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PSTPIP1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12497a

Product Information

Application	WB, FC, E
Primary Accession	O43586
Other Accession	P97814, NP_003969.2
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31127
Calculated MW	47591
Antigen Region	89-118

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
Target/Specificity	This PSTPIP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 89-118 amino acids from the N-terminal region of human PSTPIP1.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PSTPIP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

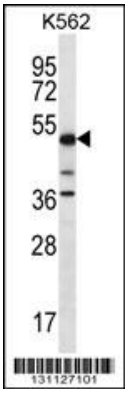
Background

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

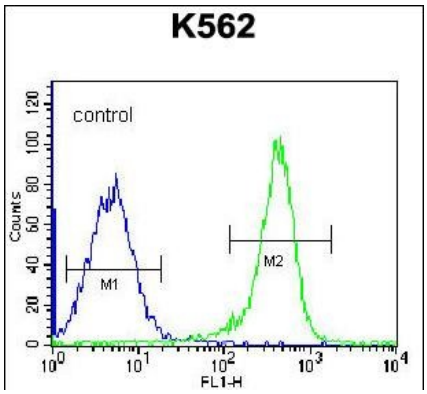
References

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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) :

Images



PSTPIP1 Antibody (N-term) (Cat. #AP12497a) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the PSTPIP1 antibody detected the PSTPIP1 protein (arrow).



PSTPIP1 Antibody (N-term) (Cat. #AP12497a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.