SignalSilence® β-Catenin siRNA I

#6225 Store at -20°C

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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rev. 02/09/16

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

Species Cross-Reactivity: H, (M)

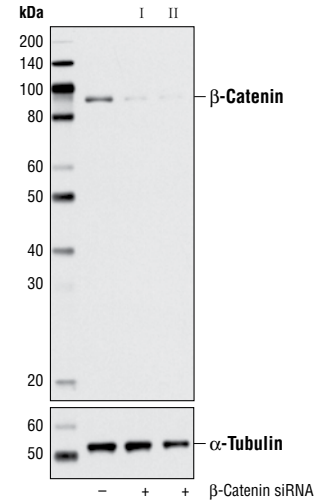
Description: SignalSilence® β-Catenin siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit β-catenin expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell.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

Background: β-catenin is a key downstream effector in the Wnt signaling pathway (1). It is implicated in two major biological processes in vertebrates: early embryonic development (2) and tumorigenesis (3). CK1 phosphorylates β-catenin on Ser45. This phosphorylation event primes β-catenin for subsequent phosphorylation by GSK-3 (4-6). GSK-3β destabilizes β-catenin by phosphorylating it at Ser33, Ser37 and Thr41 (7). Mutations in these phosphorylation sites, which result in the stabilization of β-catenin protein levels, have been found in many tumor cell lines (8).

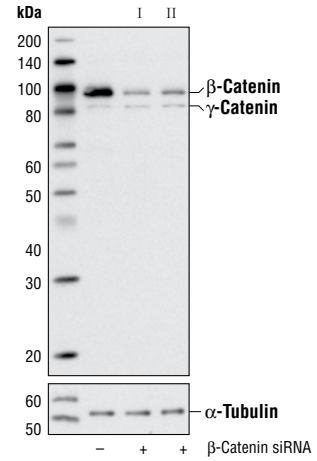
Directions for Use: CST recommends transfection with 100 nM β-Catenin siRNA I 48 to 72 hours prior to cell lysis. For transfection procedure, follow protocol provided by the transfection reagent manufacturer. Please feel free to contact CST with any questions on use.

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.

Specitivity/ Sensitivity: SignalSilence® β-Catenin siRNA I will inhibit human and mouse β-Catenin expression.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® β-Catenin siRNA I (+) or SignalSilence® β-Catenin siRNA II #6238 (+), using β-Catenin (6B3) Rabbit mAb #9582 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The β-catenin antibody confirms silencing of β-catenin expression, while the α-tubulin rabbit mAb is used is used as a loading control.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® β-Catenin siRNA I (+) or SignalSilence® β-Catenin siRNA II #6238 (+), using β-Catenin Antibody #9562 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The β-catenin antibody recognizes both β-catenin and γ-catenin and demonstrates the specificity of β-catenin expression silencing. The α-tubulin rabbit mAb is used is used as a loading control.

Entrez-Gene ID #1499
Swiss-Prot Acc. #P35222

Storage: β-Catenin siRNA I is supplied in RNAse-free water. Aliquot and store at -20ºC.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

(1) Cadigan, K.M. and Nusse, R. (1997) *Genes Dev.* 11, 3286-3305.

(2) Wodarz, A. and Nusse, R. (1998) *Annu. Rev. Cell. Dev. Biol.* 14, 59-88.

(3) Polakis, P. (1999) *Curr. Opin. Genet. Dev.* 9, 15-21.

(4) Amit, S. et al. (2002) *Genes Dev.* 16, 1066-1076.

(5) Lin, C. et al. (2002) *Cell* 108, 837-847.

(6) Yanagawa, S. et al. (2002) *EMBO J.* 21, 1733-1742.

(7) Yost, C. et al. (1996) *Genes Dev.* 10, 1443-1454.

(8) Morin, P.J. (1997) *Science* 275, 1787-1790.

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.