```
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)]
                              \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-_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)]-{0} •
EIF4EBP1_[(Thr37)]-{0} •
                                                   EIF4EBP1_[(Thr46)]-{0}
                                                   EIF4EBP1_[(Thr70)]-{0}
                                        EIF4EBP1_[A001]--eIF4E_[A001] -
                                                            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)]-{0} - PI_[(5)]-{0} - 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]
                                                      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]
                                                                      [elF4G] -
                                                                      [mTOR]
                                                                    [mitogen]
                                                           elF4G_[A002]--0
                                                     mTORC2 -
mTOR_[FATf..2f..3]--0 -
                                          mTOR_[Mheatm..2m..3m..4]--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_[(Thr46)] = PPM1G_p__EIF4EBP1_[(Thr70)] =
                              TSC1_[Cterminus]_ppi+_TSC2_[Nterminus] -
                                                    TSC2_gap_RHEB_[(G)] -
                                                                     [Output] -
                                               :_[A001]_ppi+
                                   eIF4E_[A001]_ppi-_EIF4EBP1_[A001] =
mTORC1_p+_EIF4EBP1_[(Ser65)] =
                                        mTORC1_p+_EIF4EBP1_[(Thr37)] -
                                        mTORC1_p+_EIF4EBP1_[(Thr46)] -
mTORC1_p+_EIF4EBP1_[(Thr70)] -
                                                   EIF4EBP1_[(Ser65)]-{p} -
                                                   EIF4EBP1_[(Thr37)]-{p} = EIF4EBP1_[(Thr46)]-{p} =
                                                   EIF4EBP1_[(Thr70)]-{p} -
                                                      EIF4EBP1_[A001]--0 -
PPM1G_[(AKT2)]-{0} -
                                                            RHEB_[(G)]-{0} -
                                                         Raptor_[mTOR]--0 -
                                   TSC1_[Cterminus]--TSC2_[Nterminus] -
                                                           eIF4E_[A001]--0 -
                                             eIF4E_[A001]--eIF4G_[A002] -
                                                                   mTORC1 -
                                                         mTOR_[Raptor]--0 -
```

t000 t001