

**PAK3 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10519****Specification**

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**PAK3 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O75914</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	62310

**PAK3 Antibody - Additional Information****Gene ID** 5063

Application & Usage	<b>Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. Other applications have not been tested.</b>
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**Other Names**

PAK3 , PAK3beta , Beta-PAK , hPAK3 , MRX47 , MRX30 , bPAK , oligophrenin-3 , CDKN1A , OPHN3

**Target/Specificity**

PAK3

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) Protein A affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

PAK3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **PAK3 Antibody - 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.

## **PAK3 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 Cytometry](#)
- [Cell Culture](#)

### **PAK3 Antibody - Images**

### **PAK3 Antibody - Background**

The p21-activated kinase (PAK) family of serine/threonine kinases is engaged in multiple cellular processes, including cytoskeletal recognition, MAPK signaling, apoptotic signaling, control of phagocytes, NADPH oxidase and growth factor-induced neurite outgrowth. Research indicates that phosphorylation of serine 139 of PAK3 which is located in the kinase inhibitory domain, affects the kinase activity.