SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-6b siRNA (m): sc-141670

BACKGROUND

Bcl-6, a transcriptional repressor, binds Stat recognition-like DNA elements and influences germinal center development and cell differentiation. Additionally, Bcl-6 negatively regulates NFκB expression, thereby inhibiting NFκB-mediated cellular functions. Bcl-6b (B-cell CLL/lymphoma 6, member B), also known as ZNF62, BAZF or ZBTB28, is a 480 amino acid nuclear protein that contains one BTB (POZ) domain and 5 C_2H_2-type zinc fingers. Expressed ubiquitously with highest expression in placenta and heart, Bcl-6b associates with Bcl-6 and functions as a sequence-specific transcriptional repressor that is thought to be necessary for early B-cell development. The gene encoding Bcl-6b maps to human chromosome 17p13.1, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Bray, P., et al. 1991. Characterization and mapping of human genes encoding zinc finger proteins. Proc. Natl. Acad. Sci. USA 88: 9563-9567.
2. Okabe, S., et al. 1998. BAZF, a novel Bcl-6 homolog, functions as a transcriptional repressor. Mol. Cell. Biol. 18: 4235-4244.
3. Fitzgibbon, J., et al. 2000. Assignment of B-cell lymphoma 6, member B (zinc finger protein) gene (Bcl-6b) to human chromosome 17p13.1 by *in situ* hybridization. Cytogenet. Cell Genet. 89: 218-219.
4. Sakashita, C., et al. 2002. Cloning and characterization of the human BAZF gene, a homologue of the Bcl-6 oncogene. Biochem. Biophys. Res. Commun. 291: 567-573.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608992. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Takenaga, M., et al. 2003. Bcl-6-dependent transcriptional repression by BAZF. Biochem. Biophys. Res. Commun. 303: 600-608.
7. Takamori, M., et al. 2004. BAZF is required for activation of naive CD4 T cells by TCR triggering. Int. Immunol. 16: 1439-1449.
8. Manders, P.M., et al. 2005. Bcl-6b mediates the enhanced magnitude of the secondary response of memory $CD8^+$ T lymphocytes. Proc. Natl. Acad. Sci. USA 102: 7418-7425.

CHROMOSOMAL LOCATION

Genetic locus: Bcl6b (mouse) mapping to 11 B3.

PRODUCT

Bcl-6b 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Bcl-6b shRNA Plasmid (m): sc-141670-SH and Bcl-6b shRNA (m) Lentiviral Particles: sc-141670-V as alternate gene silencing products.

For independent verification of Bcl-6b (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-141670A, sc-141670B and sc-141670C.

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-6b siRNA (m) is recommended for the inhibition of Bcl-6b 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-6b gene expression knockdown using RT-PCR Primer: Bcl-6b (m)-PR: sc-141670-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Hiraike, Y., et al. 2022. NFIA determines the *cis*-effect of genetic variation on Ucp1 expression in murinethermogenic adipocytes. iScience 25: 104729.

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.