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STEP Rabbit pAb

Catalog # AP99345

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P54829
Other Accession	P54829
Reactivity	Rat, Human
Predicted	Mouse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	63538
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PTPN5
Epitope Specificity	201-300/565
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. Non-receptor class subfamily.Contains 1 tyrosine-protein phosphatase domain.
Post-translational modifications	Phosphorylation at Ser-245 by PKA deactivates PTPN5. Phosphorylation at Thr-255 and Ser-268 by MAPKs stabilizes the phosphatase, dephosphorylation of these sites results in ubiquitin-mediated degradation of the active phosphatase.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The brain-specific STEP (striatal enriched phosphatase) family of protein tyrosine phosphatases (PTPs) comprises both transmembrane and cytosolic protein members which are the products of alternative splicing. STEP family members are expressed in the dopaminoceptive neurons of the CNS, with highest expression in the basal ganglia and related structures. The STEP protein regulates the N-methyl-d-aspartate receptor (NMDAR) complex; STEP depresses both NMDAR single-channel activity and synaptic currents. The membrane-associated STEP61 isoform localizes in the postsynaptic densities (PSDs) of striatal neurons. STEP61 contains a single tyrosine phosphatase domain, two proline-rich domains and two transmembrane domains. The STEP61 protein associates with the Src family kinase member Fyn when Fyn is phosphorylated at Tyr-420 and not Tyr-431. Upon association, STEP61 dephosphorylates Tyr-420 residue and may thus regulate Fyn activity in PSDs. Isolated from mouse brain, the STEP20 isoform lacks the conserved tyrosine phosphatase domain. The human STEP gene maps to chromosome 11p15.2-p15.1.

Additional Information

Gene ID	84867

Other Names	PTPSTEP; STEP; STEP61; PTN5_HUMAN; PTPN5; Neural-specific protein-tyrosine phosphatase; Striatum-enriched protein-tyrosine phosphatase (STEP); 3.1.3.48; PTN5_MOUSE; PTN5_RAT; protein tyrosine phosphatase non-receptor type 5; protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched); striatal-enriched protein tyrosine phosphatase
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=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	PTPN5
Function	May regulate the activity of several effector molecules involved in synaptic plasticity and neuronal cell survival, including MAPKs, Src family kinases and NMDA receptors.
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein

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