SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-6 siRNA (m): sc-29792

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.

REFERENCES

1. Ree, H.J., et al. 2003. Detection of germinal center B-cell lymphoma in archival specimens: critical evaluation of Bcl-6 protein expression in diffuse large B-cell lymphoma of the tonsil. Hum. Pathol. 34: 610-616.
2. Logarajah, S., et al. 2003. Bcl-6 is expressed in breast cancer and prevents mammary epithelial differentiation. Oncogene 22: 5572-5578.
3. Bos, R., et al. 2003. Protein expression of B-cell lymphoma gene 6 (BCL6) in invasive breast cancer is associated with cyclin D1 and hypoxia-inducible factor-1α (HIF-1α). Oncogene 22: 8948-8951.
4. Pasqualucci, L., et al. 2003. Molecular pathogenesis of non-Hodgkin's lymphoma: the role of Bcl-6. Leuk. Lymphoma 3: S5-S12.
5. Kurosu, K., et al. 2004. Bcl-6 mutations in pulmonary lymphoproliferative disorders: demonstration of an aberrant immunological reaction in HIV-related lymphoid interstitial pneumonia. J. Immunol. 172: 7116-7122.
6. Tunyaplin, C., et al. 2004. Direct repression of PRDM1 by Bcl-6 inhibits plasmacytic differentiation. J. Immunol. 173: 1158-1165.
7. Ozaki, K., et al. 2004. Regulation of B cell differentiation and plasma cell generation by IL-21, a novel inducer of Blimp-1 and Bcl-6. J. Immunol. 173: 5361-5371.
8. Li, Z., et al. 2005. Bcl-6 negatively regulates expression of the NFκB1 p105/p50 subunit. J. Immunol. 174: 205-214.
9. Harris, M.B., et al. 2005. Repression of an interleukin-4-responsive promoter requires cooperative Bcl-6 function. J. Biol. Chem. 280: 13114-13121.

CHROMOSOMAL LOCATION

Genetic locus: Bcl6 (mouse) mapping to 16 B1.

PRODUCT

Bcl-6 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-6 shRNA Plasmid (m): sc-29792-SH and Bcl-6 shRNA (m) Lentiviral Particles: sc-29792-V as alternate gene silencing products.

For independent verification of Bcl-6 (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-29792A, sc-29792B and sc-29792C.

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

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 (m)-PR: sc-29792-PR (20 µl, 497 bp). 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.