SANTA CRUZ BIOTECHNOLOGY, INC.

γPAK (C-19): sc-1519

BACKGROUND

Three recently identified isoforms of serine/threonine kinases, designated αPAK p68, βPAK p65 and γPAK p62, have been shown to exhibit a high degree of sequence homology with the *S. cerevisiae* kinase STE20, involved in pheromone signaling. The α, β, and γPAK isoforms complex specifically with Rac1 and Cdc42 in their active GTP bound state, inhibiting their intrinsic GTPase activity leading to their autophosphorylation. 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 Rac1 and Cdc42, they do not interact with Rho.

CHROMOSOMAL LOCATION

Genetic locus: PAK2 (human) mapping to 3q29; Pak2 (mouse) mapping to 16 B2.

SOURCE

γPAK (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of γPAK of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1519 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

γPAK (C-19) is recommended for detection of γPAK p62 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); partially cross-reactive with αPAK and βPAK.

γPAK (C-19) is also recommended for detection of γPAK p62 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for γPAK siRNA (h): sc-36183, γPAK siRNA (m): sc-36184, γPAK shRNA Plasmid (h): sc-36183-SH, γPAK shRNA Plasmid (m): sc-36184-SH, γPAK shRNA (h) Lentiviral Particles: sc-36183-V and γPAK shRNA (m) Lentiviral Particles: sc-36184-V.

Molecular Weight of γPAK: 62 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, rat brain extract: sc-2392 or Jurkat whole cell lysate: sc-2204.

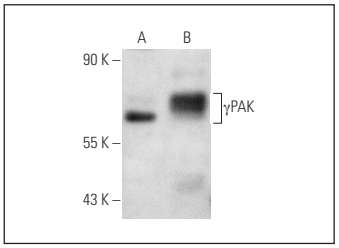
STORAGE

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



γPAK (C-19): sc-1519. Western blot analysis of γPAK expression in Jurkat whole cell lysate (**A**) and rat brain tissue extract (**B**).

SELECT PRODUCT CITATIONS

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3. Xiao, G.H., et al. 2005. The NF2 tumor suppressor gene product, merlin, inhibits cell proliferation and cell cycle progression by repressing cyclin D1 expression. Mol. Cell. Biol. 25: 2384-2394.
4. Raney, A., et al. 2005. Reconstitution and molecular analysis of an active human immunodeficiency virus type 1 Nef/p21-activated kinase 2 complex. J. Virol. 79: 12732-12741.
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6. Vincent, P., et al. 2006. Activation of p21-activated kinase 2 and its association with Nef are conserved in murine cells but are not sufficient to induce an AIDS-like disease in CD4C/HIV transgenic mice. J. Biol. Chem. 281: 6940-6954.
7. Amstutz, B., et al. 2008. Subversion of CtBP1-controlled macropinocytosis by human adenovirus serotype 3. EMBO J. 27: 956-969.
8. Yap, M.C., et al. 2010. Rapid and selective detection of fatty acylated proteins using w-alkynyl-fatty acids and click chemistry. J. Lipid Res. 51: 1566-1580.