

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

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**PTPRN Antibody (Center) Blocking Peptide - Product Information**Primary Accession [Q16849](#)**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:<a href="http://www.uniprot.org/citations/24843546" target="\_blank">24843546</a>). 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:<a href="http://www.uniprot.org/citations/24843546" target="\_blank">24843546</a>). Plays a role in insulin secretion in response to glucose stimuli (PubMed:<a href="http://www.uniprot.org/citations/24843546" target="\_blank">24843546</a>). 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)