

SignalSilence® ILK1 siRNA I

✓ 10 µM in 300 µl
(100 transfections)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

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

Description: SignalSilence® ILK1 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit ILK1 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.

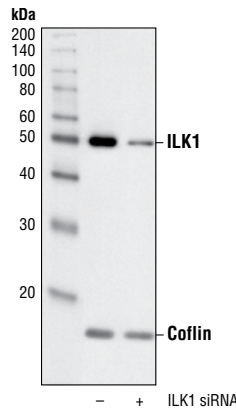
Background: Integrin-linked kinases (ILKs) couple integrins and growth factors to downstream pathways involved in cell survival, cell cycle control, cell-cell adhesion and cell motility (1). ILK functions as a scaffold bridging the extracellular matrix (ECM) and growth factor receptors to the actin cytoskeleton through interactions with integrin, PINCH (which links ILK to the RTKs via Nck2), CH-ILKBP and af- fixin (1). ILK phosphorylates Akt at Ser473, GSK-3 on Ser9, myosin light chain 2 (MLC2) on Ser18/Thr19, as well as af- fixin (2-5). These phosphorylation events are key regulatory steps in modulating the activities of the targets. ILK activity is stimulated by PI3 kinase and negatively regulated by the tumor suppressor PTEN and a PP2C protein phosphatase, ILKAP (1,3,6). It has been suggested that the conserved Ser343 residue in the activation loop plays a key role in the activation of ILK1 (2).

Small Interfering RNA (siRNA) has been used to specifically silence ILK expression in HEK-293 cells (7).

Directions for Use: CST recommends transfection with 100 nM ILK1 siRNA I 48 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: ILK1 siRNA I will inhibit human, mouse and rat ILK1 expression.



Western blot analysis of extracts from HeLa cells, transfected with 50 nM non-targeted siRNA (-) or 100 nM SignalSilence® ILK1 siRNA I (+), using ILK1 Antibody #3862 and Cofilin Antibody #3312. The ILK1 antibody confirms silencing of ILK1 expression and the cofilin antibody controls for protein loading and specificity of ILK1 siRNA.

Entrez-Gene ID #3611
Swiss-Prot Acc. #Q13418

Storage: ILK1 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) Wu, C. and Dedhar, S. (2000) *J. Biol. Chem.* 155, 505-510.
- (2) Persad, S. et al. (2001) *J. Biol. Chem.* 276, 27462-27469.
- (3) Persad, S. et al. (2000) *J. Cell Biol.* 153, 1161-1173.
- (4) Deng, J.T. et al. (2001) *J. Biol. Chem.* 276, 16365-16373.
- (5) Yamaji, S. et al. (2001) *J. Cell Biol.* 153, 1251-1264.
- (6) Morimoto, A.M. et al. (2000) *Oncogene* 19, 200-209.
- (7) Troussard, A. A. et al. (2003) *J. Biol. Chem.* 278(25), 22374-22378.