

**PDXK Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7167a****Specification**

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**PDXK Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [O00764](#)**PDXK Antibody (C-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 [AP7167a](/product/products/AP7167a) was selected from the C-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 (C-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](http://www.uniprot.org/citations/9099727), PubMed:[10987144](http://www.uniprot.org/citations/10987144), PubMed:[17766369](http://www.uniprot.org/citations/17766369), PubMed:[19351586](http://www.uniprot.org/citations/19351586), PubMed:[31187503](http://www.uniprot.org/citations/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 (C-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**PDXK Antibody (C-term) Blocking Peptide - Images****PDXK Antibody (C-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.

**PDXK Antibody (C-term) Blocking Peptide - References**

Shin, J.H., et al., Neurochem. Int. 45(1):73-79 (2004). Lee, H.S., et al., Mol. Cells 10(4):452-459 (2000). Laine-Cessac, P., et al., Biochem. Pharmacol. 54(8):863-870 (1997). Hanna, M.C., et al., J. Biol. Chem. 272(16):10756-10760 (1997). Zhang, Z., et al., J. Nutr. 10(1):53-59 (1993).