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PAK4 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10323

Specification

PAK4 Antibody - Product Information

Application	**WB**
Primary Accession	O96013
Other Accession	BAF84528
Reactivity	**Human, Mouse, Rat, Hamster**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**64072**

PAK4 Antibody - Additional Information

Gene ID 10298

Application & Usage	**Western blot analysis (0.5-4 µg/ml). However, the optimal conditions should be determined individually. The antibody recognizes ~60-70 kDa Pak4 in samples of human, mouse, and rat origins. The antibody does not cross-react with other Paks. Reactivity to other species has not been tested.**

Other Names
PAK-4 , KIAA1142

Target/Specificity
PAK4

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-PAK4 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
PAK4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PAK4 Antibody - Protein Information

Name PAK4 (HGNC:16059)

Synonyms KIAA1142

Function
Serine/threonine-protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell adhesion turnover, cell migration, growth, proliferation or cell survival (PubMed:26598620). 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. Promotes kinase-independent stabilization of RHOU, thereby contributing to focal adhesion disassembly during cell migration (PubMed:26598620).

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 - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PAK4 Antibody - Images

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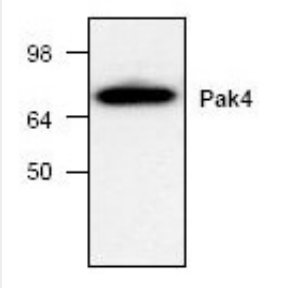

Western blot analysis of PAK4 expression in Jurkat cell lysate.

PAK4 Antibody - Background

The PAK (p21-activated kinase) family of serine/threonine kinases plays an important role in multiple cellular processes, including cytoskeletal reorganization, MAPK signaling, apoptotic signaling, etc. Several mechanisms that induce PAK activation have been reported. Binding of Rac/cdc42 to the CRIB (or PBD) domain at the N-terminal region of PAK causes autophosphorylation and conformational change of PAK. More recently identified members PAK4, PAK5 and PAK6 have lower sequence similarity with PAK1-3 in the regulatory N-terminal region. It has been demonstrated that phosphorylation of serine 474 of PAK4 may play a pivotal role in the activity and function of PAK4 kinase