

# PAK2 Rabbit mAb

Catalog # AP75868

#### **Product Information**

**Application** WB, IHC-P **Primary Accession** 013177

**Reactivity** Human, Mouse, Rat

**Host** Rabbit

**Clonality** Monoclonal Antibody

Calculated MW 58043

#### **Additional Information**

**Gene ID** 5062

Other Names PAK2

**Dilution** WB~~1/500-1/1000 IHC-P~~N/A

Format 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 PAK2

**Function** Serine/threonine protein kinase that plays a role in a variety of different

signaling pathways including cytoskeleton regulation, cell motility, cell cycle

progression, apoptosis or proliferation (PubMed: 12853446, PubMed: 16617111, PubMed: 19273597, PubMed: 19923322,

PubMed:33693784, PubMed:7744004, PubMed:9171063). Acts as a

downstream effector of the small GTPases CDC42 and RAC1

(PubMed:7744004). 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 (PubMed:7744004). Full- length PAK2 stimulates cell survival and cell growth (PubMed:7744004). Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration (PubMed:21317288). Phosphorylates JUN and plays an important role in EGF-induced cell proliferation (PubMed:21177766). Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP (PubMed:21724829). Phosphorylates

CASP7, thereby preventing its activity (PubMed: 21555521,

PubMed: <u>27889207</u>). Additionally, associates with ARHGEF7 and GIT1 to

perform kinase-independent functions such as spindle orientation control during mitosis (PubMed:19273597, PubMed:19923322). On the other hand, apoptotic stimuli such as DNA damage lead to caspase-mediated cleavage of PAK2, generating PAK-2p34, an active p34 fragment that translocates to the nucleus and promotes cellular apoptosis involving the JNK signaling pathway (PubMed:12853446, PubMed:16617111, PubMed:9171063). Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation (PubMed:15234964).

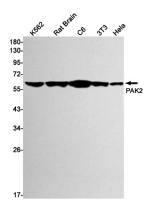
**Cellular Location** 

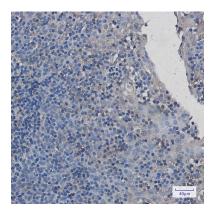
[Serine/threonine-protein kinase PAK 2]: Cytoplasm Nucleus Note=MYO18A mediates the cellular distribution of the PAK2-ARHGEF7-GIT1 complex to the inner surface of the cell membrane

**Tissue Location** 

Ubiquitously expressed. Higher levels seen in skeletal muscle, ovary, thymus and spleen

## **Images**





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