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PAK4 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP7929a

Specification

PAK4 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O96013

PAK4 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 10298

Other Names
Serine/threonine-protein kinase PAK 4, p21-activated kinase 4, PAK-4, PAK4, KIAA1142

Target/Specificity
The synthetic peptide sequence used to generate the antibody <a >AP7929a was selected from the N-term region of human PAK4 . 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.

PAK4 Antibody (N-term) Blocking Peptide - Protein Information

Name PAK4

Synonyms KIAA1142

PAK4 Antibody (N-term) Blocking Peptide - Background

PAK proteins are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. PAK proteins, a family of serine/threonine p21-activating kinases, include PAK1, PAK2, PAK3, PAK4, PAK5, and PAK6. PAK proteins serve as targets for the small GTP binding proteins Cdc42 and Rac and have been implicated in a wide range of biological activities. PAK4 interacts specifically with the GTP-bound form of Cdc42Hs and weakly activates the JNK family of MAP kinases. PAK4 is a mediator of filopodia formation and may play a role in the reorganization of the actin cytoskeleton.

PAK4 Antibody (N-term) Blocking Peptide - References

Lu, Y., et al., J. Biol. Chem. 278(12):10374-10380 (2003).Bagrodia, S., et al., Trends Cell Biol. 9(9):350-355 (1999).Abo, A., et al., EMBO J. 17(22):6527-6540 (1998).

Function
Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell migration, growth, proliferation or cell survival. Activation by various effectors including growth factor receptors or active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues. Phosphorylates and inactivates the protein phosphatase SSH1, leading to increased inhibitory phosphorylation of the actin binding/depolymerizing factor cofilin. Decreased cofilin activity may lead to stabilization of actin filaments. Phosphorylates LIMK1, a kinase that also inhibits the activity of cofilin. Phosphorylates integrin beta5/ITGB5 and thus regulates cell motility. Phosphorylates ARHGEF2 and activates the downstream target RHOA that plays a role in the regulation of assembly of focal adhesions and actin stress fibers. Stimulates cell survival by phosphorylating the BCL2 antagonist of cell death BAD. Alternatively, inhibits apoptosis by preventing caspase-8 binding to death domain receptors in a kinase independent manner. Plays a role in cell-cycle progression by controlling levels of the cell- cycle regulatory protein CDKN1A and by phosphorylating RAN.

Cellular Location
Cytoplasm. Note=Seems to shuttle between cytoplasmic compartments depending on the activating effector. For example, can be found on the cell periphery after activation of growth-factor or integrin-mediated signaling pathways.

Tissue Location
Highest expression in prostate, testis and colon.

PAK4 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides