

# JIK (C-12): sc-48551

## 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<sub>2</sub>-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. Zhang, W., Chen, T., Wan, T., He, L., Li, N., Yuan, Z. and Cao, X. 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., Imaizumi, K., Oono, K., Yui, D., Gomi, F., Katayama, T. and Tohyama, M. 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., Xia, L., Kahlenburg, J.M., Robinson, D., Templeton, D. and Kung, H.J. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

JIK (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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.

Blocking peptide available for competition studies, sc-48551 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATION

JIK (C-12) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

JIK (C-12) is also recommended for detection of JIK in additional species, including equine, canine, bovine, porcine and avian.

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.

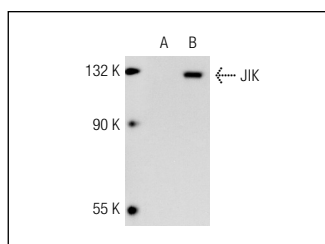
Molecular Weight of JIK: 110 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



JIK (C-12): sc-48551. Western blot analysis of JIK expression in non-transfected: sc-117752 (A) and human JIK transfected: sc-170723 (B) 293T whole cell lysates.

## RESEARCH USE

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

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Try **JIK (C-3): sc-377083**, our highly recommended monoclonal alternative to JIK (C-12).