

Phospho-PAK1/2/3 (Ser144/Ser141/Ser154) Rabbit mAb

Catalog # AP75866

Product Information

Application	WB, IHC-P, IHC-F, FC, IP
Primary Accession	O75914
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	62310

Additional Information

Gene ID	5063
Other Names	PAK3
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A IHC-F~~N/A FC~~1:50-1:100 IP~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	PAK3
Synonyms	OPHN3
Function	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 a 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. In hippocampal neurons, necessary for the formation of dendritic spines and excitatory synapses; this function is dependent on

kinase activity and may be exerted by the regulation of actomyosin contractility through the phosphorylation of myosin II regulatory light chain (MLC) (By similarity).

Cellular Location

Cytoplasm.

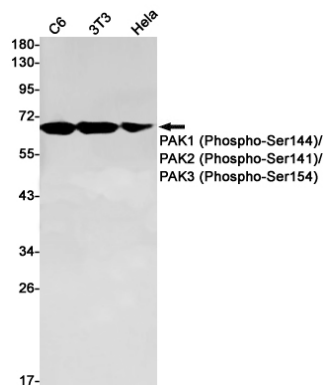
Tissue Location

Restricted to the nervous system. Highly expressed in postmitotic neurons of the developing and postnatal cerebral cortex and hippocampus.

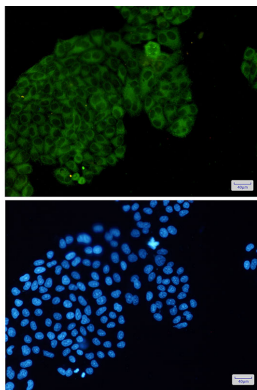
Background

PAK proteins are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. PAK proteins serve as targets for the small GTP binding proteins Cdc42 and RAC and have been implicated in a wide range of biological activities. PAK3 forms an activated complex with GTP-bound RAS-like (P21), CDC2 and RAC1 proteins which then catalyzes a variety of targets.

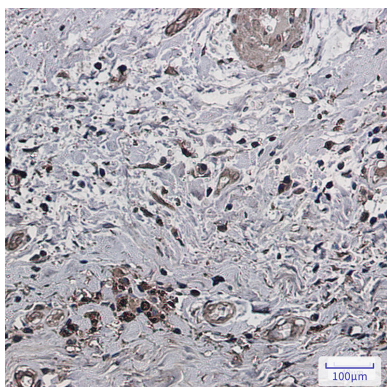
Images



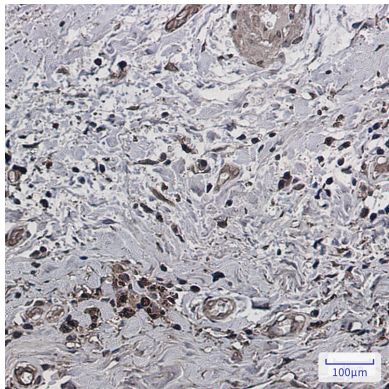
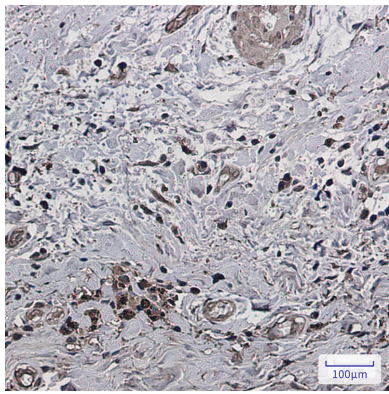
Western blot analysis of PAK1 (Phospho-Ser144)/PAK2 (Phospho-Ser141)/PAK3 (Phospho-Ser154) in C6, 3T3, HeLa lysates using Phospho-PAK1/2/3 (Ser144/Ser141/Ser154) antibody.



Immunocytochemistry analysis of PAK1 (Phospho-Ser144)/PAK2 (Phospho-Ser141)/PAK3 (Phospho-Ser154)(green) in HeLa using PAK1 (Phospho-Ser144)/PAK2 (Phospho-Ser141)/PAK3 (Phospho-Ser154) antibody, and DAPI(blue)



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using Phospho-PAK1(Ser144)/2(Ser141)/3 (Ser154) antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.