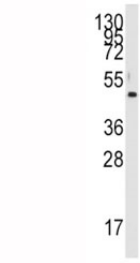
PDK4 Antibody (F50057)

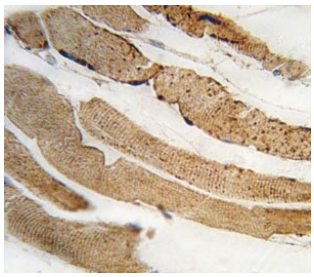
Catalog No.	Formulation	Size
F50057-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F50057-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

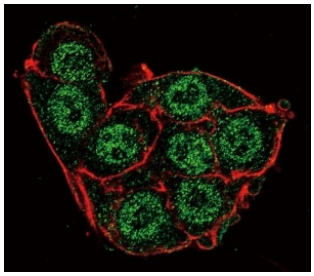
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q16654
Localization	Cytoplasmic
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:10-1:50 Immunofluorescence : 1:10-1:50
Limitations	This PDK4 antibody is available for research use only.



Western blot analysis of PDK4 antibody and HL-60 lysate. Predicted molecular weight ~46 kDa.



IHC analysis of FFPE human skeletal muscle tissue stained with PDK4 antibody



Confocal immunofluorescent analysis of PDK4 antibody with HeLa cells followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 Phalloidin (red).

Description

PDK4 is a 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. [UniProt]

Application Notes

Titration of the PDK4 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 83-111 from the human protein was used as the immunogen for this PDK4 antibody.

Storage

Aliquot the PDK4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.