

Recombinant Mouse Pdk4 Protein, Myc/DDK-tagged

Cat. No. Pdk4-4769M Lot. No. (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length pyruvate dehydrogenase kinase, isoenzyme 4 (Pdk4), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	<p>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.</p>
Molecular Mass	47 kDa

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Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Pdk4 pyruvate dehydrogenase kinase, isoenzyme 4 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Pdk4
Synonyms	PDK4; pyruvate dehydrogenase kinase, isoenzyme 4; pyruvate dehydrogenase kinase, isozyme 4; pyruvate dehydrogenase kinase 4; [Pyruvate dehydrogenase [[lipoamide]] kinase isozyme 4, mitochondrial; AV005916
Gene ID	27273
mRNA Refseq	NM_013743
Protein Refseq	NP_038771
UniProt ID	O70571

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