

BID siRNA (h): sc-29800

BACKGROUND

Members of the Bcl-2 family of proteins interact to regulate programmed cell death, or apoptosis. Various homodimers and heterodimers formed by proteins in this family can either promote or inhibit apoptosis. Bcl-2 blocks cell death following a variety of stimuli and confers a death-sparing effect on certain hematopoietic cell lines following growth factor withdrawal. Additional apoptotic inhibitors in this family include A1, Bag-1, Bcl-w, Bcl-x and Mcl-1. Pro-apoptotic members of this family include Bax, Bad, Bak, Bik (NBK) and BID. BID contains a BH3 domain which allows it to dimerize with and counter the death repressor effects of Bcl-2. BID has also been shown to heterodimerize with Bcl-x and the death agonist Bax. BID is localized predominantly in the cytosol and is also present in membrane fractions. It is highly expressed in kidney and can also be detected in brain, spleen, liver, testis and lung.

CHROMOSOMAL LOCATION

Genetic locus: BID (human) mapping to 22q11.21.

PRODUCT

BID siRNA (h) 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 BID shRNA Plasmid (h): sc-29800-SH and BID shRNA (h) Lentiviral Particles: sc-29800-V as alternate gene silencing products.

For independent verification of BID (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-29800A, sc-29800B and sc-29800C.

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

BID siRNA (h) is recommended for the inhibition of BID 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 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.

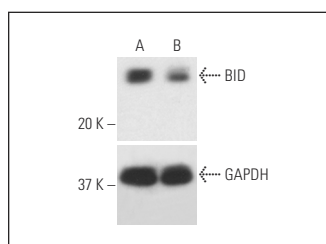
GENE EXPRESSION MONITORING

BID (B-3): sc-373939 is recommended as a control antibody for monitoring of BID 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 BID gene expression knockdown using RT-PCR Primer: BID (h)-PR: sc-29800-PR (20 μ l, 419 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



BID siRNA (h): sc-29800. Western blot analysis of BID expression in non-transfected control (A) and BID siRNA transfected (B) HeLa cells. Blot probed with BID (FL-195): sc-11423. GAPDH (FL-335): sc-25778 used as specificity and loading control.

SELECT PRODUCT CITATIONS

- Lamparska-Przybylska, M., et al. 2005. Cathepsins and BID are involved in the molecular switch between apoptosis and autophagy in breast cancer MCF7 cells exposed to camptothecin. *J. Physiol. Pharmacol.* 56: 159-179.
- Quast, S.A., et al. 2012. General sensitization of melanoma cells for TRAIL-induced apoptosis by the potassium channel inhibitor TRAM-34 depends on release of SMAC. *PLoS ONE* 7: e39290.
- Berger, A., et al. 2013. Sensitization of melanoma cells for TRAIL-induced apoptosis by BMS-345541 correlates with altered phosphorylation and activation of Bax. *Cell Death Dis.* 4: e477.
- Zhang, C.Z., et al. 2015. *Momordica charantia* lectin exhibits antitumor activity towards hepatocellular carcinoma. *Invest. New Drugs* 33: 1-11.
- Saxena, M., et al. 2016. Bacterial DNA protects monocytic cells against HIV-Vpr-induced mitochondrial membrane depolarization. *J. Immunol.* 196: 3754-3767.
- Saha, B., et al. 2017. *Trans*-4,4'-dihydroxystilbene (DHS) inhibits human neuroblastoma tumor growth and induces mitochondrial and lysosomal damages in neuroblastoma cell lines. *Oncotarget* 8: 73905-73924.

RESEARCH USE

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