

## PAKa (phospho Ser204) Polyclonal Antibody

YP0794 Catalog No:

Reactivity: Human; Mouse; Rat

WB;IHC;IF;ELISA **Applications:** 

Target: PAK1

Fields: >>MAPK signaling pathway;>>ErbB signaling pathway;>>Ras signaling

> pathway;>>cAMP signaling pathway;>>Chemokine signaling pathway;>>Axon guidance;>>Hippo signaling pathway - multiple species;>>Focal adhesion;>>C-

type lectin receptor signaling pathway;>>Natural killer cell mediated

cytotoxicity;>>T cell receptor signaling pathway;>>Fc gamma R-mediated phagocytosis;>>Regulation of actin cytoskeleton;>>Epithelial cell signaling in

Helicobacter pylori infection;>>Pathogenic Escherichia coli

infection;>>Salmonella infection;>>Human immunodeficiency virus 1

infection;>>Proteoglycans in cancer;>>Renal cell carcinoma

Gene Name: PAK1

**Protein Name:** Serine/threonine-protein kinase PAK 1

O88643

**Human Gene Id:** 5058

**Human Swiss Prot** Q13153

No:

**Mouse Swiss Prot** 

No:

Rat Gene Id: 29431

Rat Swiss Prot No: P35465

The antiserum was produced against synthesized peptide derived from human Immunogen:

PAK1 around the phosphorylation site of Ser204. AA range:170-219

**Specificity:** Phospho-PAKa (S204) Polyclonal Antibody detects endogenous levels of PAKa

protein only when phosphorylated at S204.

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide. Formulation:



Source: Polyclonal, Rabbit, IgG

**Dilution :** WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200

**Purification:** The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

Concentration: 1 mg/ml

Storage Stability: -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band: 65kD

Cell Pathway: MAPK\_ERK\_Growth;MAPK\_G\_Protein;ErbB\_HER;Chemokine;Axon

guidance; Focal adhesion; Natural killer cell mediated

cytotoxicity; T Cell Receptor; Fc gamma R-mediated phagocytosis; Regulates

Actin and Cytoskelet

**Background:** This gene encodes a family member of serine/threonine p21-activating kinases,

known as PAK proteins. These proteins are critical effectors that link

RhoGTPases to cytoskeleton reorganization and nuclear signaling, and they serve as targets for the small GTP binding proteins Cdc42 and Rac. This specific family member regulates cell motility and morphology. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

[provided by RefSeq, Apr 2010],

**Function:** catalytic activity:ATP + a protein = ADP + a

phosphoprotein.,cofactor:Magnesium.,enzyme regulation:Activated by binding small G proteins. Binding of GTP-bound CDC42 or RAC1 to the autoregulatory region releases monomers from the autoinhibited dimer, enables phosphorylation of The 422 and allows the kineses demain to adopt an active structure. Also

of Thr-423 and allows the kinase domain to adopt an active structure. Also activated by binding to GTP-bound CDC42, independent of the phosphorylation

state of Thr-423. Phosphorylation of Thr-84 by OXSR1 inhibits this

activation.,function:The activated kinase acts on a variety of targets. Likely to be the GTPase effector that links the Rho-related GTPases to the JNK MAP kinase pathway. Activated by CDC42 and RAC1. Involved in dissolution of stress fibers and reorganization of focal complexes. Involved in regulation of microtubule biogenesis through phosphorylation of TBCB. Activity is inhibited in cells

undergoing apop

Subcellular Location :

Cytoplasm . Cell junction, focal adhesion . Cell projection, lamellipodium . Cell membrane . Cell projection, ruffle membrane . Cell projection, invadopodium . Nucleus, nucleoplasm . Chromosome . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Colocalizes with RUFY3, F-actin and other core migration components in invadopodia at the cell periphery (PubMed:25766321). Recruited to the cell membrane by interaction with CDC42 and RAC1. Recruited to focal adhesions upon activation. Colocalized with CIB1 within membrane ruffles

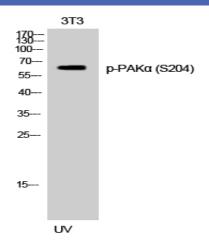


during cell spreading upon readhesion to fibronectin. Upon DNA damage, translocates to the nucleoplasm when phosphorylated at Thr-212 where is corecruited with MORC2 on damaged chromatin (PubMed:23260667). Localization to the centrosome does not depen

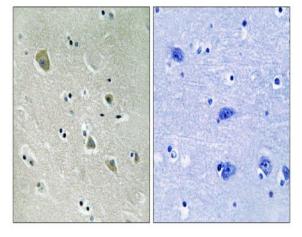
## **Expression:**

Overexpressed in gastric cancer cells and tissues (at protein level) (PubMed:25766321).

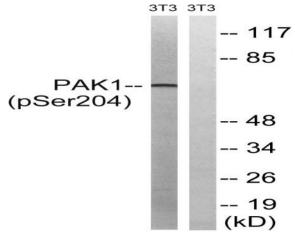
## **Products Images**



Western Blot analysis of 3T3 cells using Phospho-PAKa (S204) Polyclonal Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using PAK1 (Phospho-Ser204) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from NIH/3T3 cells treated with UV 15', using PAK1 (Phospho-Ser204) Antibody. The lane on the right is blocked with the phospho peptide.