SANTA CRUZ BIOTECHNOLOGY, INC.

p-JNK (89.Thr 183/Tyr 185): sc-293138

BACKGROUND

JNKs (c-Jun N-terminal kinases) belong to a family of MAP kinases that are involved in a variety of cellular processes, including transcriptional regulation and cellular proliferation, differentiation and development. JNK2 (c-Jun N-terminal kinase 2) and JNK3 (c-Jun N-terminal kinase 3) are 424 and 464 amino acid proteins, respectively, that each contain one protein kinase domain and use magnesium as a cofactor to catalyze the phosphorylation of target proteins, thereby playing a role in a variety of events throughout the cell. Both JNK2 and JNK3 exist as multiple alternatively spliced isoforms and are subject to post-translational phosphorylation on Thr 183 and Thr 221, respectively, an event which activates JNK2/JNK3 enzymatic activity. Defects in the gene encoding JNK3 are a cause of epileptic encephalopathy of the Lennox-Gastaut type, a group of epileptic disorders characterized by severe psychomotor delay and seizures.

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. Sluss, H.K., et al. 1994. Signal transduction by tumor necrosis factor mediated by JNK protein kinases. Mol. Cell. Biol. 14: 8376-8384.
3. Gupta, S., et al. 1996. Selective interaction of JNK protein kinase isoforms with transcription factors. EMBO J. 15: 2760-2770.
4. Yang, D.D., et al. 1998. Differentiation of CD4+ T cells to Th1 cells requires MAP kinase JNK2. Immunity 9: 575-585.

SOURCE

p-JNK (89.Thr 183/Tyr 185) is a mouse monoclonal antibody raised against a short amino acid sequence containing Thr 183 and Tyr 185 phosphorylated JNK 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.

p-JNK (89.Thr 183/Tyr 185) is available conjugated to agarose (sc-293138 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-293138 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

p-JNK (89.Thr 183/Tyr 185) is recommended for detection of Thr 183 and Tyr 185 phosphorylated JNK1, and correspondingly phosphorylated JNK2 and JNK3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Molecular Weight of p-JNK p46 isoform: 46 kDa.

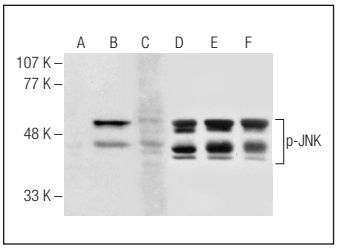
Molecular Weight of p-JNK p54 isoform: 54 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

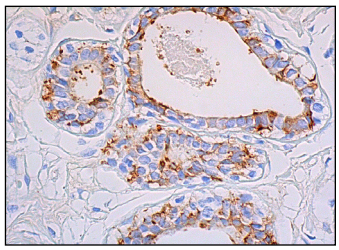
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium:sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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 (89.Thr 183/Tyr 185): sc-293138 (**A**,**B**,**C**) and JNK (FL): sc-571 (**D**,**E**,**F**).



p-JNK (89.Thr 183/Tyr 185): sc-293138. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Xu, Y.M., et al. 2015. Proteome profiling of cadmium-induced apoptosis by antibody array analyses in human bronchial epithelial cells. Oncotarget 7: 6146-6158.
2. Wu, Z., et al. 2017. Silencing of both ATF4 and PERK inhibits cell cycle progression and promotes the apoptosis of differentiating chondrocytes. Int. J. Mol. Med. 40: 101-111.
3. Park, J.Y., et al. 2017. Herbal formula SC-E1 suppresses lipopolysaccharide-stimulated inflammatory responses through activation of Nrf2/HO-1 signaling pathway in RAW 264.7 macrophages. BMC Complement. Altern. Med. 17: 374.
4. Cao, B., et al. 2019. MiR-512-5p suppresses proliferation, migration and invasion, and induces apoptosis in non-small cell lung cancer cells by targeting ETS1. Mol. Med. Rep. E-published.

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. Not for resale.