SANTA CRUZ BIOTECHNOLOGY, INC.

JNK2 (A-7): sc-271133

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.

REFERENCES

1. Kallunki, T., et al. 1994. JNK2 contains a specificity-determining region responsible for efficient c-Jun binding and phosphorylation. Genes Dev. 8: 2996-3007.
2. Dong, C., et al. 1998. Defective T cell differentiation in the absence of JNK1. Science 282: 2092-2095.

CHROMOSOMAL LOCATION

Genetic locus: MAPK9 (human) mapping to 5q35.3; Mapk9 (mouse) mapping to 11 B1.2.

SOURCE

JNK2 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 391-424 at the C-terminus of JNK2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JNK2 (A-7) is available conjugated to agarose (sc-271133 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271133 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271133 PE), fluorescein (sc-271133 FITC), Alexa Fluor® 488 (sc-271133 AF488), Alexa Fluor® 546 (sc-271133 AF546), Alexa Fluor® 594 (sc-271133 AF594) or Alexa Fluor® 647 (sc-271133 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271133 AF680) or Alexa Fluor® 790 (sc-271133 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271133 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

JNK2 (A-7) is recommended for detection of JNK2 p54 isoforms of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

JNK2 (A-7) is also recommended for detection of JNK2 p54 isoforms in additional species, including canine and bovine.

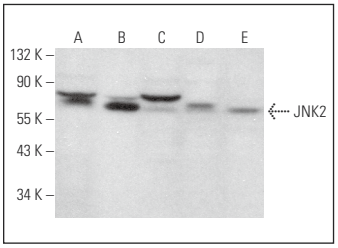
Suitable for use as control antibody for JNK2 siRNA (h): sc-39101, JNK2 siRNA (m): sc-39102, JNK2 siRNA (r): sc-156090, JNK2 shRNA Plasmid (h): sc-39101-SH, JNK2 shRNA Plasmid (m): sc-39102-SH, JNK2 shRNA Plasmid (r): sc-156090-SH, JNK2 shRNA (h) Lentiviral Particles: sc-39101-V, JNK2 shRNA (m) Lentiviral Particles: sc-39102-V and JNK2 shRNA (r) Lentiviral Particles: sc-156090-V.

Molecular Weight of JNK2 p46 isoform: 46 kDa.

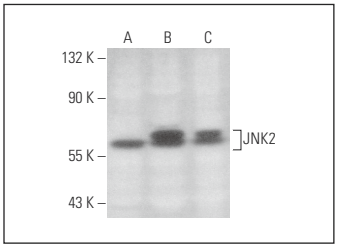
Molecular Weight of JNK2 p54 isoform: 54 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HeLa whole cell lysate: sc-2200 or SUP-T1 whole cell lysate: sc-364796.

DATA



JNK2 (A-7): sc-271133. Western blot analysis of JNK2 expression in HL-60 (**A**), RAW 264.7 (**B**), SUP-T1 (**C**), SJRH30 (**D**) and WEHI-231 (**E**) whole cell lysates.



JNK2 (A-7): sc-271133. Western blot analysis of JNK2 expression in T-47D (**A**), THP-1 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Guo, Y., et al. 2013. Receptor for activated C kinase 1 promotes hepatocellular carcinoma growth by enhancing mitogen-activated protein kinase kinase 7 activity. Hepatology 57: 140-151.
2. Desideri, E. and Ciriolo, M.R. 2021. Inhibition of JNK increases the sensitivity of hepatocellular carcinoma cells to lysosomotropic drugs via LAMP2A destabilization. Cell Death Discov. 7: 29.
3. Lim, H.M., et al. 2022. Acetylshikonin, a novel CYP2J2 inhibitor, induces apoptosis in RCC cells via FOXO3 activation and ROS elevation. Oxid. Med. Cell. Longev. 2022: 9139338.
4. Cimino, M. and Feligioni, M. 2024. The selective disruption of the JNK2/Syntaxin-1A interaction by JGRi1 protects against NMDA-evoked toxicity in SH-SY5Y cells. Neurochem. Int. 179: 105824.

RESEARCH USE

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