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PAK2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10322

Specification

PAK2 Antibody - Product Information

Application	**WB**
Primary Accession	Q13177
Other Accession	AAD40374
Reactivity	**Human, Mouse, Rat, Rabbit**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**58043**

PAK2 Antibody - Additional Information

Gene ID 5062

Application & Usage

Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. Jurkat cell lysate can be used as a positive control. The antibody recognizes 60 kDa Pak2 of human, mouse, rat, and rabbit origins. The antibody does not cross-react with Pak1, Pak3, and Pak4-6. Reactivity to other species has not been tested.

Other Names
PAK-2 , PAK65 , Gamma-PAK , hPAK65 , PAKgamma

Target/Specificity
PAK2

Antibody Form
Liquid

Appearance
Colorless liquid

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

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
PAK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PAK2 Antibody - Protein Information

Name PAK2

Function
Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell motility, cell cycle progression, apoptosis or proliferation (PubMed:7744004, PubMed:19273597, PubMed:19923322, PubMed:9171063, PubMed:12853446, PubMed:16617111, PubMed:33693784). Acts as a downstream effector of the small GTPases CDC42 and RAC1 (PubMed:7744004). Activation by the binding of active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues (PubMed:7744004). Full- length PAK2 stimulates cell survival and cell growth (PubMed:7744004). Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration (PubMed:21317288). Phosphorylates JUN and plays an important role in EGF-induced cell proliferation (PubMed:21177766). Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP (PubMed:21724829). Phosphorylates CASP7, thereby preventing its activity (PubMed:21555521, PubMed:27889207). Additionally, associates with ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation control during mitosis (PubMed:19273597, PubMed:19923322). On the other hand, apoptotic stimuli such as DNA damage lead to caspase-mediated cleavage of PAK2, generating PAK-2p34, an active p34 fragment that translocates to the nucleus and promotes cellular apoptosis involving the JNK signaling pathway (PubMed:9171063, PubMed:12853446, PubMed:16617111). Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation (PubMed:15234964).

Cellular Location
[Serine/threonine-protein kinase PAK 2]: Cytoplasm Nucleus Note=MYO18A mediates the cellular distribution of the PAK2-ARHGEF7-GIT1 complex to the inner surface of the cell membrane

Tissue Location
Ubiquitously expressed. Higher levels seen in skeletal muscle, ovary, thymus and spleen

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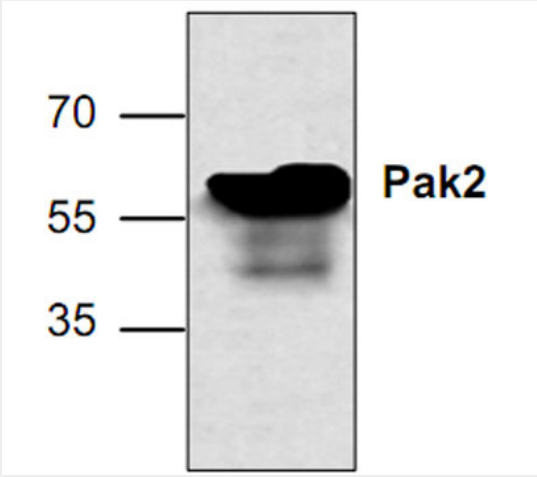
PAK2 Antibody - Protocols

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

PAK2 Antibody - Images



Western blot analysis of Pak-2 expression in Jurkat cell lysate.

PAK2 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. Binding of Rac/cdc42 to the CRIB (or PBD) domain at the N-terminal region of PAK causes autophosphorylation and conformational change of PAK. Phosphorylation of Ser21 of PAK1 or Ser20 of PAK2 regulates its binding with the adaptor protein Nck.