SANTA CRUZ BIOTECHNOLOGY, INC.

JNK1 (D-6): sc-137018

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 10 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.

REFERENCE

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: MAPK8 (human) mapping to 10q11.22; Mapk8 (mouse) mapping to 14 B.

SOURCE

JNK1 (D-6) is a mouse monoclonal antibody raised against amino acids 1-384 representing full length JNK1 p46 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JNK1 (D-6) is available conjugated to agarose (sc-137018 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137018 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137018 PE), fluorescein (sc-137018 FITC), Alexa Fluor® 488 (sc-137018 AF488), Alexa Fluor® 546 (sc-137018 AF546), Alexa Fluor® 594 (sc-137018 AF594) or Alexa Fluor® 647 (sc-137018 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137018 AF680) or Alexa Fluor® 790 (sc-137018 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 for detailed protocols and support products.

APPLICATIONS

JNK1 (D-6) is recommended for detection of JNK1 p46 and 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), 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).

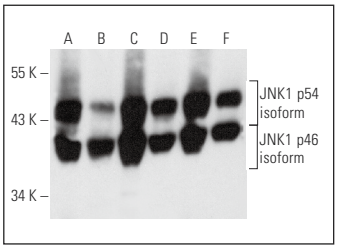
Suitable for use as control antibody for JNK1 siRNA (h): sc-29380, JNK1 siRNA (m): sc-29381, JNK1 siRNA (r): sc-156089, JNK1 shRNA Plasmid (h): sc-29380-SH, JNK1 shRNA Plasmid (m): sc-29381-SH, JNK1 shRNA Plasmid (r): sc-156089-SH, JNK1 shRNA (h) Lentiviral Particles: sc-29380-V, JNK1 shRNA (m) Lentiviral Particles: sc-29381-V and JNK1 shRNA (r) Lentiviral Particles: sc-156089-V.

Molecular Weight of JNK1 p46 isoform: 46 kDa.

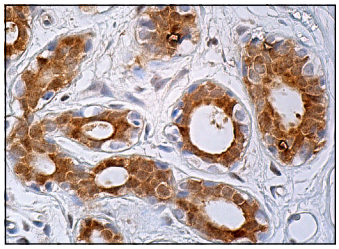
Molecular Weight of JNK1 p54 isoform: 54 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or NIH/3T3 whole cell lysate: sc-2210.

DATA



JNK1 (D-6): sc-137018. Western blot analysis of JNK1 expression in A-431 (**A**), KNRK (**B**), NIH/3T3 (**C**), HeLa (**D**), K-562 (**E**) and 293T (**F**) whole cell lysates.



JNK1 (D-6): sc-137018. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shen, Z., et al. 2008. The kringle 1 domain of hepatocyte growth factor has antiangiogenic and antitumor cell effects on hepatocellular carcinoma. Cancer Res. 68: 404-414.
2. Han, L., et al. 2020. Propofol protects human cardiac cells against chemical hypoxiainduced injury by regulating the JNK signaling pathways. Exp. Ther. Med. 19: 1864-1870.
3. Udumula, M.P., et al. 2021. High fructose and streptozotocin induced diabetic impairments are mitigated by Indirubin-3-hydrazone via down-regulation of PKR pathway in Wistar rats. Sci. Rep. 11: 12924.
4. Desideri, E., et al. 2023. Impaired degradation of YAP1 and IL6ST by chaperone-mediated autophagy promotes proliferation and migration of normal and hepatocellular carcinoma cells. Autophagy 19: 152-162.

RESEARCH USE

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