SANTA CRUZ BIOTECHNOLOGY, INC.

JIK (D-21): sc-130792

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

JNK/SAPK-inhibitory kinase (JIK) is a serine/threonine kinase that belongs to the STE20 kinase family. The kinase domain of JIK is similar to the GCK-like subfamily of STE20 kinases, while its non-catalytic domain is similar to a *Caenorhabditis elegans* putative serine/threonine kinase, SULU. JIK inhibits c-Jun NH_2-terminal kinase/stress-activated protein kinase (JNK/SAPK), which is activated by many types of cellular stresses and extracellular signals. JNK/SAPK regulates cell survival, apoptosis and proliferation in mouse development. JIK is negatively regulated by epidermal growth factor (EGF) and tyrosine kinase receptors. In unstimulated human T cells, JIK is cytoplasmic, whereas in the continuously dividing human T cells of Jurkat lymphoma, JIK is nuclear.

REFERENCES

1. Tassi, E., Biesova, Z., Di Fiore, P.P., Gutkind, J.S. and Wong, W.T. 1999. Human JIK, a novel member of the STE20 kinase family that inhibits JNK and is negatively regulated by epidermal growth factor. J. Biol. Chem. 274: 33287-33295.
2. Nishina, H., Wada, T. and Katada, T. 2004. Physiological roles of SAPK/JNK signaling pathway. J. Biol. Chem. 136: 123-126.
3. MacKeigan, J.P., Murphy, L.O. and Blenis, J. 2005. Sensitized RNAi screen of human kinases and phosphatases identifies new regulators of apoptosis and chemoresistance. Nat. Cell Biol. 7: 591-600.
4. Wakabayashi, T., Kosaka, J. and Oshika, T. 2005. JNK inhibitory kinase is upregulated in retinal ganglion cells after axotomy and enhances BimEL expression level in neuronal cells. J. Neurochem. 95: 526-536.

CHROMOSOMAL LOCATION

Genetic locus: TAOK3 (human) mapping to 12q24.23.

SOURCE

JIK (D-21) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of JIK of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

JIK (D-21) is recommended for detection of JIK of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for JIK siRNA (h): sc-60871, JIK shRNA Plasmid (h): sc-60871-SH and JIK shRNA (h) Lentiviral Particles: sc-60871-V.

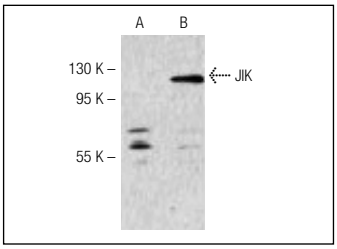
Molecular Weight of JIK: 110 kDa.

Positive Controls: human JIK transfected 293 whole cell lysate.

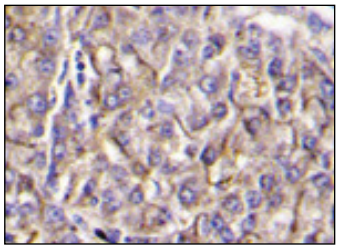
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



JIK (D-21): sc-130792. Western blot analysis of JIK expression in non-transfected (**A**) and human JIK transfected (**B**) 293 whole cell lysates.



JIK (D-21): sc-130792. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic and membrane localization.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.