



Bcl-G siRNA (h): sc-72631

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. Overexpression of Bcl-G induces apoptosis in cells, suggesting a possible role for Bcl-G in tumor suppression.

REFERENCES

- Guo, B., et al. 2001. Bcl-G, a novel pro-apoptotic member of the Bcl-2 family. *J. Biol. Chem.* 276: 2780-2785.
- Ozalp, S.S., et al. 2002. Bcl-2 expression in preinvasive and invasive cervical lesions. *Eur. J. Gynaecol. Oncol.* 23: 419-422.
- Abdelhaleem, M., et al. 2006. A novel TEL-AML1 fusion transcript involving the pro-apoptotic gene Bcl-G in pediatric precursor B acute lymphoblastic leukemia. *Leukemia* 20: 1294-1294.
- Nakamura, M., et al. 2006. The ubiquitin-like protein MNSF β regulates ERK-MAPK cascade. *J. Biol. Chem.* 281: 16861-16869.
- Soung, Y.H., et al. 2006. BH3 domain mutation of proapoptotic genes Bad, Bmf and Bcl-G is rare in transitional cell carcinomas of the urinary bladder. *Pathology* 38: 33-34.

CHROMOSOMAL LOCATION

Genetic locus: BCL2L14 (human) mapping to 12p13.2.

PRODUCT

Bcl-G 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 Bcl-G shRNA Plasmid (h): sc-72631-SH and Bcl-G shRNA (h) Lentiviral Particles: sc-72631-V as alternate gene silencing products.

For independent verification of Bcl-G (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-72631A, sc-72631B and sc-72631C.

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.

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 (h) is recommended for the inhibition of Bcl-G 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

Bcl-G (E-10): sc-398223 is recommended as a control antibody for monitoring of Bcl-G 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bcl-G gene expression knockdown using RT-PCR Primer: Bcl-G (h)-PR: sc-72631-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.