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PTPRN2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP16733a

Specification

PTPRN2 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	Q92932
Other Accession	NP_002838.2, NP_570857.2
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**111271**
Antigen Region	**161-189**

PTPRN2 Antibody (N-term) - 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

Target/Specificity
This PTPRN2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 161-189 amino acids from the N-terminal region of human PTPRN2.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PTPRN2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PTPRN2 Antibody (N-term) - 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-biphosphate (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 hydrolysis 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:8798755, PubMed:8954911). Lower levels in trachea, prostate, stomach and spinal cord (PubMed:8798755).

PTPRN2 Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PTPRN2 Antibody (N-term) - Images

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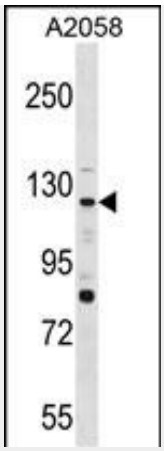

PTPRN2 Antibody (N-term) (Cat. #AP16733a) western blot analysis in A2058 cell line lysates (35ug/lane).This demonstrates the PTPRN2 antibody detected the PTPRN2 protein (arrow).

PTPRN2 Antibody (N-term) - 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) - 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)