

Bax siRNA (m): sc-29213

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 (mouse) mapping to 7 B4.

PRODUCT

Bax siRNA (m) is a pool of 3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Bax shRNA Plasmid (m): sc-29213-SH and Bax shRNA (m) Lentiviral Particles: sc-29213-V as alternate gene silencing products.

For independent verification of Bax (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29213A, sc-29213B and sc-29213C.

STORAGE AND RESUSPENSION

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

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

APPLICATIONS

Bax siRNA (m) is recommended for the inhibition of Bax expression in mouse 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 μ M in 66 μ 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.

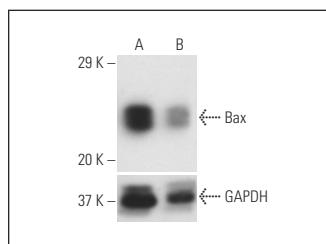
GENE EXPRESSION MONITORING

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 (m)-PR: sc-29213-PR (20 μ l, 404 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 (m): sc-29213. Western blot analysis of Bax expression in non-transfected control (A) and Bax siRNA transfected (B) TK-1 cells. Blot probed with Bax (5B7): sc-20068. GAPDH (FL-335): sc-25778 used as specificity and loading control.

SELECT PRODUCT CITATIONS

- Mantena, S.K., et al. 2006. Grape seed proanthocyanidins induce apoptosis and inhibit metastasis of highly metastatic breast carcinoma cells. *Carcinogenesis* 27: 1682-1691.
- Aalto, A.P., et al. 2007. Large-scale production of dsRNA and siRNA pools for RNA interference utilizing bacteriophage phi6 RNA-dependent RNA polymerase. *RNA* 13: 422-429.
- Kim, Y.H., et al. 2008. Combination therapy with cisplatin and anti-4-1BB: synergistic anticancer effects and amelioration of cisplatin-induced nephrotoxicity. *Cancer Res.* 68: 7264-7269.
- Peterson, J.M., et al. 2008. Bax signaling regulates palmitate-mediated apoptosis in C2C12 myotubes. *Am. J. Physiol. Endocrinol. Metab.* 295: E1307-E1314.
- Tuffy, L.P., et al. 2010. Characterization of Puma-dependent and Puma-independent neuronal cell death pathways following prolonged proteasomal inhibition. *Mol. Cell. Biol.* 30: 5484-5501.
- Sen, G.S., et al. 2011. Curcumin enhances the efficacy of chemotherapy by tailoring p65NF κ B-p300 cross-talk in favor of p53-p300 in breast cancer. *J. Biol. Chem.* 286: 42232-42247.

RESEARCH USE

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