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PDXK Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP7079a

Specification

PDXK Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O00764

PDXK Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 8566

Other Names
Pyridoxal kinase, Pyridoxine kinase, PDXK, C21orf124, C21orf97, PKH, PNK

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7079a was selected from the N-term region of human PDXK. 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.

PDXK Antibody (N-term) Blocking Peptide - Protein Information

Name PDXK (HGNC:8819)

Function
Catalyzes the phosphorylation of the dietary vitamin B6 vitamers pyridoxal (PL), pyridoxine (PN) and pyridoxamine (PM) to form pyridoxal 5'-phosphate (PLP), pyridoxine 5'-phosphate (PNP) and pyridoxamine 5'-phosphate (PMP), respectively (PubMed:9099727, PubMed:10987144, PubMed:17766369, PubMed:19351586, PubMed:31187503) (Probable). PLP is the active form of vitamin B6, and acts as a cofactor for over 140 different enzymatic reactions.

Cellular Location

Cytoplasm, cytosol.

Tissue Location
Ubiquitous (PubMed:9099727, PubMed:31187503). Highly expressed in testis (PubMed:9099727)

PDXK Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

PDXK Antibody (N-term) Blocking Peptide - Images

PDXK Antibody (N-term) Blocking Peptide - Background

Pyridoxal kinase (PDXK) converts vitamin B6 to pyridoxal-5-phosphate (PLP), an essential cofactor in the intermediate metabolism of amino acids and neurotransmitters. The PDXK gene encodes a 312-amino acid polypeptide, and expression of the cDNA reveals pyridoxal kinase activity. Northern blot analysis revealed that a major 1.5-kb PDXK transcript is expressed in all tissues tested. The expression of PDXK shows circadian oscillations. The expression of Pdxk in mouse liver and brain is regulated by the 3 PAR bZIP transcription factors, Dbp, Hlf, and Tef, which also show circadian oscillations in expression. Mice devoid of all 3 transcription factors show decreased levels of brain PLP, serotonin, and dopamine, and are highly susceptible to frequently lethal generalized spontaneous and audiogenic epilepsies.