SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-7c siRNA (h): sc-93022

BACKGROUND

Apoptosis is defined as a set of cascades which, when initiated, programs the cell to undergo lethal changes such as membrane blebbing, mitochondrial break down and DNA fragmentation. Bcl-7c (B-cell CLL/lymphoma 7 protein family member C) is a 217 amino acid anti-apoptotic protein that shares 90% sequence similarity to Bcl-7a. Knockdown of IL-10 mRNA induces apoptosis and leads to significant down-regulation of Bcl-7c, suggesting that a modulatory relationship exists between the two proteins. The gene encoding Bcl-7c maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition. There are two isoforms of Bcl-7c that are produced as a result of alternative splicing events.

REFERENCES

1. Jadayel, D.M., 2001. 1998. The BCL7 gene family: deletion of BCL7B in Williams syndrome. Gene 224: 35-44.
2. Gilbert, F. 1999. Disease genes and chromosomes: disease maps of the human genome. Chromosome 16. Genet. Test. 3: 243-254.
3. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605847. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. McCarthy, B.A., et al. 2004. RNA interference of IL-10 in leukemic B-1 cells. Cancer Immun. 4: 6.
5. Coupry, I., et al. 2004. Analysis of CBP (CREBBP) gene deletions in Rubinstein-Taybi syndrome patients using real-time quantitative PCR. Hum. Mutat. 23: 278-284.
6. Martin, J., et al. 2004. The sequence and analysis of duplication-rich human chromosome 16. Nature 432: 988-994.

CHROMOSOMAL LOCATION

Genetic locus: BCL7C (human) mapping to 16p11.2.

PRODUCT

Bcl-7c 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Bcl-7c shRNA Plasmid (h): sc-93022-SH and Bcl-7c shRNA (h) Lentiviral Particles: sc-93022-V as alternate gene silencing products.

For independent verification of Bcl-7c (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-93022A, sc-93022B and sc-93022C.

RESEARCH USE

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

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Bcl-7c siRNA (h) is recommended for the inhibition of Bcl-7c 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 µM in 66 µl. 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-7c gene expression knockdown using RT-PCR Primer: Bcl-7c (h)-PR: sc-93022-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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