

Rabbit PAK1 /PAK2 Polyclonal Antibody | anti-PAK1/PAK2 antibody

Phospho-PAK1 /PAK2 (Thr423/Thr402) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329475	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

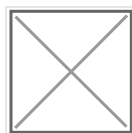
PAK1 /PAK2; Polyclonal Antibody; Phospho-PAK1 /PAK2 (Thr423/Thr402) Antibody; ADRB2; Alpha PAK; Alpha-PAK; MGC130000; MGC130001; p21 activated kinase 1; p21 protein (Cdc42/Rac) activated kinase 1; p21-activated kinase 1; p21/Cdc42/Rac1 activated kinase 1 (yeast Ste20 related); p21/Cdc42/Rac1-activated kinase 1 (STE20 homolog; yeast); p65 PAK; p65-PAK; P68-PAK; PAK alpha; PAK-1; Pak1; PAK1_HUMAN; Paka; PAKalpha; Protein kinase MUK2; Rac/p21-activated kinase; Serine/threonine-protein kinase PAK 1; STE20 homolog yeast; C-t-PAK2; CB422; EC 2.7.11.1; Gamma PAK; Gamma-PAK; hPAK65; Kinase; p21 (CDKN1A) activated kinase 2; p21 (CDKN1A)-activated kinase 2a; p21 activated kinase 2; p21 protein (Cdc42/Rac)-activated kinase 2; p21 protein Cdc42 Rac activated kinase 2; p21-activated kinase 2; p21-activated kinase; 65-KD; p21-activated protein kinase I; p21CDKN1A activated kinase 2; p27; p34; p58; p65PAK; PAK 2; PAK-2; PAK-2p34; Pak2; PAK2_HUMAN; PAK65; PAKgamma; S6 H4 kinase; S6/H4 kinase; Serine threonine protein kinase PAK 2; Serine/threonine protein kinase PAK 2; anti-PAK1/PAK2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-PAK1 /PAK2 (Thr423/Thr402) Antibody detects endogenous levels of PAK1 /PAK2 only when phosphorylated at Thr423. Tissue Specificity: Ubiquitously expressed. Higher levels seen in skeletal muscle, ovary, thymus and spleen.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PAK1/PAK2 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PAK1 around the phosphorylation site of Thr423.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Full-length PAK2 is autophosphorylated when activated by CDC42/p21. Following cleavage, both peptides, PAK-2p27 and PAK-2p34, become highly autophosphorylated, with PAK-2p27 being phosphorylated on serine and PAK-2p34 on threonine residues, respectively. Autophosphorylation of PAK-2p27 can occur in the absence of any effectors and is dependent on phosphorylation of Thr-402, because PAK-2p27 is acting as an exogenous substrate. During apoptosis proteolytically cleaved by caspase-3 or caspase-3-like proteases to yield active PAK-2p34. Ubiquitinated, leading to its proteasomal degradation. PAK-2p34 is myristoylated.
Subunit Structure	Interacts tightly with GTP-bound but not GDP-bound CDC42/p21 and RAC1. Interacts with SH3MD4. Interacts with SCRIB. Interacts with ARHGEF7 and GIT1. PAK-2p34 interacts with ARHGAP10. Interacts with RAC1. (Microbial infection) Interacts with and activated by HIV-1 Nef.

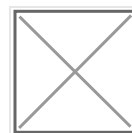
Similarity	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily.
Subcellular Location	Cytoplasm. Note: MYO18A mediates the cellular distribution of the PAK2-ARHGEF7-GIT1 complex to the inner surface of the cell membrane.Nucleus. Cytoplasm>Perinuclear region. Membrane>Lipid-anchor. Note: Interaction with ARHGAP10 probably changes PAK-2p34 location to cytoplasmic perinuclear region. Myristoylation changes PAK-2p34 location to the membrane.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



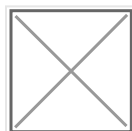
IHC (Immunohistochemistry)

At 1/100 staining Human ovarian cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



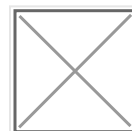
IHC (Immunohistochemistry)

At 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

Staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of extracts from HeLa treated with 0.4 M sorbitol for 5min, using Phospho-PAK1 (Thr423) /PAK2 (Thr402) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PAK1/PAK2 antibody	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. Acts as downstream effector of the small GTPases CDC42 and RAC1. 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. Full-length PAK2 stimulates cell survival and cell growth. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Phosphorylates JUN and plays an important role in EGF-induced cell proliferation. Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP. Additionally, associates with ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation control during mitosis. 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. Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	190886457
NCBI GeneID	5058
NCBI Accession #	NP_001122092.1
NCBI GenBank Nucleotide #	NM_001128620.1
UniProt Accession #	Q13153 ; Q13177
Molecular Weight	60,647 Da
NCBI Official Full Name	serine/threonine-protein kinase PAK 1 isoform 1

NCBI Official Synonym Full Names	p21 protein (Cdc42/Rac)-activated kinase 1
NCBI Official Symbol	PAK1
NCBI Official Synonym Symbols	PAKalpha
NCBI Protein Information	serine/threonine-protein kinase PAK 1; p65-PAK; alpha-PAK; STE20 homolog, yeast; p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related); p21/Cdc42/Rac1-activated kinase 1 (STE20 homolog, yeast)
UniProt Protein Name	Serine/threonine-protein kinase PAK 1
UniProt Gene Name	PAK1
UniProt Synonym Gene Names	PAK-1
UniProt Entry Name	PAK1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/pak1-pak2-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329475>