

Anti-PAK3 Picoband Antibody

Catalog # ABO12563

Product Information

Application	WB
Primary Accession	O75914
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Serine/threonine-protein kinase PAK 3(PAK3) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5063
Other Names	Serine/threonine-protein kinase PAK 3, 2.7.11.1, Beta-PAK, Oligophrenin-3, p21-activated kinase 3, PAK-3, PAK3, OPHN3
Calculated MW	62310
Application Details	Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human
Subcellular Localization	Cytoplasm .
Tissue Specificity	Restricted to the nervous system. Highly expressed in postmitotic neurons of the developing and postnatal cerebral cortex and hippocampus. .
Source	Eukaryota
Protein Name	Serine/threonine-protein kinase PAK 3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human PAK3 (13-49aa APPLRMNSNNRDSSALNHSSKPLPMAPEEKNKKARLR), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated

freezing and thawing.

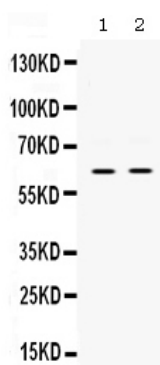
Protein Information

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

Serine/threonine-protein kinase PAK 3 is an enzyme that in humans is encoded by the PAK3 gene. PAK proteins are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. PAK proteins, a family of serine/threonine p21-activating kinases, serve as targets for the small GTP binding proteins Cdc42 and RAC and have been implicated in a wide range of biological activities. The protein encoded by this gene forms an activated complex with GTP-bound RAS-like (P21), CDC2 and RAC1 proteins which then catalyzes a variety of targets. This protein may be necessary for dendritic development and for the rapid cytoskeletal reorganization in dendritic spines associated with synaptic plasticity. Defects in this gene are the cause of non-syndromic mental retardation X-linked type 30 (MRX30), also called X-linked mental retardation type 47 (MRX47). Alternatively spliced transcript variants encoding different isoforms have been identified.

Images



Western blot analysis of PAK3 expression in rat brain extract (lane 1) and mouse brain extract (lane 2). PAK3 at 62KD was detected using rabbit anti- PAK3 Antigen Affinity purified polyclonal antibody (Catalog # ABO12563) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

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