SignalSilence® AUF1/hnRNP D siRNA I

#12763 Store at -20°C

☑ 10 µM in 300 µl (3 nmol)

Cell Signaling TECHNOLOGY®

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

Species Cross-Reactivity: H, (M, Mk)

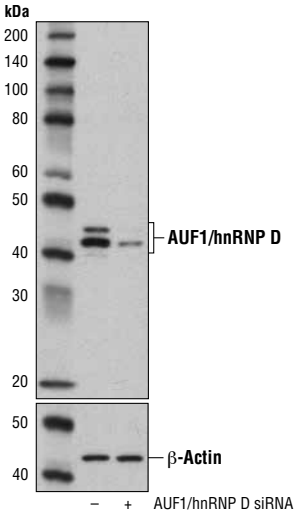
Description: SignalSilence® AUF1/hnRNP D siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit AUF1/hnRNP D expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the 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: AU-rich element RNA binding protein 1 (AUF1) is also known as heterogeneous ribonucleoprotein D (hnRNP D). AUF1 binds to the AU rich element (ARE) of target mRNA and regulates mRNA decay (1,2). It has a broad range of target genes including IL-1, IL-2, IL-3, Myc, TNF-α, and cyclin D1 (2). Binding of AUF1 to Myc mRNA also affects translation of Myc (3). Recent studies have provided evidence that AUF1 is also involved in the regulation of transcription. AUF1 binds to the promoters of various genes including complement receptor 2 (4), enkephalin (5), and α-fetoprotein (6). AUF1 also binds to the telomerase catalytic subunit Tert promoter and the G-rich telomeric repeat, thus regulating telomere maintenance and normal aging (7,8). AUF1 has four isoforms produced by alternative splicing of a single transcript: p37, p40, p42, and p45 (9,10). All AUF1 isoforms shuttle between the nucleus and cytoplasm (11, 12). These isoforms have distinct localization and bind to different target mRNAs that contribute to the diversity of AUF1 function (2).

Specificity/Sensitivity: SignalSilence® AUF1/hnRNP D siRNA I inhibits human, mouse and monkey AUF1/hnRNP D expression.

Directions for Use: CST recommends transfection with 100 nM SignalSilence® AUF1/hnRNP D 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.

Each vial contains the equivalent of 100 transfections, which corresponds to a final siRNA concentration of 100 nM per transfection in a 24-well plate with a total volume of 300 µl per well.



Western blot analysis of extracts from 293T cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® AUF1/hnRNP D siRNA I (+), using AUF1/hnRNP D (D6O4F) Rabbit mAb #12382 (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower). The AUF1/hnRNP D (D6O4F) Rabbit mAb confirms silencing of AUF1/hnRNP D expression, while the β-Actin (D6A8) Rabbit mAb is used as a loading control.

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.

Entrez-Gene ID #3184
Swiss-Prot Acc. #Q14103

Storage: AUF1/hnRNP D 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:

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(5) Dobi, A. et al. (2006) *J Biol Chem* 281, 28889-900.
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(12) Sarkar, B. et al. (2003) *J Biol Chem* 278, 20700-7.

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.