SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-7b siRNA (m): sc-141672

BACKGROUND

Bcl-7b (B-cell CLL/lymphoma 7B) is a 202 amino acid protein that exists as multiple alternatively spliced isoforms and belongs to the Bcl-7 family. Expressed ubiquitously, Bcl-7b is thought to play a role in the development and progression of lung tumors, suggesting a possible role in cell cycle or apoptotic control. Haploinsufficiency of the Bcl-7b gene is associated with the pathogenesis of certain cardiovascular and musculo-skeletal abnormalities observed in Williams-Beuren syndrome (WBS). Additionally, Bcl-7b may cause an allergic reaction in humans, specifically by binding to IgE in atopic dermatitis patients and functioning as an autoantigen. The gene encoding Bcl-7b maps to human chromosome 7q11.23, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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4. Meng, X., et al. 1998. Complete physical map of the common deletion region in Williams syndrome and identification and characterization of three novel genes. Hum. Genet. 103: 590-599.
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7. Eckert, M.A., et al. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? Cell. Mol. Life Sci. 63: 1867-1875.
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CHROMOSOMAL LOCATION

Genetic locus: Bcl7b (mouse) mapping to 5 G2.

PRODUCT

Bcl-7b siRNA (m) is a target-specific 19-25 nt siRNA 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-7b shRNA Plasmid (m): sc-141672-SH and Bcl-7b shRNA (m) Lentiviral Particles: sc-141672-V as alternate gene silencing 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 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-7b siRNA (m) is recommended for the inhibition of Bcl-7b 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 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-7b gene expression knockdown using RT-PCR Primer: Bcl-7b (m)-PR: sc-141672-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.