

SignalSilence® Bcl-2 siRNA II

✓ 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)

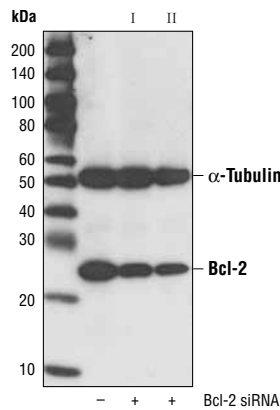
Description: SignalSilence® Bcl-2 siRNA II allows the researcher to specifically inhibit Bcl-2 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: Bcl-2 exerts a survival function in response to a wide range of apoptotic stimuli through inhibition of mitochondrial cytochrome c release (1). It has been implicated in modulating mitochondrial calcium homeostasis and proton flux (2). Several phosphorylation sites have been identified within Bcl-2 including Thr56, Ser70, Thr74 and Ser87 (3). It has been suggested that these phosphorylation sites may be targets of the ASK1/MKK7/JNK1 pathway, and that phosphorylation of Bcl-2 may be a marker for mitotic events (4,5). Mutation of Bcl-2 at Thr56 or Ser87 inhibits its anti-apoptotic activity during glucocorticoid-induced apoptosis of T lymphocytes (6). Interleukin 3 and JNK-induced Bcl-2 phosphorylation at Ser70 may be required for its enhanced antiapoptotic functions (7).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® Bcl-2 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.

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: SignalSilence® Bcl-2 siRNA II will inhibit human, mouse and rat Bcl-2 expression.



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Fluorescein Conjugate) #6201 (-), SignalSilence® Bcl-2 siRNA I #6441 (+), or SignalSilence® Bcl-2 siRNA II (+), using Bcl-2 (50E3) Rabbit mAb #2870 and α-Tubulin (11H10) Rabbit mAb #2125. Bcl-2 (50E3) Rabbit mAb confirms silencing of Bcl-2 expression, while the α-Tubulin (11H10) Rabbit mAb is used to control for loading and specificity of Bcl-2 siRNA.

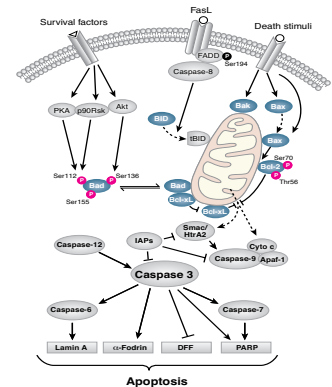
Entrez-Gene ID #596
Swiss-Prot Acc. #P10415

Storage: Bcl-2 siRNA II 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) Murphy, K.M. et al. (2000) *Cell Death Differ.* 7, 102–111.
- (2) Zhu, L. et al. (1999) *J. Biol. Chem.* 274, 33267–33273.
- (3) Maundrell, K. et al. (1997) *J. Biol. Chem.* 272, 25238–25242.
- (4) Yamamoto, K. et al. (1999) *Mol. Cell. Biol.* 19, 8469–8478.
- (5) Ling, Y.H. et al. (1998) *J. Biol. Chem.* 273, 18984–18991.
- (6) Huang, S.J. and Cidlowski, J.A. (2002) *FASEB J.* 16, 825–832.
- (7) Deng, X. et al. (2001) *J. Biol. Chem.* 276, 23681–23688.



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.