SANTA CRUZ BIOTECHNOLOGY, INC.

JNK (D-2): sc-7345

BACKGROUND

JNK proteins 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 (D-2) is a mouse monoclonal antibody raised against amino acids 1-424 representing full length 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.

JNK (D-2) is available conjugated to agarose (sc-7345 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7345 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7345 PE), fluorescein (sc-7345 FITC), Alexa Fluor® 488 (sc-7345 AF488), Alexa Fluor® 546 (sc-7345 AF546), Alexa Fluor® 594 (sc-7345 AF594) or Alexa Fluor® 647 (sc-7345 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7345 AF680) or Alexa Fluor® 790 (sc-7345 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, JNK (D-2) is available conjugated to biotin (sc-7345 B), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

JNK (D-2) is recommended for detection of all JNK1, JNK2 and JNK3 p46 and p54 isoforms of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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).

Molecular Weight of JNK p46 isoform: 46 kDa.

Molecular Weight of JNK p54 isoform: 54 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

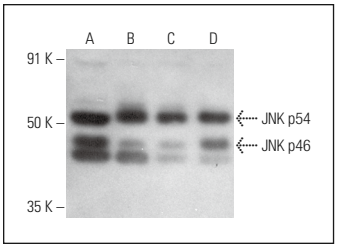
STORAGE

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

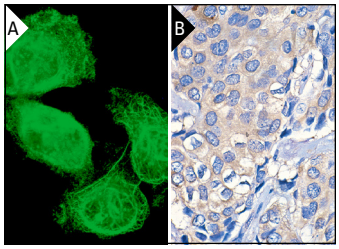
RESEARCH USE

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

DATA



JNK (D-2) HRP: sc-7345 HRP. Direct western blot analysis of JNK expression in NIH/3T3 (**A**), K-562 (**B**), HeLa (**C**) and 293T (**D**) whole cell lysates.



JNK (D-2): sc-7345. Immunofluorescence staining of methanol-fixed HeLa cells showing JNK localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining (**B**).

SELECT PRODUCT CITTIONS

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2. Bai, L., et al. 2015. Hepatitis B virus hijacks CTHRC1 to evade host immunity and maintain replication. J. Mol. Cell Biol. 7: 543-556.
3. Lee, J.H., et al. 2016. Antioxidant effects of *Cirsium setidens* extract on oxidative stress in human mesenchymal stem cells. Mol. Med. Rep. 14: 3777-3784.
4. Shin, K.C., et al. 2017. Macrophage VLDLR mediates obesity-induced Insulin resistance with adipose tissue inflammation. Nat. Commun. 8: 1087.
5. Li, T., et al. 2018. Ubiquitin-specific protease 4 promotes hepatocellular carcinoma progression via cyclophilin A stabilization and deubiquitination. Cell Death Dis. 9: 148.
6. Ogiwara, H., et al. 2019. Targeting the vulnerability of glutathione metabolism in ARID1A-deficient cancers. Cancer Cell 35: 177-190.e8.
7. Stafford, P., et al. 2020. Antibody characterization using immunosignatures. PLoS ONE 15: e0229080.
8. Fu, Y., et al. 2021. Targeting mechanosensitive Piezo1 alleviated renal fibrosis through p38MAPK-YAP pathway. Front. Cell Dev. Biol. 9: 741060.
9. Tang, T.L., et al. 2022. Sunitinib induced hepatotoxicity in L02 cells via ROS-MAPKs signaling pathway. Front. Pharmacol. 13: 1002142.
10. Cubillos-Rojas, M., et al. 2023. Synthesis and biological activity of a VHL-based PROTAC specific for p38α. Cancers 15: 611.

PROTOCOLS

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