S-Myc (T-19): sc-13667



The Power to Question

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.
- 3. 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 fordeath 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.
- 7. 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.
- 8. Noguchi, K., Yamana, H., Kitanaka, C., Mochizuki, T., Kokubu, A., and Kuchino, Y. 2000. Differentital 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 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of S-Myc of rat 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-13667 P, (100 μ g 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-13667 X, 200 μ g/0.1 ml.

APPLICATIONS

S-Myc (T-19) is recommended for detection of S-Myc of rat 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).

S-Myc (T-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 or our catalog for detailed protocols and support products.

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