

ARG54870 anti-PDK4 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes PDK4
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	PDK4
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 382-410 (C-terminus) of Human PDK4.
Conjugation	Un-conjugated
Alternate Names	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 4, mitochondrial; EC 2.7.11.2; Pyruvate dehydrogenase kinase isoform 4

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:100
	IHC-P	Assay-dependent
	WB	1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	Human heart	

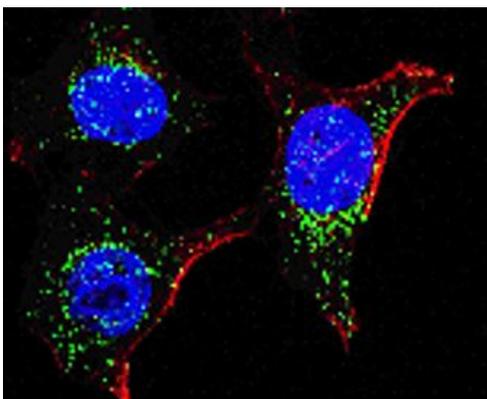
Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS and 0.09% (W/V) Sodium azide
Preservative	0.09% (W/V) Sodium azide
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 or below. 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

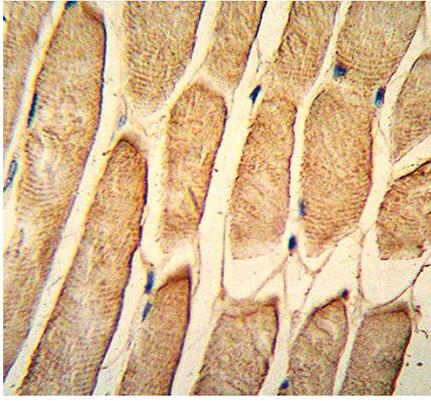
Database links	GeneID: 27273 Mouse GeneID: 5166 Human Swiss-port # O70571 Mouse Swiss-port # Q16654 Human
Gene Symbol	PDK4
Gene Full Name	pyruvate dehydrogenase kinase, isozyme 4
Background	This gene is a member of the PDK/BCKDK protein kinase family and encodes a mitochondrial protein with a histidine kinase domain. This protein is located in the matrix of the mitochondria 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. [provided by RefSeq, Jul 2008]
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. [UniProt]
Research Area	Metabolism antibody; Signaling Transduction antibody
Calculated Mw	46 kDa
Cellular Localization	Mitochondrion matrix.

Images



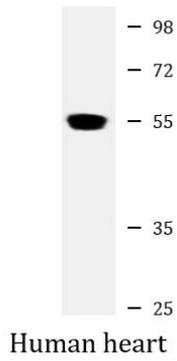
ARG54870 anti-PDK4 antibody ICC/IF image

Immunofluorescence: HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then stained with ARG54870 anti-PDK4 antibody (green) at 1:100 dilution, 2 h at room temperature. Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min).



ARG54870 anti-PDK4 antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human skeletal muscle stained with ARG54870 anti-PDK4 antibody.



ARG54870 anti-PDK4 antibody WB image

Western blot: 20 µg of Human heart lysate stained with ARG54870 anti-PDK4 antibody at 1:2000 dilution.