

Bcl-G siRNA (m): sc-72632

BACKGROUND

Apoptosis is defined as a set of cascades which, when initiated, program the cell to undergo lethal changes such as membrane blebbing, mitochondrial breakdown and DNA fragmentation. Bcl-2 is one of many key regulators of apoptosis that are essential for proper development, tissue homeostasis and protection against foreign pathogens. Bcl-G, also known as BCL2L14 (Bcl2-like 14) or BCLG, is a 327 amino acid cytoplasmic protein that belongs to the Bcl-2 family of apoptosis-regulating proteins. Bcl-G is expressed as three alternatively spliced transcripts designated short, medium and long. The short isoform is testis-specific and localizes to cytosolic organelles, while the long isoform is widely expressed and is distributed throughout the cytosol. Over-expression of Bcl-G induces apoptosis in cells, suggesting a possible role for Bcl-G in tumor suppression.

REFERENCES

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- Lin, M.L., et al. 2007. Involvement of maternal embryonic leucine zipper kinase (MELK) in mammary carcinogenesis through interaction with Bcl-G, a pro-apoptotic member of the Bcl-2 family. *Breast Cancer Res.* 9: R17-R17.

CHROMOSOMAL LOCATION

Genetic locus: Bcl2l14 (mouse) mapping to 6 G1.

PRODUCT

Bcl-G 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 Bcl-G shRNA Plasmid (m): sc-72632-SH and Bcl-G shRNA (m) Lentiviral Particles: sc-72632-V as alternate gene silencing products.

For independent verification of Bcl-G (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-72632A, sc-72632B and sc-72632C.

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

Bcl-G siRNA (m) is recommended for the inhibition of Bcl-G 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bcl-G gene expression knockdown using RT-PCR Primer: Bcl-G (m)-PR: sc-72632-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.