SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-6 siRNA (h): sc-29791

BACKGROUND

Bcl-6, a transcriptional repressor, binds Stat recognition-like DNA elements and influences germinal center development and Th1/Th2 differentiation. Bcl-6 negatively regulates NFκB expression, thereby inhibiting NFκB-mediated cellular functions. HDAC- and silent information regulator (SIR)-2-dependent acetylation of Bcl-6 causes downregulation of activity by inhibiting the ability of Bcl-6 to recruit complexes containing histone deacetylases (HDACs). Bcl-6 is frequently deregulated in non-Hodgkin's B cell lymphomas. The human BCL6 gene has been shown to encode a protein of 706 amino acids.

CHROMOSOMAL LOCATION

Genetic locus: BCL6 (human) mapping to 3q27.3.

PRODUCT

Bcl-6 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-6 shRNA Plasmid (h): sc-29791-SH and Bcl-6 shRNA (h) Lentiviral Particles: sc-29791-V as alternate gene silencing products.

For independent verification of Bcl-6 (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-29791A, sc-29791B and sc-29791C.

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-6 siRNA (h) is recommended for the inhibition of Bcl-6 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.

RESEARCH USE

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

GENE EXPRESSION MONITORING

Bcl-6 (D-8): sc-7388 is recommended as a control antibody for monitoring of Bcl-6 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-6 gene expression knockdown using RT-PCR Primer: Bcl-6 (h)-PR: sc-29791-PR (20 µl, 419 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Barros, P., et al. 2009. Rac1 signaling modulates Bcl-6-mediated repression of gene transcription. Mol. Cell. Biol. 29: 4156-4166.
2. Barros, P., et al. 2012. Rac1 signalling modulates a STAT5/Bcl-6 transcriptional switch on cell-cycle-associated target gene promoters. Nucleic Acids Res. 40: 7776-7787.
3. Eskandari, S. and Yazdanparast, R. 2017. Bcl-6 gene-silencing facilitates PMA-induced megakaryocyte differentiation in K562 cells. J. Cell Commun. Signal. 11: 357-367.
4. Yang, J., et al. 2017. Downregulation of miR-10b promotes osteoblast differentiation through targeting Bcl6. Int. J. Mol. Med. 39: 1605-1612.
5. El Jamal, S.M., et al. 2018. MEF2B is a member of the Bcl-6 gene transcriptional complex and induces its expression in diffuse large B-cell lymphoma of the germinal center B-cell-like type. Lab. Invest. 99: 539-550.
6. Fabre, M.S., et al. 2020. The oncogene BCL6 is up-regulated in glioblastoma in response to DNA damage, and drives survival after therapy. PLoS ONE 15: e0231470.
7. Min Soe, K., et al. 2022. Molecular mechanism of hyperactive tooth root formation in oculo-facio-cardio-dental syndrome. Front. Physiol. 13: 946282.

PROTOCOLS

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