Store at -20°C

#6596

SignalSilence® Frizzled6 siRNA I

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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rev. 02/11/16

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

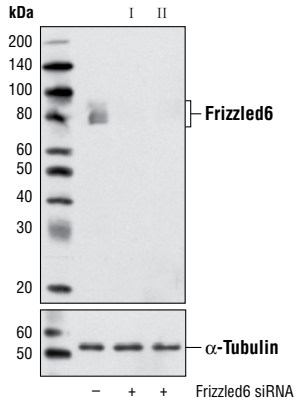
Species Cross-Reactivity: H

Description: SignalSilence® Frizzled6 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit Frizzled6 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: Frizzled (Fzd) belongs to the seven transmembrane-spanning G-protein-coupled receptor (GPCR) superfamily (1). Fzds have a large extracellular N-terminal region containing a cysteine-rich domain (CRD), which is involved in binding to Wnt proteins (1,2). The intracellular C-terminus binds to the PDZ domain of Dvl proteins, a major signaling component downstream of Fzd (3). Wnt proteins bind to Fzd and the co-receptors LRP5 or LPR6, and activate Wnt/β-catenin pathway through inhibiting phosphorylation of β-catenin by GSK3-β (4,5). In addition to this canonical Wnt/β-catenin pathway, some Wnt proteins can also activate the Fzd/Ca^{2+} pathway and Fzd/PCP (planar cell polarity) pathway (6,7). The mammalian Fzd subfamily has 10 members (Fzd1 to Fzd10) and they may mediate signaling through different pathways (8). Some Fzds can also bind to other secreted proteins, like Norrin and R-Spondin (9-11).

Directions for Use: CST recommends transfection with 100 nM Frizzled6 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® Frizzled6 siRNA I (+) or SignalSilence® Frizzled6 siRNA II #6597 (+), using Frizzled6 (D16E5) Rabbit mAb #5158 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The Frizzled6 (D16E5) Rabbit mAb confirms silencing of Frizzled6 expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #8323
Swiss-Prot Acc. #O60353

Storage: Frizzled 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) Schulte, G. and Bryja, V. (2007) *Trends Pharmacol Sci* 28, 518-25.

(2) Hsieh, J.C. et al. (1999) *Proc Natl Acad Sci USA* 96, 3546-51.

(3) Wong, H.C. et al. (2003) *Mol Cell* 12, 1251-60.

(4) Zeng, X. et al. (2005) *Nature* 438, 873-7.

(5) Davidson, G. et al. (2005) *Nature* 438, 867-72.

(6) Fanto, M. and McNeill, H. (2004) *J Cell Sci* 117, 527-33.

(7) Kohn, A.D. and Moon, R.T. *Cell Calcium* 38, 439-46.

(8) Cadigan, K.M. and Liu, Y.I. (2006) *J Cell Sci* 119, 395-402.

(9) Xu, Q. et al. (2004) *Cell* 116, 883-95.

(10) Nam, J.S. et al. (2006) *J Biol Chem* 281, 13247-57.

(11) Hendrickx, M. and Leyns, L. (2008) *Dev Growth Differ* 50, 229-43.

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.