

## Product datasheet for **AP06556PU-M**

### PAK1 Rabbit Polyclonal Antibody

#### Product data:

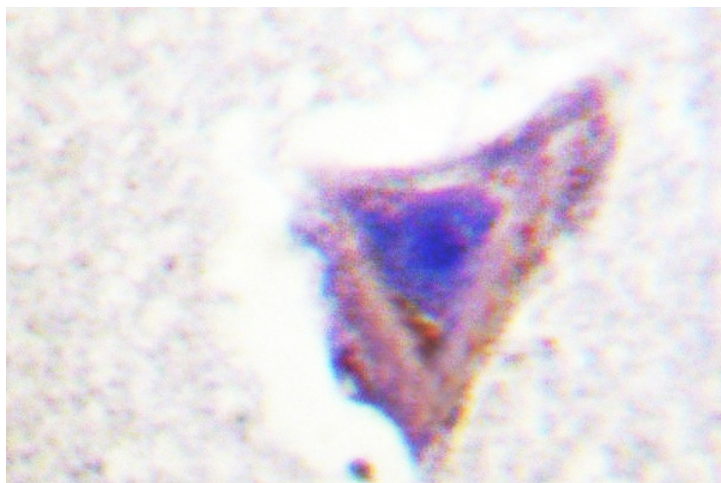
|                         |   |
|-------------------------|---|
| Product Type:           | Primary Antibodies  |
| Applications:           | IHC, WB   |
| Recommended Dilution:   | <b>Western blot:</b> 1/500-1/1000.<br><b>Immunohistochemistry on paraffin sections:</b> 1/50-1/200.   |
| Reactivity:             | Human, Mouse, Rat   |
| Host:                   | Rabbit  |
| Clonality:              | Polyclonal  |
| Immunogen:              | Synthetic peptide, corresponding to amino acids 400-450 of Human PAK1.  |
| Specificity:            | This antibody detects endogenous levels of PAK1/2/3 protein.<br>(region surrounding Glu417/396/415)   |
| Formulation:            | Phosphate buffered saline (PBS), pH 7.2.<br>State: Aff - Purified<br>State: Liquid purified Ig fraction<br>Preservative: 0.05% sodium azide |
| Concentration:          | 1.0 mg/ml   |
| Purification:           | Affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE)  |
| Conjugation:            | Unconjugated  |
| Storage:                | Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.<br>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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|                          |   |
|--------------------------|---|
| <b>Background:</b>       | Three isoforms of serine/threonine kinases, designated $\alpha$ PAK p68, $\beta$ PAK p65 and $\gamma$ PAK p62, have been shown to exhibit a high degree of sequence homology with the <i>S. cerevisiae</i> kinase Ste 20, involved in pheromone signaling. The $\alpha$ , $\beta$ and $\gamma$ 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 $\gamma$ PAK, including Ser 19, Ser 141 and Thr 402, and phosphorylation of Ser 141 and Thr 402 is correlated with $\gamma$ 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 GTPdependent manner with Rac1 and Cdc42, they do not interact with Rho. |
| <b>Synonyms:</b>         | 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, PAK 3, PAK-3, Beta-PAK, PAK beta, p21-activated kinase 3, Oligophrenin-3, OPHN3  |
| <b>Protein Families:</b> | Druggable Genome, Protein Kinase, Stem cell - Pluripotency  |
| <b>Protein Pathways:</b> | Axon guidance, Chemokine signaling pathway, Epithelial cell signaling in <i>Helicobacter pylori</i> 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 PAK1/2/3 antibody in paraffin-embedded human brain tissue.