



# PAKy Monoclonal Antibody

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>         | BYab-14181                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Isotype</b>            | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Reactivity</b>         | Human;Monkey                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Applications</b>       | WB;IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Gene Name</b>          | PAK2                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Protein Name</b>       | Serine/threonine-protein kinase PAK 2                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Immunogen</b>          | Purified recombinant fragment of PAKy expressed in E. Coli.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Specificity</b>        | PAKy Monoclonal Antibody detects endogenous levels of PAKy protein.                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Formulation</b>        | Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol.                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>             | Monoclonal, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purification</b>       | Affinity purification                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Dilution</b>           | Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications.                                                                                                                                                                                                                                                                                                |
| <b>Concentration</b>      | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>             | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage Stability</b>  | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Synonyms</b>           | PAK2; Serine/threonine-protein kinase PAK 2; Gamma-PAK; PAK65; S6/H4 kinase; p21-activated kinase 2; PAK-2; p58                                                                                                                                                                                                                                                                                                                                              |
| <b>Observed Band</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cell Pathway</b>       | [Serine/threonine-protein kinase PAK 2]: Cytoplasm. MYO18A mediates the cellular distribution of the PAK2-ARHGEF7-GIT1 complex to the inner surface of the cell membrane.; [PAK-2p34]: Nucleus. Cytoplasm, perinuclear region. Membrane; Lipid-anchor. Interaction with ARHGAP10 probably changes PAK-2p34 location to cytoplasmic perinuclear region. Myristoylation changes PAK-2p34 location to the membrane.                                             |
| <b>Tissue Specificity</b> | Ubiquitously expressed. Higher levels seen in skeletal muscle, ovary, thymus and spleen.                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Function</b>           | catalytic activity:ATP + a protein = ADP + a phosphoprotein.;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-402 and allows the kinase domain to adopt an active structure (By similarity). Following caspase cleavage, autophosphorylated PAK-2p34 is constitutively active.;function:The activated |

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kinase acts on a variety of targets. Phosphorylates ribosomal protein S6, histone H4 and myelin basic protein. Full length PAK 2 stimulates cell survival and cell growth. The process is, at least in part, mediated by phosphorylation and inhibition of pro-apoptotic BAD. Caspase-activated PAK-2p34 is involved in cell death response, probably involving the JNK signaling pathway. Cleaved PAK-2p34 seems to have a higher activity than the CDC42-activated for

**Background**

The p21 activated kinases (PAK) are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. The PAK proteins are a family of serine/threonine kinases that serve as targets for the small GTP binding proteins, CDC42 and RAC1, and have been implicated in a wide range of biological activities. The protein encoded by this gene is activated by proteolytic cleavage during caspase-mediated apoptosis, and may play a role in regulating the apoptotic events in the dying cell. [provided by RefSeq, Jul 2008],

**matters needing attention**

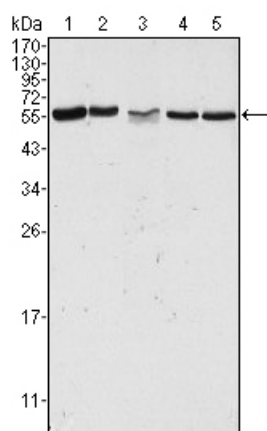
Avoid repeated freezing and thawing!

**Usage suggestions**

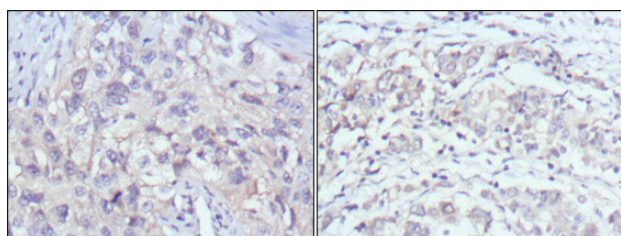
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



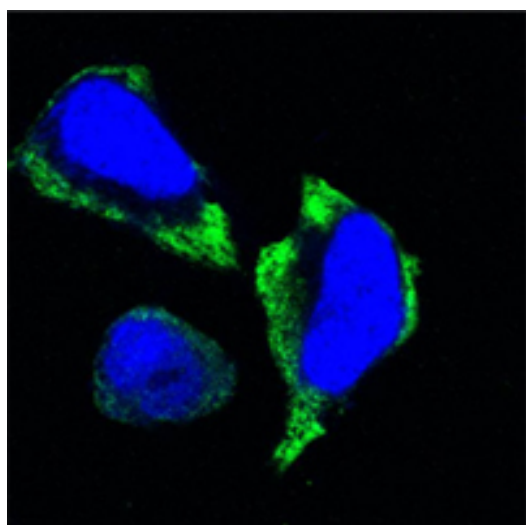
## Products Images



Western Blot analysis using PAKy Monoclonal Antibody against HeLa (1), Jurkat (2), A549 (3), HEK293 (4) and K562 (5) cell lysate.



Immunohistochemistry analysis of paraffin-embedded human lung cancer (left) and gastric cancer (right) with DAB staining using PAKy Monoclonal Antibody.



Confocal immunofluorescence analysis of HeLa cells using PAKy Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye.

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