```
AKT2_p+_PPM1G_[(AKT2)]
                                                    AKT2_p+_TSC2_[(Ser1130)] -
                                                      AKT2_p+_TSC2_[(Ser939)]
                                                      AKT2_p+_TSC2_[(Ser981)]
                                                    AKT2_p+_TSC2_[(Thr1462)] -
                                                             GTP_gef_RHEB_[(G)]
                                                     INPP4B_p-_PI_[(4)] -
IRS_[pY]_ppi+_PI3K_[SH2] -
IRS_[pY]_ppi-_PI3K_[SH2] -
PDK1_p+_AKT2_[(T309)] -
                                                         PI3K_p+_PI_[(3)] -
PI4K3alpha_p+_PI_[(4)] -
PIPK1alpha_p+_PI_[(5)] -
                                                                  PIPP_p-_PI_[(5)]
                    PTEN_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)]
                                                             \mathsf{RTK}\_\mathsf{p}-\_\mathsf{IRS}\_[(\mathsf{RTK})]
                                                            SAC1M1L_p-_PI_[(4)] -
SYNJ2_p-_PI_[(5)] -
                                  {\sf TSC1\_[Cterminus]\_ppi-\_TSC2\_[Nterminus]}
                                                                              [Output] -
                                              eIF4E_[A001]_ppi+_eIF4G_[A002]
                                       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)] -
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_[A001]--0 -
                                                                                  GTP ·
                                                                              INPP4B -
                                                                   IRS_[(RTK)]-{0} -
IRS_[(RTK)]-{p} -
IRS_[pY]--0 -
                                                          IRS_[pY]--PI3K_[SH2] - PDK1 -
                                                                    PI3K_[SH2]--0 -
                                                                         PI4K3alpha -
                                                                         PIPK1alpha -
                                                                         PI_[(3)]-{0} -
PI_[(3)]-{p} -
                                                                         PI_[(4)]-{0}
                                                                         PI_{(4)}-\{p\}
                                                                         PI_[(5)]-{0}
                                                                         PI_[(5)]-{p}
                                                                         PI [PH]--0 -
                                                             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]
                                                                                  RTK ·
                                              Raptor_[mTOR]--mTOR_[Raptor] -
                                                                            SAC1M1L -
                                                                               SYNJ2
                                                            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..4]--0
                                                     mTOR_[Nheatn..3ton..7]--0
                                                               mitogen_[EGFR]--0
                                                                                     nk
                                                                                     un -
                                               PPM1G_p-_EIF4EBP1_[(Ser65)] =
                                              PPM1G_p__EIF4EBP1_[(Thr37)] -
PPM1G_p__EIF4EBP1_[(Thr46)] -
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)] =
                                                        un_p-_PPM1G_[(AKT2)] -
                                                         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