```
AKT2_[PI]_i-_PI_[PH] -
IRS_[pY]_ppi-_PI3K_[SH2] -
                                            PPM1G_p-_EIF4EBP1_[(Ser65)]
PPM1G_p-_EIF4EBP1_[(Thr37)]
PPM1G_p-_EIF4EBP1_[(Thr46)]
                                            PPM1G_p-_EIF4EBP1_[(Thr70)] -
                  RHEB_[switch1DSYDPTIEN]_ppi-_mTOR_[FATf..2f..3] -
RHEB_[switch1]_ppi-_mTOR_[Mheatm..2m..3m..4] -
RHEB\_[switch2GQDEYSIFPQTYSIDIN]\_ppi-\_mTOR\_[Nheatn..3ton..7]
                               RTK_p-_IRS_[(RTK)] -
TSC1_[Cterminus]_ppi+_TSC2_[Nterminus] -
                                                       TSC2_gap_RHEB_[(G)]
                                      elF4E_[A001]_ppi+_EIF4EBP1_[A001] -
                                           elF4E_[A001]_ppi-_elF4G_[A002]
                                   mTOR_[Raptor]_ppi+_Raptor_[mTOR] -
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)] -
                                                      un_p-_PPM1G_[(AKT2)] -
                                                                unk_p-_PI_[(3)] =
unk_p-_PI_[(4)] =
                                                                unk_p-_PI_[(5)] -
                                                        unknown1_p+_PI_[(4)] =
unknown2_p+_PI_[(5)] =
                                                            AKT2_[(S474)]-{0} -
AKT2_[(T309)]-{0} -
                                                                  AKT2_[PI]--0 -
                                                      EGFR_[mitogen]--0 -
EIF4EBP1_[(Ser65)]-{0} -
EIF4EBP1_[(Thr37)]-{0} -
                                                      EIF4EBP1_[(Thr46)]-{0}
                                                      EIF4EBP1_[(Thr70)]-{0} -
                                          EIF4EBP1_[A001]--eIF4E_[A001] -
                                                                             GTP
                                                                IRS_[(RTK)]-{0} -
                                                                    IRS_[pY]--0 -
                                                                 PDK1 -
PI3K_[SH2]--0 -
                                                                      PI_[(3)]-{0} -
                                                                     PI_[(4)]-{0} -
PI_[(4)]-{p} -
                                                                      PI_[(5)]-{0}
                                                                     PI_[(5)]-{p} -
PI_[PH]--0 -
                                                          PPM1G_[(AKT2)]-{0} -
                                                                RHEB_[(G)]-{0} -
                                            RHEB_[switch1DSYDPTIEN]--0
                               RHEB_[switch1]--0 -
RHEB_[switch2GQDEYSIFPQTYSIDIN]--0 -
                                           Raptor\_[mTOR]--mTOR\_[Raptor] \cdot
                                     TSC1_[Cterminus]--TSC2_[Nterminus] -
                                                         TSC2_[(Ser1130)]-{0} -
                                                          TSC2_[(Ser939)]-{0} -
TSC2_[(Ser981)]-{0} -
                                                         TSC2_[(Thr1462)]-{0}
                                                                     [EIF4EBP1]
                                                                          [Raptor] -
                                                                           [eIF4E] -
                                                                          [eIF4G] -
                                                                          [mTOR] -
                                                               eIF4E_[A001]--0
                                                              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
                                                                                nn -
                                                                                un·
                                                                               unk
                                                                       unknown1
                                                                       unknown2 -
                                                         AKT2_[PI]_i+_PI_[PH] -
                                                 AKT2_p+_PPM1G_[(AKT2)] -
AKT2_p+_TSC2_[(Ser1130)] -
                                                 AKT2_p+_TSC2_[(Ser939)] -
AKT2_p+_TSC2_[(Ser939)] -
AKT2_p+_TSC2_[(Thr1462)] -
                                                         GTP_gef_RHEB_[(G)] -
                                                   IRS_[pY]_ppi+_PI3K_[SH2] =
PDK1_p+_AKT2_[(T309)] =
                                                              PI3K_p+_PI_[(3)] -
                  RHEB_[switch1DSYDPTIEN]_ppi+_mTOR_[FATf..2f..3] -
RHEB_[switch1]_ppi+_mTOR_[Mheatm..2m..3m..4] -
RHEB_[switch2GQDEYSIFPQTYSIDIN]_ppi+_mTOR_[Nheatn..3ton..7] -
                                                         RTK_p+_IRS_[(RTK)] -
                               TSC1_[Cterminus]_ppi-_TSC2_[Nterminus] -
                                           elF4E_[A001]_ppi+_elF4G_[A002] -
                                     elF4E_[A001]_ppi-_EIF4EBP1_[A001] -
                                          mTORC1_p+_EIF4EBP1_[(Ser65)] -
mTORC1_p+_EIF4EBP1_[(Thr37)] -
mTORC1_p+_EIF4EBP1_[(Thr46)] -
                                    mTORC1_p+_EIF4EBP1_[(Thr70)] -
mTORC2_p+_AKT2_[(S474)] -
mitogen_[EGFR]_ppi+_EGFR_[mitogen] -
                                                            AKT2_[(S474)]-{p} -
AKT2_[(T309)]-{p} -
                                                           AKT2_[PI]--PI_[PH] -
                                         EGFR_[mitogen]—mitogen_[EGFR] = EIF4EBP1_[(Ser65)]-{p} =
                                                      EIF4EBP1_[(Thr37)]-{p} -
                                                      EIF4EBP1_[(Thr70)]-{p} =
                                                         EIF4EBP1_[A001]--0 -
                                                                IRS [(RTK)]_{n}
                                                       IRS_[pY]--PI3K_[SH2] -
                                                                     PI_[(3)]-{p} -
                                                          PPM1G_[(AKT2)]-{p} -
                                                              RHEB_[(G)]-\{gtp\} -
                       RHEB_[switch1DSYDPTIEN]--mTOR_[FATf..2f..3] -
                           RHEB_[switch1]--mTOR_[Mheatm..2m..3m..4] -
    RHEB_[switch2GQDEYSIFPQTYSIDIN]—mTOR_[Nheatn..3ton..7] -
                                                            Raptor_[mTOR]--0 -
                                                         TSC1 [Cterminus]--0 -
                                                         TSC2_[(Ser1130)]-{p} -
                                                          TSC2_{[(Ser939)]-\{p\}}
                                                          TSC2 [(Ser981)]-{p} -
                                                         TSC2_[(Thr1462)]-{p} -
                                                         TSC2_[Nterminus]--0 -
                                                                         [EGFR] -
                                                                [activatedEGFR] -
                                                                 [activatedPI3K] -
                                                                        [mitogen] -
                                                eIF4E_[A001]--eIF4G_[A002] -
                                                            mTOR_[Raptor]--0 -
```

t000 t001