Anti-PTP IA- beta antibody

Description	Rabbit polyclonal to PTP IA-2beta.

Model	STJ95264
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human PTP IA-2beta
Immunogen Region	180-260 aa, Internal
Gene ID	5799
Gene Symbol	PTPRN2
Dilution range	WB 1:500-1:2000ELISA 1:10000
Specificity	PTP IA-2beta Polyclonal Antibody detects endogenous levels of PTP IA-2beta protein.
Tissue Specificity	Highest levels in brain and pancreas . Lower levels in trachea, prostate, stomach and spinal chord .
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Receptor-type tyrosine-protein phosphatase N2 R-PTP-N2 Islet cell autoantigen-related protein IAR ICAAR Phogrin IA-2beta60
Molecular Weight	111 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:9677OMIM:601698
Alternative Names	Receptor-type tyrosine-protein phosphatase N2 R-PTP-N2 Islet cell autoantigen-related protein IAR ICAAR Phogrin IA-2beta60
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) . Required to maintain normal levels of renin expression and renin release . May regulate catalytic active protein-tyrosine phosphatases such as PTPRA through dimerization . 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 . 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 hydrolyzation of PI(4,5)P2 cofilin is released from the plasma membrane and acts in the cytoplasm in severing F-actin filaments .
Sequence and Domain Family	The cytoplasmic domain appears to contain the autoantigenic epitopes. The leucine-based sorting signal is proposed to function in trafficking at the plasma membrane. The tyrosine-based internalization signal is proposed to function at the level of clathrin-mediated endocytosis and recycling.
Cellular Localization	Cytoplasmic vesicle, secretory vesicle membrane Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane. 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 . 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 . IA-2beta60: Cytoplasmic vesicle, secretory vesicle membrane
Post-translational Modifications	Subject to proteolytic cleavage at multiple sites.

T +44 (0)208 223 3081 **E** info@stjohnslabs.com