

c-Jun siRNA (m): sc-29224

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.

CHROMOSOMAL LOCATION

Genetic locus: Jun (mouse) mapping to 4 C5.

PRODUCT

c-Jun siRNA (m) is a pool of 4 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see c-Jun shRNA Plasmid (m): sc-29224-SH and c-Jun shRNA (m) Lentiviral Particles: sc-29224-V as alternate gene silencing products.

For independent verification of c-Jun (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29224A, sc-29224B, sc-29224C and sc-29224D.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

c-Jun siRNA (m) is recommended for inhibition of c-Jun expression in mouse 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 μ M in 66 μ l. 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.

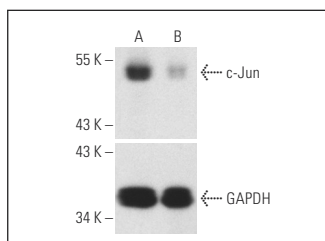
GENE EXPRESSION MONITORING

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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor c-Jun gene expression knockdown using RT-PCR Primer: c-Jun (m)-PR: sc-29224-PR (20 μ l, 585 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



c-Jun siRNA (m): sc-29224. Western blot analysis of c-Jun expression in non-transfected control (A) and c-Jun siRNA transfected (B) NIH/3T3 cells. Blot probed with c-Jun: sc-44. GAPDH (FL-335): sc-25778 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Choi, H.S., et al. 2005. Phosphorylation of Histone H3 at serine 10 is indispensable for neoplastic cell transformation. *Cancer Res.* 65: 5818-5827.
2. Jainapurkar, S., et al. 2016. Nitric oxide has contrasting age-dependent effects on the functionality of murine hematopoietic stem cells. *Stem Cell Res. Ther.* 7: 171.
3. Liu, C., et al. 2018. Interleukin-3 stimulates matrix metalloproteinase 12 production from macrophages promoting thoracic aortic aneurysm/dissection. *Clin. Sci.* 132: 655-668.

RESEARCH USE

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