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PANK2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP7160b

Specification

PANK2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q9BZ23

PANK2 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 80025

Other Names
Pantothenate kinase 2, mitochondrial, hPanK2, Pantothenic acid kinase 2, PANK2, C20orf48

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7160b was selected from the Center region of human PANK2. 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.

PANK2 Antibody (Center) Blocking Peptide - Protein Information

Name PANK2

Synonyms C20orf48

Function
[Isoform 1]: Mitochondrial isoform that catalyzes the phosphorylation of pantothenate to generate 4'-phosphopantothenate in the first and rate-determining step of coenzyme A (CoA) synthesis (PubMed:15659606, PubMed:17825826, PubMed:17242360, PubMed:16272150). Required for angiogenic activity of umbilical vein of endothelial cells (HUVEC) (PubMed:30221726).

Cellular Location

[Isoform 1]: Mitochondrion. Mitochondrion intermembrane space. Nucleus Note=Localizes predominantly to the mitochondria and to a lesser extent to the nucleus. Found in both the mitochondria and the nucleus throughout the cell cycle, with the exception of the G2/M phase when it is restricted to mitochdondria. [Isoform 3]: Cytoplasm {ECO:0000269|PubMed:12554685, ECO:0000305}

Tissue Location
Expressed in the brain (at protein level) (PubMed:15659606, PubMed:17825826). Ubiquitous (PubMed:11479594) Highly expressed in the testis (PubMed:17825826). Expressed in the umbilical vein endothelial cells (HUVEC) (PubMed:30221726)

PANK2 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

PANK2 Antibody (Center) Blocking Peptide - Images

PANK2 Antibody (Center) Blocking Peptide - Background

Pantothenate kinase is an essential regulatory enzyme in CoA biosynthesis, catalyzing the cytosolic phosphorylation of pantothenate (vitamin B5), N-pantothenoylcysteine, and pantetheine. CoA is the major acyl carrier, playing a central role in intermediary and fatty acid metabolism. In both yeast and fly, each with only 1 pantothenate kinase gene, the null mutant is inviable. Mutations in PANK2 are the cause of pantothenate kinase-associated neurodegeneration (PKAN), formerly known as Hallervorden-Spatz syndrome (HSS). PKAN is an autosomal recessive neurodegenerative disorder associated with iron accumulation in the brain. Mutations in PANK2 are the cause of hypoprebetalipoproteinemia, acanthocytosis, retinitis pigmentosa, and pallidal degeneration (HARP).

PANK2 Antibody (Center) Blocking Peptide - References

Neurology 58: 1673-1674, 2002. Hum. Molec. Genet. 12: 321-327, 2003. Neurology 61: 1423-1426, 2003. Neurology 64: 1810-1812, 2005. Nature Genet. 28: 345-349, 2001.