10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

PTPRN Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP14523c

Specification

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:24843546). Required for normal accumulation of secretory vesicles in hippocampus, pituitary and

PTPRN Antibody (Center) Blocking Peptide - Background

The protein encoded by this gene is a member of theprotein tyrosine phosphatase (PTP) family. PTPs are known to besignaling molecules that regulate a variety of cellular processesincluding cell growth, differentiation, mitotic cycle, andoncogenic transformation. This PTP possesses an extracellularregion, a single transmembrane region, and a single catalyticdomain, and thus represents a receptor-type PTP. This PTP was foundto be an autoantigen that is reactive with insulin-dependentdiabetes mellitus (IDDM) patient sera, and thus may be a potentialtarget 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)

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}. Cell junction, 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