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DEP1 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP8402a

Specification

DEP1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q12913

DEP1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 5795

Other Names
Receptor-type tyrosine-protein phosphatase eta, Protein-tyrosine phosphatase eta, R-PTP-eta, Density-enhanced phosphatase 1, DEP-1, HPTP eta, Protein-tyrosine phosphatase receptor type J, R-PTP-J, CD148, PTPRJ, DEP1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8402a was selected from the C-term region of human DEP1 . 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.

DEP1 Antibody (C-term) Blocking Peptide - Protein Information

Name PTPRJ

Synonyms DEP1

Function
Tyrosine phosphatase which dephosphorylates or contributes to the dephosphorylation of CTNND1, FLT3, PDGFRB, MET, KDR, LYN, SRC, MAPK1, MAPK3, EGFR, TJP1, OCLN, PIK3R1 and PIK3R2 (PubMed:10821867, PubMed:12062403, PubMed:12370829, PubMed:12475979, PubMed:18348712, PubMed:<a href="http://www.uniprot.org/citations/19494114"

target="_blank">19494114, PubMed:19922411, PubMed:21262971). Plays a role in cell adhesion, migration, proliferation and differentiation (PubMed:12370829, PubMed:14709717, PubMed:16682945, PubMed:19836242). Involved in vascular development (By similarity). Regulator of macrophage adhesion and spreading (By similarity). Positively affects cell-matrix adhesion (By similarity). Positive regulator of platelet activation and thrombosis. Negative regulator of cell proliferation (PubMed:16682945). Negative regulator of PDGF-stimulated cell migration; through dephosphorylation of PDGFR (PubMed:21091576). Positive regulator of endothelial cell survival, as well as of VEGF- induced SRC and AKT activation; through KDR dephosphorylation (PubMed:18936167). Negative regulator of EGFR signaling pathway; through EGFR dephosphorylation (PubMed:19836242). Enhances the barrier function of epithelial junctions during reassembly (PubMed:19332538). Negatively regulates T-cell receptor (TCR) signaling (PubMed:9531590, PubMed:9780142, PubMed:11259588). Upon T-cell TCR activation, it is up- regulated and excluded from the immunological synapses, while upon T-cell-antigen presenting cells (APC) disengagement, it is no longer excluded and can dephosphorylate PLCG1 and LAT to down-regulate prolongation of signaling (PubMed:11259588, PubMed:12913111).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell projection, ruffle membrane. Cell junction Note=After T-cell stimulation, it is temporarily excluded from immunological synapses

Tissue Location
Expressed in the promyelocytic cell line HL-60, the granulocyte-macrophage colony-stimulating factor-dependent leukemic cell line F-36P, and the IL3 and erythropoietin-dependent leukemic cell line F-36E. Expressed predominantly in epithelial cells and lymphocytes. Enhanced expression at high cell density

DEP1 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

DEP1 Antibody (C-term) Blocking Peptide - Images

DEP1 Antibody (C-term) Blocking Peptide - Background

DEP1 is a member of 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 possesses an extracellular region containing five fibronectin type III repeats, a single transmembrane region, and a single intracytoplasmic catalytic domain, and thus represents a receptor-type PTP. This PTP is present in all hematopoietic lineages, and was shown to negatively regulate T cell receptor signaling possibly through interfering with the phosphorylation of Phospholipase C Gamma 1 (PLCG1) and Linker for Activation of T Cells (LAT).

This PTP was also found to dephosphorylate PDGF beta receptor, and may be involved in UV-induced signal transduction.

DEP1 Antibody (C-term) Blocking Peptide - References

Dong, H.Y., et al., Leuk. Lymphoma 43(9):1855-1858 (2002).Ruivenkamp, C.A., et al., Nat. Genet. 31(3):295-300 (2002).Baker, J.E., et al., Mol. Cell. Biol. 21(7):2393-2403 (2001).Kovalenko, M., et al., J. Biol. Chem. 275(21):16219-16226 (2000).Gross, S., et al., J. Biol. Chem. 274(37):26378-26386 (1999).