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PDK4 Antibody (E265)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7041C

Specification

PDK4 Antibody (E265) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q16654
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**250-277**

PDK4 Antibody (E265) - Additional Information

Gene ID 5166

Other Names
[Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 4, mitochondrial, Pyruvate dehydrogenase kinase isoform 4, PDK4, PDHK4

Target/Specificity
This PDK4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 250-277 amino acids from human PDK4.

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

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
PDK4 Antibody (E265) is for research use only and not for use in diagnostic or therapeutic procedures.

PDK4 Antibody (E265) - Protein Information

Name PDK4

Synonyms PDHK4

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.

Cellular Location
Mitochondrion matrix.

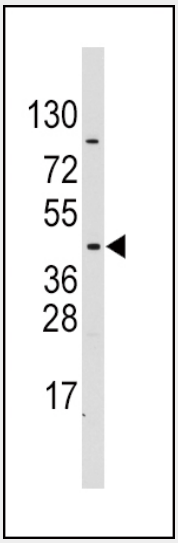
Tissue Location
Ubiquitous; highest levels of expression in heart and skeletal muscle.

PDK4 Antibody (E265) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PDK4 Antibody (E265) - Images



Western blot analysis of PDK4 Antibody (E265) in CEM cell line lysates (35ug/lane). PDK4 (arrow) was detected using the purified Pab.

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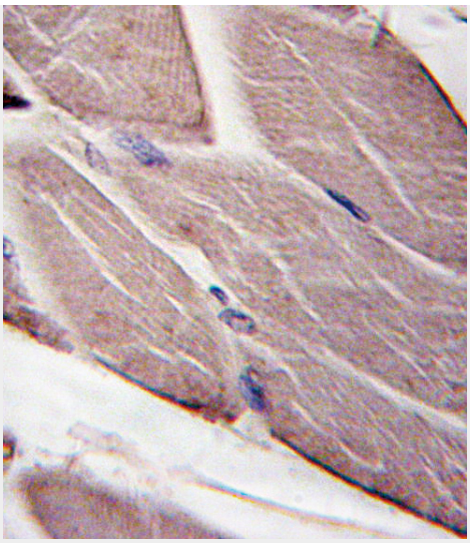

Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with PDK4-E265, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

PDK4 Antibody (E265) - Background

PDK4 inhibits the mitochondrial pyruvate dehydrogenase complex by phosphorylation of the E1 alpha subunit, thus contributing to the regulation of glucose metabolism.

PDK4 Antibody (E265) - References

Rosa, G., et al., Obes. Res. 11(2):176-182 (2003). Razeghi, P., et al., Cardiology 97(4):203-209 (2002). Rowles, J., et al., J. Biol. Chem. 271(37):22376-22382 (1996). Gudi, R., et al., J. Biol. Chem. 270(48):28989-28994 (1995).