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PANK2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7160a

Product Information

Application	WB, E
Primary Accession	Q9BZ23
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB5486
Calculated MW	62681
Antigen Region	65-95

Additional Information

Gene ID	80025
Other Names	Pantothenate kinase 2, mitochondrial, hPanK2, Pantothenic acid kinase 2, PANK2, C20orf48
Target/Specificity	This PANK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 65-95 amino acids from the N-terminal region of human PANK2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	PANK2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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:16272150, PubMed:17242360, PubMed:17825826). 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)

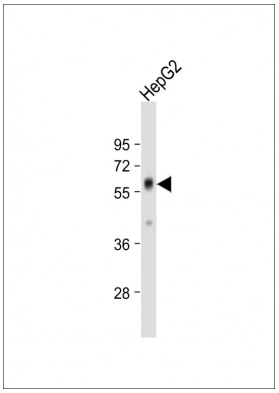
Background

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).

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.

Images



Anti-PANK2 Antibody (P80) at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 63 kDa Blocking/Dilution buffer: 5% NFDM/TBST.