GLUCAGON SIGNALING PATHWAY

Insulin signaling pathway → K04456 → K13296

K05259 → K04583 → K04632 → K08042 → cAMP → K04345

cAMP signaling pathway

K04345 → +p → K05870...
K04345 → K17491... → -p → K16333
K04345 → +p → K16311 → -p
+p → K16333

K05870...
K16333
K04498 → DNA → K07202 / K19008

K11411

K04634 → K05858 → IP3 → Ca²⁺

Calcium signaling pathway

K04958... → +p

K04348...

K04515 → +p → K07201

FoxO signaling pathway

K07202 / K07294
K07202 / K07201 → DNA → K01084 / K01596 / K08765...
K11411
K11434

Glycogenolysis

K00693 → Glycogen

G1P → Glycogen

K00688

+p

K07198...

Lipogenesis

Fatty acid biosynthesis

Malonyl-CoA → K08765...

K19028

PFK/FBPase1

+p → K11262...

Acetyl-CoA

FFA

+p
K07190...
K02183

Promoted FBPase 1 activity

F2,6BP → F6P+P

K01084

Glucose → K07299... → Glucose → G6P → F6P → F1,6P → 3-PGA → 2-PGA → PEP → Pyruvate

K12407

FBP1

PFKL

K01834

Gluconeogenesis

K00873

K00016

K01596

Lactate

Glycolysis / glucogenesis

Acyl-CoA

Citrate

Fatty acid oxidation

Acetyl CoA

K00161...

Isocitrate

2-Oxoglutarate

Succinate

Citrate cycle (TCA cycle)

Fumarate

Malate

Oxaloacetate

Citrate

Mitochondrion

Oxidative phosphorylation

Oxaloacetate → Malate