ARG40874
anti-PDK1 / Mitochondrial Pyruvate Dehydrogenase Kinase 1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes PDK1 / Mitochondrial Pyruvate Dehydrogenase Kinase 1
Tested Reactivity	Hu, Ms, Rat
Tested Application	IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	PDK1 / Mitochondrial Pyruvate Dehydrogenase Kinase 1
Species	Human
Immunogen	Synthetic peptide derived from Human PDK1.
Conjugation	Un-conjugated
Alternate Names	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 1, mitochondrial; EC 2.7.11.2; Pyruvate dehydrogenase kinase isoform 1; PDH kinase 1

Application Instructions

Application table

Application	Dilution
IP	1:50
WB	1:500 - 1:2000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

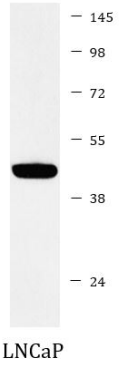
Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.4), 150 mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	PDK1
Gene Full Name	pyruvate dehydrogenase kinase, isozyme 1
Background	Pyruvate dehydrogenase (PDH) is a mitochondrial multienzyme complex that catalyzes the oxidative decarboxylation of pyruvate and is one of the major enzymes responsible for the regulation of homeostasis of carbohydrate fuels in mammals. The enzymatic activity is regulated by a phosphorylation/dephosphorylation cycle. Phosphorylation of PDH by a specific pyruvate dehydrogenase kinase (PDK) results in inactivation. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jun 2013]
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. Plays an important role in cellular responses to hypoxia and is important for cell proliferation under hypoxia. Protects cells against apoptosis in response to hypoxia and oxidative stress. [UniProt]
Calculated Mw	49 kDa
PTM	Phosphorylated by constitutively activated ABL1, FGFR1, FLT3 and JAK2 (in vitro), and this may also occur in cancer cells that express constitutively activated ABL1, FGFR1, FLT3 and JAK2. Phosphorylation at Tyr-243 and Tyr-244 strongly increases kinase activity, while phosphorylation at Tyr-136 has a lesser effect. [UniProt]
Cellular Localization	Mitochondrion matrix. [UniProt]

Images



ARG40874 anti-PDK1 / Mitochondrial Pyruvate Dehydrogenase Kinase 1 antibody WB image

Western blot: LNCaP cell lysate stained with ARG40874 anti-PDK1 / Mitochondrial Pyruvate Dehydrogenase Kinase 1 antibody.