

STEP / PTPN5 Antibody (N-Term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8430a**Specification**

STEP / PTPN5 Antibody (N-Term) - Product Information

| | |
|-------------------|------------------------|
| Application | WB, IHC-P,E |
| Primary Accession | P54829 |
| Other Accession | P54830 |
| Reactivity | Human, Mouse |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Calculated MW | 63538 |
| Antigen Region | 168-198 |

STEP / PTPN5 Antibody (N-Term) - Additional Information**Gene ID** 84867**Other Names**

Tyrosine-protein phosphatase non-receptor type 5, Neural-specific protein-tyrosine phosphatase, Striatum-enriched protein-tyrosine phosphatase, STEP, PTPN5

Target/Specificity

This STEP / PTPN5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 168-198 amino acids from the N-terminal region of human STEP / PTPN5.

Dilution

WB~~1:1000

IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

STEP / PTPN5 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

STEP / PTPN5 Antibody (N-Term) - 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

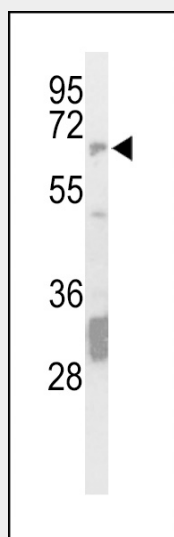
Endoplasmic reticulum membrane; Multi-pass membrane protein

STEP / PTPN5 Antibody (N-Term) - Protocols

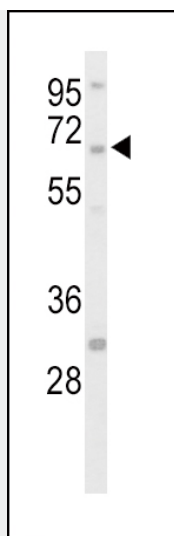
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

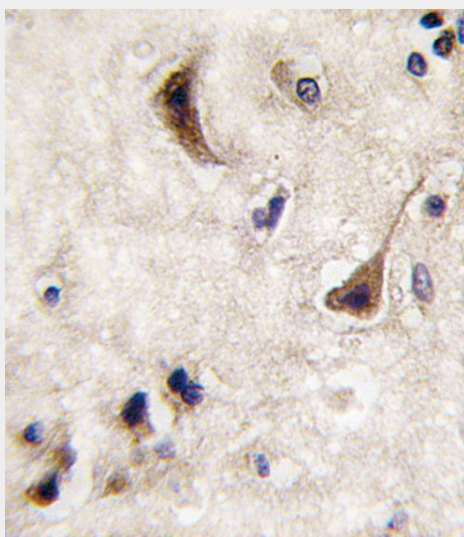
STEP / PTPN5 Antibody (N-Term) - Images



Western blot analysis of hSTEP-Q155 (Cat. #AP8430a) in mouse brain tissue lysates (35ug/lane). STEP (arrow) was detected using the purified Pab



Western blot analysis of hSTEP-Q155 (Cat. #AP8430a) in HepG2 cell line lysates (35ug/lane). STEP (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human brain tissue reacted with STEP antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

STEP / PTPN5 Antibody (N-Term) - Background

STEP (striatum-enriched phosphatase) is a neural-specific protein-tyrosine phosphatase, first isolated from the rat brain. The 537-amino acid predicted human protein as isolated from cDNA sequences is between 85 and 90% identical to the mouse and rat sequences. In rat neuronal cell cultures, glutamate-mediated activation of N-methyl-D-aspartate (NMDA) receptors leads to the rapid but transient phosphorylation of extracellular signal-related kinase-2 (ERK2). NMDA-mediated influx of calcium, activates the calcium-dependent phosphatase calcineurin and the resulting dephosphorylation and activation of STEP. STEP then inactivates ERK2 through tyrosine dephosphorylation and blocks translocation of the kinase to the nucleus. STEP plays a significant role in regulating the ERK activation and downstream signaling in neurons.

STEP / PTPN5 Antibody (N-Term) - References

Ota, T., et al., Nat. Genet. 36(1):40-45 (2004).
Li, X., et al., Genomics 28(3):442-449 (1995).