

Anti-PDK2 Antibody

Catalog # ABO11303

Product Information

Application	WB, IHC-P, ICC
Primary Accession	Q15119
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for [Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 2, mitochondrial (PDK2) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5164
Other Names	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 2, mitochondrial, 2.7.11.2, Pyruvate dehydrogenase kinase isoform 2, PDH kinase 2, PDKII, PDK2, PDHK2
Calculated MW	46154
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat Immunocytochemistry , 0.5-1 µg/ml, Human, Mouse, Rat Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse
Subcellular Localization	Mitochondrion matrix.
Tissue Specificity	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. .
Source	Eukaryota
Protein Name	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 2, mitochondrial
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human

PDK2(379-392aa WRHYQTIQEAGDWC), identical to the related rat and mouse sequences.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the PDK/BCKDK protein kinase family.

Protein Information

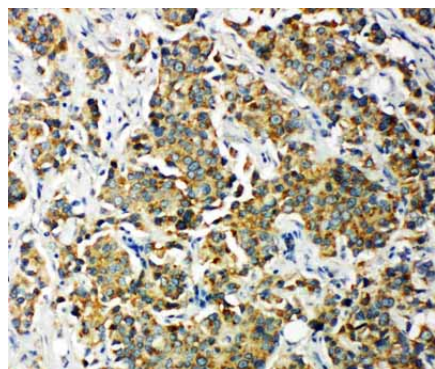
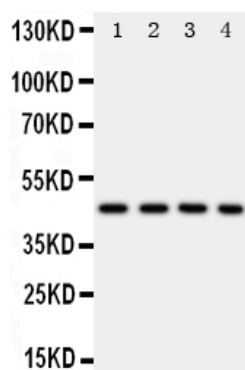
Name	PDK2
Synonyms	PDHK2
Function	Kinase that plays a key role in the regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2. This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through 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

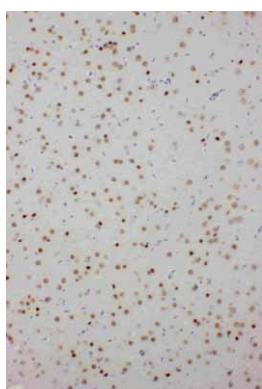
PDK2 (Pyruvate Dehydrogenase Kinase Isoenzyme 2), is an enzyme that in humans is encoded by the PDK2 gene. This gene encodes a member of the pyruvate dehydrogenase kinase family. The encoded protein phosphorylates pyruvate dehydrogenase, down-regulating the activity of the mitochondrial pyruvate dehydrogenase complex. Overexpression of this gene may play a role in both cancer and diabetes. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene.

Images

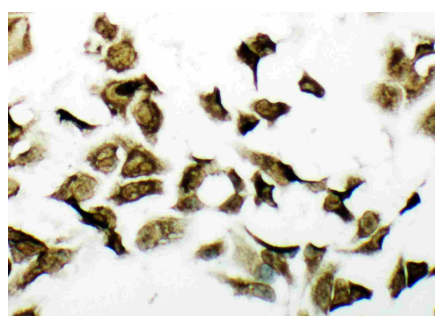
Anti-PDK2 antibody, ABO11303, Western blotting
Lane 1: Rat Heart Tissue Lysate
Lane 2: HELA Cell Lysate
Lane 3: SW620 Cell Lysate
Lane 4: MCF-7 Cell Lysate



Anti-PDK2 antibody, ABO11303, IHC(P)IHC(P): Human Mammary Cancer Tissue



Anti-PDK2 antibody, ABO11303, IHC(P)IHC(P): Rat Brain Tissue



Anti-PDK2 antibody, ABO11303, ICCICC: HELA Cell

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