10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PDK4 Antibody (E265) Blocking Peptide
Synthetic peptide
Catalog # BP7041c

Specification

PDK4 Antibody (E265) Blocking Peptide - Product Information

Primary Accession Q16654

PDK4 Antibody (E265) Blocking Peptide - Additional Information

Gene ID 5166

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

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7041c was selected from the E265 region of human PDK4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PDK4 Antibody (E265) Blocking Peptide - 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) Blocking Peptide - Protocols

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

- Blocking Peptides

PDK4 Antibody (E265) Blocking Peptide - Images

PDK4 Antibody (E265) Blocking Peptide - 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) Blocking Peptide - 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).