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**Product Name: PAK $\alpha$  Rabbit Polyclonal Antibody****Catalog #: APRab15713**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application**

<b>Dilution Ratio</b>	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:10000
<b>Molecular Weight</b>	60kDa

**Antigen Information**

<b>Gene Name</b>	PAK1
<b>Alternative Names</b>	PAK1; Serine/threonine-protein kinase PAK 1; Alpha-PAK; p21-activated kinase 1; PAK-1; p65-PAK
<b>Gene ID</b>	5058.0
<b>SwissProt ID</b>	Q13153
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human PAK1. AA range:178-227

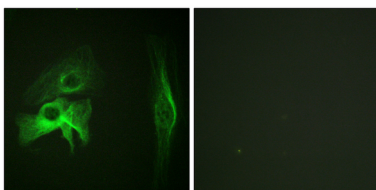
**Background**

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], 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 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 apoptosis, potentially due to binding of CDC2L1 and CDC2L2., PTM: Autophosphorylated when activated by CDC42/p21 and RAC1., similarity: Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily., similarity: Contains 1 CRIB domain., similarity: Contains 1 protein kinase domain., subcellular location: Recruited to focal adhesions upon activation., subunit: Homodimer in its autoinhibited state. Active as monomer. Interacts tightly with GTP-bound but not GDP-bound CDC42/P21 and RAC1. Binds to the caspase-cleaved p110 isoform of CDC2L1 and CDC2L2, p110C, but not the full-length proteins. Component of cytoplasmic complexes, which also contain PXN, ARHGEF6 and GIT1. Interacts with ARHGEF7. Also interacts with CRIPAK. Interacts with NISCH.,

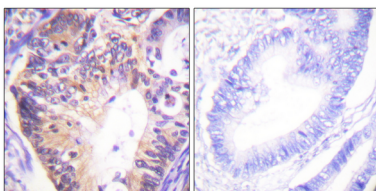
## Research Area

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 Cytoskeleton; Epithelial cell signaling in Helicobacter pylori infection; Renal cell carcinoma;

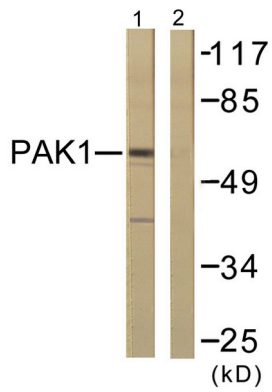
## Image Data



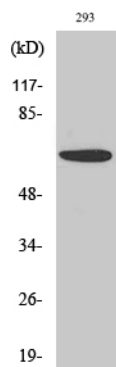
Immunofluorescence analysis of HeLa cells, using PAK1 Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma tissue, using PAK1 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from 293 cells, treated with Etoposide 25uM 60', using PAK1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using PAK $\alpha$  Polyclonal Antibody diluted at 1:500