```
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)]
                                mTORC2_p+_AKT2_[(S474)]
                                    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]
                                                                             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] •
                                                                              RTK ·
                                                            Raptor_[mTOR]--0 -
                                                         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] -
                                                                [activatedEGFR]
                                                                  [activatedPI3K]
                                                                           [eIF4E] -
                                                                          [eIF4G]
                                                                          [mTOR]
                                                                         [mitogen] ·
                                                               eIF4G_[A002]--0
                                                                         mTORC1
                                                                        mTORC2
                                                        mTOR_[FATf..2f..3]--0
                                             mTOR_[Mheatm..2m..3m..4]--0
                                                  mTOR_[Nheatn..3ton..7]--0
                                                            mTOR_[Raptor]--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+
                                     elF4E_[A001]_ppi-_EIF4EBP1_[A001] -
mTORC1_p+_EIF4EBP1_[(Ser65)] -
                                          mTORC1_p+_EIF4EBP1_[(Thr37)] -
                                          mTORC1_p+_EIF4EBP1_[(Thr46)] -
mTORC1_p+_EIF4EBP1_[(Thr70)] -
                                      mTOR_[Raptor]_ppi+_Raptor_[mTOR] -
                                                      EIF4EBP1_[(Ser65)]-{p} =
EIF4EBP1_[(Thr37)]-{p} =
                                                       EIF4EBP1_[(Thr46)]-{p} -
                                                      EIF4EBP1_[(Thr70)]-{p} -
EIF4EBP1_[A001]--0 -
                                                          PPM1G_[(AKT2)]-{0} -
                                                                RHEB_[(G)]-{0} -
                                           Raptor_[mTOR]--mTOR_[Raptor] =
                                     TSC1_[Cterminus]--TSC2_[Nterminus] -
                                                                         [Raptor] -
                                                               eIF4E_[A001]--0 -
                                                eIF4E_[A001]--eIF4G_[A002] -
```

t000 t001