

Anti-PDK2 Antibody
Catalog # ABO11303

Specification

Anti-PDK2 Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	O15119
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.

Anti-PDK2 Antibody - 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 MW KDa

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. .

Protein Name

[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 2, mitochondrial

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

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.

Anti-PDK2 Antibody - 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

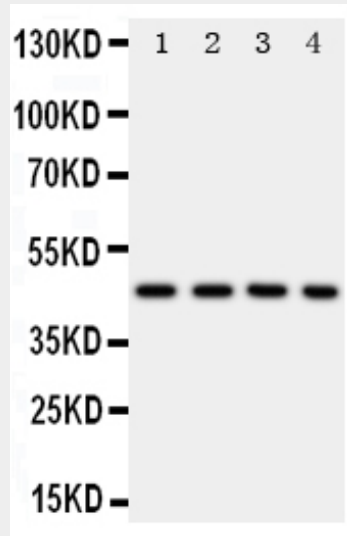
Anti-PDK2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

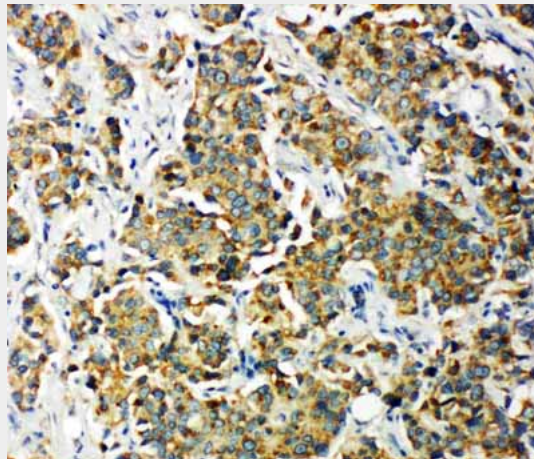
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

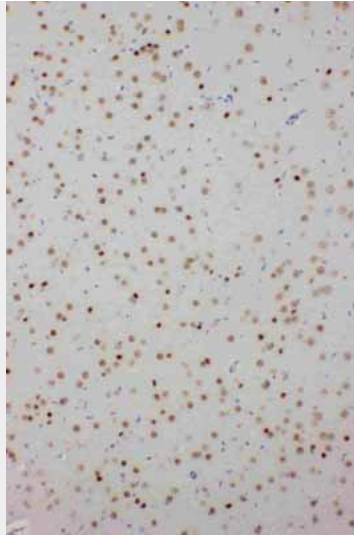
Anti-PDK2 Antibody - Images



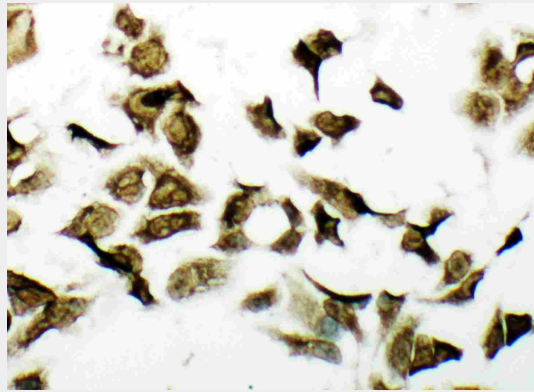
Anti-PDK2 antibody, ABO11303, Western blotting
Lane 1: Rat Heart Tissue Lysate
Lane 2: HELA Cell Lysate
Lane 3: SW620 Cell Lysate
Lane 4: MCF-7 Cell Lysate



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

Anti-PDK2 Antibody - 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.