ARG52387
anti-PAK1 / PAK2 / PAK3 phospho (Thr402) antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes PAK1 / PAK2 / PAK3 phospho (Thr402)
Tested Reactivity	Rat
Predict Reactivity	Hu, Ms, Bov, Dog
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	PAK1 / PAK2 / PAK3
Species	Rat
Immunogen	Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr402 conjugated to KLH
Conjugation	Un-conjugated
Alternate Names	PAKalpha; Serine/threonine-protein kinase PAK 1; Alpha-PAK; p65-PAK; EC 2.7.11.1; PAK-1; p21-activated kinase 1

Application Instructions

Application table

Application	Dilution
WB	1:1000

Application Note: Specific for the ~68k to ~70k PAK protein phosphorylated at Thr402. The immunolabeling of PAK is completely eliminated by λ-phosphatase treatment.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

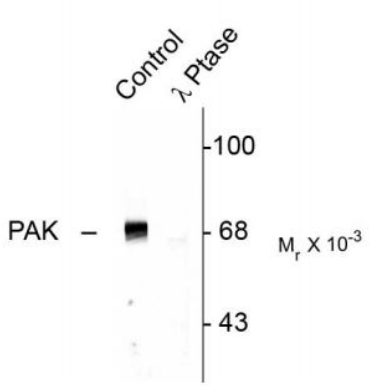
Properties

Form	Liquid
Purification	Affinity Purified
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 0.1 mg/ml BSA and 50% Glycerol
Stabilizer	0.1 mg/ml BSA, 50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 29431 Rat Swiss-port # P35465 Rat
Gene Symbol	PAK1-3
Gene Full Name	p21 protein (Cdc42/Rac)-activated kinase 1
Background	In mammals, there are several identified isoforms of p21-activated protein k inases or PAKs: α-PAK (also known as PAK-1) and β-PAK (also known as PAK-3) are mostly brainspecific, 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).
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Cell Death antibody; Microbiology and Infectious Disease antibody; Neuroscience antibody; Signaling Transduction antibody
Calculated Mw	61 kDa
PTM	Autophosphorylated in trans, meaning that in a dimer, one kinase molecule phosphorylates the other one. Activated by autophosphorylation at Thr-423 in response to a conformation change, triggered by interaction with GTP-bound CDC42 or RAC1. Activated by phosphorylation at Thr-423 by BRSK2 and by PDPK1. Phosphorylated by JAK2 in response to PRL; this increases PAK1 kinase activity. Phosphorylated at Ser-21 by PKB/AKT; this reduces interaction with NCK1 and association with focal adhesion sites.

Images



ARG52387 anti-PAK1 / PAK2 / PAK3 phospho (Thr402) antibody WB image

Western blot: Rat hippocampal lysate stained with ARG52387 anti-PAK1 / PAK2 / PAK3 phospho (Thr402) antibody showing specific immunolabeling of the ~68 kDa to ~70 kDa 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.