

**PTPN5 Antibody**  
**Catalog # ASC11866****Specification**

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**PTPN5 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q86TL6</a>
Other Accession	<a href="#">NP_008837</a> , <a href="#">90652859</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 62 kDa

Application Notes	<b>Observed: 60 kDa KDa</b> <b>PTPN5 antibody can be used for detection of PTPN5 by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.</b>
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**PTPN5 Antibody - Additional Information**

Gene ID **84867**

**Target/Specificity**

PTPN5; PTPN5 antibody is human and mouse reactive.

**Reconstitution & Storage**

PTPN5 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

PTPN5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

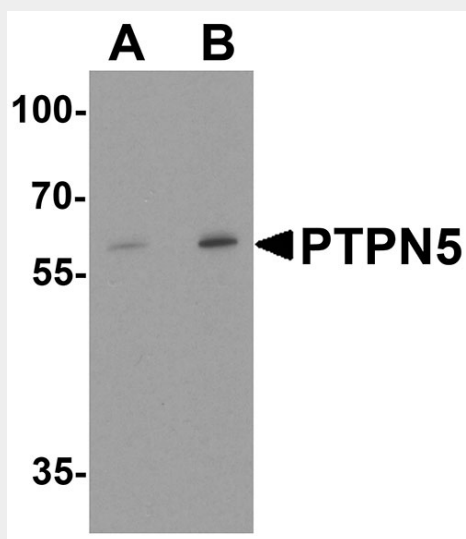
**PTPN5 Antibody - Protein Information****PTPN5 Antibody - Protocols**

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

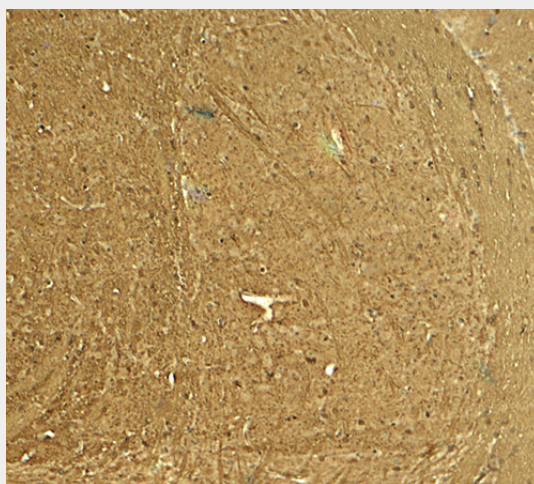
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

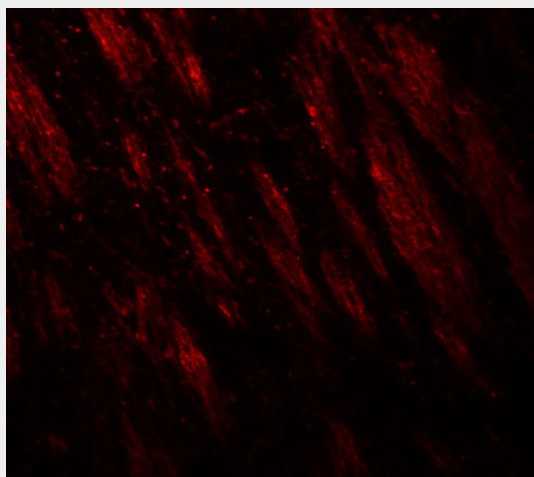
## PTPN5 Antibody - Images



Western blot analysis of PTPN5 in Jurkat cell lysate with PTPN5 antibody at (A) 1 and (B) 2  $\mu$ g/ml.



Immunohistochemistry of PTPN5 in mouse brain tissue with PTPN5 antibody at 5  $\mu$ g/ml.



Immunofluorescence of PTPN5 in mouse brain tissue with PTPN5 antibody at 20 µg/ml.

### **PTPN5 Antibody - Background**

The protein tyrosine phosphatase PTPN5, also known as Striatal enriched phosphatase (STEP), is involved in the regulation of synaptic plasticity and neuronal cell survival, including MAPKs, Src family kinases and NMDA receptors (1). It is expressed in dopaminergic neurons of the central nervous system and multiple forms of PTPN5 show differential enrichment in adult brain regions (2). NMDA-mediated activation of PTPN5 is an important mechanism for regulation of Erk activity in neurons (3). Furthermore, PTPN5 is involved in the regulation of both NMDAR and AMPAR trafficking (4,5). PTPN5 may play a role in Alzheimer's disease (1).

### **PTPN5 Antibody - References**

- Braithwaite SP, Paul S, Nairn AC, et al. Synaptic plasticity: one STEP at a time. Trends Neurosci. 2006; 29:452-8.
- Paul S, Snyder GL, Yokakura H, et al. The Dopamine/D1 receptor mediates the phosphorylation and inactivation of the protein tyrosine phosphatase STEP via a PKA-dependent pathway. J. Neurosci. 2000; 20:5630-8.
- Paul S, Nairn AC, Wang P, et al. NMDA-mediated activation of the tyrosine phosphatase STEP regulates the duration of ERK signaling. Nat. Neurosci. 2003; 6:34-42.
- Braithwaite SP, Adkisson M, Leung J, et al. Regulation of NMDA receptor trafficking and function by striatal-enriched tyrosine phosphatase (STEP). Eur. J. Neurosci. 2006; 23:2847-56.