SignalSilence® IκBα siRNA I

#6327 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. 02/10/16

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

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

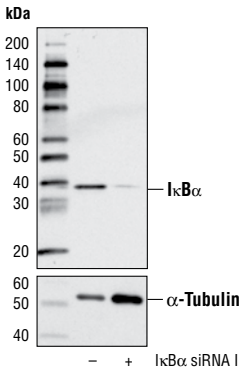
Description: SignalSilence® IκBα siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit IκBα expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence®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

Background: The NF-κB/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory IκB proteins (1-3). Activation occurs via phosphorylation of IκBα at Ser32 and Ser36 followed by proteasome-mediated degradation that results in the release and nuclear translocation of active NF-κB (3-7). IκBα phosphorylation and resulting Rel-dependent transcription are activated by a highly diverse group of extracellular signals including inflammatory cytokines, growth factors and chemokines. Kinases that phosphorylate IκB at these activating sites have been identified (8).

Directions for Use: CST recommends transfection with 100 nM IκBα 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.

Specificity/ Sensitivity: IκBα siRNA I will inhibit human, mouse, rat and monkey IκBα espression.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® IκBα siRNA I (+), using IκBα Antibody #9242 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The IκBα Antibody confirms silencing of IκBα expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #4792
Swiss-Prot Acc. #P25963

Storage: IκBα siRNA I is supplied in RNAse-free water. Aliquot and store at -20ºC.

Background References:

(1) Baeuerle, P.A. and Baltimore, D. (1988) *Science* 242, 540-6.
(2) Beg, A.A. and Baldwin, A.S. (1993) *Genes Dev* 7, 2064-70.
(3) Finco, T.S. et al. (1994) *Proc Natl Acad Sci USA* 91, 11884-8.
(4) Brown, K. et al. (1995) *Science* 267, 1485-8.
(5) Brockman, J.A. et al. (1995) *Mol Cell Biol* 15, 2809-18.
(6) Traenckner, E.B. et al. (1995) *EMBO J* 14, 2876-83.
(7) Chen, Z.J. et al. (1996) *Cell* 84, 853-62.
(8) Karin, M. and Ben-Neriah, Y. (2000) *Annu Rev Immunol* 18, 621-63.

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.