

# Anti-PAK4 (pS474) Antibody

Catalog # AP53726

## **Product Information**

| Application       | WB, IF            |
|-------------------|-------------------|
| Primary Accession | <u>096013</u>     |
| Reactivity        | Human, Mouse, Rat |
| Host              | Rabbit            |
| Clonality         | Polyclonal        |
| Calculated MW     | 64072             |

#### **Additional Information**

| Gene ID            | 10298   |
|--------------------|---|
| Other Names        | KIAA1142; Serine/threonine-protein kinase PAK 4; p21-activated kinase 4;<br>PAK-4                               |
| Target/Specificity | Recognizes endogenous levels of PAK4 (pS474) protein.   |
| Dilution           | WB~~1/500 - 1/1000 IF~~1/50 - 1/200   |
| Format             | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide. |
| Storage            | Store at -20 °C.Stable for 12 months from date of receipt   |

### **Protein Information**

| Name     | PAK4 ( <u>HGNC:16059</u> )  |
|----------|---|
| Synonyms | KIAA1142  |
| Function | Serine/threonine-protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell adhesion turnover, cell migration, growth, proliferation or cell survival (PubMed: <u>26598620</u> ). Activation by various effectors including growth factor receptors or active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues. Phosphorylates and inactivates the protein phosphatase SSH1, leading to increased inhibitory phosphorylation of the actin binding/depolymerizing factor cofilin. Decreased cofilin activity may lead to stabilization of actin filaments. Phosphorylates LIMK1, a kinase that also inhibits the activity of cofilin. Phosphorylates integrin beta5/ITGB5 and thus regulates cell motility. Phosphorylates ARHGEF2 and activates the downstream target RHOA that plays a role in the regulation of assembly of focal adhesions and actin stress fibers. Stimulates cell survival by phosphorylating the BCL2 antagonist of cell |

|                   | death BAD. Alternatively, inhibits apoptosis by preventing caspase-8 binding<br>to death domain receptors in a kinase independent manner. Plays a role in<br>cell-cycle progression by controlling levels of the cell-cycle regulatory protein<br>CDKN1A and by phosphorylating RAN. Promotes kinase-independent<br>stabilization of RHOU, thereby contributing to focal adhesion disassembly<br>during cell migration (PubMed: <u>26598620</u> ). |
|-------------------|--|
| Cellular Location | Cytoplasm. Note=Seems to shuttle between cytoplasmic compartments depending on the activating effector. For example, can be found on the cell periphery after activation of growth-factor or integrin-mediated signaling pathways.   |
| Tissue Location   | Highest expression in prostate, testis and colon.  |

#### Background

Rabbit polyclonal antibody to PAK4 (pS474)

#### Images



Western blot analysis of PAK4 (pS474) expression in PC3 (A), MCF7 (B), NIH3T3 (C), PC12 (D) whole cell lysates.



Immunofluorescent analysis of PAK4 (pS474) staining in Raw264.7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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