

Phospho-Thr402 PAK-1,2,3 Antibody
Affinity purified rabbit polyclonal antibody
Catalog # AN1080**Specification**

Phospho-Thr402 PAK-1,2,3 Antibody - Product Information

Application	WB
Primary Accession	P35465
Reactivity	Rat
Predicted	Bovine, Human, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	68/70 KDa

Phospho-Thr402 PAK-1,2,3 Antibody - Additional Information

Gene ID	29431
Gene Name	PAK1-3

Other Names

Serine/threonine-protein kinase PAK 1, Alpha-PAK, Protein kinase MUK2, p21-activated kinase 1, PAK-1, p68-PAK, Pak1

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr402 conjugated to KLH.

Dilution

WB~~ 1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity

Specific for the ~68k to ~70k PAK protein phosphorylated at Thr402. The immunolabeling of PAK is completely eliminated by λ -phosphatase treatment.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-Thr402 PAK-1,2,3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

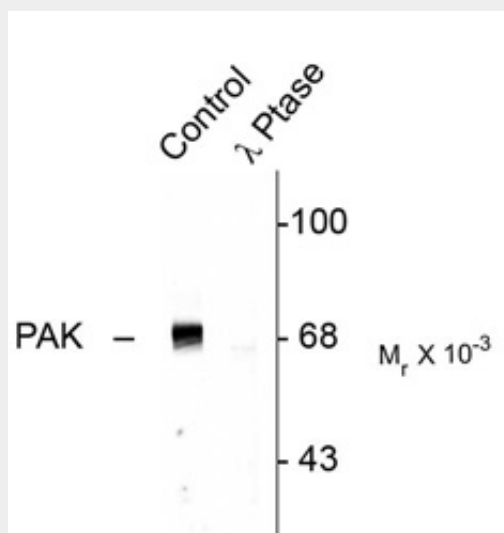
Blue Ice

Phospho-Thr402 PAK-1,2,3 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 Cytometry](#)
- [Cell Culture](#)

Phospho-Thr402 PAK-1,2,3 Antibody - Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~68k to ~70k PAK protein (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ -Ptase). The blot is identical to the control except that it was incubated in λ -Ptase (1200 units for 30 min) before being exposed to the phospho-Thr402 PAK-1,2,3 antibody. The immunolabeling of PAK is completely eliminated by treatment with λ -Ptase.

Phospho-Thr402 PAK-1,2,3 Antibody - Background

In mammals, there are several identified isoforms of p21-activated protein kinases or PAKs: α -PAK (also known as PAK-1) and β -PAK (also known as PAK-3) are mostly brain-specific, while γ -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).

Phospho-Thr402 PAK-1,2,3 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, Koeppel 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 β -Cells. J. Biol. Chem. 287:26435-26444.