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PTPRN Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14523c

Product Information

Application	WB, E
Primary Accession	Q16849
Other Accession	NP_002837.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34354
Calculated MW	105848
Antigen Region	288-316

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
Target/Specificity	This PTPRN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 288-316 amino acids from the Central region of human PTPRN.
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	PTPRN Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

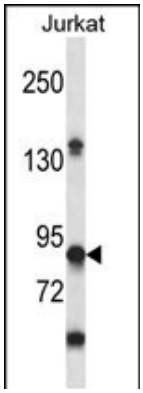
The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP possesses an extracellular 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.

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)

Images

PTPRN Antibody (Center) (Cat. #AP14523c) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the PTPRN antibody detected the PTPRN



protein (arrow).

Citations

- Small cell lung cancer growth is inhibited by miR-342 through its effect of the target gene IA-2.

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