SANTA CRUZ BIOTECHNOLOGY, INC.

c-Jun siRNA (h): sc-29223

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).

CHROMOSOMAL LOCATION

Genetic locus: JUN (human) mapping to 1p32.1.

PRODUCT

c-Jun siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see c-Jun shRNA Plasmid (h): sc-29223-SH and c-Jun shRNA (h) Lentiviral Particles: sc-29223-V as alternate gene silencing products. For independent verification of c-Jun (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29223A, sc-29223B, sc-29223C and sc-29223D.

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 (h) 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor c-Jun gene expression knockdown using RT-PCR Primer: c-Jun (h)-PR: sc-29223-PR (20 µl, 573 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

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2. Chen, K.C. and Chang, L.S. 2010. Notexin upregulates Fas and FasL protein expression of human neuroblastoma SK-N-SH cells through p38 MAPK/ATF-2 and JNK/c-Jun pathways. Toxicon 55: 754-761.
3. Chen, H.T., et al. 2011. Stromal cell-derived factor-1/CXCR4 promotes IL-6 production in human synovial fibroblasts. J. Cell. Biochem. 112: 1219-1227.
4. Lin, Y.M., et al. 2012. The CCL2/CCR2 axis enhances vascular cell adhesion molecule-1 expression in human synovial fibroblasts. PLoS ONE 7: e49999.
5. Drago, E., et al. 2013. Propolis augments apoptosis induced by butyrate via targeting cell survival pathways. PLoS ONE 8: e73151.
6. Gan, A.M., et al. 2014. Functional analysis of the fractalkine gene promoter in human aortic smooth muscle cells exposed to proinflammatory conditions. FEBS J. 281: 3869-3881.
7. Amara, S., et al. 2015. Synergistic effect of pro-inflammatory TNFα and IL-17 in periostin mediated collagen deposition: potential role in liver fibrosis. Mol. Immunol. 64: 26-35.
8. Huang, C.H., et al. 2016. The association between p38 MAPK-mediated TNF-α/TNFR2 up-regulation and 2-(4-Aminophenyl)-7-methoxybenzothiazole-induced apoptosis in human leukemia U-937 cells. J. Cell. Physiol. 231: 130-141.
9. Limoge, M., et al. 2017. Tumor-fibroblast interactions stimulate tumor vascularization by enhancing cytokine-driven production of MMP9 by tumor cells. Oncotarget 8: 35592-35608.
10. Hedrick, E., et al. 2018. TGFβ-induced lung cancer cell migration is NR4A1-dependent. Mol. Cancer Res. 16: 1991-2002.
11. Wu, C., et al. 2019. MAP4K4 activation mediates motor neuron degeneration in amyotrophic lateral sclerosis. Cell Rep. 26: 1143-1156.e5.

RESEARCH USE

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