SANTA CRUZ BIOTECHNOLOGY, INC.

JNK (FL): sc-571

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

c-Jun N-terminal kinases (JNKs) phosphorylate and augment transcriptional activity of c-Jun. JNKs originate from three genes that yield ten isoforms through alternative mRNA splicing, including JNK1α1, JNK1β1, JNK2α1, JNK2β1 and JNK3α1, which represent the p46 isoforms, and JNK1α2, JNK1β2, JNK2α2, JNK2β2 and JNK3β2, which represent the p54 isoforms. JNKs coordinate cell responses to stress and influence regulation of cell growth and transformation. The human JNK1 (PRKM8, SAPK1, MAPK8) gene maps to chromosome 10q11.22 and shares 83% amino acid identity with JNK2. JNK1 is necessary for normal activation and differentiation of CD4 helper T (TH) cells into TH1 and TH2 effector cells. Capsaicin activates JNK1 and p38 in Ras-transformed human breast epithelial cells. Nitrogen oxides (NO_x) upregulate JNK1 in addition to c-Fos, c-Jun and other signaling kinases, including MEKK1 and p38.

SOURCE

JNK (FL) is a rabbit polyclonal antibody raised against amino acids 1-384 representing full length JNK1 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.

Available as phycoerythrin conjugate for flow cytometry, sc-571 PE, 100 tests.

Available as agarose conjugate for immunoprecipitation, sc-571 AC, 500 µg/ 0.25 ml agarose in 1 ml.

APPLICATIONS

JNK (FL) is recommended for detection of all JNK1, JNK2 and JNK3 p46 and p54 isoforms of mouse, rat, human, *Drosophila melanogaster, Xenopus laevis,* zebrafish and *Caenorhabditis elegans* 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

JNK (FL) is also recommended for detection of all JNK1, JNK2 and JNK3 p46 and p54 isoforms in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of JNK3 p46 isoform: 46 kDa.

Molecular Weight of JNK3 p54 isoform: 54 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A-431 whole cell lysate: sc-2201 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.

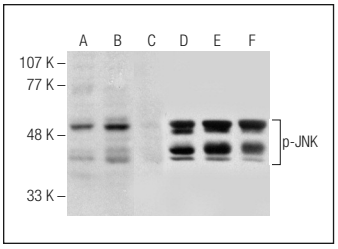
PROTOCOLS

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

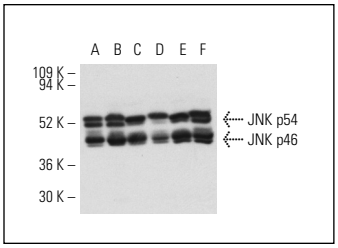
RESEARCH USE

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

DATA



Western blot analysis of JNK phosphorylation in untreated (**A**,**D**), anisomycin treated (**B**,**E**) and anisomycin and lambda protein phosphatase (sc-200312A) treated (**C**,**F**) Jurkat whole cell lysates. Antibodies tested include p-JNK (Thr 183/Tyr 185)-R: sc-12882-R (**A**,**B**,**C**) and JNK (FL): sc-571 (**D**,**E**,**F**).



JNK (FL): sc-571. Western blot analysis of JNK p46 and JNK p54 expression in K-562 (**A**), A-431 (**B**), NIH/3T3 (**C**), HeLa (**D**), RAW 264.7 (**E**) and Jurkat (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

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2. Yin, T., et al. 1997. Tissue specific pattern of stress kinase activation in ischemic/reperfused heart and kidney. J. Biol. Chem. 272: 19943-19950.
3. Lupino, E., et al. 2012. IκB kinase β is required for activation of NF-κB and AP-1 in CD3/CD28-stimulated primary $CD4^+$ T cells. J. Immunol. 188: 2545-2555.
4. Miranda, S., et al. 2012. Beneficial effects of fenofibrate in retinal pigment epithelium by the modulation of stress and survival signaling under diabetic conditions. J. Cell. Physiol. 227: 2352-2362.
5. Teng, L., et al. 2012. Divergent effects of p47(phox) phosphorylation at S303-4 or S379 on tumor necrosis factor-α signaling via TRAF4 and MAPK in endothelial cells. Arterioscler. Thromb. Vasc. Biol. 32: 1488-1496.
6. Xavier, C.P., et al. 2012. Hypericum androsaemum water extract inhibits proliferation in human colorectal cancer cells through effects on MAP kinases and PI3K/Akt pathway. Food Funct. 3: 844-852.
7. Uchida, Y., et al. 2012. Involvement of stress kinase mitogen-activated protein kinase kinase 7 in regulation of mammalian circadian clock. J. Biol. Chem. 287: 8318-8326.
8. Sun, P.H., et al. 2012. Protein tyrosine phosphatase m (PTP m or PTPRM), a negative regulator of proliferation and invasion of breast cancer cells, is associated with disease prognosis. PLoS ONE 7: e50183.