

Anti-PAK2 Antibody (5W642)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human, Mouse, Rat
Conjugation:	Unconjugated
Clone:	5W642
Purification:	Affinity-chromatography

Applications

Verified Activity:	<p>1. Western Blot</p> <ul style="list-style-type: none">-Positive WB detected in: 293 whole cell lysate, Jurkat whole cell lysate, Raji whole cell lysate, Mouse brain tissue, Rat brain tissue-All lanes: PAK2 antibody at 1:2000-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution-Predicted band size: 59 kDa-Observed band size: 59 kDa <p>2. Overlay histogram showing HepG2 cells stained with TMAH-00851 (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody ($1\mu\text{g}/1*10^6$ cells) for 1 h at 4°C. The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4°C. Control antibody (green line) was Rabbit IgG ($1\mu\text{g}/1*10^6$ cells) used under the same conditions. Acquisition of >10,000 events was performed.</p> <p>3. Immunoprecipitating PAK2 in Raji whole cell lysate</p> <ul style="list-style-type: none">-Lane 1: Rabbit control IgG instead of TMAH-00851 in Raji whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)-Lane 2: TMAH-00851(2μg)+ Raji whole cell lysate(500μg)-Lane 3: Raji whole cell lysate (10μg)
Application:	ELISA,FCM,IP,WB
Recommended	WB:1:500-1:5000; FCM:1:20-1:200; IP:1:200-1:1000.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human PAK2
Antigen Species:	Human
Gene ID:	5062
Uniprot ID:	Q13177
Synonyms:	PAK-2;PAK65;Gamma-PAK;p21-activated kinase 2;EC 2.7.11.1;S6/H4 kinase;p58; Serine/threonine-protein kinase PAK 2
Biology Area:	Neuroscience, Cancer, Cell biology, Microbiology, Signal transduction

Research Background

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. Acts as downstream effector of the small GTPases CDC42 and RAC1. 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. Full-length PAK2 stimulates cell survival and cell growth. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Phosphorylates JUN and plays an important role in EGF-induced cell proliferation. Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP. Additionally, associates with ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation control during mitosis. 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. Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation.

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