

JNK1 (F-3): sc-1648

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 JNK1 α 1, JNK1 β 1, JNK2 α 1, JNK2 β 1, and JNK3 α 1, which represent the p46 isoforms, and JNK1 α 2, JNK1 β 2, JNK2 α 2, JNK2 β 2, and JNK3 β 2, 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.

CHROMOSOMAL LOCATION

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

SOURCE

JNK1 (F-3) is a mouse monoclonal antibody raised against amino acids 1-384 representing full length JNK1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JNK1 (F-3) is available conjugated to agarose (sc-1648 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to either fluorescein (sc-1648 FITC), Alexa Fluor[®] 488 (sc-1648 AF488), Alexa Fluor[®] 546 (sc-1648 AF546), Alexa Fluor[®] 594 (sc-1648 AF594) or Alexa Fluor[®] 647 (sc-1648 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-1648 AF680) or Alexa Fluor[®] 790 (sc-1648 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, JNK1 (F-3) is available conjugated to TRITC (sc-1648 TRITC, 200 μ g/ml), for IF, IHC(P) and FCM.

APPLICATIONS

JNK1 (F-3) is recommended for detection of all JNK1 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

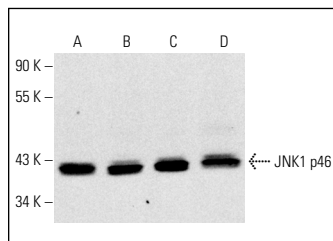
Suitable for use as control antibody for JNK1 siRNA (h): sc-29380, JNK1 siRNA (m): sc-29381, JNK1 siRNA (r): sc-156089, JNK1 shRNA Plasmid (h): sc-29380-SH, JNK1 shRNA Plasmid (m): sc-29381-SH, JNK1 shRNA Plasmid (r): sc-156089-SH, JNK1 shRNA (h) Lentiviral Particles: sc-29380-V, JNK1 shRNA (m) Lentiviral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

Molecular Weight of JNK1 p46/p54 isoforms: 46/54 kDa.

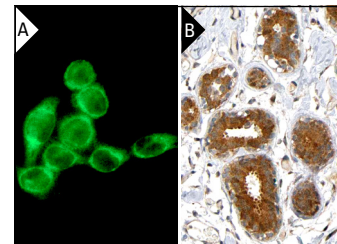
STORAGE

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

DATA



JNK1 (F-3): sc-1648. Western blot analysis of JNK1 p46 expression in HeLa (A), RAW 264.7 (B), A-431 (C) and Jurkat (D) whole cell lysates.



JNK1 (F-3) Alexa Fluor[®] 488: sc-1648 AF488. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). JNK1 (F-3): sc-1648. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Liu, J.L., et al. 1997. The constitutively active mutant G α ₁₃ transforms mouse fibroblast cells deficient in Insulin-like growth factor-I receptor. *J. Biol. Chem.* 272: 29438-29441.
2. Mody, H.R., et al. 2017. SET contributes to the epithelial-mesenchymal transition of pancreatic cancer. *Oncotarget* 8: 67966-67979.
3. Zhang, C., et al. 2018. Hepatic Ago2-mediated RNA silencing controls energy metabolism linked to AMPK activation and obesity-associated pathophysiology. *Nat. Commun.* 9: 3658.
4. Guadagnini, D., et al. 2019. Microbiota determines insulin sensitivity in TLR2-KO mice. *Life Sci.* 234: 116793.
5. Ding, Z., et al. 2020. NLRP3 inflammasome via IL-1 β regulates PCSK9 secretion. *Theranostics* 10: 7100-7110.
6. Liu, G., et al. 2021. GRP78 determines glioblastoma sensitivity to UBA1 inhibition-induced UPR signaling and cell death. *Cell Death Dis.* 12: 733.
7. Choudhury, D., et al. 2022. Inhibition of glutaminolysis restores mitochondrial function in senescent stem cells. *Cell Rep.* 41: 111744.
8. Wang, X., et al. 2023. Hematopoietic cytoplasmic adaptor protein Hem1 promotes osteoclast fusion and bone resorption in mice. *J. Biol. Chem.* 299: 102841.
9. Cheong, K.J.H., et al. 2024. CASK mediates oxidative stress-induced microglial apoptosis-inducing factor-independent parthanatos cell death via promoting PARP-1 hyperactivation and mitochondrial dysfunction. *Antioxidants* 13: 343.

RESEARCH USE

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

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