10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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. Theimmunolabeling 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

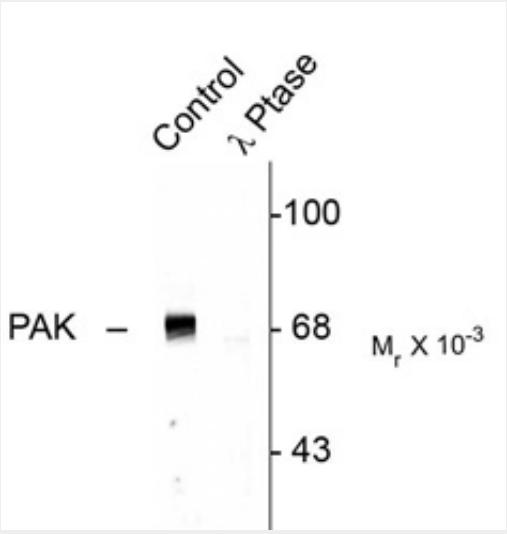
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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 Cytomety
- 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 -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.