

PTPRN2 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP16733a**Specification**

PTPRN2 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q92932](#)**PTPRN2 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 5799**Other Names**

Receptor-type tyrosine-protein phosphatase N2, R-PTP-N2, Islet cell autoantigen-related protein, IAR, ICAAR, Phogrin, PTPRN2, KIAA0387

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.

PTPRN2 Antibody (N-term) Blocking Peptide - Protein Information**Name** PTPRN2**Synonyms** KIAA0387**Function**

Plays a role in vesicle-mediated secretory processes. Required for normal accumulation of secretory vesicles in hippocampus, pituitary and pancreatic islets. Required for the accumulation of normal levels of insulin-containing vesicles and preventing their degradation. Plays a role in insulin secretion in response to glucose stimuli. Required for normal accumulation of the neurotransmitters norepinephrine, dopamine and serotonin in the brain. In females, but not in males, required for normal accumulation and secretion of pituitary hormones, such as luteinizing hormone (LH) and follicle-stimulating hormone (FSH) (By similarity). Required to maintain normal levels of renin expression and renin release (By similarity). May regulate catalytic active protein-tyrosine phosphatases such as PTPRA through dimerization (By similarity). Has phosphatidylinositol phosphatase activity; the PIPase activity is involved in its ability to regulate insulin secretion. Can dephosphorylate phosphatidylinositol 4,5-bisphosphate (PI(4,5)P2), phosphatidylinositol 5-phosphate and phosphatidylinositol 3-phosphate (By similarity). Regulates PI(4,5)P2 level in the plasma membrane and localization of cofilin at the plasma membrane and thus is indirectly involved in regulation of actin dynamics related to cell migration and metastasis; upon hydrolyzation of PI(4,5)P2 cofilin is released from the plasma membrane and acts in the

cytoplasm in severing F-actin filaments (PubMed:26620550).

Cellular Location

Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:P80560}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P80560}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:P80560}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P80560} Note=Predominantly found on dense-core secretory granules. Sorting to secretory granules in part is dependent of the N-terminal propeptide domain of the precursor and its interaction with CPE (By similarity) Transiently found at the cell membrane, when secretory vesicles fuse with the cell membrane to release their cargo. Is then endocytosed and recycled to secretory vesicles involving clathrin-dependent AP2- mediated endocytosis. Recycled via STX6- but not TTTGN1/TGN38- containing compartments (By similarity). {ECO:0000250|UniProtKB:P80560, ECO:0000250|UniProtKB:Q63475}

Tissue Location

Highest levels in brain and pancreas (PubMed:8954911, PubMed:8798755). Lower levels in trachea, prostate, stomach and spinal cord (PubMed:8798755).

PTPRN2 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PTPRN2 Antibody (N-term) Blocking Peptide - Images

PTPRN2 Antibody (N-term) Blocking Peptide - Background

The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP possesses an extracellular region, a single transmembrane region, and a single intracellular catalytic domain, and thus represents a receptor-type PTP. The catalytic domain of this PTP is most closely related to PTPRN/IA-2beta. This PTP and PTPRN are both found to be major autoantigens associated with insulin-dependent diabetes mellitus. Three alternatively spliced transcript variants of this gene, which encode distinct proteins, have been reported.

PTPRN2 Antibody (N-term) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) ; Joslyn, G., et al. Alcohol. Clin. Exp. Res. 34(5):800-812(2010) Yoshida, T., et al. Int. J. Mol. Med. 25(4):649-656(2010) Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)