

# Bax siRNA (h): sc-29212

## BACKGROUND

The Bcl-2 gene was isolated at the chromosomal breakpoint of t-bearing follicular B cell lymphomas. Bcl-2 blocks cell death following a variety of stimuli and confers a death-sparing effect to certain hematopoietic cell lines following growth factor withdrawal. Bcl-2 is localized to outer mitochondrial membranes and endoplasmic reticulum as well as nuclear membranes. A related protein, designated Bax (Bcl-associated X protein), has extensive amino acid homology with Bcl-2 and both homodimerizes and forms heterodimers with Bcl-2. Overexpression of Bax accelerates apoptotic death induced by cytokine deprivation in an IL-3 dependent cell line and Bax also counters the death repressor activity of Bcl-2.

## CHROMOSOMAL LOCATION

Genetic locus: BAX (human) mapping to 19q13.33.

## PRODUCT

Bax siRNA (h) is a pool of 2 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Bax shRNA Plasmid (h): sc-29212-SH and Bax shRNA (h) Lentiviral Particles: sc-29212-V as alternate gene silencing products.

For independent verification of Bax (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29212A and sc-29212B.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}$  C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Bax siRNA (h) is recommended for the inhibition of Bax expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

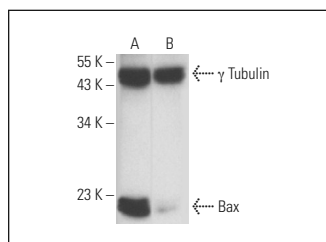
## GENE EXPRESSION MONITORING

Bax (B-9): sc-7480 is recommended as a control antibody for monitoring of Bax gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bax gene expression knockdown using RT-PCR Primer: Bax (h)-PR: sc-29212-PR (20  $\mu$ l, 419 bp). Annealing temperature for the primers should be  $55-60^{\circ}$  C and the extension temperature should be  $68-72^{\circ}$  C.

## DATA



Bax siRNA (h): sc-29212. Western blot analysis of Bax expression in non-transfected control (A) and Bax siRNA transfected (B) HeLa cells. Blot probed with Bax (2D2): sc-20067.  $\gamma$  Tubulin (C-11): sc-17787 used as specificity and loading control.

## SELECT PRODUCT CITATIONS

- Cao, C., et al. 2006. Inhibition of mammalian target of rapamycin or apoptotic pathway induces autophagy and radiosensitizes PTEN null prostate cancer cells. *Cancer Res.* 66: 10040-10047.
- Khan, S., et al. 2012. A novel cyano derivative of 11-keto- $\beta$ -boswellic acid causes apoptotic death by disrupting PI3K/AKT/HSP-90 cascade, mitochondrial integrity, and other cell survival signaling events in HL-60 cells. *Mol. Carcinog.* 51: 679-695.
- Quast, S.A., et al. 2013. ROS-dependent phosphorylation of Bax by wortmannin sensitizes melanoma cells for TRAIL-induced apoptosis. *Cell Death Dis.* 4: e839.
- Berger, A., et al. 2014. RAF inhibition overcomes resistance to TRAIL-induced apoptosis in melanoma cells. *J. Invest. Dermatol.* 134: 430-440.
- Huang, C.H., et al. 2017. Quinacrine induces the apoptosis of human leukemia U937 cells through FOXP3/miR-183/ $\beta$ -TrCP/SP1 axis-mediated BAX upregulation. *Toxicol. Appl. Pharmacol.* 334: 35-46.
- Hu, S., et al. 2018. The long noncoding RNA LOC105374325 causes podocyte injury in individuals with focal segmental glomerulosclerosis. *J. Biol. Chem.* 293: 20227-20239.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.