AKT2_[PH]_i-_PI_[AKT2] IRS_[pYMXM]_ppi-_Pl3K_[SH2] IR_p-_IRS_[(tyrosines)] PDK1_[PH]_i-_PI_[PDK1] PHLPP1_p-_AKT2_[(S474)]
PI4K3alpha_p+_PI_[(4)] PIPK1alpha_p+_PI_[(5)] PP2A_p-_AKT2_[(Thr309)]
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_[switch1]_ppi-_mTOR_[MheatFAT] RHEB_[switch2]_ppi-_mTOR_[MheatNheatFAT] SAC1M1L_p-_PI_[(4)] SYNJ2_p-_PI_[(5)] insulin_[IR]_ppi-_IR_[insulin] mTOR_[LBE]_ppi+_mLST8_[WD40repeats] mTOR_[LBE]_ppi-_mLST8_[WD40repeats] mTOR_[RICTOR]_ppi+_RICTOR_[mTOR] mTOR_[RICTOR]_ppi-_RICTOR_[mTOR] mTOR_[Raptor]_ppi+_Raptor_[mTOR] mTOR_[Raptor]_ppi-_Raptor_[mTOR] mTOR_[SIN1]_ppi+_SIN1_[mTOR] mTOR_[SIN1]_ppi-_SIN1_[mTOR] unk1_p-_PPM1G_[(PPP1R3G)] unk2_p-_S6K1_[(T389)] unk3_p-_IRS_[(hS307)] unk4_p-_IRS_[(hS527)] unk5_p-_RICTOR_[(Thr1135)] unk6_p-_PRAS40_[(Thr246)] INPP4B
IRS_[(hS307)]-{0}
IRS_[(hS527)]-{0}
IRS_[(hS527)]-{0}
IRS_[(tyrosines)]-{0}
IRS_[pYMXM]--0
IR_[insulin]--0
PDK1_[PH]--0
PHLPP1
PI3K_[SH2]--0
PI4K3alpha
PIPK1alpha
PIPP
PI_[(3)]-{0}
PI_[(4)]-{0}
PI_[(4)]-{0}
PI_[(5)]-{0}
PI_[(5)]-{0}
PI_[(5)]-{0}
PI_[DK1]--0
PP2A
PP5 PPM1G_[(PPP1R3G)]-{0}
PRAS40_[(Ser183)]-{0}
PRAS40_[(Ser221)]-{0}
PRAS40_[(Thr246)]-{0}
PTEN
RHEB_[switch1]--0
RHEB_[switch2]--0
RICTOR_[(Thr1135)]-{0} Raptor_[mTOR]--mTOR_[Raptor]

S6K1_[(T389)]-{0}

SAC1M1L

SIN1_[(Thr86)]-{0}

SIN1_[mTOR]--0

SIN1_[mTOR]--mTOR_[SIN1]

SYNJ2

TSC2_[(Ser1130)]-{0}

TSC2_[(Ser939)]-{0}

TSC2_[(Ser981)]-{0}

TSC2_[(Thr1462)]-{0}

insulin_[IR]--0

mLST8_[WD40repeats]--0

mLST8_[WD40repeats]--mTOR_[LBE]

mTOR_[LBE]--0

mTOR_[MheatFAT]--0

mTOR_[MheatNheatFAT]--0

mTOR_[RICTOR]--0

mTOR_[SIN1]--0

unk1 PRAS40_[TOS]--Raptor_[BindingMotif] Raptor_[BindingMotif]_ppi+_PRAS40_[TOS] protein1433_[PRAS40]_ppi-_PRAS40_[protein145]
RHEB_[(G)]-{0}
TSC2_gap_RHEB_[(G)] TSC1_[Cterminus]--TSC2_[Nterminus] TSC1_[Cterminus]_ppi+_TSC2_[Nterminus] insulin_[IR]_ppi+_IR_[insulin]

IR_[insulin]--insulin_[IR]

[activatedIR]

IR_p+_IRS_[(tyrosines)]

IRS_[(tyrosines)]-{p}

IRS_[pYMXM]_ppi+_PI3K_[SH2]

IRS_[pYMXM]--PI3K_[SH2]

[activatedPI3K] PI3K_p+_PI_[(3)]

PI_[(3)]-{p}

AKT2_[PH]_i+_PI_[AKT2]

INPP4B_p-_PI_[(4)]

PDK1_[PH]_i+_PI_[PDK1]

PIPP_p-_PI_[(5)]

AKT2_[PH]--PI_[AKT2] PDK1_[PH]--PI_[PDK1] PDK1_p+_AKT2_[(Thr309)]

AKT2_[(Thr309)]-{p}

AKT2_p+_SIN1_[(Thr86)]

SIN1_[(Thr86)]-{p}

mTOR_p+_AKT2_[(S474)]

AKT2_[(S474)]-{p} AKT2_p+_PPM1G_[(PPP1R3G)] AKT2_p+_PRAS40_[(Thr246)] AKT2_p+_TSC2_[(Ser1130)] AKT2_p+_TSC2_[(Ser939)] AKT2_p+_TSC2_[(Ser981)] AKT2_p+_TSC2_[(Thr1462)] PPM1G_[(PPP1R3G)]-{p} PRAS40_[(Thr246)]-{p} TSC2_[(Ser1130)]-{p} TSC2_[(Ser939)]-{p}
TSC2_[(Ser981)]-{p}
TSC2_[(Thr1462)]-{p} GTP_gef_RHEB_[(G)] TSC1_[Cterminus]_ppi-_TSC2_[Nterminus] RHEB_[(G)]-{gtp}
TSC1_[Cterminus]--0
TSC2_[Nterminus]--0 RHEB_[switch1]_ppi+_mTOR_[MheatFAT] RHEB_[switch2]_ppi+_mTOR_[MheatNheatFAT] RHEB_[switch1]--mTOR_[MheatFAT] RHEB_[switch2]--mTOR_[MheatNheatFAT] mTOR_p+_PRAS40_[(Ser183)] mTOR_p+_PRAS40_[(Ser221)] PRAS40_[(Ser183)]-{p} PRAS40_[(Ser221)]-{p} Raptor_[BindingMotif]_ppi-_PRAS40_[TOS] protein1433_[PRAS40]_ppi+_PRAS40_[protein14 PRAS40_[protein1433]--protein1433_[PRAS40] Raptor_[BindingMotif]--0 mTOR_p+_EIF4EBP1_[(Thr37)] mTOR_p+_EIF4EBP1_[(Thr46)] mTOR_p+_S6K1_[(T389)] EIF4EBP1_[(Thr37)]-{p} EIF4EBP1_[(Thr46)]-{p} S6K1_[(T389)]-{p} S6K1_p+_IRS_[(hS307)] S6K1_p+_IRS_[(hS527)] S6K1_p+_RICTOR_[(Thr1135)] mTOR_p+_EIF4EBP1_[(Thr70)] IRS_[(hS307)]-{p} IRS_[(hS527)]-{p} RICTOR_[(Thr1135)]-{p} EIF4EBP1_[(Thr70)]-{p} mTOR_p+_EIF4EBP1_[(Ser65)] EIF4EBP1_[(Ser65)]-{p}
[Output]