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PTP alpha Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP8412a

Specification

PTP alpha Antibody (N-term) Blocking peptide - Product Information

Primary Accession P18433

PTP alpha Antibody (N-term) Blocking peptide - Additional Information

Gene ID 5786

Other Names
Receptor-type tyrosine-protein phosphatase alpha, Protein-tyrosine phosphatase alpha, R-PTP-alpha, PTPRA, PTPA, PTPRL2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8412a was selected from the N-term region of human PTPalpha . 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 alpha Antibody (N-term) Blocking peptide - Protein Information

Name PTPRA

Synonyms PTPA, PTPRL2

Function
Tyrosine protein phosphatase which is involved in integrin- mediated focal adhesion formation (By similarity). Following integrin engagement, specifically recruits BCAR3, BCAR1 and CRK to focal adhesions thereby promoting SRC-mediated phosphorylation of BRAC1 and the subsequent activation of PAK and small GTPase RAC1 and CDC42 (By similarity).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell junction, focal adhesion {ECO:0000250|UniProtKB:P18052}. Note=Localizes to focal adhesion sites following integrin engagement. {ECO:0000250|UniProtKB:P18052}

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PTP alpha Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

PTP alpha Antibody (N-term) Blocking peptide - Images

PTP alpha Antibody (N-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.

PTP alpha Antibody (N-term) Blocking peptide - References

Deloukas, P., et al., Nature 414(6866):865-871 (2001).Kaplan, R., et al., Proc. Natl. Acad. Sci. U.S.A. 87(18):7000-7004 (1990).Krueger, N.X., et al., EMBO J. 9(10):3241-3252 (1990).Sap, J., et al., Proc. Natl. Acad. Sci. U.S.A. 87(16):6112-6116 (1990).Jirik, F.R., et al., FEBS Lett. 273 (1-2), 239-242 (1990).