

## L-Myc siRNA (h): sc-38071

### BACKGROUND

The v-Myc oncogene, initially identified in the MC29 avian retrovirus, causes myelocytomas, carcinomas, sarcomas and lymphomas, and belongs to a family of oncogenes conserved throughout evolution. In humans, the family consists of five genes: c-Myc, N-Myc, R-Myc, L-Myc and B-Myc. Amplification of the N-Myc gene has been found in human neuroblastomas and cell lines. The extent of N-Myc amplification correlates well with the stage of neuroblastoma disease. Immunological studies have shown that the human N-Myc gene encodes a nuclear phosphoprotein that exhibits relatively short (30 minute) half life *in vivo*. The prototype member of the family, c-Myc p67, binds DNA in a sequence-specific manner subsequent to dimerization with a second basic region helix-loop-helix leucine zipper motif protein, designated Max.

### REFERENCES

1. Schwab, M., et al. 1983. Amplified DNA with limited homology to Myc cellular oncogene is shared by human neuroblastoma cell lines and a neuroblastoma tumor. *Nature* 305: 245-248.
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3. Cole, M.D. 1986. The Myc oncogene: its role in transformation and differentiation. *Annu. Rev. Genet.* 20: 361-384.
4. LeGouy, E., et al. 1987. Structure and expression of Myc-family genes. In Harlow, E., eds., *Nuclear Oncogenes*. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 144-151.
5. Blackwood, E.M., et al. 1991. Max: a helix-loop-helix zipper protein that forms a sequence-specific DNA-binding complex with Myc. *Science* 251: 1211-1217.
6. Prendergast, G.C., et al. 1991. Association of Myn, the murine homolog of Max, with c-Myc stimulates methylation-sensitive DNA binding and Ras cotransformation. *Cell* 65: 395-407.
7. Bossone, S.A., et al. 1992. MAZ, a zinc finger protein, binds to c-Myc and C2 gene sequences regulating transcriptional initiation and termination. *Proc. Natl. Acad. Sci. USA* 89: 7452-7456.

### CHROMOSOMAL LOCATION

Genetic locus: MYCL1 (human) mapping to 1p34.2.

### PRODUCT

L-Myc siRNA (h) is a pool of 2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see L-Myc shRNA Plasmid (h): sc-38071-SH and L-Myc shRNA (h) Lentiviral Particles: sc-38071-V as alternate gene silencing products.

For independent verification of L-Myc (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-38071A and sc-38071B.

### 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

L-Myc siRNA (h) is recommended for the inhibition of L-Myc 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  $\mu$ M in 66  $\mu$ l. 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 L-Myc gene expression knockdown using RT-PCR Primer: L-Myc (h)-PR: sc-38071-PR (20  $\mu$ l, 457 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](http://www.scbt.com) for detailed protocols and support products.