

## Product datasheet for **AP20899PU-N**

### PAK1 pThr423/402 Rabbit Polyclonal Antibody

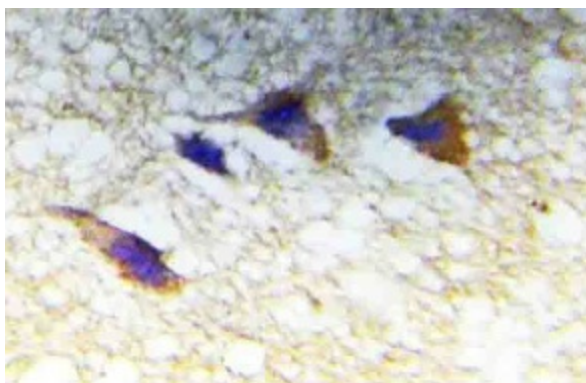
#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC
Recommended Dilution:	<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 p-PAK1/2 protein, only when phosphorylated at Thr423/402.
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:	<a href="#">Entrez Gene 18479 Mouse</a> <a href="#">Entrez Gene 29431 Rat</a> <a href="#">Entrez Gene 5058 Human Q13153</a>



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- Background:** Three isoforms of Serine/Threonine kinases, designated alphaPAK p68, betaPAK 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. The site of autophosphorylation on  $\alpha$ PAK is Thr 423, which is in the kinase activation loop. 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 MEK-4 which is involved in the JNK signaling pathway. While the PAK isoforms interact in a GTP-dependent manner with Rac 1 and Cdc42, they do not interact with Rho.
- 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:**

Immunohistochemistry (IHC) analyzes of p-PAK1/2 (pThr423/402) antibody (Cat.-No.: AP20899PU-N) in paraffin-embedded human brain tissue.