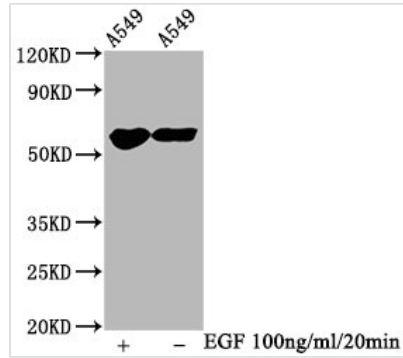




Phospho-PAK1/PAK2/PAK3 (S144+S141+S139) Antibody

Product Code	CSB-RA017407A144phHU
Abbreviation	Serine/threonine-protein kinase PAK 3
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O75914/Q13153/Q13177
Immunogen	A synthesized peptide derived from Human Phospho-PAK1/PAK2/PAK3 (S144+S141+S139)
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell migration, or cell cycle regulation. Plays a role in dendrite spine morphogenesis as well as synapse formation and plasticity. 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. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Additionally, phosphorylates TNNI3/troponin I to modulate calcium sensitivity and relaxation kinetics of thin myofilaments. May also be involved in early neuronal development.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Serine/threonine-protein kinase PAK 3, Beta-PAK, Oligophrenin-3, p21-activated kinase 3, PAK-3, PAK3, OPHN3
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience
Gene Names	PAK3/PAK1/PAK2
Accession NO.	3H12
Image	


Western Blot

Positive WB detected in A549 whole cell lysate (treated with EGF or not)

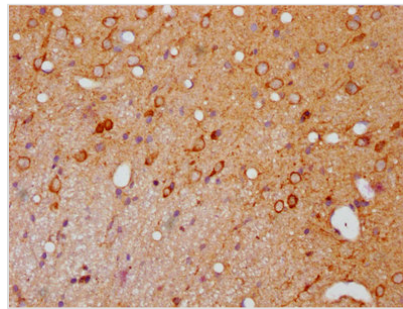
All lanes Phospho-PAK1/PAK2/PAK3 antibody at 1.2 μ g/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 65 KDa

Observed band size: 65 KDa



IHC image of CSB-RA017407A144pHU diluted at 1:100 and staining in paraffin-embedded rat brain tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4 $^{\circ}$ C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

Description

The recombinant PAK3/PAK1/PAK2 antibody is a monoclonal antibody generated by cloning PAK3/PAK1/PAK2 antibody genes into plasma vectors and transfecting vector clones into stable cell lines for production. For recombinant antibody generation, mammalian cell lines like CHO cells and HEK293 are commonly used. The recombinant PAK3/PAK1/PAK2 antibody was purified using affinity-chromatography. It has verified to detect PAK3/PAK1/PAK2 protein from Human in the ELISA, WB, IHC.

PAKs are subdivided into two groups: type I PAKs (PAK1, PAK2, and PAK3) and type II PAKs (PAK4, PAK5, and PAK6). PAKs contain a highly conserved C-terminal kinase domain but a variable N-terminal regulatory domain responsible for their implication in a variety of intracellular signaling pathways. Both groups bind Cdc42 and Rac1 GTPases through their p21 GTPase-binding domain (PBD) but only the PAKs of group I are activated by this interaction. p21-Activated kinases play important roles in cell physiology and are key regulators of several signaling pathways including actin cytoskeleton dynamics and cell cycle progression. Particularly, the p21-activated kinases PAK1 and PAK2 play essential roles in cell division and brain development and are well-known oncogenes. Moreover, in addition to their roles in cytoskeleton and proliferation regulation, PAKs play an important role in neuronal development. Some recent data shows that PAK3, whose expression is restricted to the CNS, is specifically implicated in the pathophysiology of mental retardation and in some cancers.