SignalSilence® c-Jun siRNA I

#6203 Store at -20°C

☑ 10 µM in 300 µl
(100 Transfections)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not For Use In Diagnostic Procedures.

Species Cross-Reactivity: H

Description: SignalSilence® c-Jun siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit c-Jun expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

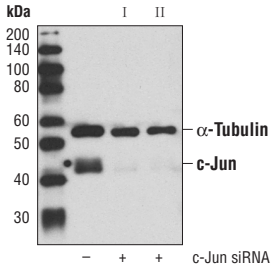
Background: c-Jun is a member of the Jun Family containing c-Jun, JunB and JunD, and is a component of the transcription factor AP-1 (activator protein-1). AP-1 is composed of dimers of Fos, Jun and ATF family members and binds to and activates transcription at TRE/AP-1 elements (Reviewed in 1).

Extracellular signals including growth factors, chemokines and stress activate AP-1-dependent transcription. The transcriptional activity of c-Jun is regulated by phosphorylation at Ser63 and Ser73 through SAPK/JNK (reviewed in 2). Knock-out studies in mice have shown that c-Jun is essential for embryogenesis (3), and subsequent studies have demonstrated roles for c-Jun in various tissues and developmental processes including axon regeneration (4), liver regeneration (5) and T cell development (6).

AP-1 regulated genes exert diverse biological functions including cell proliferation, differentiation, and apoptosis, as well as transformation, invasion and metastasis, depending on cell type and context (7-9). Other target genes regulate survival as well as hypoxia and angiogenesis (8,10). c-Jun has emerged as a promising therapeutic target for cancer, vascular remodeling, acute inflammation, as well as rheumatoid arthritis (11-13).

Directions for Use: CST recommends transfection with 100 nM c-Jun siRNA I 48 to 72 hours prior to cell lysis. For transfection procedure, follow protocol provided by the transfection reagent manufacturer. Please feel free to contact CST with any questions on use

Quality Control: Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® c-Jun siRNA I (+) or SignalSilence® c-Jun siRNA II #6204 (+), using c-Jun (60A8) Rabbit mAb #9165 and α-Tubulin (11H10) Rabbit mAb #2125. The c-Jun (60A8) Rabbit mAb confirms silencing of c-Jun expression, while the α-Tubulin (11H10) Rabbit mAb is used to control for loading and specificity of c-Jun siRNA.

Entrez-Gene ID #3725
Swiss-Prot Acc. #P05412

Storage: c-Jun siRNA I is supplied in RNAse-free water. Aliquot and store at -20°C.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

(1) Jochum, W. et al. (2001) *Oncogene* 20, 2401-12.
(2) Davis, R.J. (2000) *Cell* 103, 239-52.
(3) Hilberg, F. et al. (1993) *Nature* 365, 179-81.
(4) Raivich, G. et al. (2004) *Neuron* 43, 57-67.
(5) Behrens, A. et al. (2002) *EMBO J* 21, 1782-90.
(6) Riera-Sans, L. and Behrens, A. (2007) *J Immunol* 178, 5690-700.
(7) Leppä, S. and Bohmann, D. (1999) *Oncogene* 18, 6158-62.
(8) Shaulian, E. and Karin, M. (2002) *Nat Cell Biol* 4, E131-6.
(9) Weiss, C. and Bohmann, D. (2004) *Cell Cycle* 3, 111-3.
(10) Karamouzis, M.V. et al. (2007) *Mol Cancer Res* 5, 109-20.
(11) Kim, S. and Iwao, H. (2003) *J Pharmacol Sci* 91, 177-81.
(12) Weiss, C. and Bohmann, D. (2004) *Cell Cycle* 3, 111-3.
(13) Dass, C.R. and Choong, P.F. (2008) *Pharmazie* 63, 411-4.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.