SignalSilence® GSK-3β siRNA I (Mouse Specific)

#6993 Store at -20°C

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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rev. 02/17/16

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

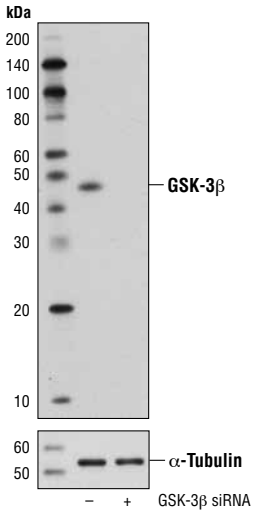
Species Cross-Reactivity: M

Description: SignalSilence® GSK-3β siRNA I (Mouse Specific) from Cell Signaling Technology (CST) allows the researcher to specifically inhibit GSK-3β 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: Glycogen synthase kinase-3 (GSK-3) was initially identified as an enzyme that regulates glycogen synthesis in response to insulin (1). GSK-3 is a ubiquitously expressed serine/threonine protein kinase that phosphorylates and inactivates glycogen synthase. GSK-3 is a critical downstream element of the PI3 kinase/Akt cell survival pathway whose activity can be inhibited by Akt-mediated phosphorylation at Ser21 of GSK-3α and Ser9 of GSK-3β (2,3). GSK-3 has been implicated in the regulation of cell fate in *Dictyostelium* and is a component of the Wnt signaling pathway required for *Drosophila*, *Xenopus*, and mammalian development (4). GSK-3 has been shown to regulate cyclin D1 proteolysis and subcellular localization (5).

Directions for Use: CST recommends transfection with 100 nM GSK-3β 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 (-) or SignalSilence® GSK-3ß siRNA I (Mouse Specific) (+), using GSK-3β (27C10) Rabbit mAb #9315 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The GSK-3β (27C10) Rabbit mAb confirms silencing of GSK-3β expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #56637
Swiss-Prot Acc. #Q9WV60

Storage: GSK-3β 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) Welsh, G.I. et al. (1996) *Trends Cell. Biol.* 6, 274-279.

(2) Srivastava, A.K. and Pandey, S.K. (1998) *Mol. Cell. Biochem.* 182, 135-141.

(3) Cross, D.A. et al. (1995) *Nature* 378, 785-789.

(4) Nusse, R. (1997) *Cell* 89, 321-323.

(5) Diehl, J.A. et al. (1998) *Genes Dev.* 12, 3499-3511.

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.