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PDK3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7040a

Product Information

Application	WB, E
Primary Accession	Q15120
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	46939
Antigen Region	1-30

Additional Information

Gene ID	5165
Other Names	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 3, mitochondrial, Pyruvate dehydrogenase kinase isoform 3, PDK3, PDHK3
Target/Specificity	This PDK3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PDK3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PDK3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDK3
Synonyms	PDHK3
Function	Inhibits pyruvate dehydrogenase activity by phosphorylation of the E1 subunit PDHA1, and thereby regulates glucose metabolism and aerobic respiration. Can also phosphorylate PDHA2. Decreases glucose utilization and

	increases fat metabolism in response to prolonged fasting, and as adaptation to a high-fat diet. Plays a role in glucose homeostasis and in maintaining normal blood glucose levels in function of nutrient levels and under starvation. Plays a role in the generation of reactive oxygen species.
Cellular Location	Mitochondrion matrix.
Tissue Location	Expressed in heart, skeletal muscle, spinal cord, as well as fetal and adult brain.

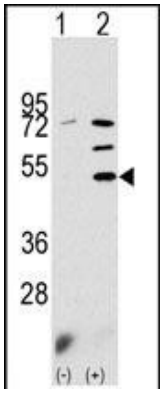
Background

PDK3 inhibits the mitochondrial pyruvate dehydrogenase complex by phosphorylation of the E1 alpha subunit, thus contributing to the regulation of glucose metabolism.

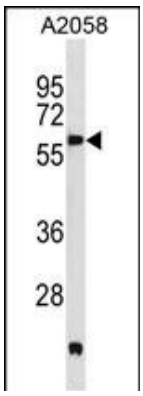
References

Baker, J.C., et al., J. Biol. Chem. 275(21):15773-15781 (2000). Gudi, R., et al., J. Biol. Chem. 270(48):28989-28994 (1995).

Images



Western blot analysis of PDK3 (arrow) using rabbit polyclonal PDK3 Antibody (N-term) (Cat# AP7040a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PDK3 gene (Lane 2) (Origene Technologies).



PDK3 Antibody (M1) (Cat. #AP7040a) western blot analysis in A2058 cell line lysates (35ug/lane).This demonstrates the PDK3 antibody detected the PDK3 protein (arrow).

Citations

- Hijacking of nucleotide biosynthesis and deamidation-mediated glycolysis by an oncogenic herpesvirus
- Phosphorylation status of pyruvate dehydrogenase distinguishes metabolic phenotypes of cultured rat brain astrocytes and neurons.
- Pyruvate dehydrogenase complex activity controls metabolic and malignant phenotype in cancer cells.

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