SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl10 siRNA (m): sc-29794

BACKGROUND

Bcl10, also designated CIPER, c-CARMEN and mE10, was first identified as a gene truncated or mutated in MALT B cell lymphomas and other tumor types. Bcl10 is homologous to the equine herpesvirus-2 E10 gene and, like E10, it contains an N-terminal caspase recruitment domain (CARD). Expression of Bcl10 has been shown to induce NFκB activation in a NIK-dependent pathway, and research indicates that the CARD domain is essential for this activation; although in a separate study, Bcl10 by itself did not induce JNK or NFκB activation. Overexpression of Bcl10 has been shown to induce apoptosis in a manner dependent on CARD-mediated oligomerization. Bcl10 has also been shown to play a role in processing of caspase-9 to its active dimer. Other studies have shown that Bcl10 is not mutated in many human tumors and lymphomas.

REFERENCES

1. Ye, H., et al. 2000. Bcl10 expression in normal and neoplastic lymphoid tissue. Nuclear localization in MALT lymphoma. Am. J. Pathol. 157: 1147-1154.
2. Ruland, J., et al. 2001. Bcl10 is a positive regulator of antigen receptor-induced activation of NFκB and neural tube closure. Cell 104: 33-42.
3. Lucas, P.C., et al. 2001. Bcl10 and MALT1, independent targets of chromosomal translocation in malt lymphoma, cooperate in a novel NFκB signaling pathway. J. Biol. Chem. 276: 19012-19019.

CHROMOSOMAL LOCATION

Genetic locus: Bcl10 (mouse) mapping to 3 H2.

PRODUCT

Bcl10 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 Bcl10 shRNA Plasmid (m): sc-29794-SH and Bcl10 shRNA (m) Lentiviral Particles: sc-29794-V as alternate gene silencing products.

For independent verification of Bcl10 (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-29794A, sc-29794B and sc-29794C.

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.

PROTOCOLS

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

APPLICATIONS

Bcl10 siRNA (m) is recommended for the inhibition of Bcl10 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

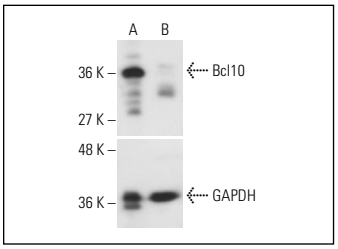
Bcl10 (331.3): sc-5273 is recommended as a control antibody for monitoring of Bcl10 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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 Bcl10 gene expression knockdown using RT-PCR Primer: Bcl10 (m)-PR: sc-29794-PR (20 µl, 419 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



Bcl10 siRNA (m): sc-29794. Western blot analysis of Bcl10 expression in non-transfected control (**A**) and Bcl10 siRNA transfected (**B**) WEHI-231 cells. Blot probed with Bcl10 (H-197): sc-5611. GAPDH (FL-335): sc-25778 used as specificity and loading control.

RESEARCH USE

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