SANTA CRUZ BIOTECHNOLOGY, INC.

JIK (H-60): sc-134588

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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., et al. 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. Zhang, W., et al. 2000. Cloning of DPK, a novel dendritic cell-derived protein kinase activating the ERK1/ERK2 and JNK/SAPK pathways. Biochem. Biophys. Res. Commun. 274: 872-879.

3. Yoneda, T., et al. 2001. Activation of caspase-12, an endoplastic reticulum (ER) resident caspase, through tumor necrosis factor receptor-associated factor 2-dependent mechanism in response to the ER stress. J. Biol. Chem. 276: 13935-13940.

4. Yustein, J.T., et al. 2003. Comparative studies of a new subfamily of human Ste20-like kinases: homodimerization, subcellular localization, and selective activation of MKK3 and p38. Oncogene 22: 6129-6141.

5. Hartmann, T.B., et al. 2004. SEREX identification of new tumour-associated antigens in cutaneous T-cell lymphoma. Br. J. Dermatol. 150: 252-258.

6. Nishina, H., et al. 2004. Physiological roles of SAPK/JNK signaling pathway. J. Biochem. 136: 123-126.

7. MacKeigan, J.P., et al. 2005. Sensitized RNAi screen of human kinases and phosphatases identifies new regulators of apoptosis and chemoresistance. Nat. Cell Biol. 7: 591-600.

8. Wakabayashi, T., et al. 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; Taok3 (mouse) mapping to 5 F.

SOURCE

JIK (H-60) is a rabbit polyclonal antibody raised against amino acids 367-426 mapping within an internal region of JIK 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.

APPLICATIONS

JIK (H-60) is recommended for detection of JIK of human and rat origin, and Taok3 of mouse origin 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).

JIK (H-60) is also recommended for detection of JIK of human and rat origin, and Taok3 of mouse origin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for JIK siRNA (h): sc-60871, Taok3 siRNA (m): sc-154067, JIK shRNA Plasmid (h): sc-60871-SH, Taok3 shRNA Plasmid (m): sc-154067-SH, JIK shRNA (h) Lentiviral Particles: sc-60871-V and Taok3 shRNA (m) Lentiviral Particles: sc-154067-V.

Molecular Weight of JIK: 110 kDa.

Positive Controls: JIK (h): 293T Lysate: sc-170723.

DATA
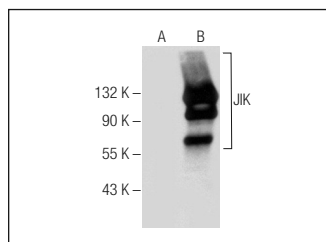
JIK (H-60): sc-134588. Western blot analysis of JIK expression in non-transfected: sc-117752 (**A**) and human JIK transfected: sc-170723 (**B**) 293T whole cell lysates.

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.

MONOS Satisfation Guaranteed

Try **JIK (C-3): sc-377083**, our highly recommended monoclonal alternative to JIK (H-60).