

Product datasheet

RPTPSIGMA MOUSE MONOCLONAL ANTIBODY (17G7.2)

SKU: MM-0020-P

100 µg

OVERVIEW

Clonality:

Monoclonal

Host:

Mouse

Reactivity:

Mouse, Human, Monkey

Application:

WB, IHC, IP

Target:

RPTPsigma

Target background:

Type IIa receptor protein tyrosine phosphatases (RPTPs) are a group of well-characterized proteins that are involved in axon growth and guidance during neural development. Members of this subfamily, RPTP σ , RPTP δ and LAR contain two cytoplasmic phosphatase domains and extracellular immunoglobulin domains followed by fibronectin type III repeats. RPTP σ is a type I transmembrane protein that has an apparent molecular weight of approximately 80 kDa. It is highly expressed by neurons in developing and adult mammalian nervous system. Knock-out mice for RPTP σ show growth retardation, delayed peripheral nerve development and high mortality rates. The role of RPTP σ in axon guidance during development suggests it could influence axon regeneration after injury in the adult mouse. It has been shown that RPTP σ slows axon regeneration in the adult injured CNS.

Target alias:

R-PTP-S, PTPNU-3, Receptor-type tyrosine-protein phosphatase sigma, R-PTP-sigma, Ptpsr

Immunogen:

recombinant protein corresponding to the intracellular domain of mouse RPTP .

Specificity:

The antibody recognizes the intracellular sub-unit of RPTP σ .

Clone ID:

17G7.2

Isotype:

IgG1 kappa

Preservative:

None

Format:

Lyophilized protein G purified in PBS pH7.4

Recommend starting dilution:

If reconstituted with deionized water in 100 μ L: WB 1:2000. Optimal dilution has to be determined by the user.

Limitations:

Research Use Only

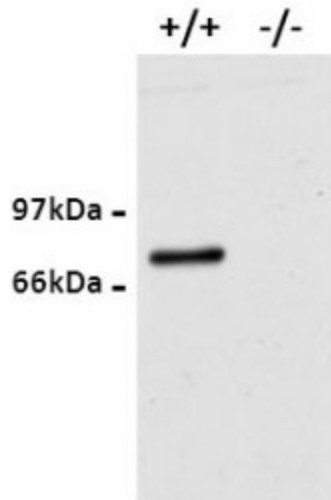
References:

- 1.-Han KA - PTP σ Drives Excitatory Presynaptic Assembly via Various Extracellular and Intracellular Mechanisms.
- 2.-Li Y - Splicing-Dependent Trans-synaptic SALM3-LAR-RPTP Interactions Regulate Excitatory Synapse Development and Locomotion.
- 3.-Kurihara D and Yamashita T - Chondroitin sulfate proteoglycans down-regulate spine formation in cortical neurons by targeting tropomyosin-related kinase B (TrkB) protein.
- 4.-Takahashi H - Postsynaptic TrkC and presynaptic PTP σ function as a bidirectional excitatory synaptic organizing complex.
- 5.-Thompson KM - Receptor protein tyrosine phosphatase sigma inhibits axonal regeneration and the rate of axon extension.

Storage:

Lyophilized antibodies can be kept at 4°C for up to 3 months and should be kept at -20°C for long-term storage (2 years). To avoid freeze-thaw cycles, reconstituted antibodies should be aliquoted before freezing for long-term (1 year) storage (-80°C) or kept at 4°C for short-term usage (2 months). For maximum recovery of product, centrifuge the original vial prior to removing the cap. Further dilutions can be made with the assay buffer. After the maximum long-term storage period (2 years lyophilized or 1 year reconstituted) antibodies should be tested in your assay with a standard sample to verify if you have noticed any decrease in their efficacy.

Image:



Western blot analysis of RPTPσ expression in newborn mouse brain lysates. RPTPσ wild type (+/+) and knock out (-/-).

