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PDK2 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1866B

Product Information

Application	WB, IHC-P, E
Primary Accession	Q15119
Other Accession	NP_002602.2
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,K
Clone Names	180CT10.2.3
Calculated MW	46154

Additional Information

Gene ID	5164
Other Names	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 2, mitochondrial, Pyruvate dehydrogenase kinase isoform 2, PDH kinase 2, PDKII, PDK2, PDHK2
Target/Specificity	This PDK2 monoclonal antibody is generated from mouse immunized with PDK2 recombinant protein.
Dilution	WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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	PDK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDK2
Synonyms	PDHK2
Function	Kinase that plays a key role in the 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. Mediates cellular responses to insulin. Plays an important role in maintaining normal blood glucose levels and in metabolic adaptation to nutrient availability. 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. Plays a role in the regulation of cell proliferation and in resistance to apoptosis under oxidative stress. Plays a role in p53/TP53-mediated apoptosis.

Cellular Location Mitochondrion matrix.

Tissue Location Expressed in many tissues, with the highest level in heart and skeletal muscle, intermediate levels in brain, kidney, pancreas and liver, and low levels in placenta and lung

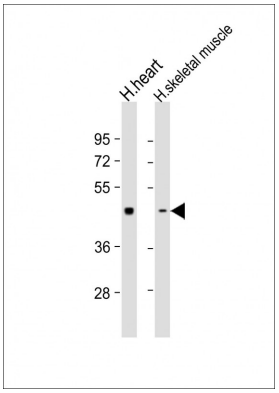
Background

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

References

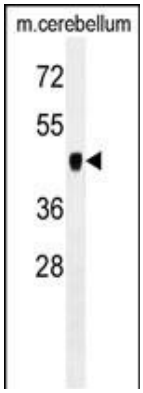
Li, J., et al. J. Biol. Chem. 284(49):34458-34467(2009)
Fencl, F., et al. Pediatr. Nephrol. 24(5):983-989(2009)
Sun, W., et al. Clin. Cancer Res. 15(2):476-484(2009)
Hiromasa, Y., et al. Biochemistry 47(8):2312-2324(2008)
Hiromasa, Y., et al. Biochemistry 47(8):2298-2311(2008)

Images



All lanes : Anti- at 1:1000 dilution Lane 1: human heart lysate Lane 2: human skeletal muscle lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 46 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

PDK2 Antibody (Cat. #AM1866b) western blot analysis in mouse cerebellum tissue lysates (35µg/lane).This demonstrates the PDK2 antibody detected the PDK2 protein (arrow).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.