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PTPRN2 Rabbit pAb

Catalog # AP99676

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q92932
Other Accession	Q92932
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	111271
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PTPRN2
Epitope Specificity	101-200/1015
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein-tyrosine phosphatase family. Receptor class 8 subfamily. Contains 1 tyrosine-protein phosphatase domain.
Post-translational modifications	Appears to undergo multiple proteolytic cleavage at consecutive basic residues.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	5799
Other Names	IA-2beta; IAR; ICAAR; PTPRP; R-PTP-N2; 4930425H11Rik; IA2beta; PTP-NP; Phol; mKIAA0387; phogrin; PTPNE6; PTPR2_HUMAN; PTPRN2; Islet cell autoantigen-related protein (IAR | ICAAR); 3.1.3.-; 3.1.3.48; KIAA0387; PTPR2_MOUSE; PTP IA-2beta; Protein tyrosine phosphatase-NP (PTP-NP); PTPR2_RAT; PTP NE-6 (PTPNE6); protein tyrosine phosphatase receptor type N2; protein tyrosine phosphatase, receptor type, N polypeptide 2; IAR PTPRP
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.