

**PTP sigma Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8421a****Specification**

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**PTP sigma Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [Q13332](#)**PTP sigma Antibody (C-term) Blocking Peptide - Additional Information**

Gene ID 5802

**Other Names**

Receptor-type tyrosine-protein phosphatase S, R-PTP-S, Receptor-type tyrosine-protein phosphatase sigma, R-PTP-sigma, PTPRS

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP8421a](/products/AP8421a) was selected from the C-term region of human PTP sigma. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**PTP sigma Antibody (C-term) Blocking Peptide - Protein Information**

Name PTPRS

**Function**

Cell surface receptor that binds to glycosaminoglycans, including chondroitin sulfate proteoglycans and heparan sulfate proteoglycan (PubMed:[21454754](http://www.uniprot.org/citations/21454754)). Binding to chondroitin sulfate and heparan sulfate proteoglycans has opposite effects on PTPRS oligomerization and regulation of neurite outgrowth. Contributes to the inhibition of neurite and axonal outgrowth by chondroitin sulfate proteoglycans, also after nerve transection. Plays a role in stimulating neurite outgrowth in response to the heparan sulfate proteoglycan GPC2. Required for normal brain development, especially for normal development of the pituitary gland and the olfactory bulb. Functions as a tyrosine phosphatase (PubMed:[8524829](http://www.uniprot.org/citations/8524829)). Mediates dephosphorylation of NTRK1, NTRK2 and NTRK3 (By similarity). Plays a role in down-regulation of

signaling cascades that lead to the activation of Akt and MAP kinases (By similarity).  
Down-regulates TLR9- mediated activation of NF-kappa-B, as well as production of TNF, interferon alpha and interferon beta (PubMed:<a href="http://www.uniprot.org/citations/26231120" target="\_blank">26231120</a>).

#### **Cellular Location**

Cell membrane; Single-pass type I membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:B0V2N1}. Perikaryon {ECO:0000250|UniProtKB:B0V2N1}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:Q64605}. Synapse, synaptosome {ECO:0000250|UniProtKB:Q64605}. Postsynaptic density {ECO:0000250|UniProtKB:Q64605}. Cell projection, neuron projection {ECO:0000250|UniProtKB:B0V2N1}. Cell projection, growth cone {ECO:0000250|UniProtKB:B0V2N1}. Note=Is rapidly internalized when dendritic cells are stimulated with the TLR9 ligand cytidine-phosphate- guanosine (CpG) (PubMed:26231120). Detected in a punctate pattern along neurites and axon growth cones (By similarity) {ECO:0000250|UniProtKB:B0V2N1, ECO:0000269|PubMed:26231120}

#### **Tissue Location**

Detected in peripheral blood plasmacytoid dendritic cells (at protein level) (PubMed:26231120).  
Detected in all tissues tested except for placenta and liver (PubMed:8524829, PubMed:8992885)  
Detected in peripheral blood plasmacytoid dendritic cells (PubMed:26231120).

### **PTP sigma Antibody (C-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

### **PTP sigma Antibody (C-term) Blocking Peptide - Images**

### **PTP sigma Antibody (C-term) Blocking Peptide - Background**

PTP sigma belongs to the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP has been also implicated in the molecular control of adult nerve repair.

### **PTP sigma Antibody (C-term) Blocking Peptide - References**

Serra-Pages, C., et al., J. Biol. Chem. 273(25):15611-15620 (1998).Endo, N., et al., J. Bone Miner. Res. 11(4):535-543 (1996).Pulido, R., et al., Proc. Natl. Acad. Sci. U.S.A. 92(25):11686-11690 (1995).Adachi, M., et al., Cancer Res. 52(3):737-740 (1992).