SignalSilence® VASP siRNA I

#7637 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.

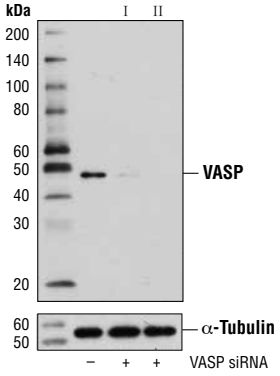
Species Cross-Reactivity: H

Description: SignalSilence® VASP siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit VASP 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: Vasodilator-stimulated phosphoprotein (VASP) was originally characterized as a substrate of both cGMP- and cAMP-dependent kinases (PKG and PKA, or cGPK and cAPK, respectively) (1). It is now believed that VASP belongs to the Ena/VASP family of adaptor proteins linking the cytoskeletal system to the signal transduction pathways and that it functions in cytoskeletal organization, fibroblast migration, platelet activation and axon guidance (2,3). Three phosphorylation sites, Ser157, Ser239, and Thr278, have been identified. Ser239 is the major PKG phosphorylation site while Ser157 is the major PKA phosphorylation site (4). Evidence suggests that VASP phosphorylation reduces its association with actin and has a negative effect on actin polymerization (5). Phosphorylation at Ser239 of VASP is a useful marker for monitoring PKG activation and signaling (6,7).

Directions for Use: CST recommends transfection with 100 nM VASP 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® VASP siRNA I (+) or SignalSilence® VASP siRNA II #7658 (+), using VASP (9A2) Rabbit mAb #3132 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The VASP (9A2) Rabbit mAb confirms silencing of VASP expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #7408
Swiss-Prot Acc. #P50552

Storage: VASP 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) Butt, E. et al. (1994) *J. Biol. Chem.* 269, 14509-14517.

(2) Ball, L.J. et al. (2000) *EMBO J.* 19, 4903-4914.

(3) Machesky, L.M. et al. (2000) *Cell* 101, 685-688.

(4) Smolenski, A. et al. (1998) *J. Biol. Chem.* 273, 20029-20035.

(5) Harbeck, B. et al. (2000) *J. Biol. Chem.* 275, 30817-30825.

(6) Oelze, M. et al. (2000) *Circ. Res.* 87, 999-1005.

(7) Lawrence, D.W. et al. (2001) *J. Immunol.* 166, 5550-5556.

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.