



## Rabbit Anti-PDK4 antibody

SL0682R

<b>Product Name:</b>	PDK4
<b>Chinese Name:</b>	丙酮酸脱氢酶激酶4抗体
<b>Alias:</b>	FLJ40832; Pyruvate dehydrogenase [lipoamide] kinase isozyme 4 mitochondrial; Pyruvate dehydrogenase kinase 4; Pyruvate dehydrogenase kinase isoform 4; Pyruvate dehydrogenase kinase isozyme 4 mitochondrial.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	47kDa
<b>Cellular localization:</b>	cytoplasmicThe cell membraneMitochondrion
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human Pdk4:311-411/411
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	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:**

Serine/threonine 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.

**Subunit:**

Homodimer. Interacts with the pyruvate dehydrogenase complex subunit DLAT, and is part of the multimeric pyruvate dehydrogenase complex that contains multiple copies of pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (DLAT, E2) and lipoamide dehydrogenase (DLD, E3).

**Subcellular Location:**

Mitochondrion matrix.

**Tissue Specificity:**

Ubiquitous; highest levels of expression in heart and skeletal muscle.

**Similarity:**

Belongs to the PDK/BCKDK protein kinase family.  
Contains 1 histidine kinase domain.

**SWISS:**

Q16654

**Gene ID:**

5166

**Database links:**

[Entrez Gene: 5166](#)Human

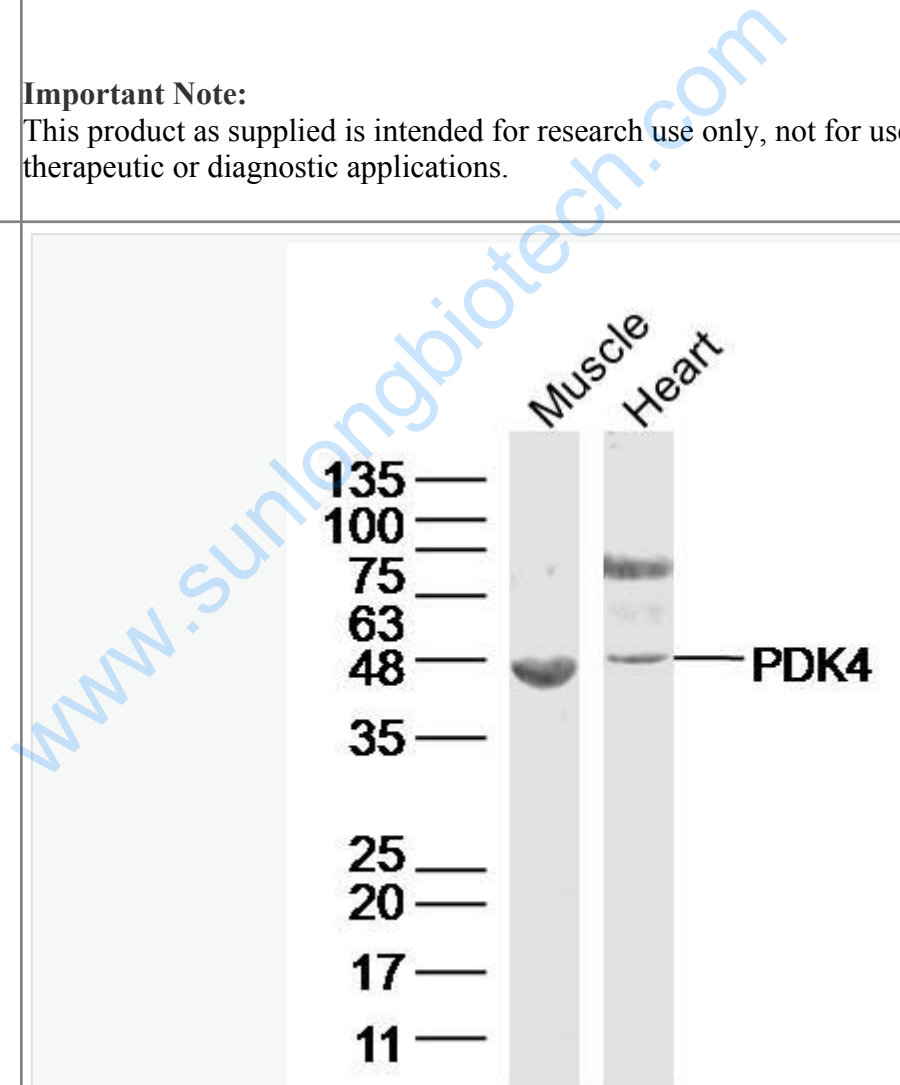
[Entrez Gene: 27273](#)Mouse

[Entrez Gene: 89813](#)Rat  
[Oimim: 602527](#)Human  
[SwissProt: Q16654](#)Human  
[SwissProt: O70571](#)Mouse  
[SwissProt: O54937](#)Rat  
[Unigene: 8364](#)Human  
[Unigene: 235547](#)Mouse  
[Unigene: 11766](#)Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Sample:

Muscle (Mouse) Lysate at 40 ug

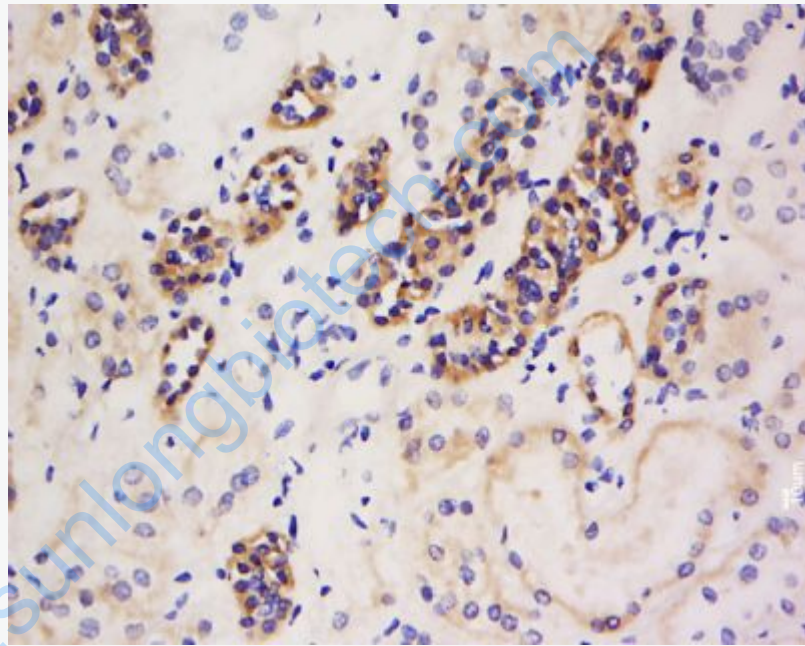
Heart (Mouse) Lysate at 40 ug

Primary: Anti-PDK4 (SL0682R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 47 kD

Observed band size: 47 kD



Tissue/cell: Human kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-PDK4 Polyclonal Antibody, Unconjugated(SL0682R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and

	DAB(C-0010) staining
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