

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

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.

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 IgG₁ 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.

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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 10⁶ 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.

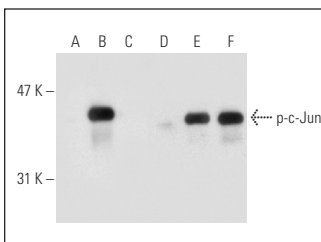
Suitable for use as control antibody for c-Jun siRNA (h): sc-29223, c-Jun siRNA (m): sc-29224, c-Jun siRNA (r): sc-156028, c-Jun shRNA Plasmid (h): sc-29223-SH, c-Jun shRNA Plasmid (m): sc-29224-SH, c-Jun shRNA Plasmid (r): sc-156028-SH, c-Jun shRNA (h) Lentiviral Particles: sc-29223-V, c-Jun shRNA (m)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

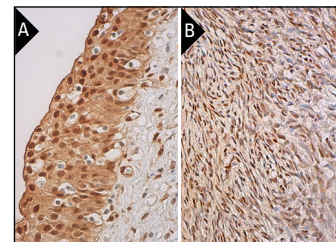
Molecular Weight of p-c-Jun: 39 kDa.

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. Jin, S., et al. 2023. Downregulation of UBE4B promotes CNS axon regrowth and functional recovery after stroke. *iScience* 26: 105885.

RESEARCH USE

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