

PAK1

Reactivity: Human Mouse Rat

Tested applications: WB IHC ICC IP

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200 ICC 1:50 - 1:200 IP 1:20 - 1:100

Calculated MW: 62kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human PAK1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

bfqr

Synonym:

MGC130000; MGC130001; PAKalpha;

Catalog #: A2554

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 5058

Isotype: IgG

Swiss Prot: Q13153

Purity: Affinity purification

For research use only.

Background:

The p21-activated kinase (PAK) family of serine/threonine kinases is engaged in multiple cellular processes, including cytoskeletal reorganization, MAPK signaling, apoptotic signaling, control of phagocyte NADPH oxidase, and growth factor-induced neurite outgrowth (1,2). Several mechanisms that induce PAK activity have been reported. Binding of Rac/Cdc42 to the CRIB (or PBD) domain near the amino terminus of PAK causes autophosphorylation and conformational changes in PAK (1). Phosphorylation of PAK1 at Thr423 by PDK induces activation of PAK1 (3). Several autophosphorylation sites have been identified, including Ser199 and Ser204 of PAK1 and Ser192 and Ser197 of PAK2 (4,5). Because the autophosphorylation sites are located in the amino-terminal inhibitory domain, it has been hypothesized that modification in this region prevents the kinase from reverting to an inactive conformation (6). Research indicates that phosphorylation at Ser144 of PAK1 or Ser139 of PAK3 (located in the kinase inhibitory domain) affects kinase activity (7). Phosphorylation at Ser21 of PAK1 or Ser20 of PAK2 regulates binding with the adaptor protein Nck (8). PAK4, PAK5, and PAK6 have lower sequence similarity with PAK1-3 in the amino-terminal regulatory region (9). Phosphorylation at Ser474 of PAK4, a site analogous to Thr423 of PAK1, may play a pivotal role in regulating the activity and function of PAK4 (10).

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