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Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody

Catalog # ABO11302

Specification

Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	Q15118
Host	**Rabbit**
Reactivity	**Human, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for [Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 1, mitochondrial(PDK1) detection. Tested with WB, IHC-P in Human;Rat.

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

Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody - Additional Information

Gene ID 5163

Other Names
[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 1, mitochondrial, 2.7.11.2, Pyruvate dehydrogenase kinase isoform 1, PDH kinase 1, PDK1, PDHK1

Calculated MW
49244 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
Mitochondrion matrix .

Tissue Specificity
Expressed predominantly in the heart. Detected at lower levels in liver, skeletal muscle and pancreas. .

Protein Name
[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 1, 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 Mitochondrial Pyruvate dehydrogenase kinase 1(408-421aa WKHYNTNHEADDWC), different from the related rat

sequence by one amino acid, and from the related mouse sequence by two amino

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.**

Sequence Similarities
Belongs to the PDK/BCKDK protein kinase family.

Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody - Protein Information

Name PDK1

Synonyms PDHK1

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 (PubMed:7499431, PubMed:18541534, PubMed:22195962, PubMed:26942675, PubMed:17683942). 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 (PubMed:18541534, PubMed:22195962, PubMed:26942675). Plays an important role in cellular responses to hypoxia and is important for cell proliferation under hypoxia (PubMed:18541534, PubMed:22195962, PubMed:26942675).

Cellular Location
Mitochondrion matrix

Tissue Location
Expressed predominantly in the heart. Detected at lower levels in liver, skeletal muscle and pancreas

Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody - Protocols

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

- Western Blot

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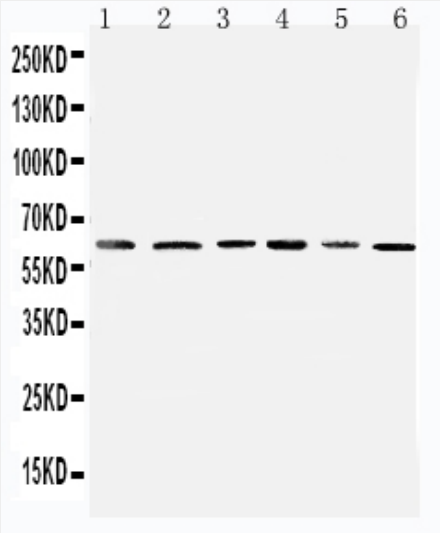
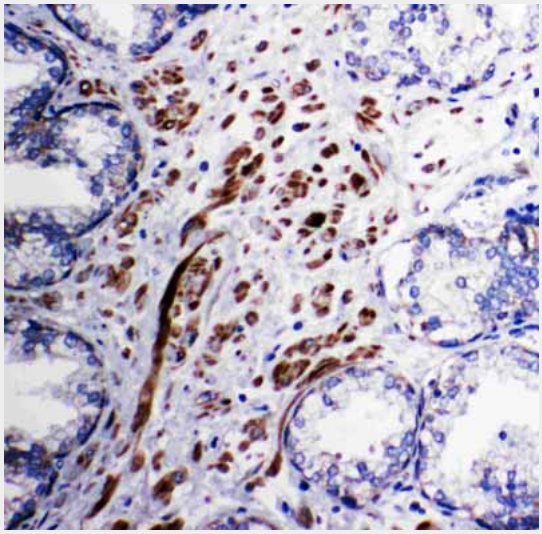
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody - Images



Anti-Mitochondrial Pyruvate dehydrogenase kinase 1 antibody, ABO11302, Western blottingLane 1: Rat Heart Tissue LysateLane 2: Rat Skeletal Muscle Tissue LysateLane 3: HELA Cell LysateLane 4: M231 Cell LysateLane 5: COLO320 Cell LysateLane 6: SW620 Cell Lysate



Anti-Mitochondrial Pyruvate dehydrogenase kinase 1 antibody, ABO11302, IHC(P)IHC(P): Human Prostatic Cancer Tissue

Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody - Background

PDK1(Pyruvate Dehydrogenase Kinase Isoenzyme 1), is an enzyme that in humans is encoded by the PDK1 gene. To find human PDKs, Gudi et al.(1995) used oligonucleotide primers to screen a human liver cDNA library by PCR. They identified and reported the deduced amino acid sequences

of PDK1, PDK2, and PDK3. The human PDK1 gene encodes a protein with a predicted molecular mass of 49,244 Da that shares 93% identity with that of the rat PDK1 gene. Northern blot analysis showed that the PDK1 message was expressed predominantly in the heart.