

PDK2 Antibody [Knockdown Validated]

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/SpecificityThis 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 [Knockdown Validated] 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

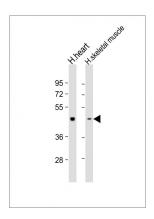
Background

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

References

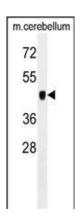
Li, J., et al. J. Biol. Chem. 284(49):34458-34467(2009) Fencl, F., et al. Pediatr. Nephrol. 24(5):983-989(2009) Sun, W., et al. Clin. Cancer Res. 15(2):476-484(2009) Hiromasa, Y., et al. Biochemistry 47(8):2312-2324(2008) Hiromasa, Y., et al. Biochemistry 47(8):2298-2311(2008)

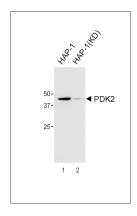
Images



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).





All lanes: Anti-PDK2 Antibody at 1:2000 dilution Lane 1: HAP-1 Lane 2: HAP-1 Knockdown Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution.

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