

SignalSilence® Cofilin siRNA II



✓ 10µM in 300 µl (100 transfections)

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

Species Cross-Reactivity: H, (M, R)

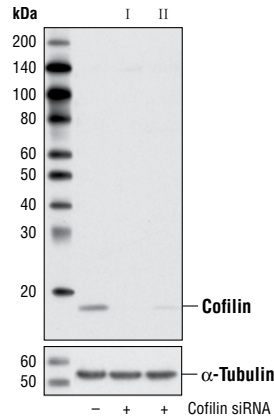
Description: SignalSilence® Cofilin siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit cofilin expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: Cofilin and ADF (actin-depolymerization factor) are members of a family of essential conserved small actin-binding proteins that play pivotal roles in cytokinesis, endocytosis, embryonic development, stress response and tissue regeneration (1). In response to stimuli, cofilin promotes the regeneration of actin filaments by severing preexisting filaments (2). The severing activity of cofilin is inhibited by LIMK or TESK phosphorylation at Ser3 of cofilin (3-5). Phosphorylation at Ser3 also regulates cofilin translocation from the nucleus to the cytoplasm (6).

Directions for Use: CST recommends transfection with 100 nM Cofilin siRNA II 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.

Specificity/ Sensitivity: SignalSilence® Cofilin siRNA II with inhibit human, mouse and rat Cofilin expression.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® Cofilin siRNA I #6267 (+) or SignalSilence® Cofilin siRNA II (+), using Cofilin (D59) Antibody #3318 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The Cofilin (D59) Antibody confirms silencing of cofilin expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #1072
Swiss-Prot Acc. #P23528

Storage: Cofilin siRNA II 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) Carlier, M. et al. (1999) *J. Biol. Chem.* 274, 33827-33830.
- (2) Condeelis, J. (2001) *Trends Cell Biol.* 11, 288-293.
- (3) Arber, S. et al. (1998) *Nature* 393, 805-809.
- (4) Yang, N. et al. (1998) *Nature* 393, 809-812.
- (5) Toshima, J. et al. (2001) *J. Biol. Chem.* 276, 31449-31458.
- (6) Nebli, G. et al. (1996) *J. Biol. Chem.* 271, 26276-26280.