10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PSTPIP1 Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP12497a

Specification

PSTPIP1 Antibody (N-term) Blocking peptide - Product Information

Primary Accession O43586

PSTPIP1 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 9051

Other Names
Proline-serine-threonine phosphatase-interacting protein 1, PEST phosphatase-interacting protein 1, CD2-binding protein 1, H-PIP, PSTPIP1, CD2BP1

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.

PSTPIP1 Antibody (N-term) Blocking peptide - Protein Information

Name PSTPIP1

Synonyms CD2BP1

Function
Involved in regulation of the actin cytoskeleton. May regulate WAS actin-bundling activity. Bridges the interaction between ABL1 and PTPN18 leading to ABL1 dephosphorylation. May play a role as a scaffold protein between PTPN12 and WAS and allow PTPN12 to dephosphorylate WAS. Has the potential to physically couple CD2 and CD2AP to WAS. Acts downstream of CD2 and CD2AP to recruit WAS to the T- cell:APC contact site so as to promote the actin polymerization required for synapse induction during T-cell activation (By similarity). Down-regulates CD2-stimulated adhesion through the coupling of PTPN12 to CD2. Also has a role in innate immunity and the inflammatory response. Recruited to inflammasomes by MEFV. Induces formation of pyroptosomes, large supramolecular structures composed of oligomerized PYCARD dimers which form prior to inflammatory apoptosis. Binding to MEFV allows MEFV to bind to PYCARD and facilitates pyroptosome formation. Regulates endocytosis and cell migration in neutrophils.

Cellular Location
Cytoplasm. Cell membrane; Peripheral membrane protein. Cell projection, uropodium. Cytoplasm, cytoskeleton. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P97814}. Cell projection,

lamellipodium {ECO:0000250|UniProtKB:P97814}. Cleavage furrow {ECO:0000250|UniProtKB:P97814}. Note=Mainly cytoplasmic in T-cells (PubMed:9857189). Colocalizes in cluster with CD2 near the cell surface membrane in activated T-cells (PubMed:9857189). In monocytes, forms a branched filamentous network in the cytoplasm (PubMed:19584923). In transfected cells, forms relatively straight filaments radiating out from the nucleus (PubMed:19584923). Filament formation requires an intact tubulin cytoskeleton (PubMed:19584923). In migrating neutrophils, colocalizes with PIP5K1C and DNM2 to the trailing edge of the uropod in a actin-dependent manner (PubMed:18480402). Colocalized with PTPN12 in the cytoplasm and the perinuclear region. During interphase, colocalizes with F-actin in the cortical cytoskeleton, lamellipodia, and stress fibers. In dividing cells, colocalizes with the F-actin rich cytokinetic cleavage furrow. Colocalized with CD2AP and WAS in the actin cytoskeleton within the cytoplasm. Colocalized with CD2, CD2AP and WAS at the site of T-cell:APC contact (By similarity). {ECO:0000250|UniProtKB:P97814, ECO:0000269|PubMed:18480402, ECO:0000269|PubMed:19584923, ECO:0000269|PubMed:9857189}

Tissue Location
Highly expressed in the peripheral blood leukocytes, granulocytes and monocytes, namely in T-cells and natural killer cells, and in spleen. Weakly expressed in the thymus, small intestine, lung and placenta.

PSTPIP1 Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

PSTPIP1 Antibody (N-term) Blocking peptide - Images

PSTPIP1 Antibody (N-term) Blocking peptide - Background

The protein encoded by this gene binds to the cytoplasmictail of CD2, an effector of T cell activation and adhesion,negatively affecting CD2-triggered T cell activation. The encodedprotein appears to be a scaffold protein and a regulator of theactin cytoskeleton. It has also been shown to bind ABL1, PTPN18,WAS, CD2AP, and PTPN12. Mutations in this gene are a cause of PAPAsyndrome.

PSTPIP1 Antibody (N-term) Blocking peptide - References

Andre, M.F., et al. Dig. Dis. Sci. 55(6):1681-1688(2010)Rose, J. Phd, et al. Mol. Med. (2010) In press :Hong, J.B., et al. J. Am. Acad. Dermatol. 61(3):533-535(2009)Voss, M., et al. BMC Immunol. 10, 53 (2009) :Waite, A.L., et al. PLoS ONE 4 (7), E6147 (2009) :