SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-7a siRNA (h): sc-96136

BACKGROUND

Bcl-7a (B-cell CLL/lymphoma 7 protein family member A) is a 210 amino acid protein that belongs to the Bcl-7 family. Chromosomal aberrations involving a disruption of the amino-terminus of Bcl-7a may be a cause of B-cell non-Hodgkin lymphoma (BNHL). Bcl-7b and Bcl-7c proteins share 90% identity with the N-terminal 51 amino acids of Bcl-7a, suggesting that the three genes are members of an evolutionarily conserved gene family. Bcl-7 gene family may be involved in early development. The Bcl-7a protein interacts with a novel human Polycomb ring finger gene and exists as two alternatively spliced isoforms. Bcl-7a may play a role in GC reaction and/or B-cell lymphomagenesis. The Bcl-7a gene maps to human chromosome 12q24.31. Chromosome 12 encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 1996. Johns Hopkins University, Baltimore, MD. MIM Number: 601406. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Jadayel, D.M., et al. 1998. The Bcl7 gene family: deletion of Bcl7B in Williams syndrome. Gene 224: 35-44.
4. Amenta, S., et al. 2004. Non-Hodgkin lymphoma in a child with Williams syndrome. Cancer Genet. Cytogenet. 154: 86-88.
5. van Doorn, R., et al. 2005. Epigenetic profiling of cutaneous T-cell lymphoma: promoter hypermethylation of multiple tumor suppressor genes including Bcl7a, PTPRG, and p73. J. Clin. Oncol. 23: 3886-3896.
6. Thornburg, C.D., et al. 2005. Burkitt lymphoma and Williams syndrome: a model for children with a multisystem disorder and malignancy. J. Pediatr. Hematol. Oncol. 27: 109-111.
7. Saglam, O., et al. 2007. Molecular differentiation of early and late stage laryngeal squamous cell carcinoma: an exploratory analysis. Diagn. Mol. Pathol. 16: 218-221.

CHROMOSOMAL LOCATION

Genetic locus: BCL7A (human) mapping to 12q24.31.

PRODUCT

Bcl-7a 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-7a shRNA Plasmid (h): sc-96136-SH and Bcl-7a shRNA (h) Lentiviral Particles: sc-96136-V as alternate gene silencing products.

For independent verification of Bcl-7a (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-96136A, sc-96136B and sc-96136C.

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-7a siRNA (h) is recommended for the inhibition of Bcl-7a 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-7a gene expression knockdown using RT-PCR Primer: Bcl-7a (h)-PR: sc-96136-PR (20 µl). 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.