Store at -20°C

#6226

SignalSilence® γ-Catenin 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.

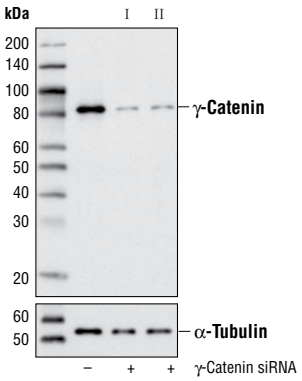
Species Cross-Reactivity: H

Description: SignalSilence® γ-Catenin siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit γ-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.

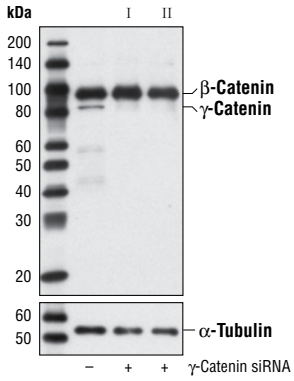
Background: Also known as plakoglobin, γ-catenin is a member of the Armadillo family of signaling molecules, which includes β-catenin and the *Drosophila* protein armadillo (1). This family of proteins is involved in Wnt signaling, which is important in embryonic development and in tumorigenesis (2-3). Although the two vertebrate proteins β- and γ-catenin display sequence homology, γ-catenin likely plays a role distinct from that of β-catenin (1, 4-6). γ-catenin localizes to desmosomes and adherens junctions, both sites of intercellular adhesion, and interacts with the cytoplasmic domains of classical and desmosomal cadherins. Interaction of γ- or β-catenin with α-catenin, desmoplakin and other junction proteins provides a link between intercellular junctions and the actin and intermediate filament cytoskeleton. Maintenance and/or modification of this link is vital for control of cell adhesion and migration (1). γ-catenin is modified by phosphorylation, affecting both adhesion and β-catenin dependent transcription (7), and by and O-glycosylation, affecting adhesion (8). Recent evidence suggests that γ-catenin regulates desmosomal adhesion in response to growth factor stimulation (9).

Directions for Use: CST recommends transfection with 100 nM γ-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.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® γ-Catenin siRNA I (+) or SignalSilence® γ-Catenin siRNA II #6239 (+), using γ-Catenin Antibody #2309 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The γ-Catenin Antibody confirms silencing of γ-catenin expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® γ-Catenin siRNA I (+) or SignalSilence® γ-Catenin siRNA II #6239 (+), using γ-Catenin Antibody #9562 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The γ-Catenin Antibody recognizes both γ-catenin and γ-catenin and demonstrates the specificity of γ-catenin expression silencing. The α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #3728
Swiss-Prot Acc. #P14923

Storage: γ-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) Zhurinsky, J. et al. (2000) *J. Cell Sci.* 113 (Pt 18), 3127-3139.

(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) Zhurinsky, J. et al. (2000) *Mol. Cell Biol.* 20, 4238-4252.

(5) Charpentier, E. et al. (2000) *J. Cell Biol.* 149, 503-520.

(6) Kolligs, F.T. et al. (2000) *Genes Dev.* 14, 1319-13131.

(7) Miravet, S. et al. (2003) *Mol. Cell Biol.* 23, 7391-7402.

(8) Hu, P. et al. (2006) *J. Biol. Chem.* 281, 12786-12791.

(9) Yin, T. et al. (2005) *J. Biol. Chem.* 280, 40355-40363.

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.