

PAK γ Mouse mAb

CatalogNo: YM0502

Key Features

Host Species

- Mouse

Reactivity

- Human,Monkey

Applications

- WB,IHC,IF,ELISA

MW

- 58kD (Calculated)

Storage

Storage* -15°C to -25°C/1 year(Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:200-1:1000

IF 1:200-1:1000

ELISA 1:10000

Not yet tested in other applications.

Basic Information

Clonality Monoclonal

Clone Number 3C2

Immunogen Information

Immunogen Purified recombinant fragment of PAK γ expressed in E. Coli.

Specificity PAK γ Monoclonal Antibody detects endogenous levels of PAK γ protein.

| Target Information

Gene name PAK2

Protein Name Serine/threonine-protein kinase PAK 2

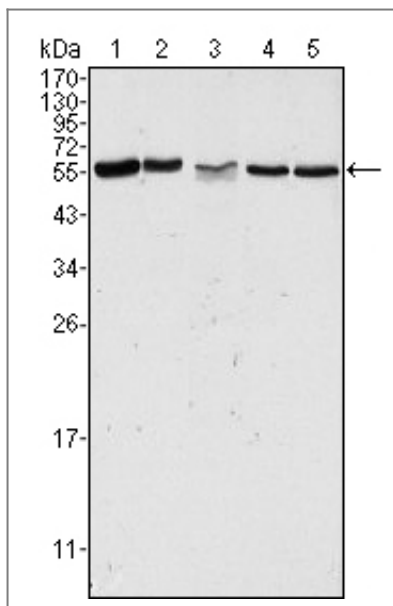
| Organism | Gene ID | UniProt ID |
|----------|------------------------|--------------------------|
| Human | 5062 ; | Q13177 ; |

Cellular Localization [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.

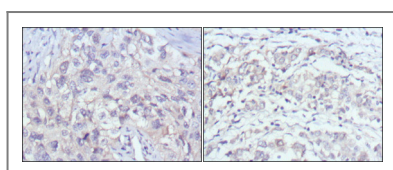
Tissue specificity Ubiquitously expressed. Higher levels seen in skeletal muscle, ovary, thymus and spleen.

Function 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 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 form.,PTM:During apoptosis proteolytically cleaved by caspase-3 or caspase-3-like proteases to yield active PAK-2p34.,PTM:Full length PAK 2 is autophosphorylated when activated by CDC42/p21. Following cleavage, both peptides, PAK-2p27 and PAK-2p34, become highly autophosphorylated, with PAK-2p27 being phosphorylated on serine and PAK-2p34 on threonine residues, respectively. Autophosphorylation of PAK-2p27 can occur in the absence of any effectors and is dependent on phosphorylation of Thr-402, because PAK-2p27 is acting as an exogenous substrate.,PTM:PAK-2p34 is myristoylated.,PTM:Ubiquitinated, leading to its proteosomal degradation.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily.,similarity:Contains 1 CRIB domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Interaction with ARHGAP10 probably changes PAK-2p34 location to cytoplasmic perinuclear region. Myristoylation changes PAK-2p34 location to the membrane.,subunit:Interacts tightly with GTP-bound but not GDP-bound CDC42/p21 and RAC1. Interacts with SH3MD4. Interacts with and activated by HIV-1 Nef. PAK-2p34 interacts with ARHGAP10.,tissue specificity:Ubiquitously expressed. Higher levels seen in skeletal muscle, ovary, thymus and spleen.,

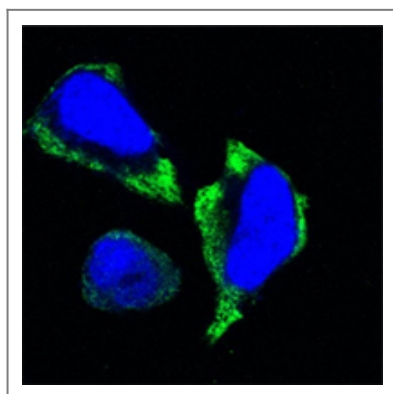
| Validation Data



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.

Contact information

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PAKy Mouse mAb