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Anti-Mitochondrial Pyruvate Dehydrogenase Kinase 1 Antibody

Catalog # ABO11302

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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Mitochondrion matrix .
Tissue Specificity	Expressed predominantly in the heart. Detected at lower levels in liver, skeletal muscle and pancreas. .
Source	Eukaryota
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.

Protein Information

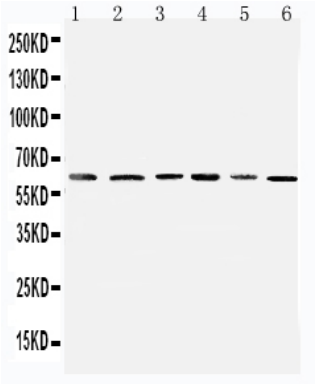
Name	PDK1
Synonyms	PDHK1
Function	Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2 (PubMed:7499431, PubMed:18541534, PubMed:22195962, PubMed:26942675, PubMed:17683942). This inhibits 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

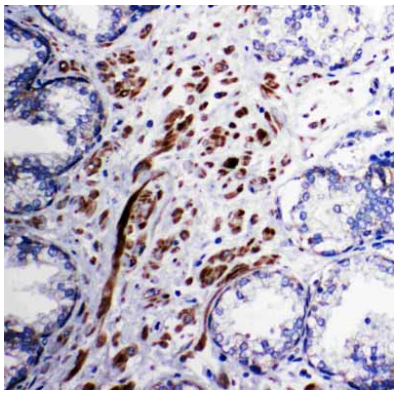
Background

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.

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

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