```
AKT2_[PI]_i-_PI_[PH] -
                                                    IRS_[pY]_ppi-_PI3K_[SH2] -
                                                              IR_p+_IRS_[(res)] - IR_p-_IRS_[(res)] -
                                                  PHLPP1_p-_AKT2_[(S474)] = PI4K3alpha_p+_PI_[(4)] =
                                                        PIPK1alpha_p+_PI_[(5)] -
                                                   PP2A_p-_AKT2_[(T309)] -
PP5_p-_TSC2_[(Ser1130)] -
                                                     PP5_p-_TSC2_[(Ser939)] -
                                                   PP5_p-_TSC2_[(Ser981)] -
PP5_p-_TSC2_[(Thr1462)] -
                                            PPM1G_p-_EIF4EBP1_[(Ser65)] -
PPM1G_p-_EIF4EBP1_[(Thr37)] -
                                             PPM1G_p-_EIF4EBP1_[(Thr46)] -
                                            PPM1G_p-_EIF4EBP1_[(Thr70)] -
                                                              PTEN_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] -
                                                      S6K1_p+_IRS_[(hS307)] -
S6K1_p+_IRS_[(hS527)] -
                                                         SAC1M1L_p-_PI_[(4)] -
SYNJ2_p-_PI_[(5)] -
                                TSC1_[Cterminus]_ppi+_TSC2_[Nterminus] -
                                      TSC2_gap_RHEB_[(G)] -
elF4E_[A001]_ppi+_ElF4EBP1_[A001] -
                                            eIF4E_[A001]_ppi-_eIF4G_[A002] -
                                                 insulin_[IR]_ppi+_IR_[insulin] = insulin_[IR]_ppi-_IR_[insulin] =
                                       mTOR_[Raptor]_ppi+_Raptor_[mTOR] -
unk_p-_PPM1G_[(AKT2)] -
                                                             AKT2_[(S474)]-{0} -
                                                             AKT2_[(T309)]-{0} -
AKT2_[PI]--0 -
                                                       EIF4EBP1_[(Ser65)]-{0} -
EIF4EBP1_[(Thr37)]-{0} -
                                                       EIF4EBP1_[(Thr46)]-{0} -
                                                       EIF4EBP1_[(Thr70)]-{0} -
                                           EIF4EBP1_[A001]--eIF4E_[A001] -
                                                                           INPP4B -
                                                              IRS_[(hS307)]-{p} -
                                                              IRS_[(hS527)]-{p} -
IRS_[(res)]-{0} -
                                                                  IRS_[(res)]-{p} -
                                                                  IRS_[pY]--0 -
IR_[insulin]--0 -
                                                       IR_[insulin]--insulin_[IR] -
                                                                             PDK1 -
                                                                          PHLPP1 -
                                                                 PI3K_[SH2]--0 -
PI4K3alpha -
                                                                      PIPK1alpha -
                                                                              PIPP -
                                                                       PI_[(3)]-{0} -
                                                                       PI_[(4)]-{0} -
                                                                       PI_[(4)]-{p} -
                                                                       PI_[(5)]-{0} -
                                                                      PI_[(5)]-{p} -
PI_[PH]--0 -
                                                                              PP2A -
                                                                               PP5 -
                                                          PPM1G_[(AKT2)]-{0} -
                                             PTEN -
RHEB_[(G)]-(0) -
RHEB_[switch1DSYDPTIEN]--0 -
                                                           RHEB [switch1]--0 -
                                RHEB_[switch2GQDEYSIFPQTYSIDIN]--0 -
                                           Raptor_[TOS]--S6K1_[TOS] -
Raptor_[mTOR]--mTOR_[Raptor] -
S6K1_[(T389)]-{p} -
                                                                         SAC1M1L -
                                                                            SYNJ2 -
                                     TSC1_[Cterminus]--TSC2_[Nterminus] -
TSC2_[(Ser1130)]-{0} -
                                                           TSC2_[(Ser939)]-{0} -
                                                           TSC2_[(Ser981)]-{0} -
                                                          TSC2_[(Thr1462)]-{0} -
                                                                      [EIF4EBP1]
                                                                          [IR] -
[Raptor] -
                                                                     [activatedIR] -
[eIF4E] -
                                                                            [eIF4G] -
                                                                            finsulin1 -
                                                                           [mTOR] -
                                                               eIF4E_[A001]--0 -
eIF4G_[A002]--0 -
                                                                  insulin_[IR]--0 -
                                                                         mTORC1 -
                                                                         mTORC2 -
                                                         mTOR_[FATf..2f..3]--0 -
                                              mTOR [Mheatm.,2m.,3m.,4]--0 -
                                                  mTOR_[Nheatn..3ton..7]--0 -
                                                         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)] -
                                                   INPP4B_p-_PI_[(4)] = IRS_[pY]_ppi+_PI3K_[SH2] =
                                                      PDK1_p+_AKT2_[(T309)] -
                                                               PI3K_p+_PI_[(3)] -
PIPP_p-_PI_[(5)] -
                   RHEB_[switch1DSYDPTIEN]_ppi+_mTOR_[FATf..2f..3] = RHEB_[switch1]_ppi+_mTOR_[Mheatm..2m..3m..4] =
RHEB\_[switch2GQDEYSIFPQTYSIDIN]\_ppi+\_mTOR\_[Nheatn..3ton..7] - \\
                                Raptor_[TOS]_ppi+_S6K1_[TOS] - TSC1_[Cterminus]_ppi-_TSC2_[Nterminus] -
                                            eIF4E_[A001]_ppi+_eIF4G_[A002] •
                                      elF4E_[A001]_ppi-_ElF4EBP1_[A001] -
                                          mTORC1_p+_EIF4EBP1_[(Ser65)] -
mTORC1_p+_EIF4EBP1_[(Thr37)] -
                                          mTORC1_p+_EIF4EBP1_[(Thr46)] -
mTORC1_p+_EIF4EBP1_[(Thr70)] -
                                                 mTORC2_p+_AKT2_[(S474)] -
                                                    mTOR_p+_S6K1_[(T389)] -
AKT2_[(S474)]-{p} -
                                                             AKT2_[(T309)]-{p} -
                                                       AKT2_[PI]--PI_[PH] -
EIF4EBP1_[(Ser65)]-{p} -
                                                      EIF4EBP1_[(Thr37)]-{p} -
EIF4EBP1_[(Thr46)]-{p} -
                                                       EIF4EBP1_[(Thr70)]-{p} -
                                                         EIF4EBP1_[A001]--0 -
IRS_[(hS307)]-{0} -
                                                              IRS_[(hS527)]-{0} -
                                                        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_[TOS]--0 -
                                                             Raptor_[mTOR]--0 -
                                                              S6K1_[(T389)]-{0} -
                                                         S6K1_[TOS]--0 -
TSC1_[Cterminus]--0 -
                                                          TSC2_[(Ser1130)]-{p} -
TSC2_[(Ser939)]-{p} -
                                                            TSC2_[(Ser981)]-{p} -
                                                         TSC2_[(Thr1462)]-{p} -
TSC2_[Nterminus]--0 -
                                                                  [activatedPI3K] -
                                                elF4E_[A001]--elF4G_[A002] -
mTOR_[Raptor]--0 -
```