

PAK2 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP7927a

Specification

PAK2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession [O13177](#)

PAK2 Antibody (N-term) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP7927a](/product/products/AP7927a) was selected from the N-term region of human PAK2. 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.

PAK2 Antibody (N-term) Blocking Peptide - 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: [12853446](http://www.uniprot.org/citations/12853446), PubMed: [16617111](http://www.uniprot.org/citations/16617111), PubMed: [19273597](http://www.uniprot.org/citations/19273597), PubMed: [19923322](http://www.uniprot.org/citations/19923322), PubMed: [33693784](http://www.uniprot.org/citations/33693784), PubMed: [7744004](http://www.uniprot.org/citations/7744004), PubMed: [9171063](http://www.uniprot.org/citations/9171063)). Acts as a downstream effector of the small GTPases CDC42 and RAC1 (PubMed: [7744004](http://www.uniprot.org/citations/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:12853446, PubMed:16617111, PubMed:9171063). 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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PAK2 Antibody (N-term) Blocking Peptide - Images

PAK2 Antibody (N-term) Blocking Peptide - 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) Blocking Peptide - 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).