SANTA CRUZ BIOTECHNOLOGY, INC.

JNK2 (m): 293T Lysate: sc-125507

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 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.

REFERENCES

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2. Dong, C., et al. 1998. Defective T cell differentiation in the absence of JNK1. Science 282: 2092-2095.
3. Potapova, O., et al. 2000. Inhibition of c-Jun N-terminal kinase 2 expression suppresses growth and induces apoptosis of human tumor cells in a p53-dependent manner. Mol. Cell. Biol. 20: 1713-1722.
4. Dong, C., et al. 2000. JNK is required for effector T cell function but not for T cell activation. Nature 405: 91-94.
5. Dreskin, S.C., et al. 2001. Isoforms of Jun kinase are differentially expressed and activated in human monocyte/macrophage (THP-1) cells. J. Immunol.166: 5646-5653.
6. Han, S.Y., et al. 2002. Differential gene regulation by specific gain-of-function JNK1 proteins expressed in Swiss 3T3 fibroblasts. J. Biol. Chem. 277: 47167-47174.
7. Chou, F.P., et al. 2002. Induced proliferation of human MRC-5 cells by nitrogen oxides via direct and indirect activation of MEKK1, JNK, and p38 signals. Toxicol. Appl. Pharmacol. 181: 203-208.
8. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 601158. World Wide Web URL: http://www.ncbi.nlm.nih. gov/omim/
9. Kang, H.J., et al. 2003. Roles of JNK1 and p38 in selective induction of apoptosis by Capsaicin in Ras-transformed human breast epithelial cells. Int. J. Cancer 103: 475-482.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Mapk9 (mouse) mapping to 11 B1.2.

PRODUCT

JNK2 (m): 293T Lysate represents a lysate of mouse JNK2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

JNK2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive JNK2 antibodies. Recommended use: 10-20 µl per lane.

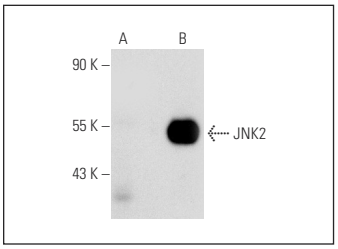
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

JNK2 (A-7): sc-271133 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse JNK2 expression in JNK2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



JNK2 (A-7): sc-271133. Western blot analysis of JNK2 expression in non-transfected: sc-117752 (**A**) and mouse JNK2 transfected: sc-125507 (**B**) 293T whole cell lysates.

RESEARCH USE

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