Human PAK1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF7495

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	*E. coli*-derived recombinant human PAK1 Leu128-Gln242 Accession # Q13153
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

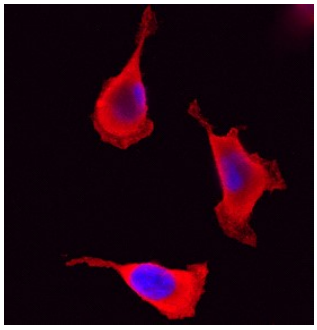
APPLICATIONS

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.*

	Recommended Concentration	Sample
Immunocytochemistry	5-15 µg/mL	See Below

DATA

Immunocytochemistry



PAK1 in HeLa Human Cell Line. PAK1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Goat Anti-Human PAK1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7495) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

PAK1 (p21-activaed 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.

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