```
AKT2_[PI]_i+_PI_[PH] -
AKT2_[PI]_i-_PI_[PH] -
                                              AKT2_p+_PPM1G_[(AKT2)]
                                             AKT2_p+_TSC2_[(Ser1130)] 
AKT2_p+_TSC2_[(Ser939)]
                                               AKT2_p+_TSC2_[(Ser981)]
                                             AKT2_p+_TSC2_[(Thr1462)] =
GTP_gef_RHEB_[(G)] =
                                              IRS_[pY]_ppi+_Pl3K_[SH2] -
IRS_[pY]_ppi-_Pl3K_[SH2] -
PDK1_p+_AKT2_[(T309)] -
                                                          PI3K_p+_PI_[(3)]
                 RHEB_[switch1DSYDPTIEN]_ppi+_mTOR_[FATf..2f..3] -
RHEB_[switch1DSYDPTIEN]_ppi-_mTOR_[FATf..2f..3] -
                     RHEB_[switch1]_ppi+_mTOR_[Mheatm..2m..3m..4]
                     RHEB_[switch1]_ppi-_mTOR_[Mheatm..2m..3m..4] -
RHEB_[switch2GQDEYSIFPQTYSIDIN]_ppi+_mTOR_[Nheatn..3ton..7] -
RHEB_[switch2GQDEYSIFPQTYSIDIN]_ppi-_mTOR_[Nheatn..3ton..7]
                                                     RTK_p+_IRS_[(RTK)] =
RTK_p-_IRS_[(RTK)] =
                             TSC1_[Cterminus]_ppi-_TSC2_[Nterminus]
                                                                    [Output] ·
                                       elF4E_[A001]_ppi+_elF4G_[A002]
                                   eIF4E_[A001]_ppi-_EIF4EBP1_[A001]
                                       elF4E_[A001]_ppi-_elF4EBP1_[A001] =
elF4E_[A001]_ppi-_elF4G_[A002] =
mTORC2_p+_AKT2_[(S474)] =
                                 mTOR_[Raptor]_ppi+_Raptor_[mTOR] -
mitogen_[EGFR]_ppi+_EGFR_[mitogen] -
                                 mitogen_[EGFR]_ppi-_EGFR_[mitogen]
                                                 nk_p-_TSC2_[(Ser1130)] -
nk_p-_TSC2_[(Ser939)] -
                                                  nk_p-_TSC2_[(Ser981)]
                                                 nk_p-_TSC2_[(Thr1462)] -
nn_p-_AKT2_[(S474)] -
nn_p-_AKT2_[(T309)] -
                                                           unk_p-_PI_[(3)] -
unk_p-_PI_[(4)] -
                                                           unk_p-_PI_[(5)]
                                                    unknown1_p+_PI_[(4)] =
unknown2_p+_PI_[(5)] =
                                                        AKT2_[(S474)]-{0}
                                                        AKT2_[(S474)]-{p} -
AKT2_[(T309)]-{0} -
                                                        AKT2_{[(T309)]-\{p\}}
                                                             AKT2_[PI]--0 ·
                                                       AKT2_[PI]--PI_[PH] -
                                     EGFR_[mitogen]--0 •
EGFR_[mitogen]-mitogen_[EGFR] •
                                                  EIF4EBP1_[(Ser65)]-{p}
                                                  EIF4EBP1_[(Thr37)]-{p}
EIF4EBP1_[(Thr46)]-{p}
                                                  EIF4EBP1_[(Thr70)]-{p}
                                                    EIF4EBP1_[A001]--0
GTP
                                                           IRS_[(RTK)]-{0} -
                                                           IRS_[(RTK)]-{p} -
IRS_[pY]--0 -
                                                   IRS_[pY]--PI3K_[SH2]
                                                                      PDK1
                                                            PI3K_[SH2]--0 -
                                                                PI_[(3)]-{0}
                                                                PI_{(3)}-\{p\}
                                                                PI [(4)]-{0}
                                                                PI_[(4)]-{p}
                                                                PI_[(5)]-{0}
                                                                PI_[(5)]-{p}
                                                     PPM1G_[(AKT2)]-{p} · RHEB_[(G)]-{gtp} ·
                                         RHEB_[switch1DSYDPTIEN]--0
                      RHEB_[switch1DSYDPTIEN]--mTOR_[FATf..2f..3] -
                                                       RHEB_[switch1]==0
                          RHEB_[switch1]--mTOR_[Mheatm..2m..3m..4]
                             RHEB_[switch2GQDEYSIFPQTYSIDIN]--0
    RHEB_[switch2GQDEYSIFPQTYSIDIN]--mTOR_[Nheatn..3ton..7]
                                        Raptor_[mTOR]--mTOR_[Raptor] -
                                                     TSC1_[Cterminus]--0
                                                     TSC2_[(Ser1130)]-{0}
                                                     TSC2 [(Ser1130)]-{p} -
                                                      TSC2_[(Ser939)]-{0}
                                                      TSC2_[(Ser939)]-{p}
                                                      TSC2 [(Ser981)]-{0} -
                                                      TSC2_[(Ser981)]-{p} -
                                                     TSC2_[(Thr1462)]-{0}
                                                     TSC2_[(Thr1462)]-{p} -
                                                     TSC2_[Nterminus]--0
                                                                    [EGFR]
                                                                [EIF4EBP1] -
                                                                   [Raptor]
                                                           [activatedEGFR]
                                                            [activatedPI3K] -
                                                                     [eIF4E]
                                                                     [eIF4G]
                                                                    [mTOR]
                                                                   [mitogen]
                                                         eIF4E_[A001]--0
                                            elF4E_[A001]--elF4G_[A002] -
                                                         eIF4G_[A002]--0
                                                                   mTORC1
                                                                   mTORC2
                                                    mTOR_[FATf..2f..3]--0
                                          mTOR [Mheatm.,2m.,3m.,41--0
                                              mTOR_[Nheatn..3ton..7]--0
                                                       mitogen_[EGFR]--0
                                                                          nk
                                                                          nn
                                                                         unk
                                                                  unknown1
                                                                  unknown2 ·
                                        PPM1G_p-_EIF4EBP1_[(Ser65)] - PPM1G_p-_EIF4EBP1_[(Thr37)] -
                                         PPM1G_p-_EIF4EBP1_[(Thr70)] -
                             TSC1_[Cterminus]_ppi+_TSC2_[Nterminus] -
                                                   TSC2_gap_RHEB_[(G)] -
                                   eIF4E_[A001]_ppi+_EIF4EBP1_[A001] -
                                       mTORC1_p+_EIF4EBP1_[(Ser65)] -
                                       mTORC1_p+_EIF4EBP1_[(Thr37)] -
                                       mTORC1_p+_EIF4EBP1_[(Thr46)] = mTORC1_p+_EIF4EBP1_[(Thr70)] =
                                                  EIF4EBP1_[(Ser65)]-{0} -
                                                  EIF4EBP1_[(Thr37)]-{0} -
EIF4EBP1_[(Thr46)]-{0} -
                                                  EIF4EBP1_[(Thr70)]-{0} -
                                       EIF4EBP1_[A001]--eIF4E_[A001] -
                                                     PPM1G_[(AKT2)]-{0} -
                                                          RHEB_[(G)]-{0} -
                                                       Raptor_[mTOR]--0 -
                                  TSC1_[Cterminus]--TSC2_[Nterminus] -
                                                       mTOR_[Raptor]--0 -
```

t000 t001