#6337 Store at -20°C

SignalSilence® NF-κB p65 siRNA I (Mouse Specific)

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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rev. 02/10/16

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

Species Cross-Reactivity: M, (R)

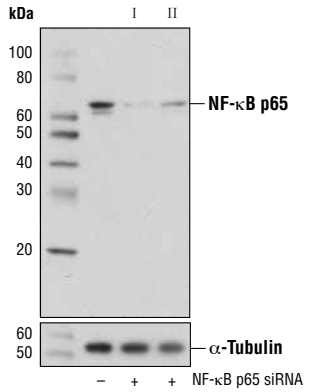
Description: SignalSilence® NF-κB p65 siRNA I (Mouse Specific) from Cell Signaling Technology (CST) allows the researcher to specifically inhibit NF-κB p65 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules 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: Transcription factors of the nuclear factor κ B (NF-κB)/Rel family play a pivotal role in inflammatory and immune responses (1,2). There are five family members in mammals: RelA, c-Rel, RelB, NF-κB1 (p105/p50), and NF-κB2 (p100/p52). Both p105 and p100 are proteolytically processed by the proteasome to produce p50 and p52, respectively. Rel proteins bind p50 and p52 to form dimeric complexes that bind DNA and regulate transcription. In unstimulated cells, NF-κB is sequestered in the cytoplasm by IκB inhibitory proteins (3-5). NF-κB-activating agents can induce the phosphorylation of IκB proteins, targeting them for rapid degradation through the ubiquitin-proteasome pathway and releasing NF-κB to enter the nucleus where it regulates gene expression (6-8). NIK and IKKα (IKK1) regulate the phosphorylation and processing of NF-κB2 (p100) to produce p52, which is then translocated to the nucleus (9-11).

Specificity/Sensitivity: SignalSilence® NF-κB p65 siRNA I (Mouse Specific) inhibits mouse and rat NF-κB p65 expression.

Directions for Use: CST recommends transfection with 100 nM SignalSilence® NF-κB p65 siRNA I (Mouse Specific) 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 NIH/3T3 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® NF-κB p65 siRNA I (Mouse Specific) (+), or SignalSilence® NF-κB p65 siRNA II (Mouse Specific) #6339 (+), using NF-κB p65 (D14E12) XP® Rabbit mAb #8242 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The NF-κB p65 (D14E12) XP® Rabbit mAb confirms silencing of NF-κB p65 expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #19697
Swiss-Prot Acc. #Q04207

Storage: NF-κB p65 siRNA I (Mouse Specific) 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) Baeuerle, P.A. and Henkel, T. (1994) *Annu Rev Immunol* 12, 141-79.
(2) Baeuerle, P.A. and Baltimore, D. (1996) *Cell* 87, 13-20.
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(4) Thompson, J.E. et al. (1995) *Cell* 80, 573-82.
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(6) Traenckner, E.B. et al. (1995) *EMBO J* 14, 2876-83.
(7) Scherer, D.C. et al. (1995) *Proc Natl Acad Sci USA* 92, 11259-63.
(8) Chen, Z.J. et al. (1996) *Cell* 84, 853-62.
(9) Senftleben, U. et al. (2001) *Science* 293, 1495-9.
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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.