VAL A 370    -11.721   9.099  -4.903  1.00 10.02           C
ATOM    363  N   GLY A 371    -14.431  12.928  -4.226  1.00 14.51           N
ATOM    364  CA  GLY A 371    -14.806  14.159  -3.555  1.00 16.57           C
ATOM    365  C   GLY A 371    -14.254  15.401  -4.226  1.00 16.85           C
ATOM    366  O   GLY A 371    -13.677  16.265  -3.569  1.00 24.30           O
ATOM    367  N   GLY A 372    -14.428  15.487  -5.541  1.00 17.30           N
ATOM    368  CA  GLY A 372    -14.001  16.653  -6.294  1.00 17.63           C
ATOM    369  C   GLY A 372    -12.504  16.893  -6.272  1.00 17.28           C
ATOM    370  O   GLY A 372    -12.044  18.006  -6.516  1.00 21.35           O
ATOM    371  N   LEU A 373    -11.741  15.845  -5.980  1.00 16.71           N
ATOM    372  CA  LEU A 373    -10.286  15.932  -5.957  1.00 12.64           C
ATOM    373  C   LEU A 373     -9.664  14.958  -6.952  1.00 13.58           C
ATOM    374  O   LEU A 373    -10.133  13.831  -7.111  1.00 12.68           O
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ATOM    375  CB  LEU A 373     -9.760  15.647  -4.550  1.00 14.54           C
ATOM    376  CG  LEU A 373     -9.371  16.848  -3.686  1.00 18.43           C
ATOM    377  CD1 LEU A 373    -10.378  17.976  -3.827  1.00 16.51           C
ATOM    378  CD2 LEU A 373     -9.250  16.418  -2.234  1.00 17.17           C
ATOM    379  N   LEU A 374     -8.603  15.393  -7.618  1.00 12.99           N
ATOM    380  CA  LEU A 374     -7.942  14.552  -8.605  1.00 13.83           C
ATOM    381  C   LEU A 374     -6.725  13.841  -8.016  1.00 14.06           C
ATOM    382  O   LEU A 374     -5.850  14.471  -7.420  1.00 11.97           O
ATOM    383  CB  LEU A 374     -7.529  15.380  -9.821  1.00 13.10           C
ATOM    384  CG  LEU A 374     -6.847  14.611 -10.950  1.00 10.85           C
ATOM    385  CD1 LEU A 374     -7.835  13.674 -11.634  1.00 12.40           C
ATOM    386  CD2 LEU A 374     -6.229  15.576 -11.944  1.00  9.24           C
ATOM    387  N   TYR A 375     -6.679  12.524  -8.190  1.00 14.06           N
ATOM    388  CA  TYR A 375     -5.568  11.720  -7.698  1.00 12.63           C
ATOM    389  C   TYR A 375     -4.761  11.116  -8.841  1.00 13.02           C
ATOM    390  O   TYR A 375     -5.325  10.648  -9.829  1.00 12.66           O
ATOM    391  CB  TYR A 375     -6.079  10.597  -6.792  1.00 13.74           C
ATOM    392  CG  TYR A 375     -6.644  11.070  -5.473  1.00 13.64           C
ATOM    393  CD1 TYR A 375     -7.998  11.347  -5.334  1.00 11.21           C
ATOM    394  CD2 TYR A 375     -5.824  11.235  -4.366  1.00 10.61           C
ATOM    395  CE1 TYR A 375     -8.516  11.777  -4.130  1.00 10.20           C
ATOM    396  CE2 TYR A 375     -6.333  11.664  -3.160  1.00 15.11           C
ATOM    397  CZ  TYR A 375     -7.680  11.933  -3.045  1.00 13.42           C
ATOM    398  OH  TYR A 375     -8.188  12.360  -1.840  1.00 14.28           O
ATOM    399  N   ALA A 376     -3.439  11.135  -8.695  1.00 12.80           N
ATOM    400  CA  ALA A 376     -2.539  10.453  -9.616  1.00 10.85           C
ATOM    401  C   ALA A 376     -1.825   9.331  -8.867  1.00 13.41           C
ATOM    402  O   ALA A 376     -1.240   9.563  -7.807  1.00 11.62           O
ATOM    403  CB  ALA A 376     -1.533  11.430 -10.193  1.00 12.12           C
ATOM    404  N   VAL A 377     -1.869   8.120  -9.416  1.00 12.93           N
ATOM    405  CA  VAL A 377     -1.354   6.949  -8.712  1.00 10.83           C
ATOM    406  C   VAL A 377     -0.242   6.232  -9.469  1.00 10.53           C
ATOM    407  O   VAL A 377     -0.315   6.058 -10.685  1.00 11.89           O
ATOM    408  CB  VAL A 377     -2.471   5.928  -8.441  1.00 11.81           C
ATOM    409  CG1 VAL A 377     -2.118   5.074  -7.233  1.00  9.40           C
ATOM    410  CG2 VAL A 377     -3.801   6.635  -8.232  1.00 13.27           C
ATOM    411  N   GLY A 378      0.779   5.802  -8.734  1.00 13.42           N
ATOM    412  CA  GLY A 378      1.858   5.007  -9.296  1.00 11.59           C
ATOM    413  C   GLY A 378      2.422   5.557 -10.591  1.00 11.60           C
ATOM    414  O   GLY A 378      2.455   6.768 -10.803  1.00 12.26           O
ATOM    415  N   GLY A 379      2.870   4.659 -11.461  1.00 12.44           N
ATOM    416  CA  GLY A 379      3.457   5.051 -12.726  1.00 10.53           C
ATOM    417  C   GLY A 379      4.964   4.888 -12.728  1.00 13.84           C
ATOM    418  O   GLY A 379      5.520   4.110 -11.949  1.00 12.59           O
ATOM    419  N   ARG A 380      5.628   5.630 -13.608  1.00 12.48           N
ATOM    420  CA  ARG A 380      7.079   5.583 -13.713  1.00 12.32           C
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ATOM    421  C   ARG A 380       7.651   6.989 -13.852  1.00 11.30           C
ATOM    422  O   ARG A 380       7.293   7.725 -14.769  1.00 14.35           O
ATOM    423  CB  ARG A 380       7.502   4.727 -14.907  1.00 15.11           C
ATOM    424  CG  ARG A 380       9.005   4.509 -15.011  1.00 16.24           C
ATOM    425  CD  ARG A 380       9.362   3.693 -16.241  1.00 13.60           C
ATOM    426  NE  ARG A 380       9.164   4.453 -17.471  1.00 18.90           N
ATOM    427  CZ  ARG A 380       9.287   3.943 -18.692  1.00 18.73           C
ATOM    428  NH1 ARG A 380       9.603   2.665 -18.851  1.00 15.36           N
ATOM    429  NH2 ARG A 380       9.089   4.711 -19.756  1.00 16.31           N
ATOM    430  N   ASN A 381       8.542   7.356 -12.937  1.00 10.27           N
ATOM    431  CA  ASN A 381       9.166   8.670 -12.966  1.00 12.57           C
ATOM    432  C   ASN A 381      10.458   8.673 -13.781  1.00 15.42           C
ATOM    433  O   ASN A 381      10.777   7.698 -14.461  1.00 11.36           O
ATOM    434  CB  ASN A 381       9.432   9.170 -11.544  1.00 11.16           C
ATOM    435  CG  ASN A 381      10.345   8.244 -10.760  1.00 15.31           C
ATOM    436  OD1 ASN A 381      11.245   7.617 -11.321  1.00 13.08           O
ATOM    437  ND2 ASN A 381      10.110   8.147  -9.456  1.00  9.73           N
ATOM    438  N   ASN A 382      11.195   9.777 -13.710  1.00 14.35           N
ATOM    439  CA  ASN A 382      12.454   9.904 -14.433  1.00 14.09           C
ATOM    440  C   ASN A 382      13.659   9.865 -13.500  1.00 11.59           C
ATOM    441  O   ASN A 382      14.693  10.467 -13.783  1.00 13.17           O
ATOM    442  CB  ASN A 382      12.470  11.197 -15.251  1.00 10.70           C
ATOM    443  CG  ASN A 382      11.487  11.170 -16.404  1.00 11.99           C
ATOM    444  OD1 ASN A 382      11.247  10.124 -17.003  1.00 16.59           O
ATOM    445  ND2 ASN A 382      10.917  12.324 -16.724  1.00  8.98           N
ATOM    446  N   SER A 383      13.520   9.149 -12.389  1.00 12.94           N
ATOM    447  CA  SER A 383      14.576   9.086 -11.382  1.00 16.19           C
ATOM    448  C   SER A 383      15.866   8.489 -11.939  1.00 15.12           C
ATOM    449  O   SER A 383      15.848   7.444 -12.589  1.00 16.40           O
ATOM    450  CB  SER A 383      14.110   8.299 -10.157  1.00 17.32           C
ATOM    451  OG  SER A 383      15.105   8.304  -9.149  1.00 19.90           O
ATOM    452  N   PRO A 384      16.994   9.160 -11.674  1.00 16.98           N
ATOM    453  CA  PRO A 384      18.315   8.829 -12.220  1.00 19.06           C
ATOM    454  C   PRO A 384      19.043   7.724 -11.457  1.00 17.94           C
ATOM    455  O   PRO A 384      20.179   7.410 -11.807  1.00 21.45           O
ATOM    456  CB  PRO A 384      19.098  10.144 -12.063  1.00 16.26           C
ATOM    457  CG  PRO A 384      18.098  11.173 -11.569  1.00 18.64           C
ATOM    458  CD  PRO A 384      17.026  10.400 -10.888  1.00 13.70           C
ATOM    459  N   ASP A 385      18.410   7.147 -10.441  1.00 18.74           N
ATOM    460  CA  ASP A 385      19.101   6.202  -9.563  1.00 19.94           C
ATOM    461  C   ASP A 385      18.766   4.734  -9.828  1.00 21.24           C
ATOM    462  O   ASP A 385      19.255   3.851  -9.125  1.00 26.29           O
ATOM    463  CB  ASP A 385      18.829   6.540  -8.095  1.00 19.21           C
ATOM    464  CG  ASP A 385      17.383   6.308  -7.701  1.00 22.88           C
ATOM    465  OD1 ASP A 385      16.552   6.055  -8.599  1.00 22.14           O
ATOM    466  OD2 ASP A 385      17.076   6.383  -6.493  1.00 22.93           O
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ATOM    467  N   GLY A 386      17.935   4.473 -10.832  1.00 20.01           N
ATOM    468  CA  GLY A 386      17.559   3.108 -11.161  1.00 22.13           C
ATOM    469  C   GLY A 386      16.208   2.695 -10.603  1.00 21.59           C
ATOM    470  O   GLY A 386      15.685   1.638 -10.955  1.00 20.17           O
ATOM    471  N   ASN A 387      15.649   3.527  -9.727  1.00 18.11           N
ATOM    472  CA  ASN A 387      14.322   3.290  -9.167  1.00 21.34           C
ATOM    473  C   ASN A 387      13.271   4.203  -9.784  1.00 17.01           C
ATOM    474  O   ASN A 387      12.903   5.213  -9.187  1.00 18.17           O
ATOM    475  CB  ASN A 387      14.330   3.516  -7.654  1.00 24.34           C
ATOM    476  CG  ASN A 387      14.936   2.363  -6.894  1.00 26.68           C
ATOM    477  OD1 ASN A 387      15.920   2.529  -6.173  1.00 30.61           O
ATOM    478  ND2 ASN A 387      14.346   1.182  -7.042  1.00 28.34           N
ATOM    479  N   THR A 388      12.779   3.847 -10.967  1.00 16.04           N
ATOM    480  CA  THR A 388      11.813   4.693 -11.668  1.00 16.85           C
ATOM    481  C   THR A 388      10.367   4.282 -11.411  1.00 15.26           C
ATOM    482  O   THR A 388       9.439   5.033 -11.715  1.00 13.68           O
ATOM    483  CB  THR A 388      12.067   4.720 -13.184  1.00 11.61           C
ATOM    484  OG1 THR A 388      12.006   3.387 -13.703  1.00 12.12           O
ATOM    485  CG2 THR A 388      13.432   5.316 -13.479  1.00 13.41           C
ATOM    486  N   ASP A 389      10.177   3.088 -10.859  1.00 13.78           N
ATOM    487  CA  ASP A 389       8.841   2.617 -10.511  1.00 13.10           C
ATOM    488  C   ASP A 389       8.289   3.403  -9.321  1.00 14.29           C
ATOM    489  O   ASP A 389       8.931   3.502  -8.274  1.00 15.83           O
ATOM    490  CB  ASP A 389       8.855   1.115 -10.214  1.00 15.32           C
ATOM    491  CG  ASP A 389       8.997   0.273 -11.469  1.00 14.98           C
ATOM    492  OD1 ASP A 389       8.483   0.690 -12.528  1.00 13.71           O
ATOM    493  OD2 ASP A 389       9.620  -0.808 -11.399  1.00 17.83           O
ATOM    494  N   SER A 390       7.096   3.962  -9.489  1.00 13.36           N
ATOM    495  CA  SER A 390       6.521   4.845  -8.480  1.00 12.47           C
ATOM    496  C   SER A 390       5.563   4.122  -7.538  1.00 11.21           C
ATOM    497  O   SER A 390       4.835   3.220  -7.945  1.00 12.02           O
ATOM    498  CB  SER A 390       5.808   6.024  -9.153  1.00 14.19           C
ATOM    499  OG  SER A 390       5.210   6.882  -8.194  1.00 15.51           O
ATOM    500  N   SER A 391       5.575   4.524  -6.271  1.00 11.70           N
ATOM    501  CA  SER A 391       4.603   4.032  -5.304  1.00 14.13           C
ATOM    502  C   SER A 391       3.839   5.217  -4.726  1.00 12.42           C
ATOM    503  O   SER A 391       3.192   5.107  -3.684  1.00 14.15           O
ATOM    504  CB  SER A 391       5.294   3.254  -4.185  1.00 10.52           C
ATOM    505  OG  SER A 391       6.127   4.104  -3.419  1.00  9.09           O
ATOM    506  N   ALA A 392       3.914   6.347  -5.422  1.00 10.73           N
ATOM    507  CA  ALA A 392       3.363   7.601  -4.921  1.00 13.57           C
ATOM    508  C   ALA A 392       1.875   7.765  -5.210  1.00 11.43           C
ATOM    509  O   ALA A 392       1.351   7.222  -6.183  1.00  8.47           O
ATOM    510  CB  ALA A 392       4.145   8.783  -5.487  1.00  9.45           C
ATOM    511  N   LEU A 393       1.205   8.516  -4.342  1.00  9.59           N
ATOM    512  CA  LEU A 393      -0.173   8.934  -4.563  1.00 11.71           C
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ATOM    513  C   LEU A 393     -0.241  10.440  -4.360  1.00 14.83           C
ATOM    514  O   LEU A 393      0.158  10.945  -3.310  1.00 12.75           O
ATOM    515  CB  LEU A 393     -1.117   8.238  -3.584  1.00 12.04           C
ATOM    516  CG  LEU A 393     -2.580   8.684  -3.653  1.00 12.99           C
ATOM    517  CD1 LEU A 393     -3.192   8.311  -4.992  1.00 12.97           C
ATOM    518  CD2 LEU A 393     -3.392   8.095  -2.503  1.00 16.50           C
ATOM    519  N   ASP A 394     -0.737  11.157  -5.363  1.00 12.47           N
ATOM    520  CA  ASP A 394     -0.773  12.615  -5.298  1.00 13.17           C
ATOM    521  C   ASP A 394     -2.167  13.192  -5.540  1.00 12.09           C
ATOM    522  O   ASP A 394     -2.916  12.715  -6.395  1.00  9.22           O
ATOM    523  CB  ASP A 394      0.238  13.221  -6.274  1.00 12.32           C
ATOM    524  CG  ASP A 394      1.666  12.839  -5.940  1.00 12.81           C
ATOM    525  OD1 ASP A 394      2.214  13.390  -4.962  1.00 11.61           O
ATOM    526  OD2 ASP A 394      2.242  11.991  -6.655  1.00 13.99           O
ATOM    527  N   CYS A 395     -2.496  14.234  -4.783  1.00 12.82           N
ATOM    528  CA  CYS A 395     -3.825  14.830  -4.816  1.00 13.33           C
ATOM    529  C   CYS A 395     -3.796  16.232  -5.420  1.00 11.56           C
ATOM    530  O   CYS A 395     -2.970  17.063  -5.044  1.00 10.65           O
ATOM    531  CB  CYS A 395     -4.404  14.882  -3.400  1.00 12.67           C
ATOM    532  SG  CYS A 395     -6.170  15.227  -3.318  1.00 16.03           S
ATOM    533  N   TYR A 396     -4.701  16.490  -6.360  1.00 11.91           N
ATOM    534  CA  TYR A 396     -4.799  17.809  -6.977  1.00 11.78           C
ATOM    535  C   TYR A 396     -6.126  18.489  -6.663  1.00 12.70           C
ATOM    536  O   TYR A 396     -7.199  17.933  -6.916  1.00 13.57           O
ATOM    537  CB  TYR A 396     -4.609  17.730  -8.493  1.00 10.25           C
ATOM    538  CG  TYR A 396     -4.805  19.062  -9.178  1.00  8.62           C
ATOM    539  CD1 TYR A 396     -3.778  19.995  -9.225  1.00  8.80           C
ATOM    540  CD2 TYR A 396     -6.017  19.392  -9.768  1.00  7.97           C
ATOM    541  CE1 TYR A 396     -3.950  21.217  -9.844  1.00 11.64           C
ATOM    542  CE2 TYR A 396     -6.199  20.616 -10.395  1.00  9.41           C
ATOM    543  CZ  TYR A 396     -5.162  21.524 -10.428  1.00 10.54           C
ATOM    544  OH  TYR A 396     -5.329  22.744 -11.047  1.00  8.00           O
ATOM    545  N   ASN A 397     -6.042  19.698  -6.116  1.00 10.80           N
ATOM    546  CA  ASN A 397     -7.224  20.478  -5.776  1.00 11.25           C
ATOM    547  C   ASN A 397     -7.455  21.570  -6.811  1.00  9.68           C
ATOM    548  O   ASN A 397     -6.732  22.564  -6.842  1.00 13.33           O
ATOM    549  CB  ASN A 397     -7.075  21.089  -4.382  1.00 10.43           C
ATOM    550  CG  ASN A 397     -8.375  21.665  -3.849  1.00 14.51           C
ATOM    551  OD1 ASN A 397     -9.311  21.930  -4.604  1.00 15.41           O
ATOM    552  ND2 ASN A 397     -8.435  21.865  -2.537  1.00 16.71           N
ATOM    553  N   PRO A 398     -8.464  21.378  -7.670  1.00 13.18           N
ATOM    554  CA  PRO A 398     -8.799  22.303  -8.760  1.00 15.87           C
ATOM    555  C   PRO A 398     -9.048  23.708  -8.241  1.00 14.68           C
ATOM    556  O   PRO A 398     -8.764  24.683  -8.932  1.00 12.89           O
ATOM    557  CB  PRO A 398    -10.110  21.733  -9.307  1.00 10.27           C
ATOM    558  CG  PRO A 398    -10.087  20.295  -8.936  1.00 10.03           C
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ATOM    559  CD  PRO A 398      -9.383  20.228  -7.616  1.00 10.89           C
ATOM    560  N   MET A 399      -9.584  23.807  -7.031  1.00 14.94           N
ATOM    561  CA  MET A 399      -9.959  25.107  -6.494  1.00 18.08           C
ATOM    562  C   MET A 399      -8.750  25.966  -6.149  1.00 15.59           C
ATOM    563  O   MET A 399      -8.824  27.190  -6.160  1.00 22.87           O
ATOM    564  CB  MET A 399     -10.865  24.959  -5.276  1.00 23.10           C
ATOM    565  CG  MET A 399     -11.585  26.251  -4.938  1.00 36.84           C
ATOM    566  SD  MET A 399     -12.409  26.245  -3.339  1.00 77.77           S
ATOM    567  CE  MET A 399     -13.448  24.795  -3.497  1.00 55.26           C
ATOM    568  N   THR A 400      -7.632  25.316  -5.855  1.00 17.69           N
ATOM    569  CA  THR A 400      -6.434  26.026  -5.424  1.00 16.08           C
ATOM    570  C   THR A 400      -5.271  25.799  -6.387  1.00 16.61           C
ATOM    571  O   THR A 400      -4.215  26.419  -6.262  1.00 14.26           O
ATOM    572  CB  THR A 400      -5.997  25.582  -4.022  1.00 14.21           C
ATOM    573  OG1 THR A 400      -5.664  24.190  -4.053  1.00 14.60           O
ATOM    574  CG2 THR A 400      -7.117  25.809  -3.014  1.00 13.80           C
ATOM    575  N   ASN A 401      -5.464  24.894  -7.339  1.00 11.82           N
ATOM    576  CA  ASN A 401      -4.412  24.564  -8.290  1.00 10.16           C
ATOM    577  C   ASN A 401      -3.163  24.051  -7.581  1.00 12.38           C
ATOM    578  O   ASN A 401      -2.040  24.311  -8.015  1.00 11.90           O
ATOM    579  CB  ASN A 401      -4.062  25.784  -9.140  1.00 10.27           C
ATOM    580  CG  ASN A 401      -3.262  25.423 -10.374  1.00 12.31           C
ATOM    581  OD1 ASN A 401      -3.531  24.414 -11.032  1.00 15.76           O
ATOM    582  ND2 ASN A 401      -2.265  26.240 -10.691  1.00  7.44           N
ATOM    583  N   GLN A 402      -3.369  23.322  -6.488  1.00 11.23           N
ATOM    584  CA  GLN A 402      -2.273  22.778  -5.696  1.00  9.67           C
ATOM    585  C   GLN A 402      -2.223  21.259  -5.760  1.00 12.48           C
ATOM    586  O   GLN A 402      -3.241  20.588  -5.599  1.00 13.60           O
ATOM    587  CB  GLN A 402      -2.410  23.202  -4.233  1.00 10.26           C
ATOM    588  CG  GLN A 402      -2.011  24.637  -3.949  1.00 13.14           C
ATOM    589  CD  GLN A 402      -0.529  24.875  -4.142  1.00 12.94           C
ATOM    590  OE1 GLN A 402       0.182  24.031  -4.689  1.00 14.40           O
ATOM    591  NE2 GLN A 402      -0.053  26.029  -3.692  1.00 11.68           N
ATOM    592  N   TRP A 403      -1.031  20.722  -5.992  1.00 11.13           N
ATOM    593  CA  TRP A 403      -0.800  19.292  -5.847  1.00 11.62           C
ATOM    594  C   TRP A 403      -0.377  18.989  -4.413  1.00 12.26           C
ATOM    595  O   TRP A 403       0.349  19.768  -3.794  1.00 14.06           O
ATOM    596  CB  TRP A 403       0.282  18.818  -6.814  1.00 10.92           C
ATOM    597  CG  TRP A 403      -0.212  18.530  -8.194  1.00  8.63           C
ATOM    598  CD1 TRP A 403      -0.079  19.323  -9.295  1.00  7.97           C
ATOM    599  CD2 TRP A 403      -0.907  17.356  -8.627  1.00  9.03           C
ATOM    600  NE1 TRP A 403      -0.650  18.717 -10.387  1.00  9.39           N
ATOM    601  CE2 TRP A 403      -1.166  17.507 -10.003  1.00 10.84           C
ATOM    602  CE3 TRP A 403      -1.341  16.193  -7.983  1.00 10.25           C
ATOM    603  CZ2 TRP A 403      -1.838  16.539 -10.746  1.00 12.08           C
ATOM    604  CZ3 TRP A 403      -2.007  15.233  -8.723  1.00 11.04           C
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ATOM    605  CH2 TRP A 403     -2.249  15.412 -10.089  1.00  9.53           C
ATOM    606  N   SER A 404     -0.832  17.859  -3.885  1.00 10.68           N
ATOM    607  CA  SER A 404     -0.469  17.464  -2.528  1.00 13.74           C
ATOM    608  C   SER A 404     -0.103  15.992  -2.451  1.00 12.15           C
ATOM    609  O   SER A 404     -0.891  15.131  -2.840  1.00 14.55           O
ATOM    610  CB  SER A 404     -1.602  17.772  -1.544  1.00 13.68           C
ATOM    611  OG  SER A 404     -1.520  19.106  -1.081  1.00 18.66           O
ATOM    612  N   PRO A 405      1.107  15.701  -1.954  1.00 14.78           N
ATOM    613  CA  PRO A 405      1.538  14.315  -1.761  1.00 14.24           C
ATOM    614  C   PRO A 405      0.647  13.625  -0.742  1.00 13.30           C
ATOM    615  O   PRO A 405      0.270  14.240   0.255  1.00 13.68           O
ATOM    616  CB  PRO A 405      2.958  14.465  -1.202  1.00 13.01           C
ATOM    617  CG  PRO A 405      3.407  15.816  -1.653  1.00 12.75           C
ATOM    618  CD  PRO A 405      2.172  16.664  -1.627  1.00 13.87           C
ATOM    619  N   CYS A 406      0.304  12.368  -1.001  1.00 11.80           N
ATOM    620  CA  CYS A 406     -0.469  11.572  -0.059  1.00 12.67           C
ATOM    621  C   CYS A 406      0.374  10.413   0.456  1.00 14.80           C
ATOM    622  O   CYS A 406      1.551  10.289   0.119  1.00 18.04           O
ATOM    623  CB  CYS A 406     -1.741  11.038  -0.720  1.00 14.32           C
ATOM    624  SG  CYS A 406     -2.971  12.300  -1.126  1.00 13.23           S
ATOM    625  N   ALA A 407     -0.229   9.565   1.280  1.00 11.64           N
ATOM    626  CA  ALA A 407      0.447   8.364   1.737  1.00 15.07           C
ATOM    627  C   ALA A 407      0.762   7.487   0.531  1.00 17.77           C
ATOM    628  O   ALA A 407     -0.111   7.236  -0.300  1.00 16.20           O
ATOM    629  CB  ALA A 407     -0.421   7.614   2.732  1.00 13.30           C
ATOM    630  N   PRO A 408      2.018   7.026   0.426  1.00 15.91           N
ATOM    631  CA  PRO A 408      2.434   6.173  -0.690  1.00  9.55           C
ATOM    632  C   PRO A 408      1.898   4.755  -0.530  1.00 13.05           C
ATOM    633  O   PRO A 408      1.588   4.341   0.588  1.00 10.29           O
ATOM    634  CB  PRO A 408      3.957   6.174  -0.571  1.00 10.64           C
ATOM    635  CG  PRO A 408      4.210   6.352   0.891  1.00  9.03           C
ATOM    636  CD  PRO A 408      3.116   7.269   1.380  1.00 13.42           C
ATOM    637  N   MET A 409      1.791   4.029  -1.639  1.00 13.07           N
ATOM    638  CA  MET A 409      1.300   2.656  -1.625  1.00  9.29           C
ATOM    639  C   MET A 409      2.311   1.733  -0.949  1.00 11.13           C
ATOM    640  O   MET A 409      3.421   2.154  -0.621  1.00  9.36           O
ATOM    641  CB  MET A 409      1.001   2.182  -3.052  1.00  8.50           C
ATOM    642  CG  MET A 409     -0.148   2.924  -3.730  1.00  9.29           C
ATOM    643  SD  MET A 409     -0.341   2.548  -5.492  1.00 13.48           S
ATOM    644  CE  MET A 409      1.226   3.131  -6.142  1.00  9.07           C
ATOM    645  N   SER A 410      1.924   0.477  -0.738  1.00  9.48           N
ATOM    646  CA  SER A 410      2.790  -0.490  -0.066  1.00 10.95           C
ATOM    647  C   SER A 410      3.938  -0.949  -0.961  1.00 10.61           C
ATOM    648  O   SER A 410      4.952  -1.445  -0.475  1.00 11.35           O
ATOM    649  CB  SER A 410      1.985  -1.701   0.413  1.00  9.45           C
ATOM    650  OG  SER A 410      1.520  -2.472  -0.680  1.00 10.61           O
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ATOM    651  N   VAL A 411       3.767  -0.784  -2.269  1.00 12.76           N
ATOM    652  CA  VAL A 411       4.787  -1.162  -3.241  1.00  9.62           C
ATOM    653  C   VAL A 411       4.670  -0.287  -4.482  1.00 12.80           C
ATOM    654  O   VAL A 411       3.598   0.251  -4.764  1.00  9.08           O
ATOM    655  CB  VAL A 411       4.636  -2.629  -3.674  1.00 10.97           C
ATOM    656  CG1 VAL A 411       4.717  -3.554  -2.469  1.00  8.10           C
ATOM    657  CG2 VAL A 411       3.321  -2.826  -4.415  1.00 10.07           C
ATOM    658  N   PRO A 412       5.777  -0.138  -5.227  1.00 12.56           N
ATOM    659  CA  PRO A 412       5.756   0.605  -6.491  1.00 12.24           C
ATOM    660  C   PRO A 412       4.889  -0.118  -7.515  1.00 13.04           C
ATOM    661  O   PRO A 412       4.962  -1.344  -7.620  1.00 13.45           O
ATOM    662  CB  PRO A 412       7.223   0.585  -6.935  1.00 14.43           C
ATOM    663  CG  PRO A 412       8.005   0.287  -5.694  1.00  8.88           C
ATOM    664  CD  PRO A 412       7.129  -0.608  -4.883  1.00 10.54           C
ATOM    665  N   ARG A 413       4.077   0.629  -8.256  1.00 11.07           N
ATOM    666  CA  ARG A 413       3.181   0.032  -9.239  1.00  9.95           C
ATOM    667  C   ARG A 413       3.197   0.805 -10.553  1.00 11.68           C
ATOM    668  O   ARG A 413       2.497   1.806 -10.702  1.00  9.81           O
ATOM    669  CB  ARG A 413       1.753  -0.031  -8.693  1.00 10.20           C
ATOM    670  CG  ARG A 413       1.607  -0.810  -7.392  1.00 11.36           C
ATOM    671  CD  ARG A 413       0.165  -0.798  -6.907  1.00 11.79           C
ATOM    672  NE  ARG A 413      -0.019  -1.579  -5.686  1.00 10.62           N
ATOM    673  CZ  ARG A 413      -0.286  -2.882  -5.664  1.00 13.34           C
ATOM    674  NH1 ARG A 413      -0.396  -3.561  -6.798  1.00  9.63           N
ATOM    675  NH2 ARG A 413      -0.438  -3.511  -4.505  1.00 10.91           N
ATOM    676  N   ASN A 414       4.003   0.336 -11.501  1.00 12.32           N
ATOM    677  CA  ASN A 414       4.031   0.917 -12.838  1.00 13.98           C
ATOM    678  C   ASN A 414       3.030   0.212 -13.742  1.00 12.47           C
ATOM    679  O   ASN A 414       2.723  -0.961 -13.535  1.00 14.37           O
ATOM    680  CB  ASN A 414       5.434   0.826 -13.441  1.00 13.18           C
ATOM    681  CG  ASN A 414       5.528   1.500 -14.798  1.00 16.60           C
ATOM    682  OD1 ASN A 414       4.848   2.494 -15.060  1.00 14.07           O
ATOM    683  ND2 ASN A 414       6.372   0.957 -15.671  1.00 16.81           N
ATOM    684  N   ARG A 415       2.530   0.925 -14.745  1.00 10.16           N
ATOM    685  CA  ARG A 415       1.516   0.370 -15.632  1.00 12.46           C
ATOM    686  C   ARG A 415       0.336  -0.089 -14.790  1.00 11.24           C
ATOM    687  O   ARG A 415      -0.120  -1.228 -14.885  1.00 12.63           O
ATOM    688  CB  ARG A 415       2.102  -0.772 -16.460  1.00 13.81           C
ATOM    689  CG  ARG A 415       3.221  -0.304 -17.383  1.00 15.23           C
ATOM    690  CD  ARG A 415       3.913  -1.449 -18.093  1.00 16.74           C
ATOM    691  NE  ARG A 415       5.013  -0.969 -18.924  1.00 19.31           N
ATOM    692  CZ  ARG A 415       5.873  -1.760 -19.557  1.00 22.24           C
ATOM    693  NH1 ARG A 415       5.767  -3.078 -19.455  1.00 24.89           N
ATOM    694  NH2 ARG A 415       6.843  -1.232 -20.291  1.00 22.84           N
ATOM    695  N   ILE A 416      -0.154   0.840 -13.976  1.00 11.50           N
ATOM    696  CA  ILE A 416      -1.142   0.572 -12.942  1.00 11.46           C
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ATOM    697  C   ILE A 416     -2.581   0.734 -13.433  1.00 10.92           C
ATOM    698  O   ILE A 416     -2.838   1.386 -14.447  1.00 11.52           O
ATOM    699  CB  ILE A 416     -0.912   1.525 -11.747  1.00  9.96           C
ATOM    700  CG1 ILE A 416     -1.763   1.124 -10.541  1.00 10.35           C
ATOM    701  CG2 ILE A 416     -1.191   2.963 -12.151  1.00  8.58           C
ATOM    702  CD1 ILE A 416     -1.537   2.011  -9.328  1.00  8.03           C
ATOM    703  N   GLY A 417     -3.513   0.128 -12.703  1.00 10.13           N
ATOM    704  CA  GLY A 417     -4.933   0.288 -12.960  1.00  9.56           C
ATOM    705  C   GLY A 417     -5.643   0.716 -11.689  1.00 12.01           C
ATOM    706  O   GLY A 417     -5.330   0.225 -10.604  1.00 10.48           O
ATOM    707  N   VAL A 418     -6.595   1.636 -11.816  1.00 12.65           N
ATOM    708  CA  VAL A 418     -7.268   2.192 -10.646  1.00 11.72           C
ATOM    709  C   VAL A 418     -8.783   2.198 -10.787  1.00 13.03           C
ATOM    710  O   VAL A 418     -9.318   2.351 -11.885  1.00 15.92           O
ATOM    711  CB  VAL A 418     -6.793   3.631 -10.352  1.00  9.23           C
ATOM    712  CG1 VAL A 418     -7.737   4.312  -9.380  1.00 14.51           C
ATOM    713  CG2 VAL A 418     -5.374   3.622  -9.809  1.00 10.94           C
ATOM    714  N   GLY A 419     -9.467   2.033  -9.661  1.00 10.59           N
ATOM    715  CA  GLY A 419    -10.916   2.078  -9.625  1.00 11.99           C
ATOM    716  C   GLY A 419    -11.392   2.588  -8.280  1.00 11.46           C
ATOM    717  O   GLY A 419    -10.756   2.344  -7.257  1.00 11.21           O
ATOM    718  N   VAL A 420    -12.511   3.301  -8.278  1.00 12.38           N
ATOM    719  CA  VAL A 420    -13.050   3.853  -7.043  1.00 18.61           C
ATOM    720  C   VAL A 420    -14.355   3.176  -6.632  1.00 17.83           C
ATOM    721  O   VAL A 420    -15.275   3.028  -7.436  1.00 19.12           O
ATOM    722  CB  VAL A 420    -13.267   5.376  -7.147  1.00 15.82           C
ATOM    723  CG1 VAL A 420    -13.991   5.896  -5.912  1.00 12.27           C
ATOM    724  CG2 VAL A 420    -11.935   6.091  -7.336  1.00 11.80           C
ATOM    725  N   ILE A 421    -14.417   2.756  -5.373  1.00 16.46           N
ATOM    726  CA  ILE A 421    -15.630   2.193  -4.799  1.00 16.74           C
ATOM    727  C   ILE A 421    -15.917   2.868  -3.465  1.00 19.99           C
ATOM    728  O   ILE A 421    -15.095   2.820  -2.549  1.00 19.72           O
ATOM    729  CB  ILE A 421    -15.503   0.678  -4.563  1.00 19.13           C
ATOM    730  CG1 ILE A 421    -15.398  -0.072  -5.892  1.00 20.90           C
ATOM    731  CG2 ILE A 421    -16.691   0.167  -3.764  1.00 21.60           C
ATOM    732  CD1 ILE A 421    -15.202  -1.569  -5.733  1.00 18.73           C
ATOM    733  N   ASP A 422    -17.081   3.501  -3.362  1.00 18.20           N
ATOM    734  CA  ASP A 422    -17.484   4.169  -2.130  1.00 19.03           C
ATOM    735  C   ASP A 422    -16.380   5.079  -1.584  1.00 14.41           C
ATOM    736  O   ASP A 422    -16.027   5.008  -0.408  1.00 14.87           O
ATOM    737  CB  ASP A 422    -17.899   3.139  -1.074  1.00 19.95           C
ATOM    738  CG  ASP A 422    -19.033   2.241  -1.548  1.00 26.06           C
ATOM    739  OD1 ASP A 422    -19.836   2.687  -2.395  1.00 27.22           O
ATOM    740  OD2 ASP A 422    -19.121   1.090  -1.071  1.00 23.32           O
ATOM    741  N   GLY A 423    -15.835   5.927  -2.450  1.00 17.25           N
ATOM    742  CA  GLY A 423    -14.850   6.913  -2.045  1.00 15.92           C
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ATOM    743  C   GLY A 423     -13.474   6.358  -1.724  1.00 15.58           C
ATOM    744  O   GLY A 423     -12.625   7.065  -1.181  1.00 17.52           O
ATOM    745  N   HIS A 424     -13.245   5.093  -2.060  1.00 15.35           N
ATOM    746  CA  HIS A 424     -11.954   4.469  -1.798  1.00 15.20           C
ATOM    747  C   HIS A 424     -11.257   4.078  -3.093  1.00 15.53           C
ATOM    748  O   HIS A 424     -11.870   3.496  -3.988  1.00 17.37           O
ATOM    749  CB  HIS A 424     -12.120   3.251  -0.890  1.00 15.81           C
ATOM    750  CG  HIS A 424     -12.681   3.579   0.458  1.00 21.16           C
ATOM    751  ND1 HIS A 424     -13.316   2.645   1.248  1.00 29.28           N
ATOM    752  CD2 HIS A 424     -12.705   4.739   1.155  1.00 18.96           C
ATOM    753  CE1 HIS A 424     -13.707   3.216   2.374  1.00 24.00           C
ATOM    754  NE2 HIS A 424     -13.348   4.487   2.343  1.00 18.64           N
ATOM    755  N   ILE A 425      -9.971   4.404  -3.187  1.00 12.47           N
ATOM    756  CA  ILE A 425      -9.196   4.131  -4.391  1.00 13.70           C
ATOM    757  C   ILE A 425      -8.505   2.774  -4.318  1.00 14.23           C
ATOM    758  O   ILE A 425      -7.738   2.505  -3.393  1.00 12.51           O
ATOM    759  CB  ILE A 425      -8.123   5.210  -4.624  1.00 13.71           C
ATOM    760  CG1 ILE A 425      -8.722   6.608  -4.464  1.00 10.23           C
ATOM    761  CG2 ILE A 425      -7.480   5.040  -5.996  1.00 10.54           C
ATOM    762  CD1 ILE A 425      -7.717   7.719  -4.655  1.00 14.56           C
ATOM    763  N   TYR A 426      -8.778   1.922  -5.299  1.00 10.62           N
ATOM    764  CA  TYR A 426      -8.101   0.638  -5.393  1.00 13.99           C
ATOM    765  C   TYR A 426      -6.972   0.698  -6.414  1.00 12.67           C
ATOM    766  O   TYR A 426      -7.198   1.017  -7.579  1.00 12.74           O
ATOM    767  CB  TYR A 426      -9.087  -0.467  -5.779  1.00 18.17           C
ATOM    768  CG  TYR A 426     -10.108  -0.798  -4.713  1.00 16.71           C
ATOM    769  CD1 TYR A 426     -11.205   0.023  -4.497  1.00 15.26           C
ATOM    770  CD2 TYR A 426      -9.980  -1.941  -3.934  1.00 16.73           C
ATOM    771  CE1 TYR A 426     -12.141  -0.279  -3.529  1.00 21.02           C
ATOM    772  CE2 TYR A 426     -10.912  -2.253  -2.965  1.00 16.69           C
ATOM    773  CZ  TYR A 426     -11.991  -1.418  -2.767  1.00 22.34           C
ATOM    774  OH  TYR A 426     -12.925  -1.722  -1.802  1.00 21.02           O
ATOM    775  N   ALA A 427      -5.756   0.398  -5.967  1.00 14.92           N
ATOM    776  CA  ALA A 427      -4.610   0.278  -6.861  1.00  9.59           C
ATOM    777  C   ALA A 427      -4.465  -1.181  -7.266  1.00 13.32           C
ATOM    778  O   ALA A 427      -4.316  -2.056  -6.412  1.00 12.59           O
ATOM    779  CB  ALA A 427      -3.346   0.768  -6.178  1.00 11.00           C
ATOM    780  N   VAL A 428      -4.505  -1.440  -8.570  1.00 11.70           N
ATOM    781  CA  VAL A 428      -4.550  -2.808  -9.072  1.00 12.83           C
ATOM    782  C   VAL A 428      -3.339  -3.180  -9.923  1.00 14.41           C
ATOM    783  O   VAL A 428      -2.969  -2.459 -10.848  1.00 13.94           O
ATOM    784  CB  VAL A 428      -5.825  -3.052  -9.903  1.00 10.79           C
ATOM    785  CG1 VAL A 428      -5.916  -4.512 -10.316  1.00  8.13           C
ATOM    786  CG2 VAL A 428      -7.060  -2.630  -9.119  1.00 11.71           C
ATOM    787  N   GLY A 429      -2.734  -4.318  -9.604  1.00 13.65           N
ATOM    788  CA  GLY A 429      -1.642  -4.853 -10.395  1.00 13.17           C
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ATOM    789  C   GLY A 429      -0.496  -3.885 -10.606  1.00 11.76           C
ATOM    790  O   GLY A 429      -0.033  -3.233  -9.671  1.00 12.62           O
ATOM    791  N   GLY A 430      -0.038  -3.791 -11.847  1.00 12.40           N
ATOM    792  CA  GLY A 430       1.127  -2.989 -12.160  1.00 13.21           C
ATOM    793  C   GLY A 430       2.388  -3.804 -11.965  1.00 14.96           C
ATOM    794  O   GLY A 430       2.330  -5.011 -11.734  1.00 13.09           O
ATOM    795  N   SER A 431       3.536  -3.146 -12.050  1.00 13.44           N
ATOM    796  CA  SER A 431       4.800  -3.851 -11.937  1.00 14.87           C
ATOM    797  C   SER A 431       5.825  -3.076 -11.122  1.00 16.94           C
ATOM    798  O   SER A 431       5.793  -1.846 -11.057  1.00 10.29           O
ATOM    799  CB  SER A 431       5.366  -4.150 -13.328  1.00 17.81           C
ATOM    800  OG  SER A 431       5.663  -2.949 -14.019  1.00 19.65           O
ATOM    801  N   HIS A 432       6.728  -3.819 -10.493  1.00 15.74           N
ATOM    802  CA  HIS A 432       7.908  -3.239  -9.877  1.00 13.83           C
ATOM    803  C   HIS A 432       9.109  -4.046 -10.338  1.00 16.15           C
ATOM    804  O   HIS A 432       9.352  -5.146  -9.842  1.00 17.22           O
ATOM    805  CB  HIS A 432       7.805  -3.266  -8.354  1.00 14.83           C
ATOM    806  CG  HIS A 432       9.022  -2.737  -7.663  1.00 16.24           C
ATOM    807  ND1 HIS A 432       9.336  -3.056  -6.358  1.00 15.01           N
ATOM    808  CD2 HIS A 432      10.004  -1.911  -8.096  1.00 12.85           C
ATOM    809  CE1 HIS A 432      10.459  -2.449  -6.018  1.00 14.42           C
ATOM    810  NE2 HIS A 432      10.884  -1.747  -7.055  1.00 15.44           N
ATOM    811  N   GLY A 433       9.849  -3.503 -11.299  1.00 14.11           N
ATOM    812  CA  GLY A 433      10.948  -4.230 -11.904  1.00 16.27           C
ATOM    813  C   GLY A 433      10.441  -5.497 -12.566  1.00 20.80           C
ATOM    814  O   GLY A 433       9.581  -5.446 -13.448  1.00 21.21           O
ATOM    815  N   CYS A 434      10.960  -6.641 -12.134  1.00 20.11           N
ATOM    816  CA  CYS A 434      10.538  -7.919 -12.705  1.00 26.64           C
ATOM    817  C   CYS A 434       9.334  -8.520 -11.968  1.00 25.48           C
ATOM    818  O   CYS A 434       8.803  -9.559 -12.370  1.00 27.43           O
ATOM    819  CB  CYS A 434      11.705  -8.911 -12.733  1.00 22.68           C
ATOM    820  SG  CYS A 434      12.232  -9.502 -11.116  1.00 32.66           S
ATOM    821  N   ILE A 435       8.913  -7.858 -10.893  1.00 17.08           N
ATOM    822  CA  ILE A 435       7.740  -8.276 -10.133  1.00 16.31           C
ATOM    823  C   ILE A 435       6.451  -7.856 -10.845  1.00 16.07           C
ATOM    824  O   ILE A 435       6.283  -6.689 -11.200  1.00 18.48           O
ATOM    825  CB  ILE A 435       7.770  -7.704  -8.699  1.00 18.07           C
ATOM    826  CG1 ILE A 435       8.914  -8.334  -7.907  1.00 21.13           C
ATOM    827  CG2 ILE A 435       6.474  -7.988  -7.982  1.00 12.92           C
ATOM    828  CD1 ILE A 435       9.375  -7.515  -6.717  1.00 18.45           C
ATOM    829  N   HIS A 436       5.547  -8.810 -11.054  1.00 13.91           N
ATOM    830  CA  HIS A 436       4.265  -8.535 -11.704  1.00 16.78           C
ATOM    831  C   HIS A 436       3.154  -8.705 -10.681  1.00 14.94           C
ATOM    832  O   HIS A 436       2.739  -9.824 -10.376  1.00 17.58           O
ATOM    833  CB  HIS A 436       4.069  -9.470 -12.895  1.00 17.52           C
ATOM    834  CG  HIS A 436       5.316  -9.669 -13.697  1.00 21.34           C
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ATOM    835  ND1 HIS A 436       5.673  -8.839 -14.739  1.00 24.74           N
ATOM    836  CD2 HIS A 436       6.305 -10.588 -13.593  1.00 21.38           C
ATOM    837  CE1 HIS A 436       6.823  -9.244 -15.247  1.00 25.16           C
ATOM    838  NE2 HIS A 436       7.228 -10.304 -14.570  1.00 27.10           N
ATOM    839  N   HIS A 437       2.678  -7.583 -10.152  1.00 14.12           N
ATOM    840  CA  HIS A 437       1.722  -7.597  -9.052  1.00 14.10           C
ATOM    841  C   HIS A 437       0.401  -8.261  -9.419  1.00 14.36           C
ATOM    842  O   HIS A 437      -0.218  -7.922 -10.428  1.00 15.41           O
ATOM    843  CB  HIS A 437       1.442  -6.171  -8.566  1.00 14.04           C
ATOM    844  CG  HIS A 437       2.651  -5.454  -8.048  1.00 12.95           C
ATOM    845  ND1 HIS A 437       3.519  -6.017  -7.138  1.00 10.46           N
ATOM    846  CD2 HIS A 437       3.125  -4.211  -8.302  1.00 10.91           C
ATOM    847  CE1 HIS A 437       4.482  -5.155  -6.860  1.00 12.91           C
ATOM    848  NE2 HIS A 437       4.266  -4.052  -7.554  1.00 12.55           N
ATOM    849  N   ASN A 438      -0.017  -9.215  -8.596  1.00 13.76           N
ATOM    850  CA  ASN A 438      -1.395  -9.676  -8.605  1.00 14.36           C
ATOM    851  C   ASN A 438      -2.102  -9.036  -7.422  1.00 12.63           C
ATOM    852  O   ASN A 438      -3.316  -9.151  -7.268  1.00 14.95           O
ATOM    853  CB  ASN A 438      -1.477 -11.201  -8.516  1.00 16.36           C
ATOM    854  CG  ASN A 438      -0.870 -11.751  -7.237  1.00 15.16           C
ATOM    855  OD1 ASN A 438       0.142 -11.253  -6.749  1.00 18.84           O
ATOM    856  ND2 ASN A 438      -1.489 -12.789  -6.691  1.00 16.17           N
ATOM    857  N   SER A 439      -1.320  -8.348  -6.594  1.00 11.65           N
ATOM    858  CA  SER A 439      -1.827  -7.726  -5.376  1.00 15.68           C
ATOM    859  C   SER A 439      -2.620  -6.453  -5.653  1.00 17.91           C
ATOM    860  O   SER A 439      -2.542  -5.871  -6.738  1.00 16.08           O
ATOM    861  CB  SER A 439      -0.680  -7.416  -4.410  1.00 13.76           C
ATOM    862  OG  SER A 439       0.182  -6.425  -4.941  1.00 15.91           O
ATOM    863  N   VAL A 440      -3.371  -6.023  -4.646  1.00 12.83           N
ATOM    864  CA  VAL A 440      -4.262  -4.885  -4.768  1.00 11.08           C
ATOM    865  C   VAL A 440      -4.431  -4.240  -3.401  1.00 13.46           C
ATOM    866  O   VAL A 440      -4.620  -4.934  -2.403  1.00 14.78           O
ATOM    867  CB  VAL A 440      -5.643  -5.325  -5.289  1.00 13.72           C
ATOM    868  CG1 VAL A 440      -6.626  -4.162  -5.261  1.00 11.40           C
ATOM    869  CG2 VAL A 440      -5.522  -5.908  -6.693  1.00 12.59           C
ATOM    870  N   GLU A 441      -4.354  -2.914  -3.354  1.00 11.29           N
ATOM    871  CA  GLU A 441      -4.524  -2.195  -2.098  1.00 14.61           C
ATOM    872  C   GLU A 441      -5.587  -1.106  -2.198  1.00 15.53           C
ATOM    873  O   GLU A 441      -5.905  -0.626  -3.286  1.00 14.49           O
ATOM    874  CB  GLU A 441      -3.190  -1.625  -1.604  1.00 12.35           C
ATOM    875  CG  GLU A 441      -2.353  -0.954  -2.679  1.00 11.54           C
ATOM    876  CD  GLU A 441      -0.916  -0.747  -2.242  1.00  9.91           C
ATOM    877  OE1 GLU A 441      -0.696  -0.065  -1.221  1.00 12.34           O
ATOM    878  OE2 GLU A 441      -0.005  -1.277  -2.912  1.00  8.35           O
ATOM    879  N   ARG A 442      -6.135  -0.728  -1.048  1.00 15.93           N
ATOM    880  CA  ARG A 442      -7.241   0.217  -0.991  1.00 14.95           C
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ATOM    881  C   ARG A 442     -6.870   1.444  -0.163  1.00 14.54           C
ATOM    882  O   ARG A 442     -6.443   1.321   0.985  1.00 14.17           O
ATOM    883  CB  ARG A 442     -8.478  -0.470  -0.407  1.00 17.84           C
ATOM    884  CG  ARG A 442     -9.667   0.447  -0.183  1.00 19.20           C
ATOM    885  CD  ARG A 442    -10.882  -0.345   0.273  1.00 23.56           C
ATOM    886  NE  ARG A 442    -10.574  -1.218   1.402  1.00 23.31           N
ATOM    887  CZ  ARG A 442    -10.617  -0.837   2.674  1.00 31.69           C
ATOM    888  NH1 ARG A 442    -10.956   0.407   2.982  1.00 33.58           N
ATOM    889  NH2 ARG A 442    -10.321  -1.698   3.639  1.00 28.62           N
ATOM    890  N   TYR A 443     -7.035   2.625  -0.752  1.00 13.54           N
ATOM    891  CA  TYR A 443     -6.687   3.871  -0.076  1.00 12.51           C
ATOM    892  C   TYR A 443     -7.914   4.608   0.451  1.00 16.36           C
ATOM    893  O   TYR A 443     -8.865   4.868  -0.289  1.00 16.10           O
ATOM    894  CB  TYR A 443     -5.887   4.788  -1.003  1.00 13.44           C
ATOM    895  CG  TYR A 443     -5.598   6.147  -0.403  1.00 13.74           C
ATOM    896  CD1 TYR A 443     -4.547   6.327   0.484  1.00 15.78           C
ATOM    897  CD2 TYR A 443     -6.378   7.249  -0.723  1.00 15.43           C
ATOM    898  CE1 TYR A 443     -4.280   7.568   1.034  1.00 17.10           C
ATOM    899  CE2 TYR A 443     -6.118   8.493  -0.179  1.00 15.51           C
ATOM    900  CZ  TYR A 443     -5.069   8.647   0.699  1.00 14.99           C
ATOM    901  OH  TYR A 443     -4.808   9.882   1.244  1.00 12.50           O
ATOM    902  N   GLU A 444     -7.877   4.948   1.735  1.00 16.04           N
ATOM    903  CA  GLU A 444     -8.966   5.670   2.379  1.00 18.52           C
ATOM    904  C   GLU A 444     -8.596   7.133   2.585  1.00 17.36           C
ATOM    905  O   GLU A 444     -7.859   7.465   3.511  1.00 18.96           O
ATOM    906  CB  GLU A 444     -9.308   5.022   3.721  1.00 22.16           C
ATOM    907  CG  GLU A 444     -9.783   3.582   3.609  1.00 20.47           C
ATOM    908  CD  GLU A 444     -9.875   2.894   4.956  1.00 29.37           C
ATOM    909  OE1 GLU A 444     -8.995   3.135   5.810  1.00 30.26           O
ATOM    910  OE2 GLU A 444    -10.829   2.116   5.162  1.00 34.07           O
ATOM    911  N   PRO A 445     -9.110   8.013   1.714  1.00 16.88           N
ATOM    912  CA  PRO A 445     -8.838   9.453   1.761  1.00 14.90           C
ATOM    913  C   PRO A 445     -9.151  10.077   3.118  1.00 18.27           C
ATOM    914  O   PRO A 445     -8.499  11.046   3.506  1.00 16.26           O
ATOM    915  CB  PRO A 445     -9.780  10.017   0.695  1.00 17.30           C
ATOM    916  CG  PRO A 445     -9.947   8.899  -0.273  1.00 15.93           C
ATOM    917  CD  PRO A 445     -9.958   7.651   0.564  1.00 19.68           C
ATOM    918  N   GLU A 446    -10.131   9.530   3.829  1.00 20.02           N
ATOM    919  CA  GLU A 446    -10.519  10.083   5.122  1.00 21.53           C
ATOM    920  C   GLU A 446     -9.530   9.700   6.222  1.00 21.65           C
ATOM    921  O   GLU A 446     -9.573  10.244   7.324  1.00 17.65           O
ATOM    922  CB  GLU A 446    -11.938   9.651   5.503  1.00 18.77           C
ATOM    923  CG  GLU A 446    -12.082   8.175   5.857  1.00 34.94           C
ATOM    924  CD  GLU A 446    -12.197   7.274   4.637  1.00 27.73           C
ATOM    925  OE1 GLU A 446    -12.021   7.768   3.502  1.00 21.96           O
ATOM    926  OE2 GLU A 446    -12.471   6.068   4.818  1.00 25.44           O
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ATOM    927  N   ARG A 447      -8.634   8.767   5.916  1.00 19.49           N
ATOM    928  CA  ARG A 447      -7.613   8.352   6.873  1.00 23.26           C
ATOM    929  C   ARG A 447      -6.214   8.523   6.296  1.00 19.79           C
ATOM    930  O   ARG A 447      -5.220   8.391   7.008  1.00 18.55           O
ATOM    931  CB  ARG A 447      -7.826   6.895   7.289  1.00 24.19           C
ATOM    932  CG  ARG A 447      -9.106   6.647   8.073  1.00 27.06           C
ATOM    933  CD  ARG A 447      -9.329   5.161   8.305  1.00 33.23           C
ATOM    934  NE  ARG A 447      -8.132   4.508   8.827  1.00 39.83           N
ATOM    935  CZ  ARG A 447      -7.777   4.513  10.108  1.00 42.80           C
ATOM    936  NH1 ARG A 447      -6.669   3.894  10.494  1.00 40.05           N
ATOM    937  NH2 ARG A 447      -8.528   5.140  11.003  1.00 43.73           N
ATOM    938  N   ASP A 448      -6.145   8.822   5.003  1.00 19.93           N
ATOM    939  CA  ASP A 448      -4.871   8.881   4.297  1.00 17.95           C
ATOM    940  C   ASP A 448      -4.057   7.621   4.573  1.00 17.62           C
ATOM    941  O   ASP A 448      -2.905   7.696   4.996  1.00 16.47           O
ATOM    942  CB  ASP A 448      -4.077  10.121   4.706  1.00 17.15           C
ATOM    943  CG  ASP A 448      -2.822  10.305   3.875  1.00 17.29           C
ATOM    944  OD1 ASP A 448      -2.824   9.886   2.698  1.00 12.31           O
ATOM    945  OD2 ASP A 448      -1.835  10.867   4.396  1.00 21.15           O
ATOM    946  N   GLU A 449      -4.669   6.465   4.335  1.00 18.47           N
ATOM    947  CA  GLU A 449      -4.019   5.184   4.585  1.00 18.62           C
ATOM    948  C   GLU A 449      -4.201   4.211   3.427  1.00 14.33           C
ATOM    949  O   GLU A 449      -5.237   4.206   2.764  1.00 13.41           O
ATOM    950  CB  GLU A 449      -4.561   4.547   5.867  1.00 18.41           C
ATOM    951  CG  GLU A 449      -4.119   5.223   7.152  1.00 23.67           C
ATOM    952  CD  GLU A 449      -4.551   4.453   8.388  1.00 29.12           C
ATOM    953  OE1 GLU A 449      -5.475   3.618   8.279  1.00 30.65           O
ATOM    954  OE2 GLU A 449      -3.962   4.677   9.467  1.00 39.88           O
ATOM    955  N   TRP A 450      -3.183   3.389   3.192  1.00 15.67           N
ATOM    956  CA  TRP A 450      -3.268   2.299   2.229  1.00 15.34           C
ATOM    957  C   TRP A 450      -3.296   0.961   2.962  1.00 14.82           C
ATOM    958  O   TRP A 450      -2.377   0.641   3.715  1.00 17.92           O
ATOM    959  CB  TRP A 450      -2.072   2.319   1.274  1.00 15.55           C
ATOM    960  CG  TRP A 450      -2.134   3.361   0.190  1.00 16.60           C
ATOM    961  CD1 TRP A 450      -1.536   4.587   0.197  1.00 14.87           C
ATOM    962  CD2 TRP A 450      -2.813   3.253  -1.070  1.00 14.63           C
ATOM    963  NE1 TRP A 450      -1.806   5.252  -0.977  1.00 12.73           N
ATOM    964  CE2 TRP A 450      -2.585   4.457  -1.768  1.00 13.25           C
ATOM    965  CE3 TRP A 450      -3.589   2.258  -1.670  1.00 15.51           C
ATOM    966  CZ2 TRP A 450      -3.113   4.690  -3.038  1.00 14.28           C
ATOM    967  CZ3 TRP A 450      -4.110   2.494  -2.933  1.00 11.66           C
ATOM    968  CH2 TRP A 450      -3.870   3.700  -3.601  1.00 13.80           C
ATOM    969  N   HIS A 451      -4.350   0.184   2.746  1.00 16.11           N
ATOM    970  CA  HIS A 451      -4.425  -1.168   3.287  1.00 15.05           C
ATOM    971  C   HIS A 451      -4.659  -2.168   2.166  1.00 14.07           C
ATOM    972  O   HIS A 451      -5.532  -1.968   1.321  1.00 14.36           O
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ATOM    973  CB  HIS A 451      -5.535  -1.278   4.333  1.00 14.49           C
ATOM    974  CG  HIS A 451      -5.234  -0.555   5.609  1.00 24.91           C
ATOM    975  ND1 HIS A 451      -4.438  -1.093   6.598  1.00 22.46           N
ATOM    976  CD2 HIS A 451      -5.619   0.663   6.056  1.00 23.63           C
ATOM    977  CE1 HIS A 451      -4.346  -0.236   7.600  1.00 22.78           C
ATOM    978  NE2 HIS A 451      -5.054   0.837   7.297  1.00 24.49           N
ATOM    979  N   LEU A 452      -3.876  -3.241   2.153  1.00 12.77           N
ATOM    980  CA  LEU A 452      -4.002  -4.244   1.104  1.00 13.22           C
ATOM    981  C   LEU A 452      -5.263  -5.081   1.261  1.00 13.09           C
ATOM    982  O   LEU A 452      -5.797  -5.221   2.360  1.00 14.04           O
ATOM    983  CB  LEU A 452      -2.767  -5.147   1.050  1.00 10.88           C
ATOM    984  CG  LEU A 452      -1.564  -4.552   0.315  1.00 13.59           C
ATOM    985  CD1 LEU A 452      -0.559  -3.969   1.294  1.00  9.52           C
ATOM    986  CD2 LEU A 452      -0.918  -5.587  -0.594  1.00 11.65           C
ATOM    987  N   VAL A 453      -5.738  -5.627   0.148  1.00  9.92           N
ATOM    988  CA  VAL A 453      -6.890  -6.514   0.166  1.00 13.54           C
ATOM    989  C   VAL A 453      -6.520  -7.823  -0.521  1.00 12.78           C
ATOM    990  O   VAL A 453      -5.344  -8.084  -0.776  1.00 11.55           O
ATOM    991  CB  VAL A 453      -8.114  -5.881  -0.526  1.00 11.41           C
ATOM    992  CG1 VAL A 453      -8.422  -4.527   0.087  1.00 11.04           C
ATOM    993  CG2 VAL A 453      -7.871  -5.748  -2.021  1.00 13.69           C
ATOM    994  N   ALA A 454      -7.519  -8.647  -0.810  1.00 12.41           N
ATOM    995  CA  ALA A 454      -7.272  -9.917  -1.477  1.00 16.51           C
ATOM    996  C   ALA A 454      -6.603  -9.683  -2.825  1.00 14.48           C
ATOM    997  O   ALA A 454      -7.052  -8.851  -3.611  1.00 15.92           O
ATOM    998  CB  ALA A 454      -8.569 -10.686  -1.651  1.00 15.51           C
ATOM    999  N   PRO A 455      -5.510 -10.408  -3.091  1.00 18.24           N
ATOM   1000  CA  PRO A 455      -4.844 -10.294  -4.392  1.00 14.87           C
ATOM   1001  C   PRO A 455      -5.697 -10.896  -5.504  1.00 16.30           C
ATOM   1002  O   PRO A 455      -6.543 -11.753  -5.242  1.00 16.39           O
ATOM   1003  CB  PRO A 455      -3.563 -11.109  -4.200  1.00 15.53           C
ATOM   1004  CG  PRO A 455      -3.889 -12.079  -3.111  1.00 15.14           C
ATOM   1005  CD  PRO A 455      -4.823 -11.350  -2.190  1.00 18.73           C
ATOM   1006  N   MET A 456      -5.482 -10.440  -6.732  1.00 13.87           N
ATOM   1007  CA  MET A 456      -6.187 -10.983  -7.881  1.00 15.34           C
ATOM   1008  C   MET A 456      -5.784 -12.432  -8.109  1.00 16.67           C
ATOM   1009  O   MET A 456      -4.762 -12.890  -7.600  1.00 13.08           O
ATOM   1010  CB  MET A 456      -5.878 -10.166  -9.136  1.00 13.78           C
ATOM   1011  CG  MET A 456      -6.446  -8.760  -9.130  1.00 11.42           C
ATOM   1012  SD  MET A 456      -6.121  -7.914 -10.688  1.00  8.51           S
ATOM   1013  CE  MET A 456      -4.329  -7.906 -10.703  1.00  9.62           C
ATOM   1014  N   LEU A 457      -6.595 -13.149  -8.878  1.00 14.87           N
ATOM   1015  CA  LEU A 457      -6.277 -14.519  -9.246  1.00 15.86           C
ATOM   1016  C   LEU A 457      -5.107 -14.528 -10.222  1.00 16.79           C
ATOM   1017  O   LEU A 457      -4.361 -15.504 -10.309  1.00 20.06           O
ATOM   1018  CB  LEU A 457      -7.498 -15.194  -9.873  1.00 17.08           C
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ATOM   1019  CG  LEU A 457      -8.741 -15.252  -8.983  1.00 18.95           C
ATOM   1020  CD1 LEU A 457      -9.951 -15.721  -9.771  1.00 18.16           C
ATOM   1021  CD2 LEU A 457      -8.497 -16.158  -7.785  1.00 18.31           C
ATOM   1022  N   THR A 458      -4.943 -13.427 -10.949  1.00 18.96           N
ATOM   1023  CA  THR A 458      -3.902 -13.332 -11.965  1.00 16.76           C
ATOM   1024  C   THR A 458      -3.036 -12.090 -11.786  1.00 14.01           C
ATOM   1025  O   THR A 458      -3.522 -11.034 -11.384  1.00 15.46           O
ATOM   1026  CB  THR A 458      -4.506 -13.292 -13.380  1.00 14.34           C
ATOM   1027  OG1 THR A 458      -5.532 -14.286 -13.499  1.00 14.81           O
ATOM   1028  CG2 THR A 458      -3.425 -13.539 -14.427  1.00 12.98           C
ATOM   1029  N   ARG A 459      -1.749 -12.225 -12.087  1.00 10.99           N
ATOM   1030  CA  ARG A 459      -0.849 -11.083 -12.098  1.00 12.06           C
ATOM   1031  C   ARG A 459      -1.105 -10.267 -13.355  1.00 11.77           C
ATOM   1032  O   ARG A 459      -1.108 -10.808 -14.458  1.00 16.81           O
ATOM   1033  CB  ARG A 459       0.602 -11.553 -12.065  1.00 17.38           C
ATOM   1034  CG  ARG A 459       0.964 -12.334 -10.818  1.00 18.03           C
ATOM   1035  CD  ARG A 459       2.346 -12.942 -10.940  1.00 18.12           C
ATOM   1036  NE  ARG A 459       2.660 -13.799  -9.804  1.00 27.95           N
ATOM   1037  CZ  ARG A 459       3.735 -14.577  -9.732  1.00 37.16           C
ATOM   1038  NH1 ARG A 459       4.602 -14.607 -10.735  1.00 37.60           N
ATOM   1039  NH2 ARG A 459       3.940 -15.327  -8.658  1.00 36.76           N
ATOM   1040  N   ARG A 460      -1.325  -8.967 -13.192  1.00 11.18           N
ATOM   1041  CA  ARG A 460      -1.670  -8.117 -14.328  1.00 13.98           C
ATOM   1042  C   ARG A 460      -0.949  -6.774 -14.297  1.00 14.65           C
ATOM   1043  O   ARG A 460      -1.177  -5.960 -13.402  1.00 15.95           O
ATOM   1044  CB  ARG A 460      -3.181  -7.870 -14.368  1.00 12.29           C
ATOM   1045  CG  ARG A 460      -4.034  -9.127 -14.327  1.00 11.79           C
ATOM   1046  CD  ARG A 460      -5.510  -8.774 -14.264  1.00 10.02           C
ATOM   1047  NE  ARG A 460      -6.357  -9.960 -14.188  1.00 13.26           N
ATOM   1048  CZ  ARG A 460      -6.872 -10.576 -15.248  1.00 16.74           C
ATOM   1049  NH1 ARG A 460      -6.625 -10.118 -16.469  1.00 13.10           N
ATOM   1050  NH2 ARG A 460      -7.633 -11.649 -15.088  1.00 18.53           N
ATOM   1051  N   ILE A 461      -0.076  -6.545 -15.273  1.00 13.79           N
ATOM   1052  CA  ILE A 461       0.481  -5.213 -15.477  1.00 17.37           C
ATOM   1053  C   ILE A 461      -0.054  -4.665 -16.793  1.00 12.00           C
ATOM   1054  O   ILE A 461      -0.207  -5.405 -17.763  1.00 13.49           O
ATOM   1055  CB  ILE A 461       2.026  -5.204 -15.492  1.00 18.15           C
ATOM   1056  CG1 ILE A 461       2.554  -5.234 -16.927  1.00 13.43           C
ATOM   1057  CG2 ILE A 461       2.580  -6.351 -14.660  1.00 19.34           C
ATOM   1058  CD1 ILE A 461       4.036  -4.981 -17.028  1.00 19.13           C
ATOM   1059  N   GLY A 462      -0.343  -3.371 -16.823  1.00 13.57           N
ATOM   1060  CA  GLY A 462      -0.990  -2.778 -17.978  1.00 18.18           C
ATOM   1061  C   GLY A 462      -2.453  -3.175 -17.984  1.00 13.10           C
ATOM   1062  O   GLY A 462      -3.098  -3.239 -19.032  1.00 11.13           O
ATOM   1063  N   VAL A 463      -2.968  -3.449 -16.791  1.00 10.62           N
ATOM   1064  CA  VAL A 463      -4.347  -3.875 -16.612  1.00 11.11           C
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ATOM   1065  C   VAL A 463      -5.312  -2.699 -16.736  1.00  9.38           C
ATOM   1066  O   VAL A 463      -4.967  -1.561 -16.422  1.00 10.66           O
ATOM   1067  CB  VAL A 463      -4.539  -4.555 -15.235  1.00 13.52           C
ATOM   1068  CG1 VAL A 463      -4.134  -3.612 -14.114  1.00 11.34           C
ATOM   1069  CG2 VAL A 463      -5.977  -5.016 -15.055  1.00 13.27           C
ATOM   1070  N   GLY A 464      -6.521  -2.982 -17.207  1.00 13.87           N
ATOM   1071  CA  GLY A 464      -7.572  -1.984 -17.263  1.00  9.38           C
ATOM   1072  C   GLY A 464      -8.561  -2.225 -16.141  1.00 12.28           C
ATOM   1073  O   GLY A 464      -8.990  -3.357 -15.914  1.00 13.50           O
ATOM   1074  N   VAL A 465      -8.919  -1.162 -15.429  1.00 13.63           N
ATOM   1075  CA  VAL A 465      -9.814  -1.282 -14.287  1.00 10.52           C
ATOM   1076  C   VAL A 465     -11.019  -0.362 -14.417  1.00 10.96           C
ATOM   1077  O   VAL A 465     -10.903   0.767 -14.892  1.00 10.55           O
ATOM   1078  CB  VAL A 465      -9.079  -0.972 -12.970  1.00 11.65           C
ATOM   1079  CG1 VAL A 465     -10.045  -1.020 -11.798  1.00 11.93           C
ATOM   1080  CG2 VAL A 465      -7.933  -1.948 -12.764  1.00  9.41           C
ATOM   1081  N   ALA A 466     -12.178  -0.857 -13.993  1.00 10.97           N
ATOM   1082  CA  ALA A 466     -13.401  -0.065 -13.988  1.00 11.28           C
ATOM   1083  C   ALA A 466     -14.363  -0.609 -12.940  1.00 12.82           C
ATOM   1084  O   ALA A 466     -14.299  -1.783 -12.580  1.00 14.19           O
ATOM   1085  CB  ALA A 466     -14.047  -0.073 -15.361  1.00 16.03           C
ATOM   1086  N   VAL A 467     -15.255   0.247 -12.454  1.00 14.71           N
ATOM   1087  CA  VAL A 467     -16.164  -0.139 -11.382  1.00 16.32           C
ATOM   1088  C   VAL A 467     -17.634  -0.039 -11.786  1.00 16.93           C
ATOM   1089  O   VAL A 467     -18.078   0.975 -12.322  1.00 24.45           O
ATOM   1090  CB  VAL A 467     -15.911   0.696 -10.113  1.00 18.95           C
ATOM   1091  CG1 VAL A 467     -17.090   0.586  -9.152  1.00 17.25           C
ATOM   1092  CG2 VAL A 467     -14.615   0.257  -9.447  1.00 12.56           C
ATOM   1093  N   LEU A 468     -18.383  -1.104 -11.522  1.00 15.08           N
ATOM   1094  CA  LEU A 468     -19.797  -1.152 -11.864  1.00 17.66           C
ATOM   1095  C   LEU A 468     -20.607  -1.773 -10.733  1.00 19.42           C
ATOM   1096  O   LEU A 468     -20.444  -2.951 -10.418  1.00 21.98           O
ATOM   1097  CB  LEU A 468     -20.005  -1.946 -13.153  1.00 15.55           C
ATOM   1098  CG  LEU A 468     -21.453  -2.129 -13.606  1.00 19.84           C
ATOM   1099  CD1 LEU A 468     -22.126  -0.779 -13.791  1.00 19.30           C
ATOM   1100  CD2 LEU A 468     -21.512  -2.941 -14.890  1.00 16.61           C
ATOM   1101  N   ASN A 469     -21.477  -0.975 -10.123  1.00 20.89           N
ATOM   1102  CA  ASN A 469     -22.298  -1.444  -9.011  1.00 21.02           C
ATOM   1103  C   ASN A 469     -21.476  -1.981  -7.845  1.00 18.94           C
ATOM   1104  O   ASN A 469     -21.752  -3.059  -7.321  1.00 20.24           O
ATOM   1105  CB  ASN A 469     -23.289  -2.503  -9.490  1.00 17.47           C
ATOM   1106  CG  ASN A 469     -24.369  -1.922 -10.372  1.00 20.12           C
ATOM   1107  OD1 ASN A 469     -24.990  -0.919 -10.026  1.00 23.87           O
ATOM   1108  ND2 ASN A 469     -24.591  -2.542 -11.526  1.00 18.91           N
ATOM   1109  N   ARG A 470     -20.465  -1.220  -7.443  1.00 19.14           N
ATOM   1110  CA  ARG A 470     -19.652  -1.574  -6.286  1.00 20.11           C
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ATOM   1111  C   ARG A 470     -18.931  -2.911  -6.454  1.00 18.38           C
ATOM   1112  O   ARG A 470     -18.678  -3.617  -5.479  1.00 20.06           O
ATOM   1113  CB  ARG A 470     -20.502  -1.571  -5.012  1.00 21.41           C
ATOM   1114  CG  ARG A 470     -21.008  -0.187  -4.621  1.00 23.05           C
ATOM   1115  CD  ARG A 470     -21.738  -0.206  -3.286  1.00 30.98           C
ATOM   1116  NE  ARG A 470     -21.906   1.137  -2.736  1.00 34.94           N
ATOM   1117  CZ  ARG A 470     -22.894   1.965  -3.063  1.00 40.74           C
ATOM   1118  NH1 ARG A 470     -23.811   1.592  -3.947  1.00 37.80           N
ATOM   1119  NH2 ARG A 470     -22.966   3.169  -2.510  1.00 37.60           N
ATOM   1120  N   LEU A 471     -18.610  -3.250  -7.699  1.00 15.83           N
ATOM   1121  CA  LEU A 471     -17.757  -4.395  -7.997  1.00 16.23           C
ATOM   1122  C   LEU A 471     -16.596  -3.935  -8.874  1.00 18.15           C
ATOM   1123  O   LEU A 471     -16.788  -3.169  -9.819  1.00 15.68           O
ATOM   1124  CB  LEU A 471     -18.545  -5.502  -8.699  1.00 15.36           C
ATOM   1125  CG  LEU A 471     -19.673  -6.173  -7.915  1.00 17.95           C
ATOM   1126  CD1 LEU A 471     -20.350  -7.234  -8.766  1.00 20.41           C
ATOM   1127  CD2 LEU A 471     -19.150  -6.780  -6.625  1.00 15.77           C
ATOM   1128  N   LEU A 472     -15.393  -4.401  -8.557  1.00 15.34           N
ATOM   1129  CA  LEU A 472     -14.195  -3.953  -9.255  1.00 11.77           C
ATOM   1130  C   LEU A 472     -13.756  -4.963 -10.305  1.00 14.08           C
ATOM   1131  O   LEU A 472     -13.604  -6.149 -10.016  1.00 13.44           O
ATOM   1132  CB  LEU A 472     -13.061  -3.712  -8.259  1.00 15.34           C
ATOM   1133  CG  LEU A 472     -11.772  -3.107  -8.816  1.00 16.43           C
ATOM   1134  CD1 LEU A 472     -11.974  -1.640  -9.162  1.00 15.82           C
ATOM   1135  CD2 LEU A 472     -10.632  -3.277  -7.824  1.00 18.28           C
ATOM   1136  N   TYR A 473     -13.544  -4.486 -11.525  1.00 14.72           N
ATOM   1137  CA  TYR A 473     -13.132  -5.356 -12.617  1.00 12.96           C
ATOM   1138  C   TYR A 473     -11.683  -5.117 -13.030  1.00 13.70           C
ATOM   1139  O   TYR A 473     -11.278  -3.987 -13.296  1.00 13.34           O
ATOM   1140  CB  TYR A 473     -14.062  -5.180 -13.818  1.00 14.94           C
ATOM   1141  CG  TYR A 473     -15.485  -5.609 -13.545  1.00 20.47           C
ATOM   1142  CD1 TYR A 473     -16.384  -4.752 -12.920  1.00 16.93           C
ATOM   1143  CD2 TYR A 473     -15.930  -6.872 -13.911  1.00 16.46           C
ATOM   1144  CE1 TYR A 473     -17.687  -5.144 -12.667  1.00 18.69           C
ATOM   1145  CE2 TYR A 473     -17.230  -7.272 -13.665  1.00 24.26           C
ATOM   1146  CZ  TYR A 473     -18.106  -6.405 -13.043  1.00 23.16           C
ATOM   1147  OH  TYR A 473     -19.401  -6.805 -12.798  1.00 16.34           O
ATOM   1148  N   ALA A 474     -10.904  -6.191 -13.067  1.00 14.08           N
ATOM   1149  CA  ALA A 474      -9.545  -6.132 -13.584  1.00 15.56           C
ATOM   1150  C   ALA A 474      -9.534  -6.808 -14.945  1.00 13.29           C
ATOM   1151  O   ALA A 474      -9.877  -7.985 -15.059  1.00 11.68           O
ATOM   1152  CB  ALA A 474      -8.584  -6.823 -12.635  1.00 13.57           C
ATOM   1153  N   VAL A 475      -9.149  -6.065 -15.977  1.00 16.55           N
ATOM   1154  CA  VAL A 475      -9.263  -6.558 -17.346  1.00 13.09           C
ATOM   1155  C   VAL A 475      -7.930  -6.620 -18.088  1.00 15.85           C
ATOM   1156  O   VAL A 475      -7.153  -5.664 -18.080  1.00 16.42           O
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ATOM   1157  CB  VAL A 475     -10.253  -5.710 -18.158  1.00  8.87           C
ATOM   1158  CG1 VAL A 475     -10.392  -6.260 -19.566  1.00 10.29           C
ATOM   1159  CG2 VAL A 475     -11.601  -5.674 -17.462  1.00 10.39           C
ATOM   1160  N   GLY A 476      -7.680  -7.757 -18.731  1.00 11.82           N
ATOM   1161  CA  GLY A 476      -6.484  -7.951 -19.528  1.00 11.16           C
ATOM   1162  C   GLY A 476      -5.197  -7.708 -18.767  1.00 13.57           C
ATOM   1163  O   GLY A 476      -5.175  -7.708 -17.535  1.00 13.40           O
ATOM   1164  N   GLY A 477      -4.117  -7.505 -19.511  1.00 14.84           N
ATOM   1165  CA  GLY A 477      -2.828  -7.218 -18.914  1.00 15.74           C
ATOM   1166  C   GLY A 477      -1.753  -8.197 -19.338  1.00 17.12           C
ATOM   1167  O   GLY A 477      -1.889  -8.896 -20.341  1.00 15.03           O
ATOM   1168  N   PHE A 478      -0.680  -8.244 -18.557  1.00 16.99           N
ATOM   1169  CA  PHE A 478       0.465  -9.090 -18.855  1.00 17.30           C
ATOM   1170  C   PHE A 478       0.951  -9.727 -17.559  1.00 17.01           C
ATOM   1171  O   PHE A 478       1.357  -9.027 -16.631  1.00 16.40           O
ATOM   1172  CB  PHE A 478       1.571  -8.252 -19.500  1.00 18.02           C
ATOM   1173  CG  PHE A 478       2.779  -9.042 -19.914  1.00 21.05           C
ATOM   1174  CD1 PHE A 478       2.682 -10.032 -20.878  1.00 19.79           C
ATOM   1175  CD2 PHE A 478       4.020  -8.775 -19.359  1.00 21.51           C
ATOM   1176  CE1 PHE A 478       3.795 -10.753 -21.267  1.00 19.44           C
ATOM   1177  CE2 PHE A 478       5.138  -9.491 -19.744  1.00 21.44           C
ATOM   1178  CZ  PHE A 478       5.025 -10.482 -20.699  1.00 23.20           C
ATOM   1179  N   ASP A 479       0.893 -11.054 -17.493  1.00 18.26           N
ATOM   1180  CA  ASP A 479       1.220 -11.772 -16.263  1.00 20.33           C
ATOM   1181  C   ASP A 479       2.715 -12.019 -16.112  1.00 18.96           C
ATOM   1182  O   ASP A 479       3.141 -12.774 -15.238  1.00 22.80           O
ATOM   1183  CB  ASP A 479       0.461 -13.099 -16.194  1.00 18.41           C
ATOM   1184  CG  ASP A 479       0.820 -14.036 -17.329  1.00 21.15           C
ATOM   1185  OD1 ASP A 479       1.983 -14.009 -17.782  1.00 23.88           O
ATOM   1186  OD2 ASP A 479      -0.064 -14.799 -17.769  1.00 25.44           O
ATOM   1187  N   GLY A 480       3.509 -11.382 -16.964  1.00 20.21           N
ATOM   1188  CA  GLY A 480       4.950 -11.538 -16.913  1.00 26.25           C
ATOM   1189  C   GLY A 480       5.466 -12.537 -17.930  1.00 25.71           C
ATOM   1190  O   GLY A 480       6.660 -12.574 -18.224  1.00 27.04           O
ATOM   1191  N   THR A 481       4.564 -13.354 -18.465  1.00 21.47           N
ATOM   1192  CA  THR A 481       4.928 -14.330 -19.485  1.00 24.53           C
ATOM   1193  C   THR A 481       4.041 -14.198 -20.715  1.00 24.80           C
ATOM   1194  O   THR A 481       4.533 -14.146 -21.842  1.00 28.36           O
ATOM   1195  CB  THR A 481       4.847 -15.773 -18.956  1.00 29.94           C
ATOM   1196  OG1 THR A 481       5.908 -16.002 -18.020  1.00 26.32           O
ATOM   1197  CG2 THR A 481       4.974 -16.765 -20.101  1.00 22.59           C
ATOM   1198  N   ASN A 482       2.732 -14.141 -20.492  1.00 22.89           N
ATOM   1199  CA  ASN A 482       1.773 -14.033 -21.586  1.00 25.15           C
ATOM   1200  C   ASN A 482       0.844 -12.835 -21.450  1.00 26.82           C
ATOM   1201  O   ASN A 482       0.480 -12.438 -20.343  1.00 26.92           O
ATOM   1202  CB  ASN A 482       0.937 -15.311 -21.697  1.00 25.12           C
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ATOM 1203 CG ASN A 482 1.723 -16.474 -22.264 1.00 32.70 C
ATOM 1204 OD1 ASN A 482 1.926 -17.486 -21.593 1.00 32.86 O
ATOM 1205 ND2 ASN A 482 2.166 -16.338 -23.509 1.00 33.73 N
ATOM 1206 N ARG A 483 0.464 -12.262 -22.586 1.00 24.58 N
ATOM 1207 CA ARG A 483 -0.546 -11.218 -22.607 1.00 21.47 C
ATOM 1208 C ARG A 483 -1.900 -11.863 -22.330 1.00 19.22 C
ATOM 1209 O ARG A 483 -2.136 -13.010 -22.709 1.00 21.63 O
ATOM 1210 CB ARG A 483 -0.543 -10.504 -23.957 1.00 19.49 C
ATOM 1211 CG ARG A 483 -0.805 -9.015 -23.863 1.00 18.78 C
ATOM 1212 CD ARG A 483 -0.032 -8.263 -24.930 1.00 22.29 C
ATOM 1213 NE ARG A 483 1.403 -8.521 -24.847 1.00 22.34 N
ATOM 1214 CZ ARG A 483 2.235 -7.871 -24.040 1.00 18.82 C
ATOM 1215 NH1 ARG A 483 1.777 -6.924 -23.233 1.00 25.28 N
ATOM 1216 NH2 ARG A 483 3.525 -8.173 -24.034 1.00 18.55 N
ATOM 1217 N LEU A 484 -2.787 -11.129 -21.668 1.00 19.72 N
ATOM 1218 CA LEU A 484 -4.026 -11.708 -21.162 1.00 16.58 C
ATOM 1219 C LEU A 484 -5.265 -11.213 -21.896 1.00 14.34 C
ATOM 1220 O LEU A 484 -5.340 -10.055 -22.302 1.00 17.57 O
ATOM 1221 CB LEU A 484 -4.173 -11.395 -19.671 1.00 17.29 C
ATOM 1222 CG LEU A 484 -2.956 -11.666 -18.782 1.00 18.08 C
ATOM 1223 CD1 LEU A 484 -3.158 -11.054 -17.403 1.00 12.38 C
ATOM 1224 CD2 LEU A 484 -2.685 -13.161 -18.681 1.00 14.19 C
ATOM 1225 N ASN A 485 -6.238 -12.103 -22.061 1.00 15.69 N
ATOM 1226 CA ASN A 485 -7.568 -11.708 -22.501 1.00 13.13 C
ATOM 1227 C ASN A 485 -8.572 -11.911 -21.370 1.00 15.18 C
ATOM 1228 O ASN A 485 -9.717 -11.465 -21.449 1.00 15.59 O
ATOM 1229 CB ASN A 485 -7.996 -12.485 -23.749 1.00 17.28 C
ATOM 1230 CG ASN A 485 -8.249 -13.961 -23.471 1.00 16.37 C
ATOM 1231 OD1 ASN A 485 -8.221 -14.409 -22.326 1.00 21.27 O
ATOM 1232 ND2 ASN A 485 -8.509 -14.721 -24.527 1.00 16.63 N
ATOM 1233 N SER A 486 -8.123 -12.581 -20.312 1.00 12.05 N
ATOM 1234 CA SER A 486 -8.984 -12.906 -19.180 1.00 15.23 C
ATOM 1235 C SER A 486 -9.322 -11.677 -18.343 1.00 15.78 C
ATOM 1236 O SER A 486 -8.596 -10.682 -18.350 1.00 14.93 O
ATOM 1237 CB SER A 486 -8.340 -13.980 -18.297 1.00 16.14 C
ATOM 1238 OG SER A 486 -7.179 -13.488 -17.645 1.00 16.35 O
ATOM 1239 N ALA A 487 -10.434 -11.760 -17.622 1.00 18.12 N
ATOM 1240 CA ALA A 487 -10.872 -10.683 -16.747 1.00 15.85 C
ATOM 1241 C ALA A 487 -11.466 -11.275 -15.476 1.00 13.43 C
ATOM 1242 O ALA A 487 -12.014 -12.375 -15.496 1.00 16.13 O
ATOM 1243 CB ALA A 487 -11.892 -9.810 -17.457 1.00 14.01 C
ATOM 1244 N GLU A 488 -11.356 -10.548 -14.370 1.00 17.34 N
ATOM 1245 CA GLU A 488 -11.879 -11.029 -13.096 1.00 13.89 C
ATOM 1246 C GLU A 488 -12.593 -9.936 -12.306 1.00 14.51 C
ATOM 1247 O GLU A 488 -12.403 -8.747 -12.554 1.00 15.43 O
ATOM 1248 CB GLU A 488 -10.768 -11.668 -12.261 1.00 15.38 C

ATOM 1249 CG GLU A 488 -9.463 -10.894 -12.260 1.00 16.73 C
ATOM 1250 CD GLU A 488 -8.373 -11.610 -11.491 1.00 16.76 C
ATOM 1251 OE1 GLU A 488 -8.523 -11.766 -10.262 1.00 15.08 O
ATOM 1252 OE2 GLU A 488 -7.370 -12.022 -12.115 1.00 17.35 O
ATOM 1253 N CYS A 489 -13.416 -10.354 -11.352 1.00 18.81 N
ATOM 1254 CA CYS A 489 -14.264 -9.429 -10.614 1.00 16.46 C
ATOM 1255 C CYS A 489 -13.984 -9.482 -9.116 1.00 18.58 C
ATOM 1256 O CYS A 489 -13.845 -10.560 -8.537 1.00 18.04 O
ATOM 1257 CB CYS A 489 -15.735 -9.745 -10.887 1.00 20.02 C
ATOM 1258 SG CYS A 489 -16.895 -8.515 -10.276 1.00 20.30 S
ATOM 1259 N TYR A 490 -13.903 -8.311 -8.494 1.00 17.88 N
ATOM 1260 CA TYR A 490 -13.658 -8.225 -7.060 1.00 15.81 C
ATOM 1261 C TYR A 490 -14.930 -7.864 -6.293 1.00 18.89 C
ATOM 1262 O TYR A 490 -15.586 -6.866 -6.594 1.00 18.12 O
ATOM 1263 CB TYR A 490 -12.554 -7.207 -6.762 1.00 15.68 C
ATOM 1264 CG TYR A 490 -12.280 -7.024 -5.284 1.00 18.49 C
ATOM 1265 CD1 TYR A 490 -11.539 -7.960 -4.575 1.00 16.55 C
ATOM 1266 CD2 TYR A 490 -12.764 -5.917 -4.600 1.00 15.78 C
ATOM 1267 CE1 TYR A 490 -11.289 -7.800 -3.226 1.00 18.44 C
ATOM 1268 CE2 TYR A 490 -12.519 -5.748 -3.251 1.00 17.52 C
ATOM 1269 CZ TYR A 490 -11.781 -6.692 -2.569 1.00 17.70 C
ATOM 1270 OH TYR A 490 -11.535 -6.529 -1.225 1.00 19.19 O
ATOM 1271 N TYR A 491 -15.269 -8.681 -5.300 1.00 18.28 N
ATOM 1272 CA TYR A 491 -16.446 -8.446 -4.470 1.00 17.46 C
ATOM 1273 C TYR A 491 -16.053 -7.929 -3.090 1.00 17.20 C
ATOM 1274 O TYR A 491 -15.729 -8.711 -2.197 1.00 22.61 O
ATOM 1275 CB TYR A 491 -17.270 -9.727 -4.345 1.00 18.48 C
ATOM 1276 CG TYR A 491 -17.778 -10.239 -5.673 1.00 13.98 C
ATOM 1277 CD1 TYR A 491 -16.945 -10.948 -6.530 1.00 19.92 C
ATOM 1278 CD2 TYR A 491 -19.085 -10.004 -6.076 1.00 14.29 C
ATOM 1279 CE1 TYR A 491 -17.401 -11.412 -7.750 1.00 23.50 C
ATOM 1280 CE2 TYR A 491 -19.553 -10.466 -7.293 1.00 20.08 C
ATOM 1281 CZ TYR A 491 -18.705 -11.169 -8.126 1.00 22.86 C
ATOM 1282 OH TYR A 491 -19.159 -11.631 -9.339 1.00 27.49 O
ATOM 1283 N PRO A 492 -16.084 -6.598 -2.915 1.00 18.13 N
ATOM 1284 CA PRO A 492 -15.642 -5.920 -1.690 1.00 21.31 C
ATOM 1285 C PRO A 492 -16.259 -6.533 -0.431 1.00 24.50 C
ATOM 1286 O PRO A 492 -15.551 -6.762 0.550 1.00 19.81 O
ATOM 1287 CB PRO A 492 -16.159 -4.489 -1.882 1.00 15.39 C
ATOM 1288 CG PRO A 492 -16.194 -4.305 -3.357 1.00 18.40 C
ATOM 1289 CD PRO A 492 -16.567 -5.646 -3.932 1.00 18.87 C
ATOM 1290 N GLU A 493 -17.562 -6.795 -0.463 1.00 21.03 N
ATOM 1291 CA GLU A 493 -18.257 -7.300 0.711 1.00 24.98 C
ATOM 1292 C GLU A 493 -17.856 -8.729 1.064 1.00 18.81 C
ATOM 1293 O GLU A 493 -18.314 -9.283 2.063 1.00 19.43 O
ATOM 1294 CB GLU A 493 -19.774 -7.185 0.527 1.00 28.82 C

ATOM 1295 CG GLU A 493 -20.297 -5.768 0.344 1.00 34.30 C
ATOM 1296 CD GLU A 493 -21.788 -5.716 0.078 1.00 43.34 C
ATOM 1297 OE1 GLU A 493 -22.403 -6.794 -0.035 1.00 46.58 O
ATOM 1298 OE2 GLU A 493 -22.335 -4.594 -0.013 1.00 46.59 O
ATOM 1299 N ARG A 494 -17.011 -9.328 0.231 1.00 23.59 N
ATOM 1300 CA ARG A 494 -16.528 -10.684 0.482 1.00 20.02 C
ATOM 1301 C ARG A 494 -15.005 -10.748 0.461 1.00 25.68 C
ATOM 1302 O ARG A 494 -14.408 -11.739 0.883 1.00 21.68 O
ATOM 1303 CB ARG A 494 -17.091 -11.660 -0.551 1.00 21.57 C
ATOM 1304 CG ARG A 494 -18.595 -11.573 -0.724 1.00 30.83 C
ATOM 1305 CD ARG A 494 -19.071 -12.538 -1.796 1.00 35.73 C
ATOM 1306 NE ARG A 494 -18.770 -13.923 -1.448 1.00 39.67 N
ATOM 1307 CZ ARG A 494 -18.909 -14.948 -2.283 1.00 40.77 C
ATOM 1308 NH1 ARG A 494 -19.340 -14.743 -3.520 1.00 38.82 N
ATOM 1309 NH2 ARG A 494 -18.610 -16.177 -1.885 1.00 38.12 N
ATOM 1310 N ASN A 495 -14.382 -9.680 -0.028 1.00 24.91 N
ATOM 1311 CA ASN A 495 -12.932 -9.633 -0.198 1.00 18.47 C
ATOM 1312 C ASN A 495 -12.409 -10.844 -0.962 1.00 20.32 C
ATOM 1313 O ASN A 495 -11.449 -11.491 -0.542 1.00 20.27 O
ATOM 1314 CB ASN A 495 -12.223 -9.530 1.154 1.00 19.49 C
ATOM 1315 CG ASN A 495 -10.718 -9.367 1.010 1.00 20.51 C
ATOM 1316 OD1 ASN A 495 -10.233 -8.826 0.015 1.00 16.37 O
ATOM 1317 ND2 ASN A 495 -9.973 -9.845 2.000 1.00 15.16 N
ATOM 1318 N GLU A 496 -13.044 -11.151 -2.085 1.00 22.42 N
ATOM 1319 CA GLU A 496 -12.608 -12.269 -2.908 1.00 23.52 C
ATOM 1320 C GLU A 496 -12.703 -11.927 -4.390 1.00 21.30 C
ATOM 1321 O GLU A 496 -13.522 -11.104 -4.797 1.00 17.40 O
ATOM 1322 CB GLU A 496 -13.428 -13.523 -2.600 1.00 22.59 C
ATOM 1323 CG GLU A 496 -14.834 -13.501 -3.174 1.00 32.52 C
ATOM 1324 CD GLU A 496 -15.594 -14.784 -2.898 1.00 39.27 C
ATOM 1325 OE1 GLU A 496 -15.380 -15.383 -1.822 1.00 41.57 O
ATOM 1326 OE2 GLU A 496 -16.400 -15.197 -3.761 1.00 42.84 O
ATOM 1327 N TRP A 497 -11.853 -12.561 -5.187 1.00 16.74 N
ATOM 1328 CA TRP A 497 -11.865 -12.367 -6.627 1.00 15.35 C
ATOM 1329 C TRP A 497 -12.526 -13.549 -7.319 1.00 18.14 C
ATOM 1330 O TRP A 497 -12.424 -14.689 -6.865 1.00 22.02 O
ATOM 1331 CB TRP A 497 -10.443 -12.161 -7.152 1.00 12.80 C
ATOM 1332 CG TRP A 497 -9.907 -10.802 -6.850 1.00 16.75 C
ATOM 1333 CD1 TRP A 497 -9.271 -10.406 -5.710 1.00 18.85 C
ATOM 1334 CD2 TRP A 497 -9.974 -9.647 -7.695 1.00 16.27 C
ATOM 1335 NE1 TRP A 497 -8.933 -9.076 -5.795 1.00 16.08 N
ATOM 1336 CE2 TRP A 497 -9.354 -8.588 -7.004 1.00 16.29 C
ATOM 1337 CE3 TRP A 497 -10.495 -9.407 -8.970 1.00 18.84 C
ATOM 1338 CZ2 TRP A 497 -9.241 -7.309 -7.545 1.00 16.45 C
ATOM 1339 CZ3 TRP A 497 -10.381 -8.136 -9.506 1.00 16.47 C
ATOM 1340 CH2 TRP A 497 -9.759 -7.104 -8.794 1.00 14.65 C

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ATOM   1341  N   ARG A 498     -13.211 -13.265  -8.418  1.00 12.72           N
ATOM   1342  CA  ARG A 498     -13.884 -14.296  -9.187  1.00 16.44           C
ATOM   1343  C   ARG A 498     -13.702 -14.026 -10.681  1.00 19.70           C
ATOM   1344  O   ARG A 498     -14.091 -12.970 -11.181  1.00 20.44           O
ATOM   1345  CB  ARG A 498     -15.369 -14.325  -8.823  1.00 18.35           C
ATOM   1346  CG  ARG A 498     -16.144 -15.463  -9.453  1.00 29.00           C
ATOM   1347  CD  ARG A 498     -17.643 -15.200  -9.407  1.00 29.79           C
ATOM   1348  NE  ARG A 498     -18.294 -15.815  -8.254  1.00 38.18           N
ATOM   1349  CZ  ARG A 498     -18.389 -15.251  -7.054  1.00 40.94           C
ATOM   1350  NH1 ARG A 498     -17.862 -14.055  -6.836  1.00 37.49           N
ATOM   1351  NH2 ARG A 498     -19.007 -15.887  -6.068  1.00 48.77           N
ATOM   1352  N   MET A 499     -13.095 -14.970 -11.392  1.00 19.82           N
ATOM   1353  CA  MET A 499     -12.900 -14.808 -12.827  1.00 20.11           C
ATOM   1354  C   MET A 499     -14.241 -14.578 -13.510  1.00 21.56           C
ATOM   1355  O   MET A 499     -15.268 -15.104 -13.078  1.00 21.93           O
ATOM   1356  CB  MET A 499     -12.217 -16.037 -13.432  1.00 17.70           C
ATOM   1357  CG  MET A 499     -10.809 -16.306 -12.916  1.00 21.54           C
ATOM   1358  SD  MET A 499      -9.592 -15.074 -13.421  1.00 32.60           S
ATOM   1359  CE  MET A 499      -9.714 -15.155 -15.205  1.00 15.21           C
ATOM   1360  N   ILE A 500     -14.230 -13.779 -14.570  1.00 19.14           N
ATOM   1361  CA  ILE A 500     -15.411 -13.605 -15.400  1.00 18.24           C
ATOM   1362  C   ILE A 500     -15.099 -14.131 -16.790  1.00 18.58           C
ATOM   1363  O   ILE A 500     -14.040 -14.716 -17.015  1.00 16.81           O
ATOM   1364  CB  ILE A 500     -15.832 -12.129 -15.504  1.00 19.17           C
ATOM   1365  CG1 ILE A 500     -14.845 -11.353 -16.382  1.00 18.24           C
ATOM   1366  CG2 ILE A 500     -15.946 -11.511 -14.117  1.00 19.84           C
ATOM   1367  CD1 ILE A 500     -15.274  -9.933 -16.683  1.00 15.64           C
ATOM   1368  N   THR A 501     -16.020 -13.927 -17.722  1.00 18.72           N
ATOM   1369  CA  THR A 501     -15.791 -14.344 -19.094  1.00 17.08           C
ATOM   1370  C   THR A 501     -14.641 -13.531 -19.681  1.00 17.34           C
ATOM   1371  O   THR A 501     -14.543 -12.325 -19.448  1.00 19.37           O
ATOM   1372  CB  THR A 501     -17.052 -14.163 -19.953  1.00 22.04           C
ATOM   1373  OG1 THR A 501     -18.176 -14.740 -19.277  1.00 16.25           O
ATOM   1374  CG2 THR A 501     -16.876 -14.835 -21.310  1.00 18.61           C
ATOM   1375  N   ALA A 502     -13.768 -14.194 -20.432  1.00 15.02           N
ATOM   1376  CA  ALA A 502     -12.620 -13.529 -21.038  1.00 14.71           C
ATOM   1377  C   ALA A 502     -13.041 -12.683 -22.235  1.00 15.25           C
ATOM   1378  O   ALA A 502     -14.133 -12.857 -22.774  1.00 18.85           O
ATOM   1379  CB  ALA A 502     -11.571 -14.551 -21.449  1.00 10.87           C
ATOM   1380  N   MET A 503     -12.175 -11.758 -22.639  1.00 17.30           N
ATOM   1381  CA  MET A 503     -12.430 -10.938 -23.816  1.00 17.51           C
ATOM   1382  C   MET A 503     -12.178 -11.772 -25.061  1.00 17.52           C
ATOM   1383  O   MET A 503     -11.488 -12.789 -25.001  1.00 16.49           O
ATOM   1384  CB  MET A 503     -11.505  -9.718 -23.844  1.00 15.55           C
ATOM   1385  CG  MET A 503     -11.519  -8.863 -22.589  1.00 19.31           C
ATOM   1386  SD  MET A 503     -10.364  -7.479 -22.717  1.00 14.37           S
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ATOM   1387  CE  MET A 503     -11.173  -6.491 -23.970  1.00 18.66           C
ATOM   1388  N   ASN A 504     -12.731 -11.343 -26.189  1.00 14.94           N
ATOM   1389  CA  ASN A 504     -12.438 -11.996 -27.454  1.00 14.80           C
ATOM   1390  C   ASN A 504     -10.987 -11.748 -27.840  1.00 16.74           C
ATOM   1391  O   ASN A 504     -10.376 -12.543 -28.553  1.00 19.65           O
ATOM   1392  CB  ASN A 504     -13.363 -11.482 -28.555  1.00 16.19           C
ATOM   1393  CG  ASN A 504     -14.826 -11.697 -28.233  1.00 17.25           C
ATOM   1394  OD1 ASN A 504     -15.536 -10.764 -27.858  1.00 16.05           O
ATOM   1395  ND2 ASN A 504     -15.285 -12.935 -28.374  1.00 19.45           N
ATOM   1396  N   THR A 505     -10.437 -10.642 -27.349  1.00 14.61           N
ATOM   1397  CA  THR A 505      -9.098 -10.221 -27.735  1.00 12.91           C
ATOM   1398  C   THR A 505      -8.128 -10.180 -26.556  1.00 17.01           C
ATOM   1399  O   THR A 505      -8.506  -9.845 -25.433  1.00 16.38           O
ATOM   1400  CB  THR A 505      -9.128  -8.829 -28.391  1.00 12.54           C
ATOM   1401  OG1 THR A 505     -10.207  -8.765 -29.330  1.00 13.76           O
ATOM   1402  CG2 THR A 505      -7.814  -8.545 -29.104  1.00 12.13           C
ATOM   1403  N   ILE A 506      -6.876 -10.530 -26.826  1.00 16.39           N
ATOM   1404  CA  ILE A 506      -5.799 -10.360 -25.861  1.00 16.77           C
ATOM   1405  C   ILE A 506      -5.419  -8.885 -25.802  1.00 18.40           C
ATOM   1406  O   ILE A 506      -5.104  -8.278 -26.828  1.00 14.52           O
ATOM   1407  CB  ILE A 506      -4.560 -11.178 -26.262  1.00 20.40           C
ATOM   1408  CG1 ILE A 506      -4.880 -12.675 -26.244  1.00 19.86           C
ATOM   1409  CG2 ILE A 506      -3.391 -10.863 -25.343  1.00 20.30           C
ATOM   1410  CD1 ILE A 506      -3.788 -13.538 -26.835  1.00 17.71           C
ATOM   1411  N   ARG A 507      -5.452  -8.307 -24.606  1.00 16.57           N
ATOM   1412  CA  ARG A 507      -5.186  -6.881 -24.448  1.00 14.02           C
ATOM   1413  C   ARG A 507      -4.346  -6.553 -23.217  1.00 16.50           C
ATOM   1414  O   ARG A 507      -4.652  -6.990 -22.106  1.00 15.85           O
ATOM   1415  CB  ARG A 507      -6.499  -6.100 -24.359  1.00 13.65           C
ATOM   1416  CG  ARG A 507      -7.431  -6.266 -25.543  1.00 15.27           C
ATOM   1417  CD  ARG A 507      -8.675  -5.413 -25.356  1.00 13.43           C
ATOM   1418  NE  ARG A 507      -9.693  -5.694 -26.362  1.00 15.83           N
ATOM   1419  CZ  ARG A 507      -9.812  -5.035 -27.508  1.00 14.09           C
ATOM   1420  NH1 ARG A 507      -8.974  -4.051 -27.797  1.00 14.57           N
ATOM   1421  NH2 ARG A 507     -10.771  -5.359 -28.364  1.00 17.20           N
ATOM   1422  N   SER A 508      -3.289  -5.777 -23.425  1.00 13.18           N
ATOM   1423  CA  SER A 508      -2.590  -5.118 -22.328  1.00 15.57           C
ATOM   1424  C   SER A 508      -2.474  -3.638 -22.675  1.00 13.22           C
ATOM   1425  O   SER A 508      -2.466  -3.274 -23.850  1.00 15.20           O
ATOM   1426  CB  SER A 508      -1.208  -5.733 -22.087  1.00 17.24           C
ATOM   1427  OG  SER A 508      -0.319  -5.452 -23.154  1.00 18.92           O
ATOM   1428  N   GLY A 509      -2.399  -2.785 -21.662  1.00 13.12           N
ATOM   1429  CA  GLY A 509      -2.352  -1.354 -21.898  1.00 13.34           C
ATOM   1430  C   GLY A 509      -3.572  -0.890 -22.670  1.00 14.99           C
ATOM   1431  O   GLY A 509      -3.477  -0.060 -23.574  1.00 12.28           O
ATOM   1432  N   ALA A 510      -4.727  -1.438 -22.310  1.00 16.69           N
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ATOM   1433  CA  ALA A 510      -5.985  -1.063 -22.939  1.00 13.32           C
ATOM   1434  C   ALA A 510      -6.694   0.034 -22.150  1.00 15.29           C
ATOM   1435  O   ALA A 510      -6.321   0.342 -21.015  1.00 12.00           O
ATOM   1436  CB  ALA A 510      -6.887  -2.279 -23.074  1.00 10.89           C
ATOM   1437  N   GLY A 511      -7.717   0.622 -22.761  1.00 10.65           N
ATOM   1438  CA  GLY A 511      -8.574   1.570 -22.074  1.00 10.84           C
ATOM   1439  C   GLY A 511      -9.840   0.891 -21.582  1.00 11.93           C
ATOM   1440  O   GLY A 511     -10.645   0.408 -22.378  1.00 13.89           O
ATOM   1441  N   VAL A 512     -10.016   0.848 -20.267  1.00 10.22           N
ATOM   1442  CA  VAL A 512     -11.177   0.199 -19.671  1.00 11.26           C
ATOM   1443  C   VAL A 512     -11.997   1.197 -18.854  1.00 13.71           C
ATOM   1444  O   VAL A 512     -11.450   1.953 -18.052  1.00 13.64           O
ATOM   1445  CB  VAL A 512     -10.754  -0.985 -18.775  1.00 12.36           C
ATOM   1446  CG1 VAL A 512     -11.966  -1.618 -18.108  1.00 11.88           C
ATOM   1447  CG2 VAL A 512      -9.985  -2.017 -19.588  1.00 10.84           C
ATOM   1448  N   CYS A 513     -13.309   1.201 -19.066  1.00 13.77           N
ATOM   1449  CA  CYS A 513     -14.193   2.113 -18.348  1.00 13.43           C
ATOM   1450  C   CYS A 513     -15.626   1.607 -18.338  1.00 15.75           C
ATOM   1451  O   CYS A 513     -15.984   0.698 -19.087  1.00 17.60           O
ATOM   1452  CB  CYS A 513     -14.153   3.508 -18.972  1.00 18.36           C
ATOM   1453  SG  CYS A 513     -14.959   3.613 -20.582  1.00 17.03           S
ATOM   1454  N   VAL A 514     -16.444   2.209 -17.484  1.00 20.68           N
ATOM   1455  CA  VAL A 514     -17.849   1.846 -17.378  1.00 19.31           C
ATOM   1456  C   VAL A 514     -18.735   2.920 -17.998  1.00 20.25           C
ATOM   1457  O   VAL A 514     -18.687   4.084 -17.601  1.00 18.89           O
ATOM   1458  CB  VAL A 514     -18.261   1.641 -15.909  1.00 20.63           C
ATOM   1459  CG1 VAL A 514     -17.794   2.815 -15.059  1.00 23.12           C
ATOM   1460  CG2 VAL A 514     -19.766   1.459 -15.801  1.00 20.62           C
ATOM   1461  N   LEU A 515     -19.538   2.526 -18.981  1.00 23.52           N
ATOM   1462  CA  LEU A 515     -20.495   3.440 -19.596  1.00 21.52           C
ATOM   1463  C   LEU A 515     -21.858   2.781 -19.760  1.00 23.99           C
ATOM   1464  O   LEU A 515     -21.980   1.728 -20.389  1.00 23.10           O
ATOM   1465  CB  LEU A 515     -19.992   3.936 -20.952  1.00 22.05           C
ATOM   1466  CG  LEU A 515     -21.019   4.760 -21.736  1.00 21.55           C
ATOM   1467  CD1 LEU A 515     -21.409   6.013 -20.971  1.00 13.56           C
ATOM   1468  CD2 LEU A 515     -20.497   5.111 -23.121  1.00 16.88           C
ATOM   1469  N   HIS A 516     -22.877   3.413 -19.187  1.00 21.64           N
ATOM   1470  CA  HIS A 516     -24.243   2.911 -19.259  1.00 19.09           C
ATOM   1471  C   HIS A 516     -24.355   1.415 -18.951  1.00 20.14           C
ATOM   1472  O   HIS A 516     -24.903   0.642 -19.736  1.00 19.59           O
ATOM   1473  CB  HIS A 516     -24.870   3.254 -20.611  1.00 17.03           C
ATOM   1474  CG  HIS A 516     -25.156   4.714 -20.785  1.00 20.17           C
ATOM   1475  ND1 HIS A 516     -25.586   5.254 -21.978  1.00 24.11           N
ATOM   1476  CD2 HIS A 516     -25.078   5.746 -19.911  1.00 22.31           C
ATOM   1477  CE1 HIS A 516     -25.758   6.557 -21.832  1.00 18.25           C
ATOM   1478  NE2 HIS A 516     -25.458   6.880 -20.588  1.00 19.18           N
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ATOM   1479  N   ASN A 517     -23.824   1.025 -17.796  1.00 22.95           N
ATOM   1480  CA  ASN A 517     -23.999  -0.322 -17.260  1.00 25.06           C
ATOM   1481  C   ASN A 517     -23.261  -1.404 -18.039  1.00 20.97           C
ATOM   1482  O   ASN A 517     -23.538  -2.593 -17.882  1.00 21.33           O
ATOM   1483  CB  ASN A 517     -25.488  -0.667 -17.135  1.00 29.68           C
ATOM   1484  CG  ASN A 517     -25.766  -1.668 -16.024  1.00 27.88           C
ATOM   1485  OD1 ASN A 517     -25.853  -1.302 -14.851  1.00 28.88           O
ATOM   1486  ND2 ASN A 517     -25.914  -2.937 -16.390  1.00 29.19           N
ATOM   1487  N   CYS A 518     -22.320  -0.988 -18.877  1.00 22.77           N
ATOM   1488  CA  CYS A 518     -21.455  -1.929 -19.575  1.00 20.18           C
ATOM   1489  C   CYS A 518     -19.997  -1.597 -19.305  1.00 22.16           C
ATOM   1490  O   CYS A 518     -19.655  -0.450 -19.012  1.00 22.33           O
ATOM   1491  CB  CYS A 518     -21.729  -1.910 -21.077  1.00 21.90           C
ATOM   1492  SG  CYS A 518     -23.374  -2.483 -21.532  1.00 24.97           S
ATOM   1493  N   ILE A 519     -19.139  -2.606 -19.399  1.00 22.35           N
ATOM   1494  CA  ILE A 519     -17.712  -2.406 -19.201  1.00 17.50           C
ATOM   1495  C   ILE A 519     -16.988  -2.440 -20.536  1.00 18.53           C
ATOM   1496  O   ILE A 519     -16.888  -3.486 -21.175  1.00 18.43           O
ATOM   1497  CB  ILE A 519     -17.115  -3.467 -18.268  1.00 19.24           C
ATOM   1498  CG1 ILE A 519     -17.836  -3.450 -16.918  1.00 16.84           C
ATOM   1499  CG2 ILE A 519     -15.623  -3.229 -18.090  1.00 14.07           C
ATOM   1500  CD1 ILE A 519     -17.267  -4.422 -15.915  1.00 18.92           C
ATOM   1501  N   TYR A 520     -16.486  -1.284 -20.952  1.00 19.80           N
ATOM   1502  CA  TYR A 520     -15.816  -1.159 -22.237  1.00 19.18           C
ATOM   1503  C   TYR A 520     -14.321  -1.447 -22.147  1.00 18.59           C
ATOM   1504  O   TYR A 520     -13.670  -1.133 -21.149  1.00 17.79           O
ATOM   1505  CB  TYR A 520     -16.047   0.237 -22.822  1.00 17.92           C
ATOM   1506  CG  TYR A 520     -17.447   0.459 -23.347  1.00 21.14           C
ATOM   1507  CD1 TYR A 520     -18.499   0.742 -22.485  1.00 19.20           C
ATOM   1508  CD2 TYR A 520     -17.717   0.390 -24.708  1.00 15.95           C
ATOM   1509  CE1 TYR A 520     -19.780   0.946 -22.963  1.00 19.94           C
ATOM   1510  CE2 TYR A 520     -18.994   0.592 -25.195  1.00 16.50           C
ATOM   1511  CZ  TYR A 520     -20.021   0.870 -24.320  1.00 19.39           C
ATOM   1512  OH  TYR A 520     -21.294   1.073 -24.804  1.00 18.56           O
ATOM   1513  N   ALA A 521     -13.792  -2.054 -23.202  1.00 14.55           N
ATOM   1514  CA  ALA A 521     -12.361  -2.269 -23.339  1.00 13.23           C
ATOM   1515  C   ALA A 521     -11.938  -1.815 -24.731  1.00 17.61           C
ATOM   1516  O   ALA A 521     -12.312  -2.425 -25.734  1.00 16.66           O
ATOM   1517  CB  ALA A 521     -12.021  -3.727 -23.127  1.00 13.69           C
ATOM   1518  N   ALA A 522     -11.170  -0.732 -24.788  1.00 13.77           N
ATOM   1519  CA  ALA A 522     -10.795  -0.132 -26.060  1.00 11.38           C
ATOM   1520  C   ALA A 522      -9.294  -0.180 -26.285  1.00 10.41           C
ATOM   1521  O   ALA A 522      -8.511   0.096 -25.378  1.00 11.00           O
ATOM   1522  CB  ALA A 522     -11.293   1.301 -26.134  1.00 11.19           C
ATOM   1523  N   GLY A 523      -8.907  -0.533 -27.505  1.00 11.32           N
ATOM   1524  CA  GLY A 523      -7.512  -0.553 -27.896  1.00 11.78           C
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ATOM 1525 C GLY A 523 -6.666 -1.508 -27.079 1.00 13.75 C
ATOM 1526 O GLY A 523 -7.158 -2.500 -26.540 1.00 12.11 O
ATOM 1527 N GLY A 524 -5.380 -1.197 -26.988 1.00 12.66 N
ATOM 1528 CA GLY A 524 -4.447 -2.031 -26.262 1.00 15.02 C
ATOM 1529 C GLY A 524 -3.434 -2.677 -27.183 1.00 13.65 C
ATOM 1530 O GLY A 524 -3.262 -2.267 -28.334 1.00 14.66 O
ATOM 1531 N TYR A 525 -2.767 -3.701 -26.668 1.00 10.64 N
ATOM 1532 CA TYR A 525 -1.714 -4.388 -27.397 1.00 13.67 C
ATOM 1533 C TYR A 525 -1.914 -5.888 -27.246 1.00 16.69 C
ATOM 1534 O TYR A 525 -1.915 -6.411 -26.132 1.00 17.69 O
ATOM 1535 CB TYR A 525 -0.356 -3.967 -26.841 1.00 17.07 C
ATOM 1536 CG TYR A 525 0.833 -4.623 -27.497 1.00 18.76 C
ATOM 1537 CD1 TYR A 525 1.262 -4.224 -28.754 1.00 21.88 C
ATOM 1538 CD2 TYR A 525 1.544 -5.622 -26.846 1.00 21.24 C
ATOM 1539 CE1 TYR A 525 2.357 -4.813 -29.354 1.00 21.89 C
ATOM 1540 CE2 TYR A 525 2.640 -6.217 -27.437 1.00 23.89 C
ATOM 1541 CZ TYR A 525 3.042 -5.807 -28.691 1.00 22.95 C
ATOM 1542 OH TYR A 525 4.134 -6.395 -29.285 1.00 31.30 O
ATOM 1543 N ASP A 526 -2.096 -6.577 -28.367 1.00 15.23 N
ATOM 1544 CA ASP A 526 -2.409 -8.002 -28.339 1.00 17.51 C
ATOM 1545 C ASP A 526 -1.150 -8.860 -28.326 1.00 18.18 C
ATOM 1546 O ASP A 526 -1.224 -10.086 -28.385 1.00 22.54 O
ATOM 1547 CB ASP A 526 -3.299 -8.382 -29.527 1.00 17.68 C
ATOM 1548 CG ASP A 526 -2.583 -8.259 -30.859 1.00 17.04 C
ATOM 1549 OD1 ASP A 526 -1.470 -7.695 -30.892 1.00 20.13 O
ATOM 1550 OD2 ASP A 526 -3.140 -8.723 -31.876 1.00 23.92 O
ATOM 1551 N GLY A 527 0.004 -8.210 -28.245 1.00 21.05 N
ATOM 1552 CA GLY A 527 1.270 -8.918 -28.235 1.00 19.53 C
ATOM 1553 C GLY A 527 2.027 -8.756 -29.537 1.00 23.59 C
ATOM 1554 O GLY A 527 3.232 -8.997 -29.598 1.00 26.74 O
ATOM 1555 N GLN A 528 1.321 -8.340 -30.584 1.00 22.43 N
ATOM 1556 CA GLN A 528 1.939 -8.183 -31.893 1.00 22.08 C
ATOM 1557 C GLN A 528 1.610 -6.837 -32.528 1.00 23.46 C
ATOM 1558 O GLN A 528 2.438 -6.260 -33.229 1.00 29.95 O
ATOM 1559 CB GLN A 528 1.524 -9.324 -32.823 1.00 29.57 C
ATOM 1560 CG GLN A 528 2.154 -9.254 -34.203 1.00 31.69 C
ATOM 1561 CD GLN A 528 1.961 -10.531 -34.998 1.00 34.79 C
ATOM 1562 OE1 GLN A 528 1.739 -11.603 -34.432 1.00 21.65 O
ATOM 1563 NE2 GLN A 528 2.040 -10.421 -36.320 1.00 43.72 N
ATOM 1564 N ASP A 529 0.401 -6.340 -32.286 1.00 24.07 N
ATOM 1565 CA ASP A 529 -0.008 -5.053 -32.838 1.00 24.17 C
ATOM 1566 C ASP A 529 -0.768 -4.218 -31.819 1.00 17.45 C
ATOM 1567 O ASP A 529 -1.371 -4.753 -30.890 1.00 17.04 O
ATOM 1568 CB ASP A 529 -0.897 -5.247 -34.071 1.00 25.26 C
ATOM 1569 CG ASP A 529 -0.359 -6.292 -35.025 1.00 32.68 C
ATOM 1570 OD1 ASP A 529 0.633 -6.007 -35.727 1.00 31.69 O

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ATOM   1571  OD2 ASP A 529      -0.940  -7.397 -35.080  1.00 38.14           O
ATOM   1572  N   GLN A 530      -0.738  -2.902 -32.001  1.00 17.31           N
ATOM   1573  CA  GLN A 530      -1.643  -2.023 -31.274  1.00 19.37           C
ATOM   1574  C   GLN A 530      -3.035  -2.186 -31.861  1.00 14.07           C
ATOM   1575  O   GLN A 530      -3.183  -2.455 -33.053  1.00 14.72           O
ATOM   1576  CB  GLN A 530      -1.196  -0.564 -31.362  1.00 19.19           C
ATOM   1577  CG  GLN A 530      -0.276  -0.128 -30.235  1.00 18.59           C
ATOM   1578  CD  GLN A 530       1.134  -0.646 -30.399  1.00 21.05           C
ATOM   1579  OE1 GLN A 530       1.493  -1.186 -31.446  1.00 19.80           O
ATOM   1580  NE2 GLN A 530       1.947  -0.481 -29.364  1.00 26.66           N
ATOM   1581  N   LEU A 531      -4.053  -2.023 -31.023  1.00 15.07           N
ATOM   1582  CA  LEU A 531      -5.419  -2.350 -31.412  1.00 14.25           C
ATOM   1583  C   LEU A 531      -6.316  -1.127 -31.550  1.00 12.10           C
ATOM   1584  O   LEU A 531      -6.126  -0.123 -30.865  1.00 10.43           O
ATOM   1585  CB  LEU A 531      -6.031  -3.309 -30.390  1.00 13.98           C
ATOM   1586  CG  LEU A 531      -5.246  -4.591 -30.111  1.00 14.66           C
ATOM   1587  CD1 LEU A 531      -5.852  -5.333 -28.931  1.00 15.59           C
ATOM   1588  CD2 LEU A 531      -5.209  -5.480 -31.344  1.00 12.99           C
ATOM   1589  N   ASN A 532      -7.296  -1.224 -32.442  1.00 12.74           N
ATOM   1590  CA  ASN A 532      -8.343  -0.216 -32.545  1.00 11.68           C
ATOM   1591  C   ASN A 532      -9.708  -0.833 -32.273  1.00 12.04           C
ATOM   1592  O   ASN A 532     -10.711  -0.130 -32.171  1.00 15.75           O
ATOM   1593  CB  ASN A 532      -8.324   0.479 -33.911  1.00 11.98           C
ATOM   1594  CG  ASN A 532      -8.581  -0.476 -35.067  1.00 13.09           C
ATOM   1595  OD1 ASN A 532      -8.946  -1.634 -34.870  1.00 10.04           O
ATOM   1596  ND2 ASN A 532      -8.395   0.015 -36.285  1.00 18.60           N
ATOM   1597  N   SER A 533      -9.736  -2.156 -32.156  1.00 12.56           N
ATOM   1598  CA  SER A 533     -10.974  -2.866 -31.869  1.00 16.45           C
ATOM   1599  C   SER A 533     -11.460  -2.504 -30.474  1.00 18.11           C
ATOM   1600  O   SER A 533     -10.664  -2.167 -29.597  1.00 15.07           O
ATOM   1601  CB  SER A 533     -10.784  -4.382 -31.990  1.00 14.86           C
ATOM   1602  OG  SER A 533     -10.068  -4.907 -30.886  1.00 15.05           O
ATOM   1603  N   VAL A 534     -12.772  -2.571 -30.280  1.00 17.04           N
ATOM   1604  CA  VAL A 534     -13.382  -2.204 -29.012  1.00 14.19           C
ATOM   1605  C   VAL A 534     -14.517  -3.162 -28.683  1.00 17.34           C
ATOM   1606  O   VAL A 534     -15.361  -3.451 -29.531  1.00 16.11           O
ATOM   1607  CB  VAL A 534     -13.941  -0.767 -29.054  1.00 16.60           C
ATOM   1608  CG1 VAL A 534     -14.582  -0.403 -27.723  1.00 15.11           C
ATOM   1609  CG2 VAL A 534     -12.841   0.222 -29.413  1.00 14.70           C
ATOM   1610  N   GLU A 535     -14.529  -3.660 -27.452  1.00 19.83           N
ATOM   1611  CA  GLU A 535     -15.593  -4.549 -27.003  1.00 16.75           C
ATOM   1612  C   GLU A 535     -16.055  -4.185 -25.596  1.00 16.74           C
ATOM   1613  O   GLU A 535     -15.297  -3.622 -24.806  1.00 17.94           O
ATOM   1614  CB  GLU A 535     -15.149  -6.016 -27.070  1.00 18.72           C
ATOM   1615  CG  GLU A 535     -13.864  -6.332 -26.317  1.00 17.55           C
ATOM   1616  CD  GLU A 535     -13.384  -7.758 -26.549  1.00 19.70           C
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ATOM   1617  OE1 GLU A 535     -14.197  -8.696 -26.402  1.00 22.33           O
ATOM   1618  OE2 GLU A 535     -12.195  -7.944 -26.884  1.00 16.17           O
ATOM   1619  N   ARG A 536     -17.308  -4.500 -25.294  1.00 18.68           N
ATOM   1620  CA  ARG A 536     -17.862  -4.231 -23.976  1.00 20.10           C
ATOM   1621  C   ARG A 536     -18.307  -5.530 -23.317  1.00 20.83           C
ATOM   1622  O   ARG A 536     -18.432  -6.563 -23.976  1.00 18.65           O
ATOM   1623  CB  ARG A 536     -19.040  -3.266 -24.083  1.00 19.66           C
ATOM   1624  CG  ARG A 536     -20.120  -3.746 -25.027  1.00 24.11           C
ATOM   1625  CD  ARG A 536     -21.297  -2.793 -25.078  1.00 20.71           C
ATOM   1626  NE  ARG A 536     -22.284  -3.238 -26.056  1.00 23.26           N
ATOM   1627  CZ  ARG A 536     -23.460  -2.654 -26.252  1.00 20.47           C
ATOM   1628  NH1 ARG A 536     -23.804  -1.596 -25.532  1.00 28.75           N
ATOM   1629  NH2 ARG A 536     -24.292  -3.130 -27.167  1.00 28.75           N
ATOM   1630  N   TYR A 537     -18.541  -5.472 -22.012  1.00 22.35           N
ATOM   1631  CA  TYR A 537     -18.969  -6.640 -21.257  1.00 21.68           C
ATOM   1632  C   TYR A 537     -20.328  -6.391 -20.617  1.00 19.56           C
ATOM   1633  O   TYR A 537     -20.577  -5.318 -20.070  1.00 21.12           O
ATOM   1634  CB  TYR A 537     -17.931  -6.987 -20.189  1.00 20.53           C
ATOM   1635  CG  TYR A 537     -18.317  -8.145 -19.295  1.00 22.58           C
ATOM   1636  CD1 TYR A 537     -18.167  -9.458 -19.721  1.00 19.77           C
ATOM   1637  CD2 TYR A 537     -18.819  -7.923 -18.019  1.00 23.16           C
ATOM   1638  CE1 TYR A 537     -18.513 -10.519 -18.904  1.00 24.27           C
ATOM   1639  CE2 TYR A 537     -19.167  -8.977 -17.192  1.00 25.29           C
ATOM   1640  CZ  TYR A 537     -19.013 -10.273 -17.638  1.00 28.78           C
ATOM   1641  OH  TYR A 537     -19.360 -11.323 -16.817  1.00 22.40           O
ATOM   1642  N   ASP A 538     -21.209  -7.382 -20.697  1.00 24.67           N
ATOM   1643  CA  ASP A 538     -22.530  -7.277 -20.087  1.00 28.45           C
ATOM   1644  C   ASP A 538     -22.686  -8.295 -18.962  1.00 26.33           C
ATOM   1645  O   ASP A 538     -22.589  -9.500 -19.188  1.00 25.77           O
ATOM   1646  CB  ASP A 538     -23.625  -7.479 -21.136  1.00 27.80           C
ATOM   1647  CG  ASP A 538     -25.017  -7.344 -20.555  1.00 26.42           C
ATOM   1648  OD1 ASP A 538     -25.878  -8.189 -20.871  1.00 30.99           O
ATOM   1649  OD2 ASP A 538     -25.250  -6.392 -19.782  1.00 30.52           O
ATOM   1650  N   VAL A 539     -22.926  -7.804 -17.750  1.00 25.97           N
ATOM   1651  CA  VAL A 539     -23.065  -8.673 -16.586  1.00 28.97           C
ATOM   1652  C   VAL A 539     -24.261  -9.612 -16.726  1.00 31.87           C
ATOM   1653  O   VAL A 539     -24.228 -10.750 -16.258  1.00 33.15           O
ATOM   1654  CB  VAL A 539     -23.217  -7.861 -15.282  1.00 34.68           C
ATOM   1655  CG1 VAL A 539     -22.080  -6.856 -15.143  1.00 26.06           C
ATOM   1656  CG2 VAL A 539     -24.568  -7.158 -15.248  1.00 32.04           C
ATOM   1657  N   GLU A 540     -25.315  -9.126 -17.373  1.00 30.58           N
ATOM   1658  CA  GLU A 540     -26.531  -9.907 -17.563  1.00 33.31           C
ATOM   1659  C   GLU A 540     -26.283 -11.164 -18.393  1.00 30.34           C
ATOM   1660  O   GLU A 540     -26.558 -12.277 -17.946  1.00 30.30           O
ATOM   1661  CB  GLU A 540     -27.615  -9.048 -18.214  1.00 34.62           C
ATOM   1662  CG  GLU A 540     -28.027  -7.847 -17.379  1.00 41.48           C
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ATOM 1663 CD GLU A 540 -28.964 -6.914 -18.119 1.00 54.46 C
ATOM 1664 OE1 GLU A 540 -29.197 -7.139 -19.325 1.00 60.38 O
ATOM 1665 OE2 GLU A 540 -29.466 -5.955 -17.495 1.00 56.76 O
ATOM 1666 N THR A 541 -25.763 -10.982 -19.602 1.00 34.25 N
ATOM 1667 CA THR A 541 -25.489 -12.106 -20.491 1.00 27.69 C
ATOM 1668 C THR A 541 -24.127 -12.733 -20.221 1.00 25.04 C
ATOM 1669 O THR A 541 -23.871 -13.867 -20.622 1.00 23.88 O
ATOM 1670 CB THR A 541 -25.564 -11.691 -21.973 1.00 28.47 C
ATOM 1671 OG1 THR A 541 -24.747 -10.534 -22.189 1.00 29.22 O
ATOM 1672 CG2 THR A 541 -27.001 -11.376 -22.364 1.00 23.99 C
ATOM 1673 N GLU A 542 -23.255 -11.995 -19.541 1.00 30.92 N
ATOM 1674 CA GLU A 542 -21.918 -12.492 -19.236 1.00 26.25 C
ATOM 1675 C GLU A 542 -21.099 -12.671 -20.509 1.00 24.34 C
ATOM 1676 O GLU A 542 -20.323 -13.619 -20.626 1.00 26.61 O
ATOM 1677 CB GLU A 542 -22.002 -13.824 -18.491 1.00 30.12 C
ATOM 1678 CG GLU A 542 -21.644 -13.751 -17.017 1.00 34.59 C
ATOM 1679 CD GLU A 542 -21.734 -15.102 -16.329 1.00 36.97 C
ATOM 1680 OE1 GLU A 542 -22.206 -16.066 -16.967 1.00 38.80 O
ATOM 1681 OE2 GLU A 542 -21.332 -15.200 -15.151 1.00 44.81 O
ATOM 1682 N THR A 543 -21.275 -11.761 -21.461 1.00 22.19 N
ATOM 1683 CA THR A 543 -20.582 -11.859 -22.740 1.00 26.21 C
ATOM 1684 C THR A 543 -19.828 -10.585 -23.100 1.00 24.65 C
ATOM 1685 O THR A 543 -20.242 -9.481 -22.749 1.00 22.03 O
ATOM 1686 CB THR A 543 -21.558 -12.185 -23.891 1.00 24.28 C
ATOM 1687 OG1 THR A 543 -22.662 -11.271 -23.857 1.00 29.40 O
ATOM 1688 CG2 THR A 543 -22.079 -13.608 -23.769 1.00 22.13 C
ATOM 1689 N TRP A 544 -18.711 -10.756 -23.800 1.00 23.11 N
ATOM 1690 CA TRP A 544 -18.010 -9.642 -24.419 1.00 19.26 C
ATOM 1691 C TRP A 544 -18.419 -9.567 -25.884 1.00 19.59 C
ATOM 1692 O TRP A 544 -18.226 -10.521 -26.636 1.00 20.00 O
ATOM 1693 CB TRP A 544 -16.495 -9.825 -24.316 1.00 18.66 C
ATOM 1694 CG TRP A 544 -15.940 -9.621 -22.940 1.00 20.67 C
ATOM 1695 CD1 TRP A 544 -15.810 -10.561 -21.959 1.00 20.35 C
ATOM 1696 CD2 TRP A 544 -15.425 -8.400 -22.397 1.00 17.08 C
ATOM 1697 NE1 TRP A 544 -15.251 -9.999 -20.836 1.00 19.86 N
ATOM 1698 CE2 TRP A 544 -15.006 -8.673 -21.078 1.00 18.02 C
ATOM 1699 CE3 TRP A 544 -15.279 -7.102 -22.896 1.00 18.20 C
ATOM 1700 CZ2 TRP A 544 -14.452 -7.697 -20.252 1.00 17.76 C
ATOM 1701 CZ3 TRP A 544 -14.729 -6.132 -22.074 1.00 17.30 C
ATOM 1702 CH2 TRP A 544 -14.323 -6.435 -20.767 1.00 17.88 C
ATOM 1703 N THR A 545 -18.993 -8.437 -26.283 1.00 20.90 N
ATOM 1704 CA THR A 545 -19.372 -8.225 -27.674 1.00 20.92 C
ATOM 1705 C THR A 545 -18.657 -7.008 -28.249 1.00 20.75 C
ATOM 1706 O THR A 545 -18.436 -6.020 -27.550 1.00 21.72 O
ATOM 1707 CB THR A 545 -20.896 -8.043 -27.831 1.00 21.60 C
ATOM 1708 OG1 THR A 545 -21.341 -6.962 -27.002 1.00 17.11 O

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ATOM   1709  CG2 THR A 545     -21.628  -9.315 -27.431  1.00 21.36           C
ATOM   1710  N   PHE A 546     -18.293  -7.088 -29.525  1.00 18.96           N
ATOM   1711  CA  PHE A 546     -17.612  -5.985 -30.194  1.00 16.52           C
ATOM   1712  C   PHE A 546     -18.553  -4.821 -30.481  1.00 17.90           C
ATOM   1713  O   PHE A 546     -19.764  -5.000 -30.620  1.00 16.12           O
ATOM   1714  CB  PHE A 546     -16.970  -6.453 -31.504  1.00 14.43           C
ATOM   1715  CG  PHE A 546     -15.680  -7.197 -31.317  1.00 16.17           C
ATOM   1716  CD1 PHE A 546     -14.515  -6.519 -31.004  1.00 13.53           C
ATOM   1717  CD2 PHE A 546     -15.631  -8.574 -31.463  1.00 15.72           C
ATOM   1718  CE1 PHE A 546     -13.324  -7.199 -30.832  1.00 14.81           C
ATOM   1719  CE2 PHE A 546     -14.442  -9.260 -31.293  1.00 16.08           C
ATOM   1720  CZ  PHE A 546     -13.287  -8.572 -30.977  1.00 14.15           C
ATOM   1721  N   VAL A 547     -17.978  -3.626 -30.562  1.00 14.47           N
ATOM   1722  CA  VAL A 547     -18.700  -2.445 -31.008  1.00 16.22           C
ATOM   1723  C   VAL A 547     -17.904  -1.809 -32.140  1.00 13.94           C
ATOM   1724  O   VAL A 547     -16.996  -2.434 -32.688  1.00 22.65           O
ATOM   1725  CB  VAL A 547     -18.904  -1.425 -29.865  1.00 17.73           C
ATOM   1726  CG1 VAL A 547     -19.760  -2.027 -28.759  1.00 14.02           C
ATOM   1727  CG2 VAL A 547     -17.563  -0.951 -29.319  1.00 12.52           C
ATOM   1728  N   ALA A 548     -18.240  -0.574 -32.494  1.00 12.42           N
ATOM   1729  CA  ALA A 548     -17.500   0.142 -33.527  1.00 15.03           C
ATOM   1730  C   ALA A 548     -16.054   0.364 -33.091  1.00 14.68           C
ATOM   1731  O   ALA A 548     -15.800   0.782 -31.963  1.00 18.28           O
ATOM   1732  CB  ALA A 548     -18.174   1.469 -33.839  1.00 13.89           C
ATOM   1733  N   PRO A 549     -15.096   0.077 -33.984  1.00 17.78           N
ATOM   1734  CA  PRO A 549     -13.674   0.253 -33.674  1.00 15.00           C
ATOM   1735  C   PRO A 549     -13.253   1.719 -33.709  1.00 17.11           C
ATOM   1736  O   PRO A 549     -13.882   2.530 -34.394  1.00 16.70           O
ATOM   1737  CB  PRO A 549     -12.981  -0.515 -34.799  1.00 16.39           C
ATOM   1738  CG  PRO A 549     -13.924  -0.407 -35.946  1.00 15.84           C
ATOM   1739  CD  PRO A 549     -15.304  -0.451 -35.344  1.00 18.11           C
ATOM   1740  N   MET A 550     -12.198   2.050 -32.970  1.00 18.14           N
ATOM   1741  CA  MET A 550     -11.671   3.410 -32.948  1.00 14.62           C
ATOM   1742  C   MET A 550     -11.060   3.776 -34.290  1.00 14.97           C
ATOM   1743  O   MET A 550     -10.747   2.902 -35.097  1.00 14.34           O
ATOM   1744  CB  MET A 550     -10.620   3.563 -31.849  1.00 14.83           C
ATOM   1745  CG  MET A 550     -11.188   3.627 -30.446  1.00 14.35           C
ATOM   1746  SD  MET A 550      -9.888   3.737 -29.209  1.00  9.00           S
ATOM   1747  CE  MET A 550      -9.027   2.194 -29.501  1.00 12.45           C
ATOM   1748  N   LYS A 551     -10.889   5.073 -34.523  1.00 18.45           N
ATOM   1749  CA  LYS A 551     -10.299   5.555 -35.764  1.00 15.05           C
ATOM   1750  C   LYS A 551      -8.813   5.220 -35.829  1.00 16.06           C
ATOM   1751  O   LYS A 551      -8.259   5.023 -36.908  1.00 15.07           O
ATOM   1752  CB  LYS A 551     -10.512   7.064 -35.909  1.00 18.77           C
ATOM   1753  CG  LYS A 551     -11.958   7.455 -36.159  1.00 20.83           C
ATOM   1754  CD  LYS A 551     -12.490   6.752 -37.398  1.00 28.15           C
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ATOM   1755  CE  LYS A 551     -14.001   6.820 -37.479  1.00 24.98           C
ATOM   1756  NZ  LYS A 551     -14.518   5.963 -38.581  1.00 33.53           N
ATOM   1757  N   HIS A 552      -8.173   5.152 -34.667  1.00 16.71           N
ATOM   1758  CA  HIS A 552      -6.744   4.869 -34.606  1.00 18.44           C
ATOM   1759  C   HIS A 552      -6.429   3.726 -33.654  1.00 15.49           C
ATOM   1760  O   HIS A 552      -6.940   3.679 -32.537  1.00 15.21           O
ATOM   1761  CB  HIS A 552      -5.972   6.115 -34.169  1.00 17.81           C
ATOM   1762  CG  HIS A 552      -6.131   7.278 -35.095  1.00 21.44           C
ATOM   1763  ND1 HIS A 552      -5.185   7.611 -36.040  1.00 25.80           N
ATOM   1764  CD2 HIS A 552      -7.129   8.184 -35.225  1.00 21.21           C
ATOM   1765  CE1 HIS A 552      -5.591   8.673 -36.711  1.00 28.27           C
ATOM   1766  NE2 HIS A 552      -6.769   9.041 -36.236  1.00 26.93           N
ATOM   1767  N   ARG A 553      -5.584   2.805 -34.105  1.00 16.66           N
ATOM   1768  CA  ARG A 553      -5.026   1.795 -33.220  1.00 13.87           C
ATOM   1769  C   ARG A 553      -4.178   2.505 -32.177  1.00 13.18           C
ATOM   1770  O   ARG A 553      -3.440   3.435 -32.502  1.00 14.61           O
ATOM   1771  CB  ARG A 553      -4.160   0.813 -34.007  1.00 11.73           C
ATOM   1772  CG  ARG A 553      -4.919  -0.013 -35.028  1.00 14.83           C
ATOM   1773  CD  ARG A 553      -3.967  -0.855 -35.868  1.00 12.73           C
ATOM   1774  NE  ARG A 553      -4.685  -1.757 -36.764  1.00 13.31           N
ATOM   1775  CZ  ARG A 553      -5.104  -2.969 -36.416  1.00 14.49           C
ATOM   1776  NH1 ARG A 553      -4.876  -3.423 -35.191  1.00 15.02           N
ATOM   1777  NH2 ARG A 553      -5.750  -3.726 -37.291  1.00 18.42           N
ATOM   1778  N   ARG A 554      -4.279   2.074 -30.925  1.00 13.84           N
ATOM   1779  CA  ARG A 554      -3.524   2.716 -29.857  1.00 12.49           C
ATOM   1780  C   ARG A 554      -3.450   1.864 -28.592  1.00 16.10           C
ATOM   1781  O   ARG A 554      -4.418   1.203 -28.218  1.00 19.95           O
ATOM   1782  CB  ARG A 554      -4.128   4.087 -29.537  1.00 12.69           C
ATOM   1783  CG  ARG A 554      -5.564   4.030 -29.036  1.00 10.96           C
ATOM   1784  CD  ARG A 554      -6.104   5.419 -28.727  1.00 12.07           C
ATOM   1785  NE  ARG A 554      -6.598   6.109 -29.916  1.00 10.24           N
ATOM   1786  CZ  ARG A 554      -6.434   7.408 -30.149  1.00 12.15           C
ATOM   1787  NH1 ARG A 554      -5.778   8.163 -29.279  1.00  9.87           N
ATOM   1788  NH2 ARG A 554      -6.922   7.953 -31.255  1.00 11.39           N
ATOM   1789  N   SER A 555      -2.290   1.884 -27.942  1.00 13.80           N
ATOM   1790  CA  SER A 555      -2.115   1.231 -26.650  1.00 16.70           C
ATOM   1791  C   SER A 555      -1.533   2.232 -25.663  1.00 13.75           C
ATOM   1792  O   SER A 555      -0.888   3.200 -26.064  1.00 15.13           O
ATOM   1793  CB  SER A 555      -1.198   0.010 -26.766  1.00 18.59           C
ATOM   1794  OG  SER A 555       0.128   0.389 -27.094  1.00 19.32           O
ATOM   1795  N   ALA A 556      -1.763   1.999 -24.376  1.00 14.05           N
ATOM   1796  CA  ALA A 556      -1.326   2.931 -23.342  1.00 14.54           C
ATOM   1797  C   ALA A 556      -2.108   4.236 -23.450  1.00 12.57           C
ATOM   1798  O   ALA A 556      -1.574   5.319 -23.209  1.00 11.73           O
ATOM   1799  CB  ALA A 556       0.168   3.191 -23.455  1.00 12.03           C
ATOM   1800  N   LEU A 557      -3.380   4.120 -23.816  1.00  9.54           N
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ATOM   1801  CA  LEU A 557      -4.235   5.285 -23.993  1.00 10.48           C
ATOM   1802  C   LEU A 557      -4.924   5.677 -22.693  1.00 11.19           C
ATOM   1803  O   LEU A 557      -5.172   4.836 -21.832  1.00 12.94           O
ATOM   1804  CB  LEU A 557      -5.293   5.010 -25.062  1.00 10.49           C
ATOM   1805  CG  LEU A 557      -6.258   3.858 -24.768  1.00 13.67           C
ATOM   1806  CD1 LEU A 557      -7.566   4.044 -25.528  1.00 11.14           C
ATOM   1807  CD2 LEU A 557      -5.626   2.512 -25.110  1.00  8.40           C
ATOM   1808  N   GLY A 558      -5.233   6.961 -22.559  1.00  9.75           N
ATOM   1809  CA  GLY A 558      -6.023   7.434 -21.441  1.00 12.12           C
ATOM   1810  C   GLY A 558      -7.495   7.361 -21.796  1.00 12.54           C
ATOM   1811  O   GLY A 558      -7.873   7.618 -22.937  1.00 11.79           O
ATOM   1812  N   ILE A 559      -8.329   7.007 -20.824  1.00 13.32           N
ATOM   1813  CA  ILE A 559      -9.757   6.856 -21.080  1.00 15.07           C
ATOM   1814  C   ILE A 559     -10.596   7.443 -19.953  1.00 11.26           C
ATOM   1815  O   ILE A 559     -10.170   7.477 -18.798  1.00 12.35           O
ATOM   1816  CB  ILE A 559     -10.141   5.372 -21.267  1.00 11.27           C
ATOM   1817  CG1 ILE A 559     -11.484   5.252 -21.989  1.00 10.53           C
ATOM   1818  CG2 ILE A 559     -10.180   4.658 -19.924  1.00 12.59           C
ATOM   1819  CD1 ILE A 559     -11.888   3.827 -22.294  1.00  9.43           C
ATOM   1820  N   THR A 560     -11.793   7.903 -20.297  1.00  9.18           N
ATOM   1821  CA  THR A 560     -12.729   8.412 -19.304  1.00 11.41           C
ATOM   1822  C   THR A 560     -14.087   8.665 -19.936  1.00 12.37           C
ATOM   1823  O   THR A 560     -14.230   8.635 -21.158  1.00 12.48           O
ATOM   1824  CB  THR A 560     -12.238   9.725 -18.671  1.00 13.94           C
ATOM   1825  OG1 THR A 560     -13.025  10.018 -17.511  1.00 13.96           O
ATOM   1826  CG2 THR A 560     -12.357  10.875 -19.663  1.00 10.18           C
ATOM   1827  N   VAL A 561     -15.083   8.918 -19.095  1.00 12.93           N
ATOM   1828  CA  VAL A 561     -16.426   9.215 -19.570  1.00 12.72           C
ATOM   1829  C   VAL A 561     -16.765  10.676 -19.322  1.00 14.76           C
ATOM   1830  O   VAL A 561     -16.322  11.266 -18.336  1.00 14.16           O
ATOM   1831  CB  VAL A 561     -17.480   8.324 -18.883  1.00 12.14           C
ATOM   1832  CG1 VAL A 561     -18.883   8.778 -19.254  1.00 10.61           C
ATOM   1833  CG2 VAL A 561     -17.271   6.870 -19.261  1.00 14.04           C
ATOM   1834  N   HIS A 562     -17.547  11.260 -20.223  1.00 14.22           N
ATOM   1835  CA  HIS A 562     -17.986  12.639 -20.058  1.00 14.30           C
ATOM   1836  C   HIS A 562     -19.303  12.866 -20.785  1.00 14.24           C
ATOM   1837  O   HIS A 562     -19.353  12.781 -22.016  1.00 13.40           O
ATOM   1838  CB  HIS A 562     -16.927  13.609 -20.589  1.00 13.15           C
ATOM   1839  CG  HIS A 562     -17.263  15.050 -20.363  1.00 13.09           C
ATOM   1840  ND1 HIS A 562     -17.990  15.796 -21.265  1.00 11.66           N
ATOM   1841  CD2 HIS A 562     -16.968  15.881 -19.337  1.00 13.02           C
ATOM   1842  CE1 HIS A 562     -18.132  17.025 -20.802  1.00 12.81           C
ATOM   1843  NE2 HIS A 562     -17.520  17.103 -19.633  1.00 11.97           N
ATOM   1844  N   GLN A 563     -20.360  13.148 -20.026  1.00 15.90           N
ATOM   1845  CA  GLN A 563     -21.659  13.470 -20.603  1.00 16.64           C
ATOM   1846  C   GLN A 563     -22.250  12.276 -21.348  1.00 16.00           C
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ATOM   1847  O   GLN A 563     -22.924  12.452 -22.367  1.00 22.41           O
ATOM   1848  CB  GLN A 563     -21.547  14.676 -21.545  1.00 23.20           C
ATOM   1849  CG  GLN A 563     -21.177  16.005 -20.862  1.00 26.20           C
ATOM   1850  CD  GLN A 563     -22.330  16.610 -20.081  1.00 25.35           C
ATOM   1851  OE1 GLN A 563     -22.416  16.465 -18.859  1.00 33.74           O
ATOM   1852  NE2 GLN A 563     -23.233  17.278 -20.788  1.00 28.75           N
ATOM   1853  N   GLY A 564     -21.985  11.070 -20.848  1.00 13.98           N
ATOM   1854  CA  GLY A 564     -22.529   9.857 -21.434  1.00 14.71           C
ATOM   1855  C   GLY A 564     -21.769   9.380 -22.659  1.00 19.74           C
ATOM   1856  O   GLY A 564     -22.279   8.574 -23.441  1.00 15.62           O
ATOM   1857  N   ARG A 565     -20.551   9.886 -22.830  1.00 15.23           N
ATOM   1858  CA  ARG A 565     -19.704   9.490 -23.949  1.00 17.31           C
ATOM   1859  C   ARG A 565     -18.324   9.061 -23.466  1.00 13.07           C
ATOM   1860  O   ARG A 565     -17.851   9.516 -22.425  1.00 14.12           O
ATOM   1861  CB  ARG A 565     -19.563  10.630 -24.960  1.00 19.24           C
ATOM   1862  CG  ARG A 565     -20.847  11.024 -25.671  1.00 16.14           C
ATOM   1863  CD  ARG A 565     -20.524  11.652 -27.015  1.00 16.42           C
ATOM   1864  NE  ARG A 565     -21.635  12.419 -27.571  1.00 28.73           N
ATOM   1865  CZ  ARG A 565     -22.771  11.884 -28.005  1.00 28.74           C
ATOM   1866  NH1 ARG A 565     -22.959  10.575 -27.927  1.00 26.25           N
ATOM   1867  NH2 ARG A 565     -23.725  12.661 -28.502  1.00 32.25           N
ATOM   1868  N   ILE A 566     -17.680   8.187 -24.229  1.00 12.23           N
ATOM   1869  CA  ILE A 566     -16.349   7.707 -23.882  1.00 12.02           C
ATOM   1870  C   ILE A 566     -15.275   8.528 -24.581  1.00 14.52           C
ATOM   1871  O   ILE A 566     -15.381   8.825 -25.771  1.00 12.58           O
ATOM   1872  CB  ILE A 566     -16.170   6.228 -24.261  1.00 14.55           C
ATOM   1873  CG1 ILE A 566     -17.253   5.375 -23.598  1.00 17.52           C
ATOM   1874  CG2 ILE A 566     -14.782   5.741 -23.869  1.00 12.10           C
ATOM   1875  CD1 ILE A 566     -17.143   3.898 -23.916  1.00 17.61           C
ATOM   1876  N   TYR A 567     -14.242   8.899 -23.834  1.00 13.82           N
ATOM   1877  CA  TYR A 567     -13.127   9.647 -24.395  1.00 13.23           C
ATOM   1878  C   TYR A 567     -11.821   8.877 -24.244  1.00 12.10           C
ATOM   1879  O   TYR A 567     -11.482   8.417 -23.154  1.00 10.11           O
ATOM   1880  CB  TYR A 567     -13.003  11.020 -23.727  1.00 11.89           C
ATOM   1881  CG  TYR A 567     -14.066  12.013 -24.136  1.00  9.61           C
ATOM   1882  CD1 TYR A 567     -15.362  11.914 -23.648  1.00 12.96           C
ATOM   1883  CD2 TYR A 567     -13.771  13.057 -25.003  1.00 11.25           C
ATOM   1884  CE1 TYR A 567     -16.337  12.823 -24.018  1.00 10.98           C
ATOM   1885  CE2 TYR A 567     -14.738  13.971 -25.380  1.00  9.34           C
ATOM   1886  CZ  TYR A 567     -16.020  13.849 -24.884  1.00 13.51           C
ATOM   1887  OH  TYR A 567     -16.987  14.758 -25.255  1.00 14.11           O
ATOM   1888  N   VAL A 568     -11.095   8.737 -25.349  1.00 13.98           N
ATOM   1889  CA  VAL A 568      -9.767   8.139 -25.326  1.00 10.62           C
ATOM   1890  C   VAL A 568      -8.716   9.202 -25.634  1.00 11.29           C
ATOM   1891  O   VAL A 568      -8.884   9.997 -26.558  1.00 15.71           O
ATOM   1892  CB  VAL A 568      -9.651   6.979 -26.329  1.00  9.74           C
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ATOM   1893  CG1 VAL A 568     -10.551   5.828 -25.906  1.00 10.97           C
ATOM   1894  CG2 VAL A 568     -10.002   7.449 -27.731  1.00 12.26           C
ATOM   1895  N   LEU A 569      -7.640   9.223 -24.854  1.00 11.93           N
ATOM   1896  CA  LEU A 569      -6.598  10.232 -25.023  1.00 10.71           C
ATOM   1897  C   LEU A 569      -5.225   9.623 -25.305  1.00 12.48           C
ATOM   1898  O   LEU A 569      -4.773   8.725 -24.593  1.00  9.51           O
ATOM   1899  CB  LEU A 569      -6.517  11.145 -23.794  1.00  8.41           C
ATOM   1900  CG  LEU A 569      -7.717  12.048 -23.495  1.00  9.64           C
ATOM   1901  CD1 LEU A 569      -8.872  11.254 -22.904  1.00 11.19           C
ATOM   1902  CD2 LEU A 569      -7.322  13.190 -22.571  1.00 11.21           C
ATOM   1903  N   GLY A 570      -4.573  10.121 -26.351  1.00 12.58           N
ATOM   1904  CA  GLY A 570      -3.210   9.732 -26.670  1.00 13.04           C
ATOM   1905  C   GLY A 570      -2.993   8.244 -26.871  1.00 11.76           C
ATOM   1906  O   GLY A 570      -3.909   7.511 -27.244  1.00 11.46           O
ATOM   1907  N   GLY A 571      -1.766   7.800 -26.622  1.00 12.03           N
ATOM   1908  CA  GLY A 571      -1.404   6.410 -26.816  1.00 12.00           C
ATOM   1909  C   GLY A 571      -0.311   6.247 -27.853  1.00 13.74           C
ATOM   1910  O   GLY A 571       0.178   7.223 -28.426  1.00 11.98           O
ATOM   1911  N   TYR A 572       0.071   4.999 -28.096  1.00 14.98           N
ATOM   1912  CA  TYR A 572       1.128   4.679 -29.042  1.00 15.22           C
ATOM   1913  C   TYR A 572       0.560   3.752 -30.110  1.00 15.38           C
ATOM   1914  O   TYR A 572      -0.057   2.739 -29.787  1.00 16.96           O
ATOM   1915  CB  TYR A 572       2.289   4.011 -28.303  1.00 18.91           C
ATOM   1916  CG  TYR A 572       3.525   3.777 -29.138  1.00 24.77           C
ATOM   1917  CD1 TYR A 572       4.278   4.844 -29.612  1.00 24.47           C
ATOM   1918  CD2 TYR A 572       3.953   2.488 -29.433  1.00 25.47           C
ATOM   1919  CE1 TYR A 572       5.415   4.634 -30.372  1.00 23.62           C
ATOM   1920  CE2 TYR A 572       5.092   2.269 -30.191  1.00 24.65           C
ATOM   1921  CZ  TYR A 572       5.817   3.346 -30.656  1.00 24.21           C
ATOM   1922  OH  TYR A 572       6.947   3.135 -31.409  1.00 35.84           O
ATOM   1923  N   ASP A 573       0.752   4.103 -31.379  1.00 16.50           N
ATOM   1924  CA  ASP A 573       0.164   3.333 -32.476  1.00 17.79           C
ATOM   1925  C   ASP A 573       1.155   2.360 -33.107  1.00 19.66           C
ATOM   1926  O   ASP A 573       0.808   1.613 -34.021  1.00 18.38           O
ATOM   1927  CB  ASP A 573      -0.415   4.263 -33.547  1.00 17.72           C
ATOM   1928  CG  ASP A 573       0.660   4.928 -34.392  1.00 20.78           C
ATOM   1929  OD1 ASP A 573       1.837   4.937 -33.973  1.00 19.82           O
ATOM   1930  OD2 ASP A 573       0.323   5.449 -35.477  1.00 16.89           O
ATOM   1931  N   GLY A 574       2.387   2.371 -32.613  1.00 23.21           N
ATOM   1932  CA  GLY A 574       3.417   1.496 -33.137  1.00 23.78           C
ATOM   1933  C   GLY A 574       4.607   2.273 -33.659  1.00 27.67           C
ATOM   1934  O   GLY A 574       5.741   1.798 -33.597  1.00 30.15           O
ATOM   1935  N   HIS A 575       4.348   3.471 -34.175  1.00 27.65           N
ATOM   1936  CA  HIS A 575       5.408   4.336 -34.682  1.00 28.07           C
ATOM   1937  C   HIS A 575       5.360   5.697 -34.002  1.00 27.27           C
ATOM   1938  O   HIS A 575       6.388   6.351 -33.823  1.00 28.27           O
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ATOM   1939  CB  HIS A 575       5.276   4.535 -36.195  1.00 26.23           C
ATOM   1940  CG  HIS A 575       4.891   3.298 -36.943  1.00 41.12           C
ATOM   1941  ND1 HIS A 575       5.807   2.341 -37.325  1.00 49.51           N
ATOM   1942  CD2 HIS A 575       3.688   2.866 -37.392  1.00 39.13           C
ATOM   1943  CE1 HIS A 575       5.185   1.371 -37.970  1.00 43.16           C
ATOM   1944  NE2 HIS A 575       3.898   1.665 -38.024  1.00 45.33           N
ATOM   1945  N   THR A 576       4.158   6.118 -33.623  1.00 21.18           N
ATOM   1946  CA  THR A 576       3.938   7.489 -33.184  1.00 19.01           C
ATOM   1947  C   THR A 576       3.209   7.586 -31.847  1.00 21.12           C
ATOM   1948  O   THR A 576       2.286   6.820 -31.570  1.00 21.18           O
ATOM   1949  CB  THR A 576       3.127   8.275 -34.236  1.00 22.43           C
ATOM   1950  OG1 THR A 576       3.775   8.185 -35.512  1.00 21.51           O
ATOM   1951  CG2 THR A 576       2.999   9.737 -33.835  1.00 23.27           C
ATOM   1952  N   PHE A 577       3.633   8.535 -31.020  1.00 15.60           N
ATOM   1953  CA  PHE A 577       2.902   8.858 -29.806  1.00 15.42           C
ATOM   1954  C   PHE A 577       1.775   9.816 -30.162  1.00 13.59           C
ATOM   1955  O   PHE A 577       2.013  10.954 -30.555  1.00 12.13           O
ATOM   1956  CB  PHE A 577       3.838   9.453 -28.757  1.00 12.74           C
ATOM   1957  CG  PHE A 577       4.860   8.477 -28.248  1.00 16.26           C
ATOM   1958  CD1 PHE A 577       4.577   7.660 -27.166  1.00 17.09           C
ATOM   1959  CD2 PHE A 577       6.092   8.359 -28.863  1.00 17.79           C
ATOM   1960  CE1 PHE A 577       5.512   6.753 -26.699  1.00 19.71           C
ATOM   1961  CE2 PHE A 577       7.030   7.454 -28.401  1.00 17.47           C
ATOM   1962  CZ  PHE A 577       6.740   6.652 -27.318  1.00 15.02           C
ATOM   1963  N   LEU A 578       0.543   9.334 -30.036  1.00 15.80           N
ATOM   1964  CA  LEU A 578      -0.618  10.045 -30.557  1.00 13.51           C
ATOM   1965  C   LEU A 578      -1.006  11.250 -29.715  1.00 11.29           C
ATOM   1966  O   LEU A 578      -0.927  11.217 -28.490  1.00 11.45           O
ATOM   1967  CB  LEU A 578      -1.811   9.092 -30.678  1.00 12.98           C
ATOM   1968  CG  LEU A 578      -1.603   7.866 -31.569  1.00 12.84           C
ATOM   1969  CD1 LEU A 578      -2.832   6.972 -31.548  1.00 12.58           C
ATOM   1970  CD2 LEU A 578      -1.273   8.294 -32.990  1.00 12.75           C
ATOM   1971  N   ASP A 579      -1.422  12.316 -30.389  1.00 13.14           N
ATOM   1972  CA  ASP A 579      -1.983  13.480 -29.722  1.00 13.37           C
ATOM   1973  C   ASP A 579      -3.493  13.473 -29.931  1.00 13.29           C
ATOM   1974  O   ASP A 579      -4.216  14.321 -29.408  1.00 12.57           O
ATOM   1975  CB  ASP A 579      -1.373  14.764 -30.284  1.00 12.64           C
ATOM   1976  CG  ASP A 579      -1.816  15.046 -31.707  1.00 16.52           C
ATOM   1977  OD1 ASP A 579      -2.360  14.128 -32.356  1.00 20.18           O
ATOM   1978  OD2 ASP A 579      -1.617  16.185 -32.178  1.00 18.71           O
ATOM   1979  N   SER A 580      -3.956  12.493 -30.699  1.00 13.42           N
ATOM   1980  CA  SER A 580      -5.361  12.384 -31.075  1.00 14.74           C
ATOM   1981  C   SER A 580      -6.283  12.097 -29.891  1.00 12.71           C
ATOM   1982  O   SER A 580      -5.900  11.417 -28.938  1.00 14.58           O
ATOM   1983  CB  SER A 580      -5.529  11.295 -32.137  1.00 13.79           C
ATOM   1984  OG  SER A 580      -6.896  10.975 -32.326  1.00 22.56           O
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ATOM   1985  N   VAL A 581     -7.503  12.618 -29.964  1.00 11.41           N
ATOM   1986  CA  VAL A 581     -8.523  12.332 -28.964  1.00 11.27           C
ATOM   1987  C   VAL A 581     -9.830  11.958 -29.650  1.00 13.79           C
ATOM   1988  O   VAL A 581    -10.368  12.737 -30.440  1.00 15.12           O
ATOM   1989  CB  VAL A 581     -8.776  13.537 -28.042  1.00 12.04           C
ATOM   1990  CG1 VAL A 581     -9.952  13.252 -27.117  1.00  9.33           C
ATOM   1991  CG2 VAL A 581     -7.523  13.874 -27.248  1.00  9.64           C
ATOM   1992  N   GLU A 582    -10.334  10.766 -29.346  1.00 12.32           N
ATOM   1993  CA  GLU A 582    -11.552  10.263 -29.973  1.00 12.78           C
ATOM   1994  C   GLU A 582    -12.701  10.158 -28.976  1.00 14.90           C
ATOM   1995  O   GLU A 582    -12.488   9.974 -27.777  1.00 15.60           O
ATOM   1996  CB  GLU A 582    -11.298   8.901 -30.624  1.00 14.22           C
ATOM   1997  CG  GLU A 582    -10.112   8.890 -31.575  1.00 17.67           C
ATOM   1998  CD  GLU A 582     -9.982   7.583 -32.331  1.00 18.23           C
ATOM   1999  OE1 GLU A 582     -8.854   7.246 -32.750  1.00 21.14           O
ATOM   2000  OE2 GLU A 582    -11.008   6.896 -32.515  1.00 19.21           O
ATOM   2001  N   CYS A 583    -13.920  10.271 -29.486  1.00 12.86           N
ATOM   2002  CA  CYS A 583    -15.112  10.230 -28.654  1.00 13.01           C
ATOM   2003  C   CYS A 583    -16.058   9.137 -29.147  1.00 13.99           C
ATOM   2004  O   CYS A 583    -16.303   9.018 -30.348  1.00 14.85           O
ATOM   2005  CB  CYS A 583    -15.808  11.593 -28.677  1.00 13.49           C
ATOM   2006  SG  CYS A 583    -17.299  11.709 -27.666  1.00 16.31           S
ATOM   2007  N   TYR A 584    -16.579   8.334 -28.222  1.00 13.06           N
ATOM   2008  CA  TYR A 584    -17.501   7.262 -28.587  1.00 13.56           C
ATOM   2009  C   TYR A 584    -18.946   7.576 -28.208  1.00 15.58           C
ATOM   2010  O   TYR A 584    -19.252   7.834 -27.045  1.00 13.24           O
ATOM   2011  CB  TYR A 584    -17.078   5.932 -27.960  1.00 12.30           C
ATOM   2012  CG  TYR A 584    -18.032   4.796 -28.266  1.00 14.50           C
ATOM   2013  CD1 TYR A 584    -17.949   4.098 -29.464  1.00 15.09           C
ATOM   2014  CD2 TYR A 584    -19.019   4.426 -27.361  1.00 13.92           C
ATOM   2015  CE1 TYR A 584    -18.819   3.064 -29.752  1.00 15.37           C
ATOM   2016  CE2 TYR A 584    -19.893   3.390 -27.640  1.00 13.50           C
ATOM   2017  CZ  TYR A 584    -19.788   2.712 -28.838  1.00 15.86           C
ATOM   2018  OH  TYR A 584    -20.653   1.682 -29.126  1.00 12.92           O
ATOM   2019  N   ASP A 585    -19.827   7.549 -29.204  1.00 16.85           N
ATOM   2020  CA  ASP A 585    -21.254   7.737 -28.982  1.00 14.96           C
ATOM   2021  C   ASP A 585    -21.938   6.378 -28.930  1.00 12.84           C
ATOM   2022  O   ASP A 585    -22.061   5.704 -29.951  1.00 17.80           O
ATOM   2023  CB  ASP A 585    -21.860   8.588 -30.101  1.00 17.83           C
ATOM   2024  CG  ASP A 585    -23.315   8.942 -29.847  1.00 20.66           C
ATOM   2025  OD1 ASP A 585    -23.978   8.237 -29.058  1.00 21.07           O
ATOM   2026  OD2 ASP A 585    -23.795   9.934 -30.435  1.00 19.98           O
ATOM   2027  N   PRO A 586    -22.381   5.965 -27.735  1.00 16.70           N
ATOM   2028  CA  PRO A 586    -23.015   4.653 -27.568  1.00 15.43           C
ATOM   2029  C   PRO A 586    -24.371   4.563 -28.265  1.00 16.84           C
ATOM   2030  O   PRO A 586    -24.800   3.468 -28.630  1.00 18.68           O
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ATOM   2031  CB  PRO A 586     -23.184   4.540 -26.050  1.00 13.02           C
ATOM   2032  CG  PRO A 586     -23.226   5.949 -25.571  1.00 12.20           C
ATOM   2033  CD  PRO A 586     -22.287   6.700 -26.462  1.00 14.73           C
ATOM   2034  N   ASP A 587     -25.026   5.704 -28.454  1.00 16.22           N
ATOM   2035  CA  ASP A 587     -26.352   5.742 -29.064  1.00 16.34           C
ATOM   2036  C   ASP A 587     -26.310   5.506 -30.577  1.00 21.33           C
ATOM   2037  O   ASP A 587     -27.222   4.900 -31.147  1.00 15.14           O
ATOM   2038  CB  ASP A 587     -27.037   7.075 -28.752  1.00 15.96           C
ATOM   2039  CG  ASP A 587     -27.396   7.217 -27.284  1.00 20.14           C
ATOM   2040  OD1 ASP A 587     -26.968   6.362 -26.479  1.00 16.64           O
ATOM   2041  OD2 ASP A 587     -28.105   8.185 -26.935  1.00 21.35           O
ATOM   2042  N   THR A 588     -25.250   5.987 -31.218  1.00 19.08           N
ATOM   2043  CA  THR A 588     -25.078   5.820 -32.657  1.00 17.91           C
ATOM   2044  C   THR A 588     -24.029   4.758 -32.958  1.00 17.91           C
ATOM   2045  O   THR A 588     -23.824   4.384 -34.113  1.00 19.84           O
ATOM   2046  CB  THR A 588     -24.642   7.134 -33.327  1.00 19.71           C
ATOM   2047  OG1 THR A 588     -23.461   7.628 -32.682  1.00 22.08           O
ATOM   2048  CG2 THR A 588     -25.740   8.181 -33.225  1.00 15.70           C
ATOM   2049  N   ASP A 589     -23.368   4.279 -31.909  1.00 18.61           N
ATOM   2050  CA  ASP A 589     -22.276   3.322 -32.048  1.00 18.04           C
ATOM   2051  C   ASP A 589     -21.202   3.860 -32.988  1.00 17.17           C
ATOM   2052  O   ASP A 589     -20.766   3.171 -33.911  1.00 18.11           O
ATOM   2053  CB  ASP A 589     -22.794   1.974 -32.549  1.00 13.09           C
ATOM   2054  CG  ASP A 589     -21.730   0.892 -32.516  1.00 18.02           C
ATOM   2055  OD1 ASP A 589     -20.900   0.901 -31.582  1.00 18.56           O
ATOM   2056  OD2 ASP A 589     -21.721   0.035 -33.425  1.00 18.76           O
ATOM   2057  N   THR A 590     -20.778   5.096 -32.745  1.00 17.71           N
ATOM   2058  CA  THR A 590     -19.799   5.748 -33.608  1.00 20.18           C
ATOM   2059  C   THR A 590     -18.626   6.350 -32.838  1.00 14.90           C
ATOM   2060  O   THR A 590     -18.792   6.876 -31.739  1.00 17.04           O
ATOM   2061  CB  THR A 590     -20.454   6.852 -34.460  1.00 17.61           C
ATOM   2062  OG1 THR A 590     -21.282   7.671 -33.626  1.00 23.96           O
ATOM   2063  CG2 THR A 590     -21.309   6.237 -35.550  1.00 18.65           C
ATOM   2064  N   TRP A 591     -17.438   6.256 -33.427  1.00 12.49           N
ATOM   2065  CA  TRP A 591     -16.254   6.926 -32.905  1.00 15.17           C
ATOM   2066  C   TRP A 591     -15.937   8.116 -33.799  1.00 15.20           C
ATOM   2067  O   TRP A 591     -16.456   8.219 -34.909  1.00 19.93           O
ATOM   2068  CB  TRP A 591     -15.051   5.978 -32.884  1.00 12.57           C
ATOM   2069  CG  TRP A 591     -15.061   4.962 -31.779  1.00 13.24           C
ATOM   2070  CD1 TRP A 591     -15.523   3.680 -31.848  1.00 13.77           C
ATOM   2071  CD2 TRP A 591     -14.565   5.137 -30.445  1.00 14.14           C
ATOM   2072  NE1 TRP A 591     -15.352   3.049 -30.639  1.00 12.65           N
ATOM   2073  CE2 TRP A 591     -14.768   3.922 -29.761  1.00 14.24           C
ATOM   2074  CE3 TRP A 591     -13.973   6.203 -29.763  1.00 12.29           C
ATOM   2075  CZ2 TRP A 591     -14.399   3.745 -28.429  1.00 11.54           C
ATOM   2076  CZ3 TRP A 591     -13.609   6.025 -28.438  1.00 11.00           C
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ATOM   2077  CH2 TRP A 591     -13.823   4.806 -27.787  1.00 10.98           C
ATOM   2078  N   SER A 592     -15.078   9.008 -33.322  1.00 14.91           N
ATOM   2079  CA  SER A 592     -14.665  10.158 -34.117  1.00 18.22           C
ATOM   2080  C   SER A 592     -13.733  11.069 -33.334  1.00 15.06           C
ATOM   2081  O   SER A 592     -13.953  11.323 -32.152  1.00 18.24           O
ATOM   2082  CB  SER A 592     -15.887  10.951 -34.586  1.00 21.41           C
ATOM   2083  OG  SER A 592     -16.667  11.383 -33.485  1.00 16.43           O
ATOM   2084  N   GLU A 593     -12.689  11.554 -33.998  1.00 16.95           N
ATOM   2085  CA  GLU A 593     -11.799  12.531 -33.391  1.00 14.92           C
ATOM   2086  C   GLU A 593     -12.553  13.835 -33.173  1.00 18.74           C
ATOM   2087  O   GLU A 593     -13.299  14.282 -34.047  1.00 15.36           O
ATOM   2088  CB  GLU A 593     -10.577  12.779 -34.276  1.00 15.58           C
ATOM   2089  CG  GLU A 593      -9.710  11.557 -34.502  1.00 18.74           C
ATOM   2090  CD  GLU A 593      -8.366  11.911 -35.107  1.00 22.79           C
ATOM   2091  OE1 GLU A 593      -7.873  11.144 -35.960  1.00 25.58           O
ATOM   2092  OE2 GLU A 593      -7.802  12.958 -34.725  1.00 18.13           O
ATOM   2093  N   VAL A 594     -12.356  14.441 -32.007  1.00 16.81           N
ATOM   2094  CA  VAL A 594     -13.053  15.674 -31.663  1.00 13.18           C
ATOM   2095  C   VAL A 594     -12.074  16.811 -31.393  1.00 18.37           C
ATOM   2096  O   VAL A 594     -12.410  17.986 -31.547  1.00 20.85           O
ATOM   2097  CB  VAL A 594     -13.963  15.477 -30.447  1.00 11.25           C
ATOM   2098  CG1 VAL A 594     -15.120  14.555 -30.810  1.00 14.41           C
ATOM   2099  CG2 VAL A 594     -13.169  14.918 -29.275  1.00 10.49           C
ATOM   2100  N   THR A 595     -10.861  16.450 -30.995  1.00 14.56           N
ATOM   2101  CA  THR A 595      -9.810  17.429 -30.773  1.00 14.11           C
ATOM   2102  C   THR A 595      -8.468  16.724 -30.724  1.00 12.84           C
ATOM   2103  O   THR A 595      -8.369  15.541 -31.043  1.00 16.06           O
ATOM   2104  CB  THR A 595     -10.010  18.181 -29.450  1.00 11.46           C
ATOM   2105  OG1 THR A 595      -8.998  19.184 -29.316  1.00 10.82           O
ATOM   2106  CG2 THR A 595      -9.915  17.223 -28.276  1.00 10.48           C
ATOM   2107  N   ARG A 596      -7.434  17.454 -30.326  1.00 10.79           N
ATOM   2108  CA  ARG A 596      -6.135  16.843 -30.083  1.00 14.13           C
ATOM   2109  C   ARG A 596      -5.421  17.529 -28.927  1.00 13.44           C
ATOM   2110  O   ARG A 596      -5.572  18.732 -28.717  1.00 12.74           O
ATOM   2111  CB  ARG A 596      -5.266  16.844 -31.345  1.00 18.43           C
ATOM   2112  CG  ARG A 596      -4.878  18.219 -31.875  1.00 22.29           C
ATOM   2113  CD  ARG A 596      -3.814  18.078 -32.959  1.00 25.29           C
ATOM   2114  NE  ARG A 596      -3.419  19.359 -33.539  1.00 31.75           N
ATOM   2115  CZ  ARG A 596      -2.643  20.248 -32.926  1.00 37.00           C
ATOM   2116  NH1 ARG A 596      -2.188  20.003 -31.703  1.00 28.99           N
ATOM   2117  NH2 ARG A 596      -2.330  21.387 -33.531  1.00 32.43           N
ATOM   2118  N   MET A 597      -4.657  16.748 -28.171  1.00 12.50           N
ATOM   2119  CA  MET A 597      -3.919  17.270 -27.032  1.00 11.62           C
ATOM   2120  C   MET A 597      -2.864  18.246 -27.534  1.00 12.94           C
ATOM   2121  O   MET A 597      -2.615  18.326 -28.735  1.00 14.23           O
ATOM   2122  CB  MET A 597      -3.272  16.123 -26.256  1.00 15.49           C
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ATOM   2123  CG  MET A 597      -4.233  14.978 -25.948  1.00 17.25           C
ATOM   2124  SD  MET A 597      -3.449  13.529 -25.211  1.00 14.17           S
ATOM   2125  CE  MET A 597      -3.019  14.161 -23.595  1.00 18.21           C
ATOM   2126  N   THR A 598      -2.249  18.987 -26.621  1.00 12.27           N
ATOM   2127  CA  THR A 598      -1.251  19.980 -27.002  1.00 11.06           C
ATOM   2128  C   THR A 598       0.047  19.329 -27.472  1.00 12.95           C
ATOM   2129  O   THR A 598       0.901  19.985 -28.066  1.00 16.02           O
ATOM   2130  CB  THR A 598      -0.962  20.966 -25.855  1.00 14.17           C
ATOM   2131  OG1 THR A 598      -0.588  20.241 -24.676  1.00 13.88           O
ATOM   2132  CG2 THR A 598      -2.195  21.809 -25.561  1.00  9.18           C
ATOM   2133  N   SER A 599       0.187  18.036 -27.206  1.00 13.36           N
ATOM   2134  CA  SER A 599       1.350  17.283 -27.659  1.00 12.43           C
ATOM   2135  C   SER A 599       1.091  15.785 -27.546  1.00 10.14           C
ATOM   2136  O   SER A 599       0.483  15.325 -26.583  1.00 12.06           O
ATOM   2137  CB  SER A 599       2.595  17.673 -26.857  1.00  8.99           C
ATOM   2138  OG  SER A 599       2.407  17.453 -25.470  1.00 11.94           O
ATOM   2139  N   GLY A 600       1.545  15.028 -28.540  1.00 13.27           N
ATOM   2140  CA  GLY A 600       1.395  13.585 -28.522  1.00 12.46           C
ATOM   2141  C   GLY A 600       2.042  12.987 -27.289  1.00 12.28           C
ATOM   2142  O   GLY A 600       3.095  13.450 -26.849  1.00  9.52           O
ATOM   2143  N   ARG A 601       1.414  11.958 -26.730  1.00 12.30           N
ATOM   2144  CA  ARG A 601       1.898  11.347 -25.498  1.00 10.47           C
ATOM   2145  C   ARG A 601       1.142  10.058 -25.198  1.00 14.32           C
ATOM   2146  O   ARG A 601      -0.013   9.901 -25.594  1.00 14.78           O
ATOM   2147  CB  ARG A 601       1.741  12.319 -24.328  1.00 11.36           C
ATOM   2148  CG  ARG A 601       0.299  12.533 -23.897  1.00 12.62           C
ATOM   2149  CD  ARG A 601       0.159  13.706 -22.934  1.00 10.03           C
ATOM   2150  NE  ARG A 601       0.292  14.991 -23.614  1.00 11.75           N
ATOM   2151  CZ  ARG A 601      -0.066  16.157 -23.087  1.00 13.58           C
ATOM   2152  NH1 ARG A 601      -0.588  16.207 -21.869  1.00 14.57           N
ATOM   2153  NH2 ARG A 601       0.091  17.276 -23.780  1.00 12.62           N
ATOM   2154  N   SER A 602       1.801   9.140 -24.497  1.00 14.09           N
ATOM   2155  C   SER A 602       1.223   7.667 -22.614  1.00 14.40           C
ATOM   2156  O   SER A 602       1.851   8.439 -21.888  1.00 15.90           O
ATOM   2157  CA ASER A 602       1.178   7.876 -24.124  0.86 14.28           C
ATOM   2158  CB ASER A 602       1.854   6.703 -24.841  0.86 14.54           C
ATOM   2159  OG ASER A 602       3.195   6.543 -24.413  0.86 15.83           O
ATOM   2160  CA BSER A 602       1.192   7.870 -24.127  0.14 14.29           C
ATOM   2161  CB BSER A 602       1.914   6.717 -24.828  0.14 14.39           C
ATOM   2162  OG BSER A 602       1.338   5.470 -24.490  0.14 14.33           O
ATOM   2163  N   GLY A 603       0.541   6.628 -22.145  1.00 10.63           N
ATOM   2164  CA  GLY A 603       0.547   6.276 -20.736  1.00 12.63           C
ATOM   2165  C   GLY A 603       0.105   7.366 -19.774  1.00 14.47           C
ATOM   2166  O   GLY A 603       0.672   7.504 -18.691  1.00  9.19           O
ATOM   2167  N   VAL A 604      -0.913   8.133 -20.159  1.00 14.10           N
ATOM   2168  CA  VAL A 604      -1.449   9.180 -19.293  1.00 11.15           C
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ATOM   2169  C   VAL A 604     -2.458   8.619 -18.300  1.00 11.72           C
ATOM   2170  O   VAL A 604     -2.933   7.494 -18.449  1.00  9.42           O
ATOM   2171  CB  VAL A 604     -2.157  10.294 -20.096  1.00 10.59           C
ATOM   2172  CG1 VAL A 604     -1.208  10.914 -21.115  1.00 12.27           C
ATOM   2173  CG2 VAL A 604     -3.411   9.752 -20.772  1.00  7.62           C
ATOM   2174  N   GLY A 605     -2.770   9.415 -17.282  1.00 11.42           N
ATOM   2175  CA  GLY A 605     -3.884   9.137 -16.394  1.00  9.37           C
ATOM   2176  C   GLY A 605     -4.958  10.184 -16.624  1.00 10.26           C
ATOM   2177  O   GLY A 605     -4.646  11.356 -16.824  1.00 11.46           O
ATOM   2178  N   VAL A 606     -6.221   9.768 -16.608  1.00 11.27           N
ATOM   2179  CA  VAL A 606     -7.323  10.675 -16.913  1.00 10.98           C
ATOM   2180  C   VAL A 606     -8.512  10.491 -15.972  1.00 12.95           C
ATOM   2181  O   VAL A 606     -8.827   9.375 -15.560  1.00 16.24           O
ATOM   2182  CB  VAL A 606     -7.812  10.491 -18.363  1.00 15.32           C
ATOM   2183  CG1 VAL A 606     -8.808  11.579 -18.726  1.00 13.61           C
ATOM   2184  CG2 VAL A 606     -6.637  10.501 -19.329  1.00 14.70           C
ATOM   2185  N   ALA A 607     -9.170  11.597 -15.640  1.00 11.10           N
ATOM   2186  CA  ALA A 607    -10.358  11.567 -14.796  1.00 11.67           C
ATOM   2187  C   ALA A 607    -11.225  12.789 -15.070  1.00 10.73           C
ATOM   2188  O   ALA A 607    -10.776  13.743 -15.701  1.00 12.07           O
ATOM   2189  CB  ALA A 607     -9.967  11.504 -13.326  1.00 11.25           C
ATOM   2190  N   VAL A 608    -12.466  12.758 -14.596  1.00 14.39           N
ATOM   2191  CA  VAL A 608    -13.402  13.856 -14.827  1.00 13.26           C
ATOM   2192  C   VAL A 608    -13.955  14.426 -13.523  1.00 13.90           C
ATOM   2193  O   VAL A 608    -14.299  13.682 -12.605  1.00 11.55           O
ATOM   2194  CB  VAL A 608    -14.587  13.411 -15.719  1.00 15.02           C
ATOM   2195  CG1 VAL A 608    -15.716  14.426 -15.655  1.00 12.06           C
ATOM   2196  CG2 VAL A 608    -14.128  13.196 -17.156  1.00  9.71           C
ATOM   2197  N   THR A 609    -14.045  15.751 -13.451  1.00 16.17           N
ATOM   2198  CA  THR A 609    -14.611  16.414 -12.280  1.00 15.11           C
ATOM   2199  C   THR A 609    -14.881  17.892 -12.549  1.00 15.82           C
ATOM   2200  O   THR A 609    -14.480  18.437 -13.578  1.00 16.32           O
ATOM   2201  CB  THR A 609    -13.687  16.286 -11.054  1.00 16.75           C
ATOM   2202  OG1 THR A 609    -14.410  16.627  -9.864  1.00 18.17           O
ATOM   2203  CG2 THR A 609    -12.486  17.203 -11.196  1.00 14.43           C
ATOM   2204  OXT THR A 609    -15.510  18.576 -11.743  1.00 16.67           O
TER
HETATM 2205  O   HOH W   1     -7.710  11.893 -38.996  1.00 18.56           O
HETATM 2206  O   HOH W   2      3.869  12.031  -3.233  1.00  9.75           O
HETATM 2207  O   HOH W   3     -6.702   6.932 -15.739  1.00 11.89           O
HETATM 2208  O   HOH W   4      2.737   9.502  -2.126  1.00 11.81           O
HETATM 2209  O   HOH W   5     -1.051  14.755 -19.523  1.00  8.75           O
HETATM 2210  O   HOH W   6     -3.265  -7.974  -2.437  1.00 12.65           O
HETATM 2211  O   HOH W   7     -4.360   3.144 -36.867  1.00 20.96           O
HETATM 2212  O   HOH W   8    -10.818   3.846 -13.402  1.00 15.38           O
HETATM 2213  O   HOH W   9     -6.977   3.014 -14.421  1.00  8.92           O
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HETATM 2214  O   HOH W  10      -8.896   1.656 -16.138  1.00 10.02           O
HETATM 2215  O   HOH W  11     -18.973  15.474 -23.550  1.00 15.10           O
HETATM 2216  O   HOH W  12      -7.609  -3.866 -33.652  1.00 14.09           O
HETATM 2217  O   HOH W  13     -11.977 -14.258 -17.990  1.00 16.20           O
HETATM 2218  O   HOH W  14       6.832  11.267  -3.697  1.00 20.17           O
HETATM 2219  O   HOH W  15      -9.555   6.199 -16.644  1.00 13.25           O
HETATM 2220  O   HOH W  16      -3.416  18.534 -24.179  1.00 13.41           O
HETATM 2221  O   HOH W  17       0.749  21.302 -16.219  1.00 11.79           O
HETATM 2222  O   HOH W  18     -26.319  10.816 -30.596  1.00 16.86           O
HETATM 2223  O   HOH W  19     -25.214  -1.087  -7.535  1.00 21.74           O
HETATM 2224  O   HOH W  20       5.839  10.375 -32.151  1.00 16.63           O
HETATM 2225  O   HOH W  21      -2.557   5.827 -35.594  1.00 20.29           O
HETATM 2226  O   HOH W  22      -4.495   3.081 -15.701  1.00  6.61           O
HETATM 2227  O   HOH W  23      10.021   3.593 -22.334  1.00 13.72           O
HETATM 2228  O   HOH W  24     -14.415  -0.175  -0.571  1.00 16.03           O
HETATM 2229  O   HOH W  25     -19.686 -18.805  -1.196  1.00 24.44           O
HETATM 2230  O   HOH W  26      -2.521  -0.023 -17.830  1.00 11.36           O
HETATM 2231  O   HOH W  27     -27.780  10.935 -28.433  1.00 25.40           O
HETATM 2232  O   HOH W  28      -0.812   3.985   4.315  1.00 14.11           O
HETATM 2233  O   HOH W  29      -5.753  30.665 -11.356  1.00 12.72           O
HETATM 2234  O   HOH W  30     -24.652  -1.944  -5.014  1.00 15.99           O
HETATM 2235  O   HOH W  31       4.033  15.404 -25.145  1.00 13.27           O
HETATM 2236  O   HOH W  32     -17.435  21.303 -19.851  1.00 24.99           O
HETATM 2237  O   HOH W  33      -6.938  14.757 -33.084  1.00 15.15           O
HETATM 2238  O   HOH W  34     -15.639 -13.880 -25.263  1.00 16.49           O
HETATM 2239  O   HOH W  35      -4.251 -14.604  -5.864  1.00 16.33           O
HETATM 2240  O   HOH W  36       1.881  16.195  -5.478  1.00 14.17           O
HETATM 2241  O   HOH W  37       1.806  15.596  -8.063  1.00  7.48           O
HETATM 2242  O   HOH W  38      -3.632   0.551 -19.868  1.00 17.23           O
HETATM 2243  O   HOH W  39      -7.778  23.929 -11.178  1.00 12.31           O
HETATM 2244  O   HOH W  40      -6.709 -13.891  -3.824  1.00 16.20           O
HETATM 2245  O   HOH W  41       0.824  25.056 -22.054  1.00 21.00           O
HETATM 2246  O   HOH W  42       0.035 -11.344  -3.919  1.00 18.46           O
HETATM 2247  O   HOH W  43      -6.296 -11.706 -29.133  1.00 18.28           O
HETATM 2248  O   HOH W  44      -4.559   5.268 -17.441  1.00 12.25           O
HETATM 2249  O   HOH W  45     -20.203   1.648  -7.983  1.00 20.37           O
HETATM 2250  O   HOH W  46     -19.226   3.432  -5.406  1.00 23.82           O
HETATM 2251  O   HOH W  47      -2.365   5.194 -19.776  1.00 13.66           O
HETATM 2252  O   HOH W  48     -13.991  -2.869 -32.512  1.00 15.19           O
HETATM 2253  O   HOH W  49     -19.806   3.027 -36.664  1.00 19.61           O
HETATM 2254  O   HOH W  50      12.576   3.806 -16.550  1.00 11.78           O
HETATM 2255  O   HOH W  51      -6.221  30.068  -8.205  1.00 23.21           O
HETATM 2256  O   HOH W  52       0.446 -15.676  -8.154  1.00 26.23           O
HETATM 2257  O   HOH W  53      -1.207  -9.538  -1.984  1.00 13.68           O
HETATM 2258  O   HOH W  54     -21.092  -5.277 -11.752  1.00 15.30           O
HETATM 2259  O   HOH W  55      17.842   5.150 -12.871  1.00 22.35           O
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HETATM 2260  O   HOH W  56       7.781  -1.554 -14.103  1.00 18.97           O
HETATM 2261  O   HOH W  57     -12.484 -14.765 -29.143  1.00 17.15           O
HETATM 2262  O   HOH W  58       2.803  21.740  -8.904  1.00 12.07           O
HETATM 2263  O   HOH W  59      -4.060   4.104  12.100  1.00 24.99           O
HETATM 2264  O   HOH W  60     -18.299  17.145 -10.717  1.00 18.28           O
HETATM 2265  O   HOH W  61     -26.591   0.727 -10.407  1.00 17.40           O
HETATM 2266  O   HOH W  62      -6.282  12.159   1.445  1.00 22.82           O
HETATM 2267  O   HOH W  63      -3.579   1.971  11.458  1.00 34.23           O
HETATM 2268  O   HOH W  64     -16.047  12.369 -11.449  1.00 17.98           O
HETATM 2269  O   HOH W  65       0.846  22.117  -7.166  1.00 13.82           O
HETATM 2270  O   HOH W  66      -6.978  28.436  -9.661  1.00 20.33           O
HETATM 2271  O   HOH W  67       7.234   8.810  -7.845  1.00  5.27           O
HETATM 2272  O   HOH W  68      -1.098   4.354 -17.527  1.00  9.59           O
HETATM 2273  O   HOH W  69      -6.686  11.489 -41.073  1.00 17.91           O
HETATM 2274  O   HOH W  70     -23.920  -5.022 -12.308  1.00 21.25           O
HETATM 2275  O   HOH W  71      -6.946  27.573 -11.543  1.00 20.25           O
HETATM 2276  O   HOH W  72       9.792   7.415 -18.369  1.00 20.84           O
HETATM 2277  O   HOH W  73     -15.392   9.092  -6.769  1.00 22.14           O
HETATM 2278  O   HOH W  74     -10.841  12.872  -1.340  1.00 12.86           O
HETATM 2279  O   HOH W  75       8.551   1.171 -21.810  1.00 14.69           O
HETATM 2280  O   HOH W  76      -1.401   1.826 -16.735  1.00  9.61           O
HETATM 2281  O   HOH W  77      -8.192   5.108 -14.055  1.00 20.61           O
HETATM 2282  O   HOH W  78     -12.728   8.115 -11.045  1.00 16.55           O
HETATM 2283  O   HOH W  79     -17.334   4.327 -12.429  1.00 24.55           O
HETATM 2284  O   HOH W  80     -15.887   5.763 -15.969  1.00 24.37           O
HETATM 2285  O   HOH W  81      11.383  12.025 -11.975  1.00 13.53           O
HETATM 2286  O   HOH W  82       2.489  24.677 -15.064  1.00 13.93           O
HETATM 2287  O   HOH W  83      -5.642 -18.298 -12.560  1.00 15.38           O
HETATM 2288  O   HOH W  84     -19.918  -9.869 -12.005  1.00 19.49           O
HETATM 2289  O   HOH W  85       2.211  -8.983  -6.039  1.00 12.63           O
HETATM 2290  O   HOH W  86     -12.900 -17.695 -10.429  1.00 20.83           O
HETATM 2291  O   HOH W  87     -22.471   5.912 -17.191  1.00 16.93           O
HETATM 2292  O   HOH W  88     -13.534   9.936 -13.465  1.00 17.22           O
HETATM 2293  O   HOH W  89       6.763  17.605 -18.636  1.00 20.86           O
HETATM 2294  O   HOH W  90       2.655  20.610 -23.877  1.00 14.41           O
HETATM 2295  O   HOH W  91      -1.938  -3.558   4.262  1.00 11.29           O
HETATM 2296  O   HOH W  92       4.990  13.605  -5.936  1.00 16.56           O
HETATM 2297  O   HOH W  93       6.623  12.855  -0.773  1.00 16.69           O
HETATM 2298  O   HOH W  94       3.922  13.744  -8.875  1.00 16.70           O
HETATM 2299  O   HOH W  95     -19.720  14.503 -17.097  1.00  9.61           O
HETATM 2300  O   HOH W  96     -21.145  22.261 -12.896  1.00 37.33           O
HETATM 2301  O   HOH W  97      -3.299  20.429  -2.093  1.00 17.25           O
HETATM 2302  O   HOH W  98       2.870 -11.731  -3.701  1.00 28.29           O
HETATM 2303  O   HOH W  99       7.487  -4.809  -4.993  1.00  9.43           O
HETATM 2304  O   HOH W 100     -11.733  -5.692   3.289  1.00 16.17           O
HETATM 2305  O   HOH W 101     -10.639  23.912 -20.878  1.00 16.82           O
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HETATM 2306  O   HOH W 102     -12.910  20.357  -3.674  1.00 21.21           O
HETATM 2307  O   HOH W 103     -16.656  10.444  -4.635  1.00 17.82           O
HETATM 2308  O   HOH W 104     -10.045  21.378 -29.927  1.00 13.51           O
HETATM 2309  O   HOH W 105       1.774  14.854 -33.884  1.00 31.30           O
HETATM 2310  O   HOH W 106      -1.131  27.997  -7.616  1.00 15.53           O
HETATM 2311  O   HOH W 107      -8.194 -14.589 -27.655  1.00 23.18           O
HETATM 2312  O   HOH W 108      -7.622  27.459 -22.256  1.00 24.68           O
HETATM 2313  O   HOH W 109       0.202  25.258 -25.486  1.00 23.23           O
HETATM 2314  O   HOH W 110       5.118  -3.033   1.632  1.00 14.04           O
HETATM 2315  O   HOH W 111      10.172   1.352 -14.292  1.00 19.07           O
HETATM 2316  O   HOH W 112      12.189   3.949 -24.293  1.00 19.10           O
HETATM 2317  O   HOH W 113     -12.072   3.780 -16.372  1.00 16.31           O
HETATM 2318  O   HOH W 114       4.656  -5.873 -21.734  1.00 26.82           O
HETATM 2319  O   HOH W 115     -16.970  20.589 -12.103  1.00 17.04           O
HETATM 2320  O   HOH W 116       8.211  -2.808 -17.574  1.00 29.27           O
HETATM 2321  O   HOH W 117      13.422   8.756 -18.726  1.00 20.22           O
HETATM 2322  O   HOH W 118       3.228  24.277 -13.242  1.00 13.73           O
HETATM 2323  O   HOH W 119     -14.427  28.144 -27.949  1.00 22.00           O
HETATM 2324  O   HOH W 120       2.033  29.478 -15.114  1.00 26.70           O
HETATM 2325  O   HOH W 121       5.539   8.968  -1.375  1.00 15.48           O
HETATM 2326  O   HOH W 122      -3.732  15.202   1.187  1.00 24.54           O
HETATM 2327  O   HOH W 123       1.367  10.080   9.422  1.00 28.22           O
HETATM 2328  O   HOH W 124      -2.062  12.267   6.972  1.00 26.44           O
HETATM 2329  O   HOH W 125     -21.565   4.247   1.400  1.00 25.77           O
HETATM 2330  O   HOH W 126     -19.612   7.944   4.731  1.00 34.81           O
HETATM 2331  O   HOH W 127     -26.573   8.483   5.143  1.00 21.08           O
HETATM 2332  O   HOH W 128       8.124   6.497  -5.764  1.00 14.00           O
HETATM 2333  O   HOH W 129      15.549  -9.465 -11.062  1.00 20.99           O
HETATM 2334  O   HOH W 130       0.611  11.501   4.599  1.00 22.35           O
HETATM 2335  O   HOH W 131      -7.598   1.961 -18.601  1.00 15.32           O
HETATM 2336  O   HOH W 132     -16.407 -17.864 -16.001  1.00 19.20           O
HETATM 2337  O   HOH W 133     -10.090 -16.906 -18.640  1.00 29.45           O
HETATM 2338  O   HOH W 134      -5.625 -16.440 -24.529  1.00 24.54           O
HETATM 2339  O   HOH W 135     -21.534 -16.902 -25.625  1.00 28.19           O
HETATM 2340  O   HOH W 136     -19.080  -9.269 -30.566  1.00 19.64           O
HETATM 2341  O   HOH W 137     -23.978  -1.726 -30.645  1.00 23.89           O
HETATM 2342  O   HOH W 138     -25.626   0.501 -30.630  1.00 30.31           O
HETATM 2343  O   HOH W 139      -1.928   8.204 -23.034  1.00 15.21           O
HETATM 2344  O   HOH W 140       8.426   0.450 -17.538  1.00 26.52           O
HETATM 2345  O   HOH W 141      11.526   6.525  -7.608  1.00 20.48           O
HETATM 2346  O   HOH W 142      11.133   8.678  -2.990  1.00 31.68           O
HETATM 2347  O   HOH W 143     -24.798   9.839 -27.005  1.00 23.85           O
TER
HETATM 2348  C01 BDJ B   1       5.063  -1.783 -29.817  1.00 30.56      A    C
HETATM 2349  O02 BDJ B   1       5.555  -1.668 -28.506  1.00 30.51      A    O
HETATM 2350  C03 BDJ B   1       4.650  -1.696 -27.392  1.00 27.42      A    C
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HETATM 2351  C04 BDJ B   1       4.236  -2.987 -26.822  1.00 26.22      A    C
HETATM 2352  C05 BDJ B   1       3.327  -3.024 -25.702  1.00 20.67      A    C
HETATM 2353  C06 BDJ B   1       4.178  -0.539 -26.859  1.00 25.44      A    C
HETATM 2354  C07 BDJ B   1       3.258  -0.580 -25.720  1.00 25.60      A    C
HETATM 2355  C08 BDJ B   1       2.849  -1.856 -25.167  1.00 21.13      A    C
HETATM 2356  S09 BDJ B   1       1.709  -1.922 -23.747  1.00 22.16      A    S
HETATM 2357  N10 BDJ B   1       2.570  -1.797 -22.359  1.00 17.89      A    N
HETATM 2358  C11 BDJ B   1       2.859  -2.935 -21.504  1.00 21.31      A    C
HETATM 2359  C12 BDJ B   1       1.697  -3.644 -20.761  1.00 18.38      A    C
HETATM 2360  N13 BDJ B   1       1.992  -4.767 -19.901  1.00 21.26      A    N
HETATM 2361  O14 BDJ B   1       0.617  -3.275 -20.889  1.00 24.35      A    O
HETATM 2362  C15 BDJ B   1       3.126  -0.486 -21.984  1.00 19.54      A    C
HETATM 2363  C16 BDJ B   1       4.434  -0.200 -22.389  1.00 21.55      A    C
HETATM 2364  C17 BDJ B   1       5.032   1.066 -22.052  1.00 19.05      A    C
HETATM 2365  C18 BDJ B   1       4.322   1.977 -21.326  1.00 18.78      A    C
HETATM 2366  N19 BDJ B   1       4.947   3.236 -21.039  1.00 18.70      A    N
HETATM 2367  C20 BDJ B   1       5.907   3.415 -19.947  1.00 17.48      A    C
HETATM 2368  C21 BDJ B   1       5.646   2.834 -18.644  1.00 18.90      A    C
HETATM 2369  N22 BDJ B   1       5.359   3.721 -17.502  1.00 16.08      A    N
HETATM 2370  O23 BDJ B   1       5.672   1.671 -18.499  1.00 15.95      A    O
HETATM 2371  S24 BDJ B   1       4.588   4.446 -22.078  1.00 27.18      A    S
HETATM 2372  C25 BDJ B   1       5.549   4.097 -23.570  1.00 20.30      A    C
HETATM 2373  C26 BDJ B   1       6.786   4.641 -23.719  1.00 18.29      A    C
HETATM 2374  C27 BDJ B   1       7.527   4.366 -24.852  1.00 20.38      A    C
HETATM 2375  C28 BDJ B   1       7.012   3.523 -25.841  1.00 24.24      A    C
HETATM 2376  O29 BDJ B   1       7.751   3.264 -26.947  1.00 27.65      A    O
HETATM 2377  C30 BDJ B   1       8.962   2.540 -26.812  1.00 25.29      A    C
HETATM 2378  C31 BDJ B   1       5.773   2.966 -25.692  1.00 19.85      A    C
HETATM 2379  C32 BDJ B   1       5.029   3.236 -24.562  1.00 19.44      A    C
HETATM 2380  O33 BDJ B   1       4.863   5.723 -21.527  1.00 17.91      A    O
HETATM 2381  O34 BDJ B   1       3.175   4.546 -22.378  1.00 19.59      A    O
HETATM 2382  C35 BDJ B   1       2.974   1.695 -20.919  1.00 17.79      A    C
HETATM 2383  C36 BDJ B   1       2.389   0.452 -21.249  1.00 18.75      A    C
HETATM 2384  C37 BDJ B   1       1.077   0.166 -20.841  1.00 18.39      A    C
HETATM 2385  C38 BDJ B   1       0.342   1.114 -20.107  1.00 15.09      A    C
HETATM 2386  C39 BDJ B   1       0.936   2.382 -19.769  1.00 18.83      A    C
HETATM 2387  C40 BDJ B   1       2.222   2.665 -20.166  1.00 15.94      A    C
HETATM 2388  O41 BDJ B   1       0.894  -3.152 -23.777  1.00 18.05      A    O
HETATM 2389  O42 BDJ B   1       0.692  -0.910 -23.851  1.00 17.83      A    O
HETATM 2390 H011 BDJ B   1       5.044  -2.716 -30.075  1.00 36.68      A    H
HETATM 2391 H012 BDJ B   1       4.114  -1.395 -29.863  1.00 36.68      A    H
HETATM 2392 H013 BDJ B   1       5.624  -1.309 -30.404  1.00 36.68      A    H
HETATM 2393 H041 BDJ B   1       4.571  -3.815 -27.202  1.00 31.46      A    H
HETATM 2394 H051 BDJ B   1       3.074  -3.816 -25.354  1.00 24.80      A    H
HETATM 2395 H061 BDJ B   1       4.452   0.313 -27.232  1.00 30.53      A    H
HETATM 2396 H071 BDJ B   1       2.926   0.230 -25.345  1.00 30.72      A    H
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HETATM 2397 H111 BDJ B   1       3.329  -3.628 -22.063  1.00 25.57      A    H
HETATM 2398 H112 BDJ B   1       3.509  -2.620 -20.803  1.00 25.57      A    H
HETATM 2399 H131 BDJ B   1       2.845  -5.049 -19.804  1.00 25.52      A    H
HETATM 2400 H132 BDJ B   1       1.310  -5.197 -19.452  1.00 25.52      A    H
HETATM 2401 H161 BDJ B   1       4.922  -0.831 -22.878  1.00 25.86      A    H
HETATM 2402 H171 BDJ B   1       5.932   1.266 -22.331  1.00 22.87      A    H
HETATM 2403 H201 BDJ B   1       6.777   3.016 -20.271  1.00 20.98      A    H
HETATM 2404 H202 BDJ B   1       6.049   4.324 -19.828  1.00 20.98      A    H
HETATM 2405 H221 BDJ B   1       5.343   4.631 -17.622  1.00 19.30      A    H
HETATM 2406 H222 BDJ B   1       5.195   3.368 -16.681  1.00 19.30      A    H
HETATM 2407 H261 BDJ B   1       7.133   5.204 -23.062  1.00 21.95      A    H
HETATM 2408 H271 BDJ B   1       8.428   4.771 -24.964  1.00 24.46      A    H
HETATM 2409 H301 BDJ B   1       9.413   2.441 -27.744  1.00 30.35      A    H
HETATM 2410 H302 BDJ B   1       8.767   1.619 -26.428  1.00 30.35      A    H
HETATM 2411 H303 BDJ B   1       9.586   3.041 -26.185  1.00 30.35      A    H
HETATM 2412 H311 BDJ B   1       5.410   2.373 -26.388  1.00 23.82      A    H
HETATM 2413 H321 BDJ B   1       4.141   2.838 -24.454  1.00 23.32      A    H
HETATM 2414 H371 BDJ B   1       0.669  -0.686 -21.065  1.00 22.07      A    H
HETATM 2415 H381 BDJ B   1      -0.531   0.919 -19.836  1.00 18.11      A    H
HETATM 2416 H391 BDJ B   1       0.407   3.065 -19.238  1.00 22.60      A    H
HETATM 2417 H401 BDJ B   1       2.626   3.537 -19.933  1.00 19.12      A    H
TER
END
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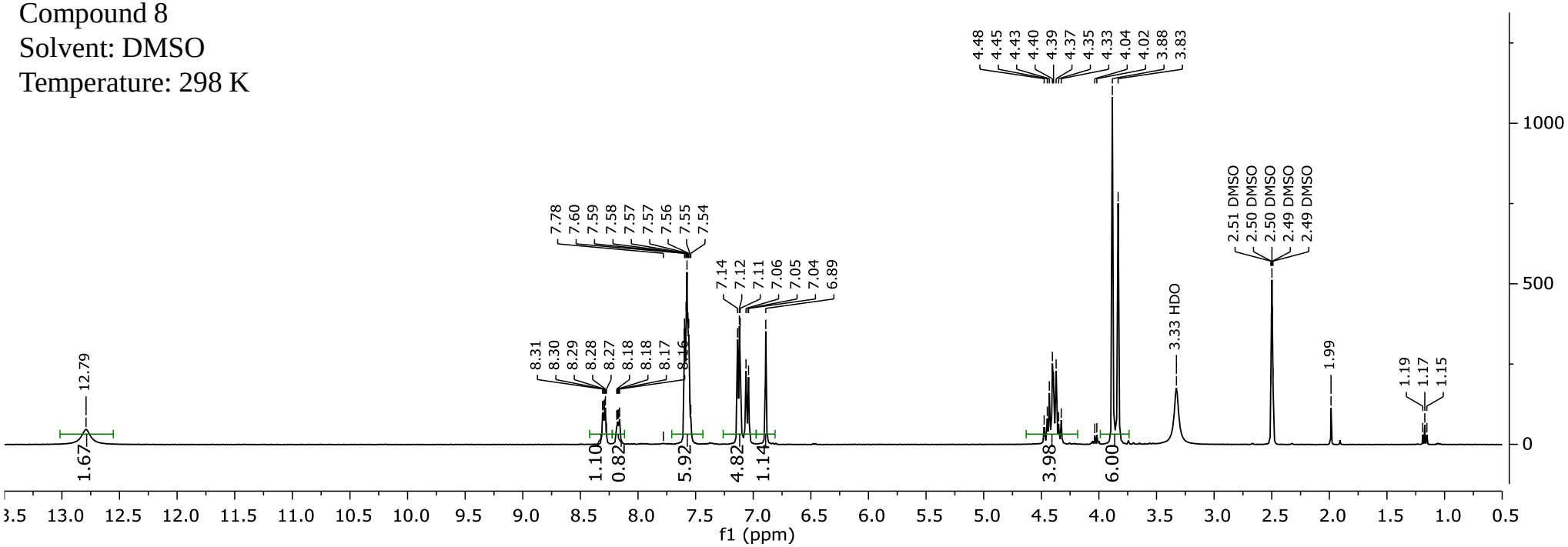
Compound 8
Solvent: DMSO
Temperature: 298 K



Compound 8
Solvent: DMSO
Temperature: 353 K