10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PDXP Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP9822a

Specification

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

Primary Accession Q96GD0

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

Gene ID 57026

Other Names
Pyridoxal phosphate phosphatase, PLP phosphatase, Chronophin, PDXP, CIN, PLP, PLPP

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.

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

Name PDXP (HGNC:30259)

Function
Functions as a pyridoxal phosphate (PLP) phosphatase, which also catalyzes the dephosphorylation of pyridoxine 5'-phosphate (PNP) and pyridoxamine 5'-phosphate (PMP), with order of substrate preference PLP > PNP > PMP and therefore plays a role in vitamin B6 metabolism (PubMed:14522954, PubMed:8132548). Also functions as a protein serine phosphatase that specifically dephosphorylates 'Ser-3' in proteins of the actin-depolymerizing factor (ADF)/cofilin family like CFL1 and DSTN. Thereby, regulates cofilin-dependent actin cytoskeleton reorganization, being required for normal progress through mitosis and normal cytokinesis. Does not dephosphorylate phosphothreonines in LIMK1. Does not dephosphorylate peptides containing phosphotyrosine (PubMed:15580268).

Cellular Location
Cytoplasm, cytosol. Cytoplasm, cytoskeleton. Cell projection, ruffle membrane; Peripheral membrane protein; Cytoplasmic side. Cell projection, lamellipodium membrane; Peripheral membrane protein; Cytoplasmic side. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Note=Colocalizes with the actin cytoskeleton in membrane ruffles and lamellipodia. Diffusely distributed throughout the cytosol during pro-metaphase and metaphase Detected at the dynamic

cell poles during telophase. Detected at the cleavage furrow and contractile ring during cytokinesis. Transiently detected at the plasma membrane in late stages of cytokinesis. Detected at the midbody.

Tissue Location
Ubiquitously expressed (at protein level) (PubMed:23223568). Highly expressed in all the regions of central nerve system except the spinal cord. Also expressed at high level in liver and testis. In fetus, it is weakly expressed in all organs except brain (PubMed:14522954, PubMed:15580268).

PDXP Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

PDXP Antibody (N-term) Blocking Peptide - Images

PDXP Antibody (N-term) Blocking Peptide - Background

Pyridoxal 5-prime-phosphate (PLP) is the active form of vitamin B6 that acts as a coenzyme in maintaining biochemical homeostasis. The preferred degradation route from PLP to 4-pyridoxic acid involves the dephosphorylation of PLP by PDXP.

PDXP Antibody (N-term) Blocking Peptide - References

Huang, T.Y., et al. Dev. Cell 15(5):691-703(2008)Lee, Y.P., et al. BMB Rep 41(5):408-413(2008)Kim, D.W., et al. J. Biochem. Mol. Biol. 38(6):703-708(2005)Gohla, A., et al. Nat. Cell Biol. 7(1):21-29(2005)Jang, Y.M., et al. J. Biol. Chem. 278(50):50040-50046(2003)