PANK2 Peptide - Middle Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	PANK2, Blocking Peptide
Full Product Name	PANK2 Peptide - middle region
Product Gene Name	PANK2 blocking peptide
Sequence	Synthetic peptide located within the following region: FGLPGWAVAS SFGNMMSKEK REAVSKEDLA RATLITITNN IGSIARMCAL
Species Reactivity	Human
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	PANK2 peptide (MBS3239907) is used for blocking the activity of PANK2 antibody (MBS3214983)
Molecular Weight	50kDa
OMIM	234200
Product Categories/Family for PANK2 blocking peptide	Peptide
Applications Tested/Suitable for PANK2 blocking peptide	Western Blot (WB)
Related Product Information for PANK2 blocking peptide	This is a synthetic peptide designed for use in combination with anti-PANK2 Antibody, made Target Description: This gene encodes a protein belonging to the pantothenate kinase family and is the only member of that family to be expressed in mitochondria. Pantothenate kinase is a key regulatory enzyme in the biosynthesis of coenzyme A (CoA) in bacteria and mammalian cells. It catalyzes the first committed step in the universal biosynthetic pathway leading to CoA and is itself subject to regulation through feedback inhibition by acyl CoA species. Mutations in this gene are associated with HARP syndrome and pantothenate kinase-associated neurodegeneration (PKAN), formerly Hallervorden-Spatz syndrome. Alternative splicing, involving the use of alternate first exons, results in multiple transcripts encoding different isoforms.
Other Notes	Small volumes of PANK2 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PANK2 purchase	MBS3239907 is a blocking peptide targeting PANK2. Also known as PANK2 Peptide - middle region. Reactive in Human.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PANK2. It may not necessarily be applicable to this product.

NCBI GI #	23452046
NCBI GeneID	80025
NCBI Accession #	AAN32907.1
UniProt Primary Accession #	Q9BZ23
UniProt Related Accession #	Q9BZ23

NCBI Official Full Name	pantothenate kinase 2
NCBI Official Synonym Full Names	pantothenate kinase 2
NCBI Official Symbol	PANK2
NCBI Official Synonym Symbols	HSS; HARP; PKAN; NBIA1; C20orf48
UniProt Protein Name	Pantothenate kinase 2, mitochondrial
UniProt Synonym Protein Names	Pantothenic acid kinase 2
Protein Family	Pantothenate kinase
UniProt Gene Name	PANK2
UniProt Synonym Gene Names	C20orf48
UniProt Entry Name	PANK2_HUMAN
NCBI Protein Information	pantothenate kinase 2, mitochondrial
NCBI Summary for PANK2	This gene encodes a protein belonging to the pantothenate kinase family and is the only member of that family to be expressed in mitochondria. Pantothenate kinase is a key regulatory enzyme in the biosynthesis of coenzyme A (CoA) in bacteria and mammalian cells. It catalyzes the first committed step in the universal biosynthetic pathway leading to CoA and is itself subject to regulation through feedback inhibition by acyl CoA species. Mutations in this gene are associated with HARP syndrome and pantothenate kinase-associated neurodegeneration (PKAN), formerly Hallervorden-Spatz syndrome. Alternative splicing, involving the use of alternate first exons, results in multiple transcripts encoding different isoforms. [provided by RefSeq, Jul 2008]
UniProt Comments for PANK2	PANK2: a pantothenate kinase that catalyzes the first committed step in the biosynthesis of coenzyme A, an essential cofactor in cellular metabolism. PANK2 is predominantly localized in mitochondria in primates. Defects in PANK2 are the cause of pantothenate kinase-associated neurodegeneration (PKAN), an autosomal recessive neurodegenerative disorder associated with iron accumulation in the brain. Three isoforms of the human PANK2, produced by alternative splicing, have been reported. Protein type: Kinase, other; Mitochondrial; EC 2.7.1.33; Cofactor and Vitamin Metabolism - pantothenate and CoA biosynthesis Chromosomal Location of Human Ortholog: 20p13 Cellular Component: mitochondrial intermembrane space; cytosol Molecular Function: pantothenate kinase activity; ATP binding Biological Process: coenzyme A biosynthetic process; coenzyme biosynthetic process; vitamin metabolic process; regulation of mitochondrial membrane potential; pantothenate metabolic process; aerobic respiration; phosphorylation; spermatid development; water-soluble vitamin metabolic process Disease: Hypoprebetalipoproteinemia, Acanthocytosis, Retinitis Pigmentosa, And Pallidal Degeneration; Neurodegeneration With Brain Iron Accumulation 1
Research Articles on PANK2	**1.** Study identified c.1069C > T missense variation (rs753376100) in exon 3 of PANK2 gene associated with Pantothenate kinase-associated Neurodegeneration (PKAN) that had segregated in the family in an autosomal recessive mode. The clinical phenotype was found to be concordant with classic PKAN in terms of the age of onset, symptoms and radiological findings. The variant amino acid was mapped within the catalytic site.
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