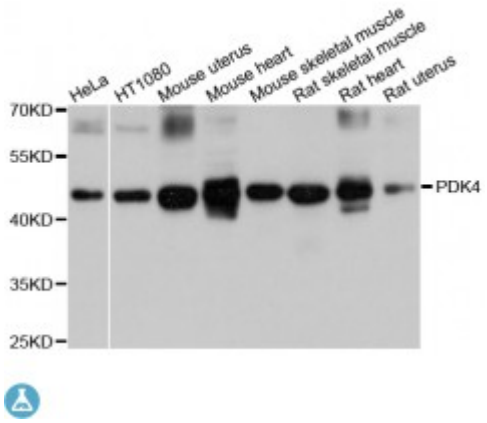
Anti-PDK4 Antibody



Description	This gene is a member of the PDK/BCKDK protein kinase family and encodes a mitochondrial protein with a histidine kinase domain. This protein is located in the matrix of the mitrochondria and inhibits the pyruvate dehydrogenase complex by phosphorylating one of its subunits, thereby contributing to the regulation of glucose metabolism. Expression of this gene is regulated by glucocorticoids, retinoic acid and insulin.

Model	STJ115300
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 102-411 of human PDK4 (NP_002603.1).
Gene ID	5166
Gene Symbol	PDK4
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Ubiquitous
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	kinase isozyme 4 mitochondrial
Molecular Weight	46.469 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:8812OMIM:602527Reactome:R-HSA-204174
Alternative Names	kinase isozyme 4 mitochondrial
Function	Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2, This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate, Inhibition of pyruvate dehydrogenase decreases glucose utilization and increases fat metabolism in response to prolonged fasting and starvation, Plays an important role in maintaining normal blood glucose levels under starvation, and is involved in the insulin signaling cascade, Via its regulation of pyruvate dehydrogenase activity, plays an important role in maintaining normal blood pH and in preventing the accumulation of ketone bodies under starvation, In the fed state, mediates cellular responses to glucose levels and to a high-fat diet, Regulates both fatty acid oxidation and de novo fatty acid biosynthesis, Plays a role in the generation of reactive oxygen species, Protects detached epithelial cells against anoikis, Plays a role in cell proliferation via its role in regulating carbohydrate and fatty acid metabolism,
Cellular Localization	Mitochondrion matrix

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