Store at -20°C

#6402

SignalSilence® MEK2 siRNA I (Mouse Specific)

✓ 10µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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New 03/11

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #26396
Swiss-Prot Acc. #Q63932

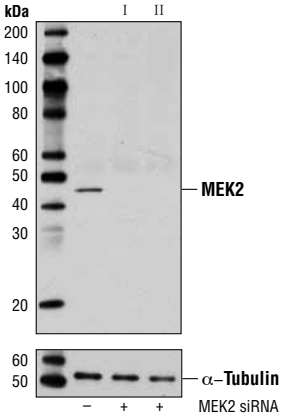
Species Cross-Reactivity: M

Description: SignalSilence® MEK2 siRNA I (Mouse Specific) from Cell Signaling Technology (CST) allows the researcher to specifically inhibit MEK2 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: MEK1 and MEK2, also called MAPK or Erk kinases, are dual-specificity protein kinases that function in a mitogen activated protein kinase cascade controlling cell growth and differentiation (1-3). Activation of MEK1 and MEK2 occurs through phosphorylation of two serine residues at positions 217 and 221, located in the activation loop of subdomain VIII, by Raf-like molecules. MEK1/2 is activated by a wide variety of growth factors and cytokines and also by membrane depolarization and calcium influx (1-4). Constitutively active forms of MEK1/2 are sufficient for the transformation of NIH/3T3 cells or the differentiation of PC12 cells (4). MEK activates p44 and p42 MAP kinase by phosphorylating both threonine and tyrosine residues at sites located within the activation loop of kinase subdomain VIII.

Directions for Use: CST recommends transfection with 100 nM SignalSilence® MEK2 siRNA I (Mouse Specific) 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 NIH/3T3 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® MEK2 siRNA I (Mouse Specific) (+), or SignalSilence® MEK2 siRNA II (Mouse Specific) #6403 (+) using MEK2 (13E3) Rabbit mAb #9147 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The MEK2 (13E3) Rabbit mAb confirms silencing of MEK2 expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Storage: MEK2 siRNA I (Mouse Specific) 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) Crews, C.M. et al. (1992) *Science* 258, 478-480.

(2) Alessi, D.R. et al. (1994) *EMBO J.* 13, 1610-1619.

(3) Rosen, L.B. et al. (1994) *Neuron* 12, 1207-1221.

(4) Cowley, S. et al. (1994) *Cell* 77, 841-852.

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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.