

#4559 Store at -20°C

SignalSilence® LIMK1 siRNA I



✓ 10 µM in 300 µl (3 nmol)

Orders ■ 877-616-CELL (2355) orders@cellsignal.com
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For Research Use Only. Not For Use In Diagnostic Procedures.

Species Cross-Reactivity: H, (Mk)

Description: SignalSilence® LIMK1 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit LIMK1 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.

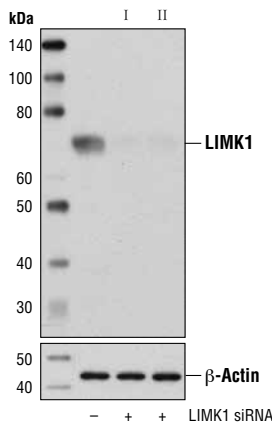
Background: LIM kinases (LIMK1 and LIMK2) are serine/threonine kinases that have two zinc finger motifs, known as LIM motifs, in their amino-terminal regulatory domains (1). LIM kinases are involved in actin cytoskeletal regulation downstream of Rho-family GTPases, PAKs, and ROCK (2,3). PAK1 and ROCK phosphorylate LIMK1 or LIMK2 at the conserved Thr508 or Thr505 residues in the activation loop, increasing LIMK activity (3-5). Activated LIM kinases inhibit the actin depolymerization activity of cofilin by phosphorylation at the amino-terminal Ser3 residue of cofilin (6,7).

Specificity/Sensitivity: LIMK1 siRNA I inhibits human and monkey LIMK1 expression.

Directions for Use: CST recommends transfection with 100 nM SignalSilence® LIMK1 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.

Each vial contains the equivalent of 100 transfections, which corresponds to a final siRNA concentration of 100 nM per transfection in a 24-well plate with a total volume of 300 µl per well.

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 293T cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® LIMK1 siRNA I (+), or SignalSilence® LIMK1 siRNA II #7156 (+), using LIMK1 Antibody #3842 (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower). The LIMK1 Antibody confirms silencing of LIMK1 expression, while the β-Actin (D6A8) Rabbit mAb is used as a loading control.

Entrez-Gene ID #3984
Swiss-Prot Acc. #P53667

Storage: LIMK1 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) Okano, I. et al. (1995) *J. Biol. Chem.* 270, 31321-31330.
- (2) Maekawa, M. et al. (1999) *Science* 285, 895-898.
- (3) Edwards, D. C. et al. (1999) *Nat. Cell Biol.* 1, 253-259.
- (4) Ohashi, K. et al. (2000) *J. Biol. Chem.* 275, 3577-3582.
- (5) Sumi, T. et al. (2001) *J. Biol. Chem.* 276, 670-676.
- (6) Arber, S. et al. (1998) *Nature* 393, 805-809.
- (7) Yang, N. et al. (1998) *Nature* 393, 809-812.

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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.