SANTA CRUZ BIOTECHNOLOGY, INC.

# c-Jun siRNA (h2): sc-44201

## BACKGROUND

Genes belonging to the Jun and Fos oncogene families encode nuclear proteins that are 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.

## PRODUCT

c-Jun siRNA (h2) is a pool of 2 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see c-Jun shRNA Plasmid (h2): sc-44201-SH and c-Jun shRNA (h2) Lentiviral Particles: sc-44201-V as alternate gene silencing products.

For independent verification of c-Jun (h2) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-44201A and sc-44201B.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

c-Jun siRNA (h2) is recommended for the inhibition of c-Jun expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

p-c-Jun (KM-1): sc-822 is recommended as a control antibody for monitoring of c-Jun gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor c-Jun gene expression knockdown using RT-PCR Primer: c-Jun (h2)-PR: sc-44201-PR (20 µl, 464 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. Chen S.Y., et al. 2006. C-Jun enhancement of androgen receptor transactivation is associated with prostate cancer cell proliferation. Oncogene 25: 7212-7223.
2. Lei, P., et al. 2008. 1,1-Bis(3'-indolyl)-1-(p-substituted phenyl)methanes inhibit colon cancer cell and tumor growth through activation of c-Jun N-terminal kinase. Carcinogenesis 29: 1139-1147.
3. Song, J.Y., et al. 2010. Expression of a homeostatic regulator, Wip1 (wild-type p53-induced phosphatase), is temporally induced by c-Jun and p53 in response to UV irradiation. J. Biol. Chem. 285: 9067-9076.
4. Morte, B., et al. 2011. Monocyte-mediated regulation of genes by the amyloid and prion peptides in SH-SY5Y neuroblastoma cells. Neurochem. Int. 58: 613-619.
5. Hedrick, E., et al. 2018. TGFβ-induced lung cancer cell migration is NR4A1-dependent. Mol. Cancer Res. 16: 1991-2002.


## RESEARCH USE

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