

**PDK2 Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AW5490**

**Specification**

**PDK2 Antibody - Product Information**

Application	FC, IHC-P, WB,E
Primary Accession	<a href="#">Q15119</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=46,39;M=46;R=46 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

**PDK2 Antibody - Additional Information**

**Gene ID** 5164

**Antigen Region**  
16-307

**Other Names**  
[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 2, mitochondrial, Pyruvate dehydrogenase kinase isoform 2, PDH kinase 2, PDKII, PDK2, PDHK2

**Dilution**  
FC~~1:10~50  
IHC-P~~1:10~50  
WB~~1:1000

**Target/Specificity**  
This PDK2 antibody is generated from rabbits immunized with recombinant protein of human PDK2.

**Storage**  
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**  
PDK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**PDK2 Antibody - Protein Information**

**Name** PDK2

**Synonyms** PDHK2

## Function

Kinase that plays a key role in the 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. Mediates cellular responses to insulin. Plays an important role in maintaining normal blood glucose levels and in metabolic adaptation to nutrient availability. 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. Plays a role in the regulation of cell proliferation and in resistance to apoptosis under oxidative stress. Plays a role in p53/TP53-mediated apoptosis.

## Cellular Location

Mitochondrion matrix.

## Tissue Location

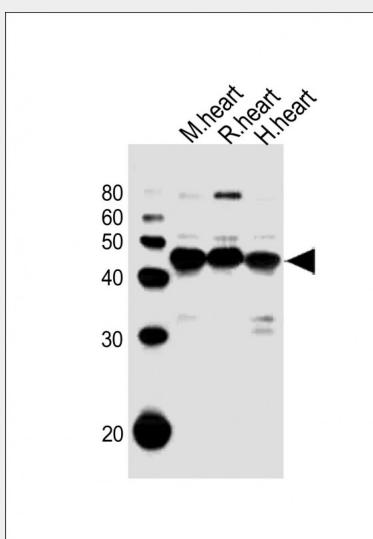
Expressed in many tissues, with the highest level in heart and skeletal muscle, intermediate levels in brain, kidney, pancreas and liver, and low levels in placenta and lung

## PDK2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

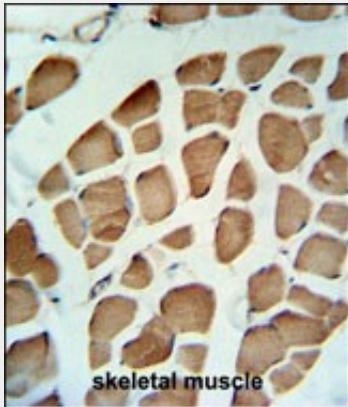
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## PDK2 Antibody - Images

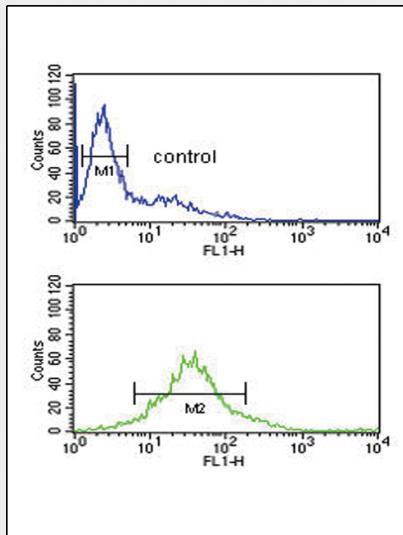


All lanes : Anti-PDK2 Antibody at 1:1000 dilution Lane 1: mouse heart lysates Lane 2: rat heart lysates Lane 3: human heart lysates Lysates/proteins at 20 µg per lane. Secondary Goat

Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 46 kDa  
Blocking/Dilution buffer: 5% NFDM/TBST.



PDK2 Antibody (Cat. #AW5490) IHC analysis in formalin fixed and paraffin embedded skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PDK2 Antibody for immunohistochemistry. Clinical relevance has not been evaluated.



PDK2 Antibody (Cat. #AW5490) flow cytometric analysis of Jurkat cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

### **PDK2 Antibody - Background**

PDK2 inhibits the mitochondrial pyruvate dehydrogenase complex by phosphorylation of the E1 alpha subunit, thus contributing to the regulation of glucose metabolism.

### **PDK2 Antibody - References**

Li, J., et al. J. Biol. Chem. 284(49):34458-34467(2009) Fencl, F., et al. Pediatr. Nephrol. 24(5):983-989(2009) Sun, W., et al. Clin. Cancer Res. 15(2):476-484(2009) Hiromasa, Y., et al. Biochemistry 47(8):2312-2324(2008)