```
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+_PI3K_[SH2] -
IRS_[pY]_ppi-_PI3K_[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]
                                    eIF4E_[A001]_ppi+_eIF4G_[A002] -
eIF4E_[A001]_ppi-_EIF4EBP1_[A001] -
eIF4E_[A001]_ppi-_eIF4G_[A002] -
                                               \mathsf{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-_Pl_[(3)] =
unk_p-_Pl_[(4)] =
unk_p-_Pl_[(5)] =
unk_nown1_p+_Pl_[(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}
                                                             IRS_[(RTK)]-{0} -
IRS_[(RTK)]-{p} -
IRS_[pY]--0 -
                                                     IRS_[pY]--PI3K_[SH2]
                                                              PI3K_[SH2]--0
                                                                   PI_[(3)]-{0} -
PI_[(3)]-{p} -
                                                                   PI_[(4)]-{0}
                                                                   PI_[(4)]-{p}
                                                                   PI [(5)]-{0}
                                                                   PI_[(5)]-{p}
                                                                   PI [PH]--0
                                                       PPM1G_[(AKT2)]-{p}
                                                           \mathsf{RHEB}\_[(\mathsf{G})] – \{\mathsf{gtp}\}
                       RHEB_[switch1DSYDPTIEN]—0 -
RHEB_[switch1DSYDPTIEN]—mTOR_[FATf..2f..3] -
                                                         RHEB_[switch1]--0
                          RHEB_[switch1]--mTOR_[Mheatm..2m..3m..4]
RHEB_[switch2GQDEYSIFPQTYSIDIN]--0
    RHEB\_[switch 2GQDEYSIFPQTYSIDIN] -- 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] -
                                                               [activatedPI3K]
                                                                       [eIF4E]
                                                                       [eIF4G]
                                                                       [mTOR]
                                                           [mitogen]
eIF4E_[A001]--0
                                              eIF4E_[A001]--eIF4G_[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
                                                                             un
                                                                            unk
                                                                    unknown1
                                                                     unknown2 ·
                                          PPM1G_p-_EIF4EBP1_[(Ser65)] -
                                           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