

A-Myb (D-12): sc-514682

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 G₁ to S phase transition. 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 G₁ 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, slg⁺ 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; Mybl1 (mouse) mapping to 1 A2.

SOURCE

A-Myb (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 58-75 near the N-terminus of A-Myb of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514682 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

A-Myb (D-12) is recommended for detection of A-Myb of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for A-Myb siRNA (h): sc-29613, A-Myb siRNA (m): sc-29614, A-Myb shRNA Plasmid (h): sc-29613-SH, A-Myb shRNA Plasmid (m): sc-29614-SH, A-Myb shRNA (h) Lentiviral Particles: sc-29613-V and A-Myb shRNA (m) Lentiviral Particles: sc-29614-V.

Molecular Weight of A-Myb: 83 kDa.

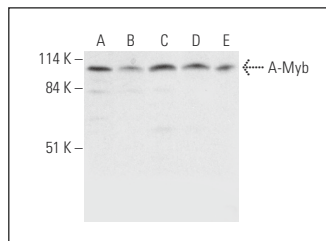
Positive Controls: NAMALWA cell lysate: sc-2234, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

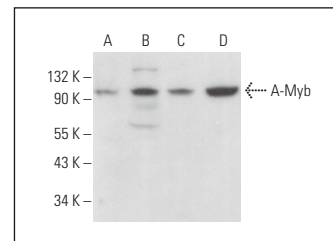
To ensure optimal results, the following support reagents are recommended:

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) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



A-Myb (D-12): sc-514682. Western blot analysis of A-Myb expression in NAMALWA (A), Jurkat (B), HeLa (C), Hep G2 (D) and RAW 264.7 (E) whole cell lysates.



A-Myb (D-12): sc-514682. Western blot analysis of A-Myb expression in HeLa (A), Raji (B), EOC 20 (C) and C6 (D) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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.