

PTPRN Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP14523c

Specification

PTPRN Antibody (Center) Blocking Peptide - Product Information

Primary Accession [O16849](#)

PTPRN Antibody (Center) Blocking Peptide - Additional Information

Gene ID 5798

Other Names

Receptor-type tyrosine-protein phosphatase-like N, R-PTP-N, Islet cell antigen 512, ICA 512, Islet cell autoantigen 3, PTP IA-2, PTPRN, ICA3, ICA512

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.

PTPRN Antibody (Center) Blocking Peptide - Protein Information

Name PTPRN

Synonyms ICA3, ICA512

Function

Plays a role in vesicle-mediated secretory processes (PubMed:24843546). Required for normal accumulation of secretory vesicles in hippocampus, pituitary and pancreatic islets (By similarity). Required for the accumulation of normal levels of insulin- containing vesicles and preventing their degradation (PubMed:24843546). Plays a role in insulin secretion in response to glucose stimuli (PubMed:24843546). Required for normal accumulation of the neurotransmitters norepinephrine, dopamine and serotonin in the brain (By similarity). 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). Seems to lack intrinsic enzyme activity (By similarity). May regulate catalytic active protein-tyrosine phosphatases such as PTPRA through dimerization (By similarity).

Cellular Location

Membrane {ECO:0000250|UniProtKB:Q63259}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q63259} Cytoplasmic vesicle, secretory vesicle membrane; Single-pass type I membrane protein. Perikaryon {ECO:0000250|UniProtKB:Q63259}. Cell projection, axon {ECO:0000250|UniProtKB:Q63259}. Synapse {ECO:0000250|UniProtKB:Q63259}. Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q63259}. Endosome {ECO:0000250|UniProtKB:Q63259}. Note=Detected on neuronal secretory vesicles, but not on synaptic vesicles. Colocalizes with insulin-containing secretory granules (PubMed:25561468). Primarily detected on secretory vesicle membranes. 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 via the Golgi apparatus membranes. {ECO:0000250|UniProtKB:Q63259, ECO:0000269|PubMed:25561468} [ICA512-cleaved cytosolic fragment]: Nucleus

Tissue Location

Expression is restricted to neuroendocrine cells. Found in pancreas, brain and pituitary.

PTPRN Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PTPRN Antibody (Center) Blocking Peptide - Images

PTPRN Antibody (Center) 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 catalytic domain, and thus represents a receptor-type PTP. This PTP was found to be an autoantigen that is reactive with insulin-dependent diabetes mellitus (IDDM) patient sera, and thus may be a potential target of autoimmunity in diabetes mellitus.

PTPRN Antibody (Center) Blocking Peptide - References

Yu, L., et al. J. Immunol. Methods 353 (1-2), 20-23 (2010) :Honeyman, M.C., et al. J. Immunol. 184(4):2204-2210(2010) Weenink, S.M., et al. J. Autoimmun. 33(2):147-154(2009) Burbelo, P.D., et al. Diabetes Care 31(9):1824-1826(2008) Williams, A.J., et al. Diabetologia 51(8):1444-1448(2008)