

JIK (C-3): sc-377083



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 NH₂-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 endoplasmic 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.

CHROMOSOMAL LOCATION

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

SOURCE

JIK (C-3) is a mouse monoclonal antibody raised against amino acids 367-426 mapping within an internal region of JIK of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JIK (C-3) is available conjugated to agarose (sc-377083 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377083 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377083 PE), fluorescein (sc-377083 FITC), Alexa Fluor® 488 (sc-377083 AF488), Alexa Fluor® 546 (sc-377083 AF546), Alexa Fluor® 594 (sc-377083 AF594) or Alexa Fluor® 647 (sc-377083 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377083 AF680) or Alexa Fluor® 790 (sc-377083 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

JIK (C-3) is recommended for detection of JIK of human origin by Western Blotting (starting dilution 1:100, 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.

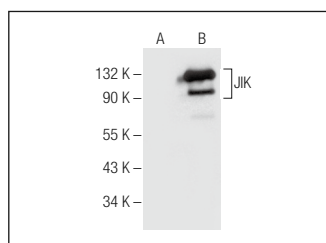
Molecular Weight of JIK: 110 kDa.

Positive Controls: JIK (h2): 293T Lysate: sc-170723.

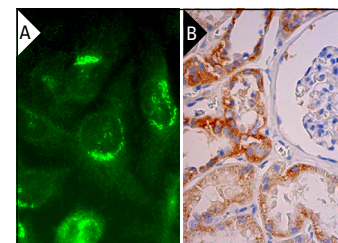
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



JIK (C-3): sc-377083. Western blot analysis of JIK expression in non-transfected: sc-117752 (A) and human JIK transfected: sc-170723 (B) 293T whole cell lysates.



JIK (C-3): sc-377083. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

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 for detailed protocols and support products.