

## Product datasheet for **AP21121PU-N**

### PAK2 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 PAKy protein. (region surrounding Arg186)
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:	~ 58 kDa
Gene Name:	p21 (RAC1) activated kinase 2
Database Link:	<a href="#">Entrez Gene 29432 Rat</a> <a href="#">Entrez Gene 224105 Mouse</a> <a href="#">Entrez Gene 5062 Human</a> <a href="#">Q13177</a>



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**Background:**

Three isoforms of serine/threonine kinases, designated 7PAK p68, 8PAK p65 and 9PAK p62, have been shown to exhibit a high degree of sequence homology with the *S. cerevisiae* kinase Ste 20, involved in pheromone signaling. The 7, 8, and 9 PAK isoforms complex specifically with Rac1 and Cdc42 in their active GTP-bound state, inhibiting their intrinsic GTPase activity leading to their autophosphorylation. There are eight sites of autophosphorylation on 9 PAK, including Ser 19, Ser 141 Thr 402, phosphorylation of Ser 141 and Thr 402 is correlated with 9 PAK 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. While the PAK isoforms interact in a GTP dependent manner with Rac 1 and Cdc 42, they do not interact with Rho.

**Synonyms:**

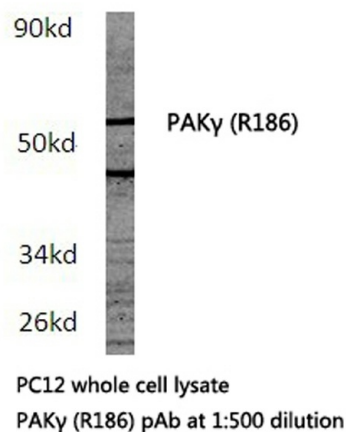
PAK 2, PAK-2, Gamma-PAK, PAK gamma, PAK65, p21-activated kinase 2, p58

**Protein Families:**

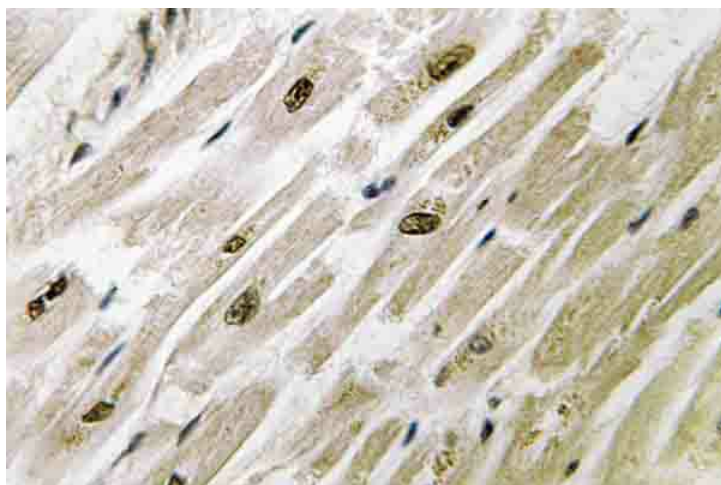
Druggable Genome, Protein Kinase

**Protein Pathways:**

Axon guidance, ErbB signaling pathway, Focal adhesion, MAPK signaling pathway, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway

**Product images:**

Western blot (WB) analysis of PAK $\gamma$  antibody (Cat.-No.: AP21121PU-N) in extracts from PC12 cells.



Immunohistochemistry (IHC) analyzes of PAK2 antibody (Cat.-No.: AP21121PU-N) in paraffin-embedded human heart tissue.