

## Product datasheet for **AP20990PU-N**

### PAK1 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	<b>Western blot:</b> 1/500 - 1/1000. <b>Immunohistochemistry on paraffin sections</b> 1/50 - 1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of PAK1/2 protein. (region surrounding Pro429)
Formulation:	Phosphate buffered saline (PBS), pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity chromatography (> 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 60 kDa
Gene Name:	p21 (RAC1) activated kinase 1
Database Link:	<u><a href="#">Entrez Gene 18479 Mouse</a></u> <u><a href="#">Entrez Gene 29431 Rat</a></u> <u><a href="#">Entrez Gene 5058 Human</a></u> <u><a href="#">Q13153</a></u>



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**Background:**

Three isoforms of serine/threonine kinases, designated alphaPAK p68, Bpak p65 and gammaPAK p62, have been shown to exhibit a high degree of sequence homology with the *S. cerevisiae* kinase Ste 20, involved in pheromone signaling. The alpha, beta and gammaPAK isoforms complex specifically with Rac 1 and Cdc42 in their active GTP-bound state, inhibiting their intrinsic GTPase activity leading to their autophosphorylation. There are eight sites of autophosphorylation on gammaPAK, including Ser 19, Ser 141 and Thr 402, and phosphorylation of Ser 141 and Thr 402 is correlated with gammaPAK activation. Once phosphorylated and their affinity for Rac/Cdc42 reduced, the PAK isoforms disassociate from the complex to seek downstream substrates. One such putative substrate is MEK kinase, an upstream effector of MEK4 which is involved in the JNK signaling pathway.

**Synonyms:**

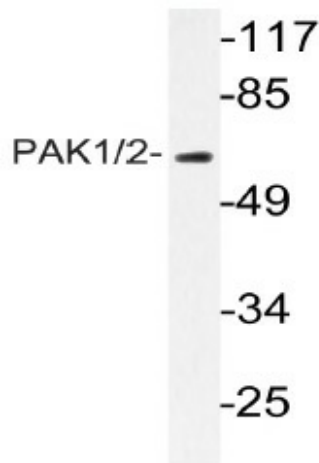
PAK 1, PAK-1, Alpha-PAK, PAK alpha, p21-activated kinase 1, p65-PAK, PAK 2, PAK-2, Gamma-PAK, PAK gamma, PAK65, p21-activated kinase 2, p58

**Protein Families:**

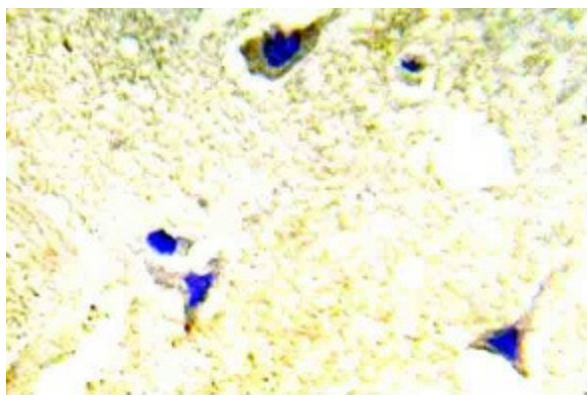
Druggable Genome, Protein Kinase, Stem cell - Pluripotency

**Protein Pathways:**

Axon guidance, Chemokine signaling pathway, Epithelial cell signaling in *Helicobacter pylori* infection, ErbB signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway

**Product images:**

Western blot (WB) analyzes of PAK1/2 antibody (Cat.-No.: AP20990PU-N) in extracts from CV-1 cells.



Immunohistochemistry (IHC) analyzes of PAK1/2 antibody (Cat.-No.: AP20990PU-N) in paraffin-embedded human brain tissue.