SANTA CRUZ BIOTECHNOLOGY, INC.

c-Jun (G-4): sc-74543

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

c-Jun (G-4) is a mouse monoclonal antibody raised against amino acids 1-79 of c-Jun 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-74543 X, 200 µg/0.1 ml.

c-Jun (G-4) is available conjugated to agarose (sc-74543 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74543 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74543 PE), fluorescein (sc-74543 FITC), Alexa Fluor® 488 (sc-74543 AF488), Alexa Fluor® 546 (sc-74543 AF546), Alexa Fluor® 594 (sc-74543 AF594) or Alexa Fluor® 647 (sc-74543 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74543 AF680) or Alexa Fluor® 790 (sc-74543 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

c-Jun (G-4) is recommended for detection of c-Jun p39 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

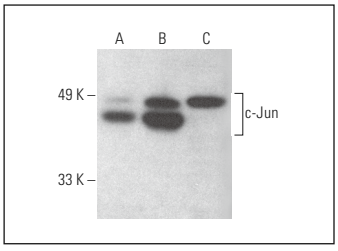
Suitable for use as control antibody for c-Jun siRNA (h): sc-29223, c-Jun siRNA (m): sc-29224, c-Jun siRNA (r): sc-156028, c-Jun shRNA Plasmid (h): sc-29223-SH, c-Jun shRNA Plasmid (m): sc-29224-SH, c-Jun shRNA Plasmid (r): sc-156028-SH, c-Jun shRNA (h) Lentiviral Particles: sc-29223-V, c-Jun shRNA (m) Lentiviral Particles: sc-29224-V and c-Jun shRNA (r) Lentiviral Particles: sc-156028-V.

c-Jun (G-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

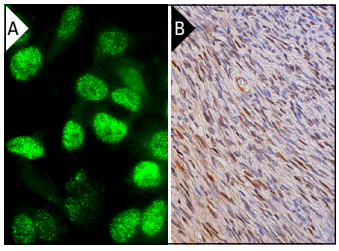
Molecular Weight of c-Jun: 39 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, NIH/3T3 whole cell lysate: sc-2210 or HeLa + UV irradiated cell lysate: sc-2221.

DATA



c-Jun (G-4) HRP: sc-74543 HRP. Direct western blot analysis of c-Jun expression in HeLa + UV (**A**), NIH/3T3 (**B**) and BYDP (**C**) whole cell lysates.



c-Jun (G-4): sc-74543. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear staining of ovarian stroma cells (**B**).

SELECT PRODUCT CITATIONS

1. Wang, Y.H., et al. 2007. IL-25 augments type 2 immune responses by enhancing the expansion and functions of TSLP-DC-activated Th2 memory cells. J. Exp. Med. 204: 1837-1847.
2. Yan, F., et al. 2018. ATF3 is positively involved in particulate matter-induced airway inflammation *in vitro* and *in vivo.* Toxicol. Lett. 287: 113-121.
3. Hwang, J.H., et al. 2019. TAZ couples Hippo/Wnt signalling and Insulin sensitivity through Irs1 expression. Nat. Commun. 10: 421.
4. Naim, A. and Baig, M.S. 2020. Matrix metalloproteinase-8 (MMP-8) regulates the activation of hepatic stellate cells (HSCs) through the ERK-mediated pathway. Mol. Cell. Biochem. 467: 107-116.

RESEARCH USE

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