SANTA CRUZ BIOTECHNOLOGY, INC.

p-c-Jun (Tyr 170): sc-101723

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The Power to Question

BACKGROUND

Genes belonging to the Jun and Fos oncogene families encode nuclear proteins that are found to be associated with a number of transcriptional complexes. The c-Jun protein is a major component of the transcription factor AP-1, originally shown to mediate phorbol ester tumor promoter (TPA)-induced expression of responsive genes through the TPA-response element (TRE). The Jun proteins form homo- and heterodimers which bind the TRE, while Fos proteins are active only as heterodimers with any of the Jun proteins. Fos/Jun heterodimers have a much higher affinity for the TRE than Jun homodimers. Ha-Ras augments c-Jun activity and stimulates phosphorylation of its activation domain. An inhibitor of Fos/Jun function, termed IP-1, associates with Fos and Jun and is inactivated upon phosphorylation induced by the cAMP-dependent protein kinase A (PKA).

REFERENCES

1. Sambucetti, L.C., et al. 1986. The Fos protein complex is associated with DNA in isolated nuclei and binds to DNA cellulose. Science 234: 1417-1419.
2. Bohmann, D., et al 1987. Human proto-oncogene c-Jun encodes a DNA binding protein with structural and functional properties of transcription factor AP-1. Science 238: 1386-1392.
3. Distel, R.J., et al 1987. Nucleoprotein complexes that regulate gene expression in adipocyte differentiation: direct participation of c-Fos. Cell 49: 835-844.
4. Renz, M., et al. 1987. Chromatin association and DNA-binding properties of the c-Fos proto-oncogene product. Nucleic Acids Res. 15: 277-292.
5. Franza, B.R., et al 1988. The Fos complex and Fos related antigens recognize sequence elements that contain AP-1 binding sites. Science 239: 1150-1153.
6. Angel, P., et al 1988. Oncogene Jun encodes a sequence-specific trans-activator similar to AP-1. Nature 332: 166-171.
7. Binétruy, B., et al 1991. Ha-Ras augments c-Jun activity and stimulates phosphorylation of its activation domain. Nature 351: 122-127.
8. Auwerx, J., et al 1991. IP-1: a dominant inhibitor of Fos/Jun whose activity is modulated by phosphorylation. Cell 64: 983-993.
9. Frank, R.C., et al 1999. The t(8;21) fusion protein, AML1/ETO, transforms NIH/3T3 cells and activates AP-1. Oncogene 18: 1701-1710.

CHROMOSOMAL LOCATION

Genetic locus: JUN (human) mapping to 1p32.1; Jun (mouse) mapping to 4 C5.

STORAGE

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

PROTOCOLS

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

SOURCE

p-c-Jun (Tyr 170) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 170 of c-Jun of human origin.

PRODUCT

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

APPLICATIONS

p-c-Jun (Tyr 170) is recommended for detection of Tyr 170 phosphorylated c-Jun of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for c-Jun siRNA (h): sc-29223 and c-Jun siRNA (m): sc-29224.

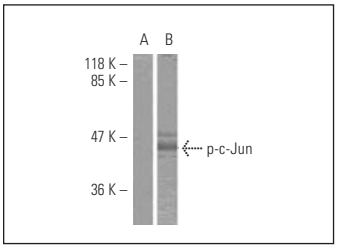
Molecular Weight of p-c-Jun: 39 kDa.

Positive Controls: human breast carcinoma tissue or UV-treated HeLa whole cell lysate.

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) and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



p-c-Jun (Tyr 170): sc-101723. Western blot analysis of phosphorylated c-Jun expression in untreated (**A**) and UV-treated (**B**) HeLa whole cell lysates.

RESEARCH USE

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