



## S-Myc (L-19): sc-13670

### BACKGROUND

The Myc family of genes includes five functional members, including c-Myc, L-Myc, N-Myc, B-Myc, and S-Myc. The S-Myc gene maps to the rat chromosome 19B and encodes a 429 amino acid protein with an approximate molecular mass of 50 kDa. S-Myc is closely related to N-Myc, but lacks an acidic amino-acid rich sequence commonly present in the Myc family proteins. S-Myc is also very similar to c-Myc in its ability to induce apoptosis through the caspase activation pathway. S-Myc is distinct from c-Myc in that it has tumor suppressor activity and does not require p53 to induce apoptosis. The high level of S-Myc mRNA expression in nude mice suppresses the tumorigenicity of RT4-AC tumor cells, suggesting that S-Myc acts as a negative regulator of tumor growth. S-Myc may also play an important role in the transcriptional regulation of a set of genes whose expression induces programmed cell death both *in vitro* and *in vivo*.

### REFERENCES

- Ingvarsson, S., Asker, C., Axelson, H., Klein, G., and Sumegi, J. 1988. Structure and expression of B-Myc, a new member of the Myc gene family. *Mol. Cell. Biol.* 8: 3168-3174.
- Sugiyama, A., Kume, A., Nemoto, K., Lee, S.Y., Asami, Y., Nemoto, F., Nishimura, S., and Kuchino, Y. 1989. Isolation and characterization of S-Myc, a member of the rat Myc gene family. *Proc. Natl. Acad. Sci. USA* 86: 9144-9148.
- Asai, A., Miyagi, Y., Sugiyama, A., Nagashima, Y., Kanemitsu, H., Obinata, M., Mishima, K., and Kuchino, Y. 1994. The S-Myc protein having the ability to induce apoptosis is selectively expressed in rat embryo chondrocytes. *Oncogene* 9: 2345-2352.
- Kuchino, Y., Asai, A., and Kitanaka, C. 1996. Myc-mediated apoptosis. *Prog. Mol. Subcell. Biol.* 16: 104-129.
- Kagaya, S., Kitanaka, C., Noguchi, K., Mochizuki, T., Sugiyama, A., Asai, A., Yasuhara, N., Eguchi, Y., Tsujimoto, Y., and Kuchino, Y. 1997. A functional role for death proteases in S-Myc and c-Myc-mediated apoptosis. *Mol. Cell. Biol.* 17: 6736-6745.
- Dang, C.V. 1999. c-Myc target genes involved in cell growth, apoptosis, and metabolism. *Mol. Cell. Biol.* 19: 1-11.
- Sugiyama, A., Noguchi, K., Kitanaka, C., Katou, N., Tashiro, F., Ono, T., Yoshida, M.C., and Kuchino, Y. 1999. Molecular cloning and chromosomal mapping of mouse intronless Myc gene acting as a potent apoptosis inducer. *Gene* 226: 273-283.
- Noguchi, K., Yamana, H., Kitanaka, C., Mochizuki, T., Kokubu, A., and Kuchino, Y. 2000. Differential role of the JNK and p38 MAPK pathway in c-Myc- and S-Myc-mediated apoptosis. *Biochem. Biophys. Res. Commun.* 267: 221-227.

### SOURCE

S-Myc (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of S-Myc of mouse origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13670 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13670 X, 200 µg/0.1 ml.

### APPLICATIONS

S-Myc (L-19) is recommended for detection of S-Myc of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 S-Myc siRNA (m): sc-38088.

S-Myc (L-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of S-Myc: 50 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.