SignalSilence® Ezh2 siRNA I

#6509 Store at -20°C

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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

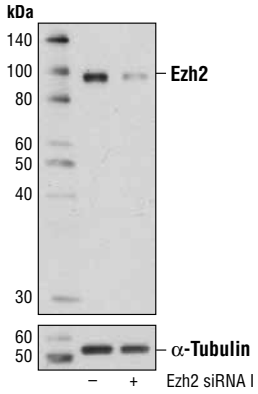
Species Cross-Reactivity: H

Description: SignalSilence® Ezh2 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit Ezh2 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: The polycomb group (PcG) proteins are involved in maintaining the silenced state of several developmentally regulated genes and contribute to the maintenance of cell identity, cell cycle regulation, and oncogenesis (1,2). Enhancer of zeste homolog 2 (Ezh2), a member of this large protein family, contains four conserved regions including domain I, domain II, and a cysteine-rich amino acid stretch that precedes the carboxy-terminal SET domain (3). The SET domain has been linked with histone methyltransferase (HMTase) activity. Moreover, mammalian Ezh2 is a member of a histone deacetylase complex that functions in gene silencing, acting at the level of chromatin structure (4). Ezh2 complexes methylate histone H3 at Lys9 and 27 *in vitro*, which is thought to be involved in targeting transcriptional regulators to specific loci (5). Ezh2 is deregulated in various tumor types, and its role, both as a primary effector and as a mediator of tumorigenesis, has become a subject of increased interest (6).

Directions for Use: CST recommends transfection with 100 nM Ezh2 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 293 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® Ezh2 siRNA I (+), using Ezh2 (D2C9) XP™ Rabbit mAb #5246 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The Ezh2 (D2C9) XP™ Rabbit mAb confirms silencing of Ezh2 expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #2146
Swiss-Prot Acc. #Q15910

Storage: Ezh2 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) Seller, W.B. and Loda, M. (2002) *Cancer Cell* 2, 349-350.

(2) Visser, H.P. et al. (2001) *Br. J. Haematol.* 112, 950-958.

(3) Chen, H. et al. (1996) *Genomics* 38, 30-37.

(4) Tonini, T. et al. (2004) *Oncogene* 23, 4930-4937.

(5) Muller, J. et al. (2002) *Cell* 111, 197-208.

(6) Kleer, C.G. et al. (2003) *Proc Natl. Acad. Sci. USA* 100, 11606-11611.

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.