

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PAK1 in direct ELISAs. In direct ELISAs, less than 10% cross-reactivity with recombinant human (rh) PAK1B, rhPAK2, rhPAK4, rhPAK6, and rhPAK7 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human PAK1 Leu128-Gln242 Accession # Q13153
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Immunocytochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PAK1 (p21-activated kinase 1; also α-PAK and p65-PAK) is both a cytoplasmic and nuclear 58-60 kDa member of PAK group I, STE20 subfamily, STE Ser/Thr protein kinase family of molecules. It is widely expressed, and is upregulated in numerous cancers. PAK1 has multiple activities. It is responsible for regulating focal adhesions during motility. At the front edge of cells, PAK1 promotes focal adhesion formation by phosphorylating PIX, while at the back edge, it directs focal adhesion disassembly. PAK1 also impacts microtubule formation. Microtubules are composed of heterodimeric subunits containing an α- and β-tubulin polypeptide. The availability of α-tubulin for microtubule formation is based on the ability of PAK1 to phosphorylate a α-tubulin chaperone, tubulin cofactor B. PAK1 is activated following binding to active GTPases which induce PAK autophosphorylation. When active, PAK1 is a monomer; when inactive, it reportedly homodimerizes. Human PAK1 is 545 amino acids (aa) in length. It contains one GTPase binding domain (aa 75-105) plus a protein kinase catalytic region (aa 250-521). There are five SH3-binding motifs. Acetylation occurs on Lys256, and there are at least 14 potential phosphorylation sites, seven of which are known to be utilized. There is one splice variant that shows a 35 aa substitution for aa 518-545. Over aa 128-242, human PAK1 shares 96% aa sequence identity with mouse PAK1.

PRODUCT SPECIFIC NOTICES

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