SignalSilence® hnRNP A1 siRNA I

#7668 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 (M, R, Mk)

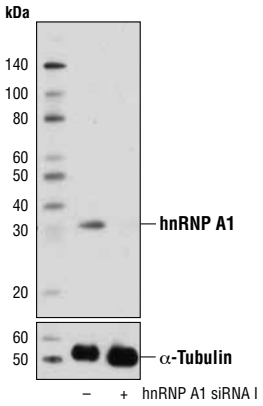
Description: SignalSilence® hnRNP A1 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit hnRNP A1 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: Heterogeneous nuclear ribonucleoprotein A1 (hnRNP A1) is a member of the hnRNP A/B family of related RNA binding proteins that bind pre-mRNA and are involved in the processing, metabolism, and transport of nuclear pre-mRNA transcripts (1). hnRNP A1 regulates the alternative splicing of c-Src and c-H-Ras (2,3) and modifies initiation of translation of the fibroblast growth factor 2 mRNA (4). hnRNP A1 expression level is elevated in many cancers; knockdown of hnRNP A1 leads to apoptosis in various cancer cells (5). Although predominantly nuclear, hnRNP A1 is continually transported from the nucleus to the cytoplasm where it disassociates from mRNA and is rapidly re-imported into the nucleus (6,7). hnRNP A1 binds to cis-acting repressive sequences (CRS) of HIV-1 to influence HIV-1 production (8,9). HIV-1 enhances hnRNP A1 expression and promotes the relocalization of hnRNP A1 to the cytoplasm (10).

Specificity/Sensitivity: SignalSilence® hnRNP A1 siRNA I inhibits human, mouse, rat, and monkey hnRNP A1 expression.

Directions for Use: CST recommends transfection with 100 nM SignalSilence® hnRNP A1 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 (-) or SignalSilence® hnRNP A1 siRNA I (+), using hnRNP A1 (D21H11) Rabbit mAb #8443 and α-Tubulin (11H10) Rabbit mAb #2125. The hnRNP A1 (D21H11) Rabbit mAb confirms silencing of hnRNP A1 expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #3178
Swiss-Prot Acc. #P09651

Storage: hnRNP A1 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) Myer, V.E. and Steitz, J.A. (1995) *RNA* 1, 171-82.
(2) Rooke, N. et al. (2003) *Mol Cell Biol* 23, 1874-84.
(3) Guil, S. et al. (2003) *Mol Cell Biol* 23, 2927-41.
(4) Bonnal, S. et al. (2005) *J Biol Chem* 280, 4144-53.
(5) Patry, C. et al. (2003) *Cancer Res* 63, 7679-88.
(6) Piñol-Roma, S. and Dreyfuss, G. (1992) *Nature* 355, 730-2.
(7) Siomi, M.C. et al. (1997) *J Cell Biol* 138, 1181-92.
(8) Black, A.C. et al. (1996) *Virus Genes* 12, 275-85.
(9) Hadian, K. et al. (2009) *J Biol Chem* 284, 33384-91.
(10) Monette, A. et al. (2009) *J Biol Chem* 284, 31350-62.

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.