SANTA CRUZ BIOTECHNOLOGY, INC.

p-JNK (Thr 183): sc-135642

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

SOURCE

p-JNK (Thr 183) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 183 phosphorylated JNK of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

p-JNK (Thr 183) is recommended for detection of Thr 183 phosphorylated JNK1 and JNK2 and correspondingly Thr 221 phosphorylated 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of JNK p46 isoform: 46 kDa.

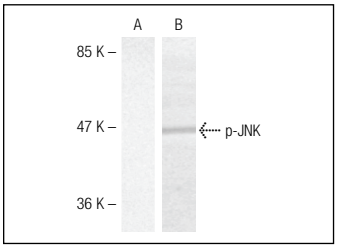
Molecular Weight of JNK p54 isoform: 54 kDa.

Positive Controls: NIH/3T3 + UV cell lysate: sc-3804.

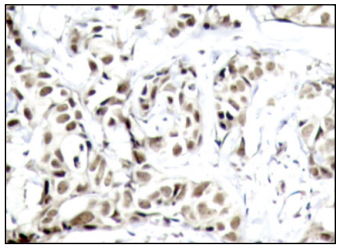
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-JNK (Thr 183): sc-135642. Western blot analysis of phosphorylated JNK expression in untreated (**A**) and UV-treated (**B**) 293 cell extracts.



p-JNK (Thr 183): sc-135642. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Duan, W.J., et al. 2011. Silibinin activated p53 and induced autophagic death in human fibrosarcoma HT1080 cells via reactive oxygen species-p38 and c-Jun N-terminal kinase pathways. Biol. Pharm. Bull. 34: 47-53.
2. Liu, H., et al. 2011. Apoptosis induced by a new flavonoid in human hepatoma HepG2 cells involves reactive oxygen species-mediated mitochondrial dysfunction and MAPK activation. Eur. J. Pharmacol. 654: 209-216.
3. Singh, M., et al. 2012. Ubiquitin-proteasomal degradation of COX-2 in TGFβ stimulated human endometrial cells is mediated through endoplasmic reticulum mannosidase I. Endocrinology 153: 426-437.
4. Chatterjee, S., et al. 2013. Regulation of autophagy in rat hepatocytes treated *in vitro* with low concentration of mercury. Toxicol. Environ. Chem. 95: 504-514.