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KD-Validated Anti-PAK2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1137

Specification

KD-Validated Anti-PAK2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q13177
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 58 kDa , observed, 61 kDa KDa**
Gene Name	**PAK2**
Aliases	**PAK2; P21 (RAC1) Activated Kinase 2; PAK65; S6/H4 Kinase; P21 Protein (Cdc42/Rac)-Activated Kinase 2; Serine/Threonine-Protein Kinase PAK 2; P21 (CDKN1A)-Activated Kinase 2; P21-Activated Kinase 2; EC 2.7.11.1; Gamma-PAK; PAKgamma; PAK-2; P58; EC 2.7.11; PAKGAMMA; KNO2**
Immunogen	**A synthesized peptide derived from human PAK2**

KD-Validated Anti-PAK2 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**5062**

Other Names
Serine/threonine-protein kinase PAK 2, 2.7.11.1, Gamma-PAK, PAK65, S6/H4 kinase, p21-activated kinase 2, PAK-2, p58, PAK-2p27, p27, PAK-2p34, p34, C-t-PAK2, PAK2

KD-Validated Anti-PAK2 Rabbit Monoclonal Antibody - Protein Information

Name PAK2

Function
Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell motility, cell cycle progression, apoptosis or proliferation (PubMed:12853446, PubMed:16617111, PubMed:19273597, PubMed:19923322, PubMed:33693784, PubMed:7744004, PubMed:9171063). Acts as a downstream effector of the small GTPases CDC42 and RAC1 (PubMed:7744004). Activation by the binding of active CDC42 and RAC1 results in a conformational change and a subsequent

autophosphorylation on several serine and/or threonine residues (PubMed:7744004). Full- length PAK2 stimulates cell survival and cell growth (PubMed:7744004). Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration (PubMed:21317288). Phosphorylates JUN and plays an important role in EGF-induced cell proliferation (PubMed:21177766). Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP (PubMed:21724829). Phosphorylates CASP7, thereby preventing its activity (PubMed:21555521, PubMed:27889207). Additionally, associates with ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation control during mitosis (PubMed:19273597, PubMed:19923322). On the other hand, apoptotic stimuli such as DNA damage lead to caspase-mediated cleavage of PAK2, generating PAK-2p34, an active p34 fragment that translocates to the nucleus and promotes cellular apoptosis involving the JNK signaling pathway (PubMed:12853446, PubMed:16617111, PubMed:9171063). Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation (PubMed:15234964).

Cellular Location
[Serine/threonine-protein kinase PAK 2]: Cytoplasm Nucleus Note=MYO18A mediates the cellular distribution of the PAK2-ARHGEF7-GIT1 complex to the inner surface of the cell membrane

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

KD-Validated Anti-PAK2 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-PAK2 Rabbit Monoclonal Antibody - Images

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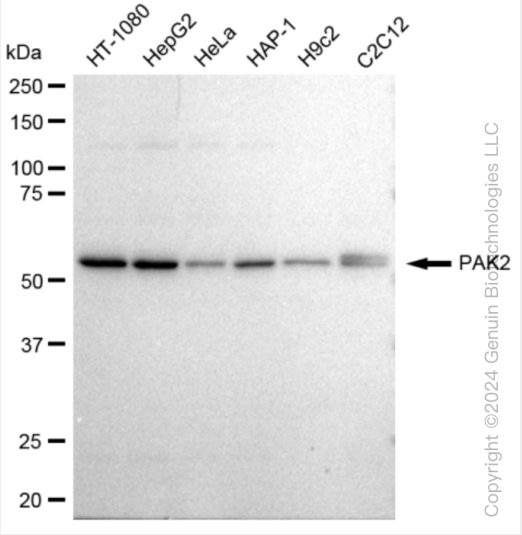
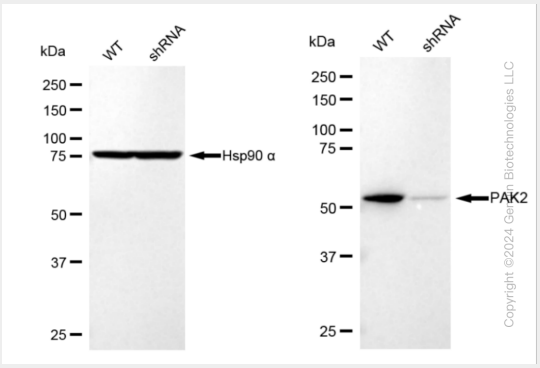
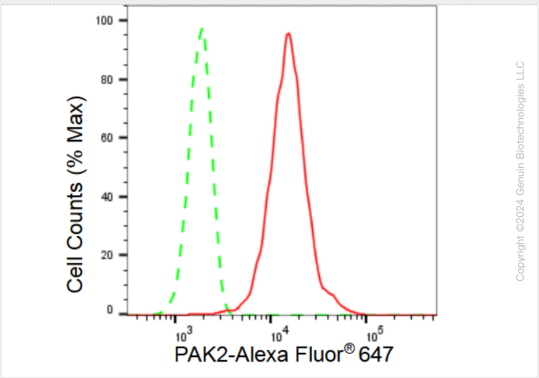


Western blotting analysis using anti-PAK2 antibody (Cat#AGI1137). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-PAK2 antibody (Cat#AGI1137, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-PAK2 antibody (Cat#AGI1137). PAK2 expression in wild type (WT) and PAK2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-PAK2 antibody (Cat#AGI1137, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of PAK2 expression in HT-1080 cells using PAK2 antibody (Cat#AGI1137, 1:2,000). Green, isotype control; red, PAK2.

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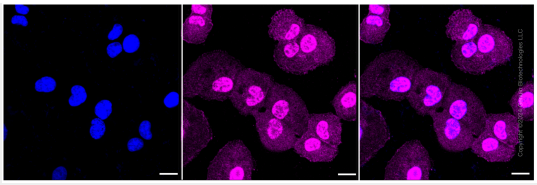

Immunocytochemical staining of HT-1080 cells with PAK2 antibody (Cat#AGI1137, 1:1,000). Nuclei were stained blue with DAPI; PAK2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar: 20 µm.