

SignalSilence® NF-κB p65 siRNA II

✓ 10 μM in 300 μl
(100 Transfections)

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New 11/08

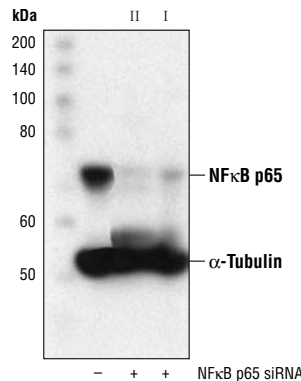
This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Species Cross-Reactivity: H

Description: SignalSilence® NF-κB p65 siRNA II 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 are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: Transcription factors of the nuclear factor kappa 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 an 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).

Directions for Use: CST recommends transfection with 100 nM NF-κB p65 siRNA II 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.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Fluorescein Conjugate) #6201 (-), SignalSilence® NF-κB p65 siRNA II (+), or SignalSilence® NF-κB p65 siRNA I #6261 (+) using NF-κB p65 (C22B4) Rabbit mAb #4764 and α-Tubulin (11H10) Rabbit mAb #2125. NF-κB p65 (C22B4) Rabbit mAb confirms silencing of NF-κB p65 and α-Tubulin (11H10) Rabbit mAb is used to control for loading and specificity of NF-κB p65 siRNA.

Entrez-Gene ID #5970

Swiss-Prot Acc. #Q04206

Storage: NF-κB p65 siRNA II is supplied in RNase-free water. Aliquot and store at -20°C.

Companion Products:

SignalSilence® Control siRNA (Fluorescein Conjugate) #6201

SignalSilence® Control siRNA (Unconjugated) #6568

SignalSilence® NF-κB p65 siRNA I #6261

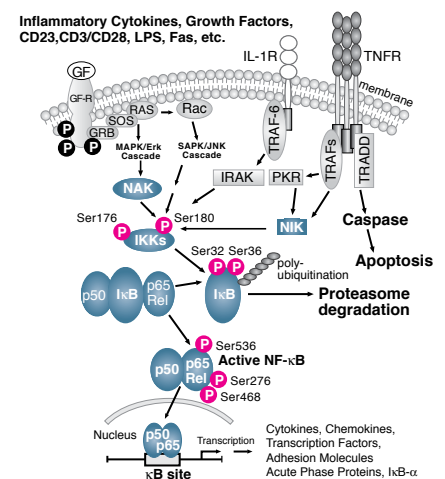
SignalSilence® NF-κB p65 siRNA Kit #6535

NF-κB p65 (C22B4) Rabbit mAb #4764

α-Tubulin (11H10) Rabbit mAb #2125

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.
- (3) Haskill, S. et al. (1991) *Cell* 65, 1281–9.
- (4) Thompson, J.E. et al. (1995) *Cell* 80, 573–82.
- (5) Whiteside, S.T. et al. (1997) *EMBO J* 16, 1413–26.
- (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) Sentfleben, U. et al. (2001) *Science* 293, 1495–9.
- (10) Coope, H.J. et al. (2002) *EMBO J* 21, 5375–85.
- (11) Xiao, G. et al. (2001) *Mol Cell* 7, 401–9.



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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.