SANTA CRUZ BIOTECHNOLOGY, INC.

B-Myc siRNA (m): sc-38070

BACKGROUND

The Myc family of genes includes five functional members, including c-Myc, L-Myc, N-Myc, B-Myc, and S-Myc. The B-Myc gene maps to the rat chromosome 3 and encodes a 178 amino acid protein. B-Myc is a short-lived nuclear protein which is phosphorylated on residues Ser 60 and Ser 68. B-Myc-specific mRNA is most higly expressed in rat brain and closely resembles the expression pattern of c-Myc. The B-Myc protein is primarily expressed in hormonally-controlled tissues, with the highest level of expression in the epididymis. B-Myc shows extensive homology to c-Myc in the N-terminal region, which contains a transcriptional activation domain. B-Myc inhibits both neoplastic transformation and transcriptionl activation by c-Myc, and therefore may function as an inhibitor of cellular proliferation.

REFERENCES

1. Ingvarsson, S., et al. 1988. Structure and expression of B-Myc, a new member of the Myc gene family. Mol. Cell. Biol. 8: 3168-3174.
2. Asker, C., et al. 1989. Nucleotide sequence of the rat Bmyc gene. Oncogene 4: 1523-1527.
3. Resar, L.M., et al. 1993. B-Myc inhibits neoplastic transformation and transcriptional activation by c-Myc. Mol. Cell. Biol. 13: 1130-1136.
4. Asker, C.E., et al. 1995. Mouse and rat B-Myc share amino acid sequence homology with the c-Myc transcriptional activator domain and contain a B-Myc specific carboxy terminal region. Oncogene 11: 1963-1969.
5. Dang, C.V. 1999. c-Myc target genes involved in cell growth, apoptosis, and metabolism. Mol. Cell. Biol. 19: 1-11.
6. Gregory, M.A., et al. 2000. B-Myc is preferentially expressed in hormonally-controlled tissues and inhibits cellular proliferation. Oncogene 19: 4886-4895.

CHROMOSOMAL LOCATION

Genetic locus: Bmyc (mouse) mapping to 2 A3.

PRODUCT

B-Myc 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 B-Myc shRNA Plasmid (m): sc-38070-SH and B-Myc shRNA (m) Lentiviral Particles: sc-38070-V as alternate gene silencing products.

For independent verification of B-Myc (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-38070A, sc-38070B and sc-38070C.

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.

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

B-Myc siRNA (m) is recommended for the inhibition of B-Myc 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 B-Myc gene expression knockdown using RT-PCR Primer: B-Myc (m)-PR: sc-38070-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.