

SignalSilence® Bak siRNA I

✓ 10 µM in 300 µl
(100 transfections)



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

rev. 02/11/16

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

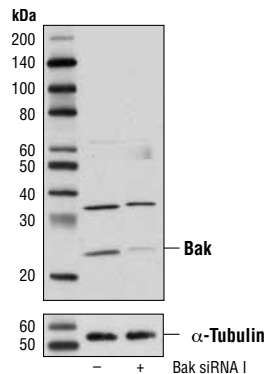
Species Cross-Reactivity: H

Description: SignalSilence® Bak siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit Bak 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: Bak is a proapoptotic member of the Bcl-2 family (1). This protein is located on the outer membrane of mitochondria and is an essential component for transduction of apoptotic signals through the mitochondrial pathway (2,3). Upon apoptotic stimulation, an upstream stimulator like truncated BID (tBID) induces conformational changes in Bak to form oligomer channels in the mitochondrial membrane for cytochrome c release. The release of cytochrome c to the cytosol activates the caspase-9 pathway and eventually leads to cell death (4,5).

Directions for Use: CST recommends transfection with 100 nM Bak 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 OVCAR8 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® Bak siRNA I (+), using Bak (D2D3) Rabbit mAb #6947 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The Bak (D2D3) Rabbit mAb confirms silencing of Bak expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #578
Swiss-Prot Acc. #Q16611

Storage: Bak 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) 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) Zandi, E. et al. (1997) *Cell* 91, 243-52.
- (9) Karin, M. (1999) *Oncogene* 18, 6867-74.
- (10) DiDonato, J.A. et al. (1997) *Nature* 388, 548-54.
- (11) Mercurio, F. et al. (1997) *Science* 278, 860-6.
- (12) Johnson, L.N. et al. (1996) *Cell* 85, 149-58.
- (13) Delhase, M. et al. (1999) *Science* 284, 309-13.