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Anti-PDK4 Picoband Antibody
Catalog # ABO12459

Specification

Anti-PDK4 Picoband Antibody - Product Information

Application	**WB**
Primary Accession	Q16654
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for [Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 4, mitochondrial(PDK4) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-PDK4 Picoband Antibody - Additional Information

Gene ID 5166

Other Names
[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 4, mitochondrial, 2.7.11.2, Pyruvate dehydrogenase kinase isoform 4, PDK4, PDHK4

Calculated MW
46469 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Mitochondrion matrix.

Tissue Specificity
Ubiquitous; highest levels of expression in heart and skeletal muscle. .

Protein Name
[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 4, mitochondrial

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

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human PDK4 (91-125aa WYIQSLMDLVEFHEKSPDDQKALSDFVDTLIKVRN), different from the related mouse and rat sequences by three amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins.

Storage	**At -20˚C for one year. After r˚Constitution, 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.**

Anti-PDK4 Picoband Antibody - Protein Information

Name PDK4

Synonyms PDHK4

Function
Kinase that plays a key role in 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 in response to prolonged fasting and starvation. Plays an important role in maintaining normal blood glucose levels under starvation, and is involved in the insulin signaling cascade. 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. In the fed state, mediates cellular responses to glucose levels and to a high-fat diet. Regulates both fatty acid oxidation and de novo fatty acid biosynthesis. Plays a role in the generation of reactive oxygen species. Protects detached epithelial cells against anoikis. Plays a role in cell proliferation via its role in regulating carbohydrate and fatty acid metabolism.

Cellular Location
Mitochondrion matrix.

Tissue Location
Ubiquitous; highest levels of expression in heart and skeletal muscle.

Anti-PDK4 Picoband 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 Cytomety
- Cell Culture

Anti-PDK4 Picoband Antibody - Images

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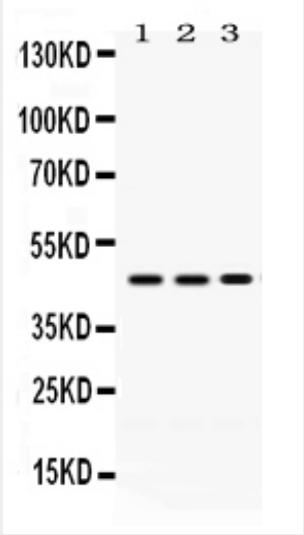

Anti- PDK4 Picoband antibody, ABO12459, Western blottingAll lanes: Anti PDK4 (ABO12459) at 0.5ug/mlLane 1: Rat Lung Tissue Lysate at 50ugLane 2: Mouse Thymus Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugPredicted bind size: 46KDObserved bind size: 46KD

Anti-PDK4 Picoband Antibody - Background

Pyruvate dehydrogenase lipoamide kinase isozyme 4, mitochondrial is an enzyme that in humans is encoded by the PDK4 gene. This gene is a member of the PDK/BCKDK protein kinase family and encodes a mitochondrial protein with a histidine kinase domain. This protein is located in the matrix of the mitrochondria and inhibits the pyruvate dehydrogenase complex by phosphorylating one of its subunits, thereby contributing to the regulation of glucose metabolism. Expression of this gene is regulated by glucocorticoids, retinoic acid and insulin. In addition, PDK4 is increased in hibernation and helps to decrease metabolism and conserve glucose by decreasing its conversion to acetyl-CoA, which enters the citric acid cycle and is converted to ATP.