SANTA CRUZ BIOTECHNOLOGY, INC.

p-JNK (14.Thr 183/Tyr 185): sc-293136

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.

SOURCE

p-JNK (14.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 (14.Thr 183/Tyr 185) is available conjugated to agarose (sc-293136 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-293136 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

p-JNK (14.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), 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).

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

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

Positive Controls: CCRF-CEM cell lysate: sc-2225.

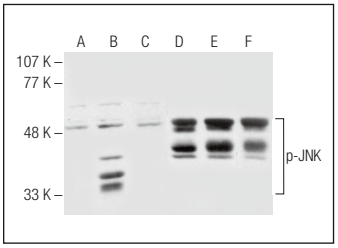
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

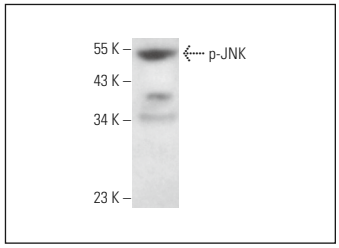
STORAGE

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

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 (14.Thr 183/Tyr 185): sc-293136 (**A**,**B**,**C**) and JNK (FL): sc-571 (**D**,**E**,**F**).



p-JNK (14.Thr 183/Tyr 185): sc-293136. Western blot analysis of JNK phosphorylation in CCRF-CEM whole cell lysate.

SELECT PRODUCT CITATIONS

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2. Fu, X., et al. 2016. High-dose fluoride impairs the properties of human embryonic stem cells via JNK signaling. PLoS ONE 11: e0148819.
3. Chen, X.J., et al. 2017. JNK signaling is required for the MIP-1α-associated regulation of Kupffer cells in the heat stroke response. Mol. Med. Rep. 16: 2389-2396.
4. You, P., et al. 2018. Local level of TGF-β1 determines the effectiveness of dexamethasone through regulating the balance of Treg/Th17 cells in TNBS-induced mouse colitis. Exp. Ther. Med. 15: 3639-3649.
5. Zhang, J., et al. 2019. Involvement of autophagy in hypoxia-BNIP3 signaling to promote epidermal keratinocyte migration. Cell Death Dis. 10: 234.
6. Che, D.N., et al. 2020. Luteolin suppresses IL-31 production in IL-33-stimulated mast cells through MAPK and NFκB signaling pathways. Int. Immunopharmacol. 83: 106403.
7. Lim, S.H., et al. 2021. Saikosaponin A and D inhibit adipogenesis via the AMPK and MAPK signaling pathways in 3T3-L1 adipocytes. Int. J. Mol. Sci. 22: 11409.
8. Martino, E., et al. 2022. Milk exosomal miR-27b worsen endoplasmic reticulum stress mediated colorectal cancer cell death. Nutrients 14: 5081.
9. Shi, Y., et al. 2023. JNK-IN-8 treatment improves ARDS-induced cognitive impairment by inhibiting JNK/NFκB-mediated NLRP3 inflammasome. Brain Behav. 13: e2980.

RESEARCH USE

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