

PDK1 Monoclonal Antibody

Catalog No :	YM0513
Reactivity :	Human;Rat;Monkey
Applications :	WB;IHC;IF;FCM;ELISA
Target :	PDK1
Fields :	>>HIF-1 signaling pathway;>>Central carbon metabolism in cancer
Gene Name :	PDK1
Protein Name :	[Pyruvate dehydrogenase [lipoamide]] kinase isozyme 1 mitochondrial
Human Gene Id :	5163
Human Swiss Prot No :	Q15118
Mouse Swiss Prot No :	Q8BFP9
Rat Swiss Prot No :	Q63065
Immunogen :	Purified recombinant fragment of human PDK1 expressed in E. Coli.
Specificity :	PDK1 Monoclonal Antibody detects endogenous levels of PDK1 protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. IF 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.
Purification :	Affinity purification
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)

Molecularweight : 49kD

Cell Pathway : T_Cell_Receptor;Fc epsilon RI;Neurotrophin;

P References :

1. Nat Cell Biol. 2008 Feb;10(2):127-37.
2. Blood. 2008 Apr 1;111(7):3723-34.
3. J Biol Chem. 2007 Apr 20;282(16):12272-89.

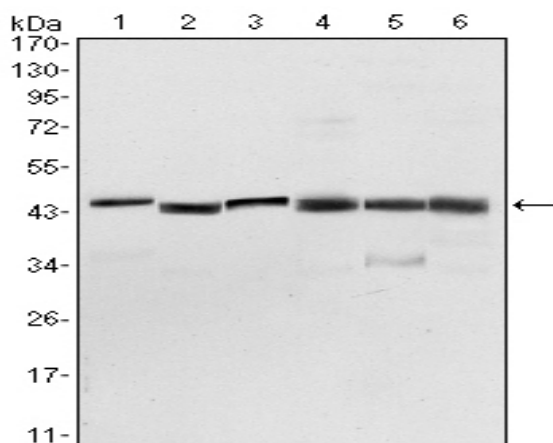
Background : Pyruvate dehydrogenase (PDH) is a mitochondrial multienzyme complex that catalyzes the oxidative decarboxylation of pyruvate and is one of the major enzymes responsible for the regulation of homeostasis of carbohydrate fuels in mammals. The enzymatic activity is regulated by a phosphorylation/dephosphorylation 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 : catalytic activity:ATP + [pyruvate dehydrogenase (acetyl-transferring)] = ADP + [pyruvate dehydrogenase (acetyl-transferring)] phosphate.,function:Inhibits the mitochondrial pyruvate dehydrogenase complex by phosphorylation of the E1 alpha subunit, thus contributing to the regulation of glucose metabolism.,similarity:Belongs to the PDK/BCKDK protein kinase family.,similarity:Contains 1 histidine kinase domain.,tissue specificity:Expressed predominantly in the heart.,

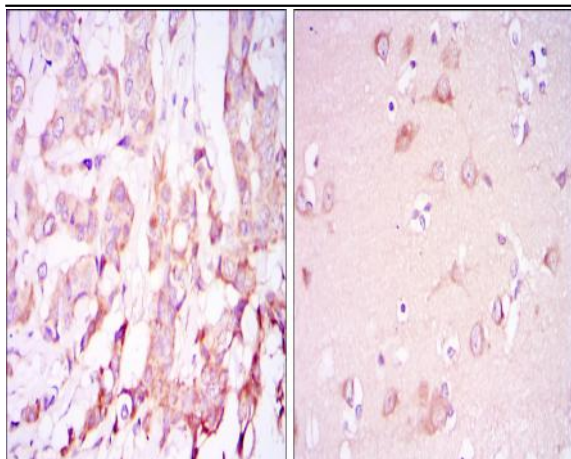
Subcellular Location : Mitochondrion matrix .

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

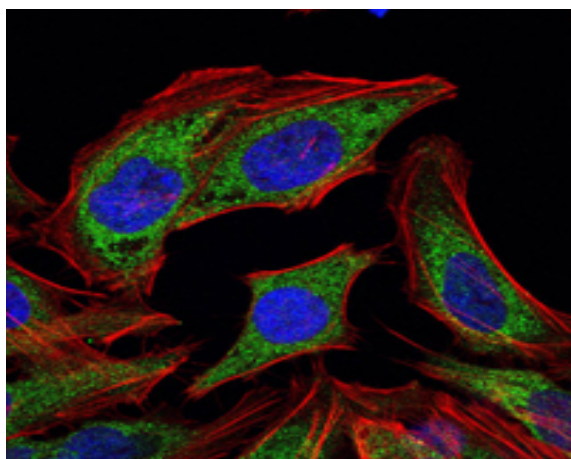
Products Images



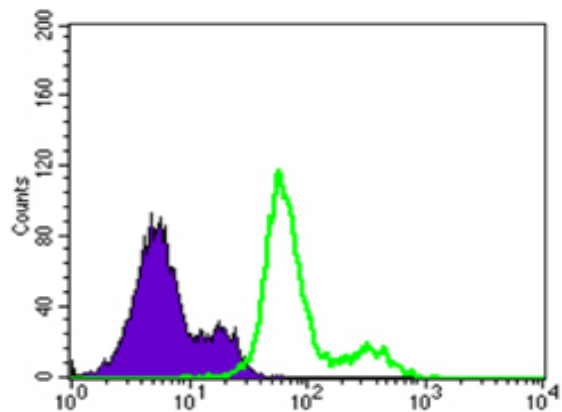
Western Blot analysis using PDK1 Monoclonal Antibody against NIH/3T3 (1), HeLa (2), Jurkat (3), HepG2 (4), PC-12 (5), and Cos7 (6) cell lysate.



Immunohistochemistry analysis of paraffin-embedded breast cancer tissues (left) and brain tissues (right) with DAB staining using PDK1 Monoclonal Antibody.



Immunofluorescence analysis of HELA cells using PDK1 Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of Lovo cells using PDK1 Monoclonal Antibody (green) and negative control (purple).