# SignalSilence® RKIP siRNA I

#6296 Store at -20°C

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

**Orders** ■ 877-616-CELL (2355)
orders@cellsignal.com
**Support** ■ 877-678-TECH (8324)
info@cellsignal.com
**Web** ■ www.cellsignal.com

rev. 02/09/16

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

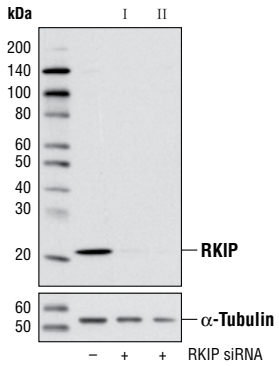
**Species Cross-Reactivity: H**

**Description:** SignalSilence® RKIP siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit RKIP 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:** Raf kinase inhibitor protein (RKIP) is a member of the phosphatidylethanolamine-binding protein (PEBP) family that associates with Raf-1 and the MEK and MAP kinases (1). RKIP has been shown to complex with Raf-1, MEK, and ERK (2). Although MEK and ERK can simultaneously bind RKIP, the association between Raf-1 and RKIP and that of RKIP and MEK are mutually exclusive. Thus, RKIP competitively disrupts the Raf-1-MEK complex and effectively terminates signal transmission from Raf-1 to MAP kinases (2). The inhibitory effect of RKIP on MAP kinase signaling is eliminated by PKC phosphorylation of RKIP at Ser153 (3). PKC phosphorylation on Ser153 also promotes the association of RKIP with GRK2, which prevents GRK2-dependent internalization of GPCR (4). RKIP also interacts with modules of the NF-κB pathway, including NF-κB-inducing kinase (NIK), TAK1, IKKα and IKKβ (5). These interactions antagonize cytokine-induced activation of the NF-κB pathway (5). Restoration of RKIP expression is associated with the inhibition of prostate cancer metastasis, implying that RKIP may be a potential clinical target as a suppressor of tumor metastasis through inhibition of vascular invasion (6).

**Directions for Use:** CST recommends transfection with 100 nM RKIP 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® RKIP siRNA I (+) or SignalSilence® RKIP siRNA II #6297 (+), using RKIP (V177) Antibody #5291 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The RKIP (V177) Antibody confirms silencing of RKIP expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.*

**Entrez-Gene ID** #5037
**Swiss-Prot Acc.** #P30086

**Storage:** RKIP 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) Yeung, K. et al. (1999) *Nature* 401, 173-177.
(2) Yeung, K. et al. (2000) *Mol. Cell. Biol.* 20, 3079-3085.
(3) Corbit,, K. C. et al. (2003) *J. Biol. Chem.* 278, 13061-13068.
(4) Lorenz, K. et al. (2003) *Nature* 426, 574-579.
(5) Yeung, K. C. et al. (2001) *Mol. Cell. Biol.* 21, 3079-3085.
(6) Fu, Z. et al. (2003) *J. Natl. Cancer Inst.* 95, 878-889.



**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.