SANTA CRUZ BIOTECHNOLOGY, INC.

p-c-Jun (KM-1): sc-822

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, but the 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 deactivated 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.

CHROMOSOMAL LOCATION

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

SOURCE

p-c-Jun (KM-1) is a mouse monoclonal antibody raised against amino acids 56-69 of human c-Jun.

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-822 X, 200 µg/0.1 ml.

p-c-Jun (KM-1) is available conjugated to agarose (sc-822 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-822 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-822 PE), fluorescein (sc-822 FITC), Alexa Fluor® 488 (sc-822 AF488), Alexa Fluor® 546 (sc-822 AF546), Alexa Fluor® 594 (sc-822 AF594) or Alexa Fluor® 647 (sc-822 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-822 AF680) or Alexa Fluor® 790 (sc-822 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

p-c-Jun (KM-1) is recommended for detection of c-Jun p39 phosphorylated on Serine 63 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells); non cross-reactive with Jun B or Jun D phosphorylated on the analogous serine residues or with c-Jun non-phosphorylated at Serine 63.

p-c-Jun (KM-1) is also recommended for detection of correspondingly phosphorylated c-Jun in additional species, including canine, bovine, porcine and avian.

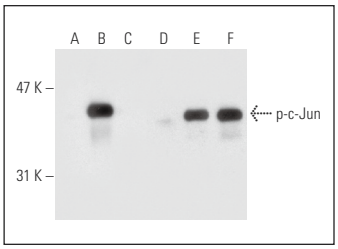
Suitable for use as control antibody for c-Jun siRNA (h): sc-29223, c-Jun siRNA (m): sc-29224, c-Jun siRNA (r): sc-156028, c-Jun shRNA Plasmid (h): sc-29223-SH, c-Jun shRNA Plasmid (m): sc-29224-SH, c-Jun shRNA Plasmid (r): sc-156028-SH, c-Jun shRNA (h) Lentiviral Particles: sc-29223-V, c-Jun shRNA (m)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

p-c-Jun (KM-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

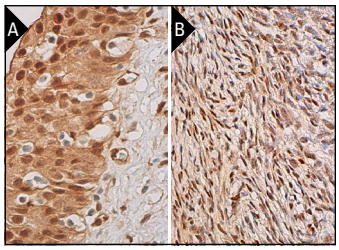
Molecular Weight of p-c-Jun: 39 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, NIH/3T3 whole cell lysate: sc-2210 or NIH/3T3 + anisomycin cell lysate: sc-2247.

DATA



Western blot analysis of c-Jun phosphorylation in non-transfected: sc-117752 (**A**,**D**), untreated mouse c-Jun transfected: sc-125069 (**B**,**E**) and lambda protein phosphatase (sc-200312A) treated human c-Jun transfected: sc-125069 (**C**,**F**) 293T whole cell lysates. Antibodies tested include p-c-Jun (KM-1): sc-822 (**A**,**B**,**C**) and c-Jun (H-79): sc-1694 (**D**,**E**,**F**).



p-c-Jun (KM-1): sc-822. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear and cytoplasmic staining of ovarian stroma cells (**B**).

SELECT PRODUCT CITATIONS

1. Rutberg, S.E., et al. 1996. Differentiation of mouse keratinocytes is accompanied by PKC-dependent changes in AP-1 proteins. Oncogene 13: 167-176.
2. Ang, D. A., et al. 2024. Aberrant non-canonical NFκB signalling reprograms the epigenome landscape to drive oncogenic transcriptomes in multiple myeloma. Nat. Commun. 15: 2513.

RESEARCH USE

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