Store at -20°C

#6284

SignalSilence® MTAP siRNA I

☑ 10µM 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.

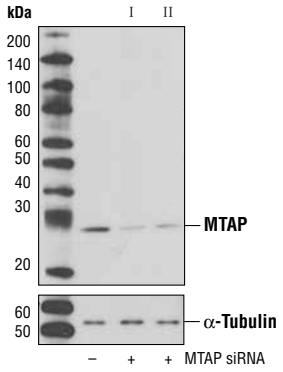
Species Cross-Reactivity: H

Description: SignalSilence® MTAP siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit MTAP 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: MTAP is an enzyme that is essential for the salvage pathway for both adenine and methionine synthesis. MTAP catalyzes the cleavage of 5'-methylthioadenosine into adenine and 5-methylthio-D-ribose-1-phosphate. Adenine is then used to generate AMP whereas 5-methylthio-D-ribose-1-phosphate is converted into methionine (1,2). MTAP is expressed in all normal cells and tissues, although frequently lost in different human tumors including pancreatic adenocarcinoma, neuroendocrine tumors, non-small cell lung carcinoma and breast carcinoma. MTAP is usually codeleted with p16 (cdkN2a/ARF) (3-5). MTAP overexpression in breast cancer cells inhibits their ability to form colonies in soft agar, thereby implicating its function as a tumor suppressor (6).

Directions for Use: CST recommends transfection with 100 nM MTAP 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® MTAP siRNA I (+) or SignalSilence® MTAP II #6285 (+), using MTAP Antibody #4158 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The MTAP Antibody confirms silencing of MTAP expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #4507
Swiss-Prot Acc. #Q13126

Storage: MTAP siRNA I 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) Backlund, P.S. and Smith, R.A. (1981) *J Biol Chem* 256, 1533-5.

(2) Backlund, P.S. et al. (1982) *J Biol Chem* 257, 4196-202.

(3) Dreyling, M.H. et al. (1998) *Genes Chromosomes Cancer* 22, 72-8.

(4) Zhang, H. et al. (1996) *Cancer Genet Cytogenet* 86, 22-8.

(5) Illei, P.B. et al. (2003) *Clin Cancer Res* 9, 2108-13.

(6) Christopher, S.A. et al. (2002) *Cancer Res* 62, 6639-44.

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.