SANTA CRUZ BIOTECHNOLOGY, INC.

# A-Myb siRNA (h): sc-29613

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*The Power to Question*

## BACKGROUND

The Myb family of transcription factors, which includes the structurally related A-, B- and c-Myb genes, regulate differentiation and cellular growth through binding to promoters with the consensus sequence PyAAC(G/T)G and trans-activating gene expression. c-Myb is the cellular homolog of the leukemogenic avian retroviral protein v-Myc. c-Myb is expressed predominantly in immature and rapidly dividing hematopoietic cells, and cellular levels of c-Myb substantially decreases as cells reach terminal differentiation. B-Myb is expressed in a wide variety of proliferating cells, with levels accumulating during the $G_1$ to S phase transition. A third related protein, A-Myb, is expressed at specific times in reproductive tissues, some neural cells, and a subset of normal and neoplastic B lymphocytes. Both A-Myb and B-Myb are expressed in t(14:18) lymphoma cells where they then inhibit cell arrest and apoptotic signaling. Expression of B-Myb rescues cells from p53-induced $G_1$ phase arrest that is mediated by p21, while A-Myb functions as an anti-apoptotic factor by effectively activating the Bcl-2 promoter and thereby up-regulating Bcl-2 expression.

## REFERENCES


1. Sakura, H., et al. 1989. Delineation of three functional domains of the transcriptional activator encoded by the c-Myb protooncogene. Proc. Natl. Acad. Sci. USA 86: 5758-5762.
2. Mizuguchi, G., et al. 1990. DNA binding activity and transcriptional activator function of the human B-Myb protein compared with c-Myb. J. Biol. Chem. 265: 9280-9284.
3. Reiss, K., et al. 1991. Growth regulated expression of B-Myb in fibroblasts and hematopoietic cells. J. Cell. Physiol. 148: 338-343.
4. Golay, J., et al. 1994. The human A-Myb protein is a strong activator of transcription. Oncogene 9: 2469-2479.
5. Vorbrueggen, G., et al. 1994. The carboxy terminus of human c-Myb protein stimulates activated transcription in trans. Nucleic Acids Res. 22: 2466-2475.
6. Golay, J., et al. 1996. Expression of A-Myb, but not c-Myb and B-Myb, is restricted to Burkitt's lymphoma, sIg$^+$ B-acute lymphoblastic leukemia, and a subset of chronic lymphocytic leukemias. Blood 87: 1900-1911.


## CHROMOSOMAL LOCATION

Genetic locus: MYBL1 (human) mapping to 8q13.1.

## PRODUCT

A-Myb 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 A-Myb shRNA Plasmid (h): sc-29613-SH and A-Myb shRNA (h) Lentiviral Particles: sc-29613-V as alternate gene silencing products.

For independent verification of A-Myb (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-29613A, sc-29613B and sc-29613C.

## 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

A-Myb siRNA (h) is recommended for the inhibition of A-Myb 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.

## GENE EXPRESSION MONITORING

A-Myb (D-12): sc-514682 is recommended as a control antibody for monitoring of A-Myb 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 A-Myb gene expression knockdown using RT-PCR Primer: A-Myb (h)-PR: sc-29613-PR (20 µl, 445 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.