Store at -20°C

#6576

SignalSilence® Dicer siRNA I

☑ 10 µM in 300 µl
(100 Transfections)

Cell Signaling TECHNOLOGY®

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

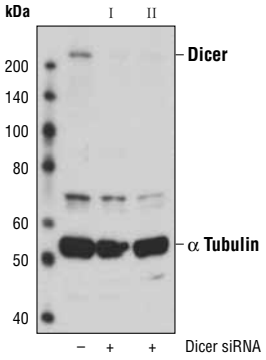
Species Cross-Reactivity: H, M, R

Description: SignalSilence® Dicer siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit dicer 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: Dicer is a member of the RNase III family that specifically cleaves double-stranded RNAs to generate microRNAs (miRNAs) (1). Long, primary transcript pri-miRNAs are processed to stem-looped pre-miRNAs by drosha (2) that are transported to the cytoplasm and further processed by dicer to produce 22-nucleotide mature miRNAs (3). The mature miRNA then becomes a part of the RNA-Induced Silencing Complex (RISC) and can bind to the 3′UTR of the target mRNA (3).

Directions for Use: CST recommends transfection with 100 nM Dicer 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 #6568 (-) or SignalSilence® Dicer siRNA I (+), using Dicer Antibody #3363 and β-Actin (13E5) Rabbit mAb #4970. The Dicer Antibody confirms silencing of dicer expression and β-Actin (13E5) Rabbit mAb is used to control for loading and specificity of dicer siRNA.

Entrez-Gene ID #23405
Swiss-Prot Acc. #Q9UPY3

Storage: Dicer 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) Hutvágner, G. and Zamore, P.D. (2002) *Science* 297, 2056–60.

(2) Lee, Y. et al. (2003) *Nature* 425, 415–9.

(3) Diederichs, S. and Haber, D.A. (2007) Cell 131, 1097–108.

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.