

PAK2 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7927a

Specification

PAK2 Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	Q13177
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	192-222

PAK2 Antibody (N-term) - Additional Information

Gene ID 5062

Other Names

Serine/threonine-protein kinase PAK 2, Gamma-PAK, PAK65, S6/H4 kinase, p21-activated kinase 2, PAK-2, p58, PAK-2p27, p27, PAK-2p34, p34, C-t-PAK2, PAK2

Target/Specificity

This PAK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 192-222 amino acids from the N-terminal region of human PAK2.

Dilution

WB~~1:1000
IHC-P~~1:50~100

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

PAK2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PAK2 Antibody (N-term) - 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

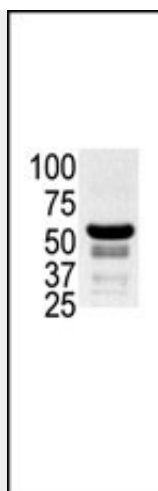
PAK2 Antibody (N-term) - Protocols

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

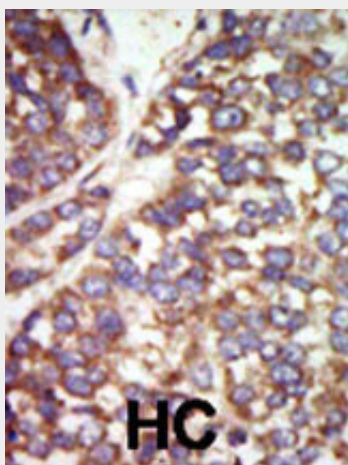
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PAK2 Antibody (N-term) - Images





The anti-PAK2 Pab (Cat. #AP7927a) is used in Western blot to detect PAK2 in ovary cell lysate. Data is kindly provided by Elena Black from Boston University (Boston, MA).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

PAK2 Antibody (N-term) - Background

PAK2, a member of the STE20 subfamily of Ser/Thr protein kinases, acts on a variety of targets. It phosphorylates ribosomal protein S6, histone H4 and myelin basic protein. PAK2 interacts tightly with GTP-bound but not GDP-bound CDC42/p21 and RAC1. Expression is ubiquitous, with higher levels seen in skeletal muscle, ovary, thymus and spleen. PAK2 is autophosphorylated when activated by CDC42/p21. The protein structure contains 1 CRIB domain.

PAK2 Antibody (N-term) - References

Benner, G.E., et al., J. Biol. Chem. 270(36):21121-21128 (1995).
Martin, G.A., et al., EMBO J. 14(9):1970-1978 (1995).
Martin, G.A., et al., EMBO J. 14 (17), 4385 (1995).