

# $\alpha$ PAK (A-6): sc-166887



The Power to Question

## BACKGROUND

Three isoforms of serine/threonine kinases, designated  $\alpha$ PAK p68,  $\beta$ PAK p65 and  $\gamma$ PAK p62, have been shown to exhibit a high degree of sequence homology with the *S. cerevisiae* kinase Ste20, involved in pheromone signaling. The  $\alpha$ ,  $\beta$  and  $\gamma$ PAK isoforms complex specifically with Rac 1 and Cdc42 in their active GTP-bound state, inhibiting their intrinsic GTPase activity leading to their autophosphorylation. There are eight sites of autophosphorylation on  $\gamma$ PAK, including Ser 19, Ser 141 and Thr 402, and phosphorylation of Ser 141 and Thr 402 is correlated with  $\gamma$ PAK activation. Once phosphorylated and their affinity for Rac/Cdc42 reduced, the PAK isoforms disassociate from the complex to seek downstream substrates. One such putative substrate is MEK kinase, an upstream effector of MEK4 which is involved in the JNK signaling pathway. While the PAK isoforms interact in a GTP-dependent manner with Rac 1 and Cdc42, they do not interact with Rho.

## SOURCE

$\alpha$ PAK (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 246-470 mapping at the C-terminus of  $\alpha$ PAK of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

$\alpha$ PAK (A-6) is available conjugated to agarose (sc-166887 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166887 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166887 PE), fluorescein (sc-166887 FITC), Alexa Fluor<sup>®</sup> 488 (sc-166887 AF488), Alexa Fluor<sup>®</sup> 546 (sc-166887 AF546), Alexa Fluor<sup>®</sup> 594 (sc-166887 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-166887 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-166887 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-166887 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

$\alpha$ PAK (A-6) is recommended for detection of  $\alpha$ PAK,  $\beta$ PAK and  $\gamma$ PAK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

$\alpha$ PAK (A-6) is also recommended for detection of  $\alpha$ PAK,  $\beta$ PAK and  $\gamma$ PAK in additional species, including equine and bovine.

Molecular Weight of  $\alpha$ PAK: 65 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HeLa whole cell lysate: sc-2200 or c4 whole cell lysate: sc-364186.

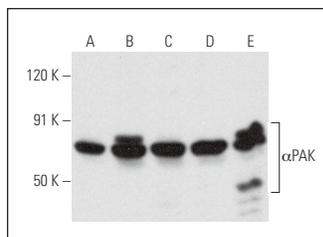
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

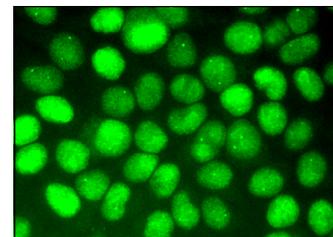
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



$\alpha$ PAK (A-6): sc-166887. Western blot analysis of  $\alpha$ PAK expression in HeLa (A), CCRF-CEM (B), c4 (C), BYDP (D) and L8 (E) whole cell lysates.



$\alpha$ PAK (A-6): sc-166887. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

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## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.