

PTPbeta Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP8413a**Specification**

PTPbeta Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P23467](#)**PTPbeta Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 5787**Other Names**

Receptor-type tyrosine-protein phosphatase beta, Protein-tyrosine phosphatase beta, R-PTP-beta, Vascular endothelial protein tyrosine phosphatase, VE-PTP, PTPRB, PTPB

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8413a](/product/products/AP8413a) was selected from the C-term region of human PTPbeta . 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.

PTPbeta Antibody (C-term) Blocking Peptide - Protein Information**Name** PTPRB**Synonyms** PTPB**Function**

Plays an important role in blood vessel remodeling and angiogenesis. Not necessary for the initial formation of blood vessels, but is essential for their maintenance and remodeling. Can induce dephosphorylation of TEK/TIE2, CDH5/VE-cadherin and KDR/VEGFR-2. Regulates angiopoietin-TIE2 signaling in endothelial cells. Acts as a negative regulator of TIE2, and controls TIE2 driven endothelial cell proliferation, which in turn affects blood vessel remodeling during embryonic development and determines blood vessel size during perinatal growth. Essential for the maintenance of endothelial cell contact integrity and for the adhesive function of VE-cadherin in endothelial cells and this requires the presence of plakoglobin (By similarity).

Cellular Location

Membrane; Single-pass type I membrane protein

PTPbeta Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PTPbeta Antibody (C-term) Blocking Peptide - Images**PTPbeta Antibody (C-term) Blocking Peptide - Background**

Phosphorylation of receptors by protein kinases is a process that can be reversed by a group of enzymes called protein phosphatases. Coordinated control of kinases and phosphatases provides the cell with the capacity to rapidly switch between phosphorylated and dephosphorylated protein states in dynamic response to environmental stimuli. Activation of critical enzymes by kinase phosphorylation alone is not enough to provide adequate regulation ? it is the combination with phosphatase dephosphorylation that effectively creates on/off switches to control cellular events. Errors in control, either through kinases or their counterpart phosphatases, can lead to unchecked cell growth attributable to human cancers and developmental disorders. Potential mechanisms to control dephosphorylation include changes in the expression of protein phosphatases, their subcellular localization, phosphorylation of phosphatase catalytic and regulatory subunits and regulation by endogenous phosphatase inhibitors. Most protein phosphatases are not stringently specific for their substrates. Consequently, changes in phosphatase activity may have a broad impact on dephosphorylation and turnover of phosphoproteins that are substrates for different kinases. This may be an important point of control to connect cellular circuitry of interrelated signaling pathways, and to synchronize physiological responses.

PTPbeta Antibody (C-term) Blocking Peptide - References

Krueger, N.X., et al., EMBO J. 9(10):3241-3252 (1990).