

Rabbit anti-Rat PAK-1,2,3 (Thr402) Polyclonal Antibody | anti-PAK1-3 antibody

Anti-Phospho-Thr402 PAK-1,2,3

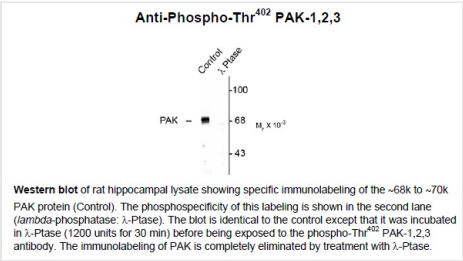
CATALOG # AAA72801	HOST Rabbit	REACTIVITY Rat	APPLICATIONS Western Blot
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PRODUCT SYNONYMS

PAK-1; 2; 3 (Thr402); Polyclonal Antibody; Anti-Phospho-Thr402 PAK-1; 3; anti-PAK1-3 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Rat
Clonality	Polyclonal
Specificity	Specific for the ~68k to ~70k PAK protein phosphorylated at Thr402. The immunolabeling of PAK is completely eliminated by lambda-phosphatase treatment.
Purity/Purification	Affinity Purified (Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.)
Form/Format	100 ul in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 ug per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.
Sequence Length	544
Applicable Applications for anti-PAK1-3 antibody	WB (Western Blot)
Antigen	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr402 of rat p21 activated kinase 2 (PAK-2). The peptide sequence used is identical in PAK-1, 2 and 3. Note: Thr402 in PAK-2 corresponds to Thr423 in human PAK-1.
Immunogen Information	Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr402 conjugated to KLH
Immunogen Species	Rat
Reactivity Assumed Based on 100% Sequence Homology	Bovine, canine, human and mouse
Species Reactivity Note	The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, human and mouse based on the fact that these species have 100% homology with the amino acid sequence used as antigen.
Biological Significance	In mammals, there are several identified isoforms of p21-activated protein kinases or PAKs: alpha-PAK (also known as PAK-1) and beta-PAK (also known as PAK-3) are mostly brain-specific, while -PAK (also known as PAK-2) is expressed ubiquitously (Jakobi et al., 2003). Mutations of the gene coding for PAK-3 are associated with X-linked mental retardation and recent work indicates that PAK-3 is a key regulator of synapse formation and plasticity in the hippocampus (Boda et al., 2004). PAK-3 is thought to play a key role in regulation of cell shape and motility as well as cell death (Jakobi et al., 2003; Walter et al., 1998). Autophosphorylation of Thr402 in the protein has been found to be essential for activation of PAK (Jakobi et al., 2000).
Preparation and Storage	Store at -20 degree C; stable for at least one year.



Application Data

ADDITIONAL INFORMATION

Related Product Information for anti-PAK1-3 antibody	Affinity purified rabbit polyclonal antibody
References	• Boda B, Alberi S, Nikonenko I, Node-Langlois R, Jourdain P, Moosmayer M, Parisi-Jourdain L, Muller D (2004) The mental retardation protein PAK-3 contributes to synapse formation and plasticity in hippocampus. J Neurosci 24:10816-10825. • Jakobi R, Huang Z, Walter BN, Tuazon PT, Traugh JA (2000) Substrates enhance autophosphorylation and activation of p21-activated protein kinase gamma-PAK in the absence of activation loop phosphorylation. Eur J Biochem 267:4414-4421. • Jakobi R, McCarthy CC, Koepfel MA, Stringer DK (2003) Caspase-activated PAK-2 is regulated by subcellular targeting and proteasomal degradation. J Biol Chem 278:38675-38685. • Walter BN, Huang Z, Jakobi R, Tuazon PT, Alnemri ES, Litwack G, Traugh JA (1998) Cleavage and activation of p21-activated protein kinase gamma-PAK by CPP32 (caspase 3). Effects of autophosphorylation on activity. J Biol Chem 273:28733-28739. • Jia Nie, Chao Sun, Omar Faruque, Guangming Ye, Jia Li, Qiangrong Liang, Zhijie Chang, Wannian Yang, Xiao Han, and Yuguang Shi (2012) Synapses of Amphids Defective (SAD-A) Kinase Promotes Glucose-stimulated Insulin Secretion through Activation of p21-activated Kinase (PAK1) in Pancreatic beta-Cells. J. Biol. Chem. 287:26435- 26444.

NCBI AND UNIPROT INFORMATION

NCBI GI #	8393901
NCBI GeneID	29431
NCBI Accession #	NP_058894.1
NCBI GenBank Nucleotide #	NM_017198.1
UniProt Accession #	P35465; Q62934
Molecular Weight	68/70
NCBI Official Full Name	serine/threonine-protein kinase PAK 1
NCBI Official Synonym Full Names	p21 protein (Cdc42/Rac)-activated kinase 1
NCBI Official Symbol	Pak1
NCBI Protein Information	serine/threonine-protein kinase PAK 1; PAK-1; p68-PAK; alpha-PAK; protein kinase MUK2; p21-activated kinase 1; p21 (CDKN1A)-activated kinase 1; p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related)
UniProt Protein Name	Serine/threonine-protein kinase PAK 1
UniProt Gene Name	Pak1
UniProt Synonym Gene Names	PAK-1
UniProt Entry Name	PAK1_RAT

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/pak-1-2-3-thr402-antibody-western-blot-elisa/72801>