SANTA CRUZ BIOTECHNOLOGY, INC.

p-B-Myc (Ser 68): sc-16303

BACKGROUND

The Myc family of genes includes five functional members, including c-Myc, L-Myc, N-Myc, B-Myc and S-Myc. The B-Myc gene maps to the rat chromosome 3 and encodes a 178 amino acid protein that has a molecular mass of 26 kDa. B-Myc is a short-lived nuclear protein that is phosphorylated *in vivo* on residues Ser 60 and Ser 68, the major phosphorylation site. B-Myc is phosphorylated at similar sites as compared with c-Myc, suggesting that B-Myc may be regulated by similar kinases. B-Myc-specific mRNA is most higly expressed in rat brain and closely resembles the expression pattern of c-Myc. The B-Myc protein is primarily expressed in hormonally-controlled tissues, with the highest level of expression in the epididymis. B-Myc shows extensive homology to c-Myc in the N-terminal region, which contains a transcriptional activation domain. B-Myc inhibits both neoplastic transformation and transcriptionl activation by c-Myc and therefore, may function as an inhibitor of cellular proliferation.

REFERENCES

1. 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.
2. Asker, C., Steinitz, M., Andersson, K., Sumegi, J., Klein, G. and Ingvarsson, S. 1989. Nucleotide sequence of the rat B-Myc gene. Oncogene. 4: 1523-1527.
3. Resar, L.M., Dolde, C., Barrett, J.F. and Dang, C.V. 1993. B-Myc inhibits neoplastic transformation and transcriptional activation by c-Myc. Mol. Cell Biol. 13: 1130-1136.
4. Asker, C.E., Magnusson, K.P., Piccoli, S.P., Andersson, K., Klein, G., Cole, M.D. and Wiman, K.G. 1995. Mouse and rat B-Myc share amino acid sequence homology with the c-Myc transcriptional activator domain and contain a B-Myc specific carboxy terminal region. Oncogene 11: 1963-1969.
5. Dang, C.V. 1999. c-Myc target genes involved in cell growth, apoptosis and metabolism. Mol. Cell Biol. 19: 1-11.
6. Gregory, M.A., Xiao, Q., Cornwall, G.A., Lutterbach, B. and Hann, S.R. 2000. B-Myc is preferentially expressed in hormonally-controlled tissues and inhibits cellular proliferation. Oncogene 19: 4886-4895.

CHROMOSOMAL LOCATION

Genetic locus: Bmyc (mouse) mapping to 2 A3.

SOURCE

p-B-Myc (Ser 68) is available as either goat (sc-16303) or rabbit (sc-16303-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Ser 60 and Ser 68 of B-Myc of mouse origin.

STORAGE

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

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-16303 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-16303 X, 200 µg/0.1 ml.

APPLICATIONS

p-B-Myc (Ser 68) is recommended for detection of Ser 68 phosphorylated B-Myc of mouse and 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).

Suitable for use as control antibody for B-Myc siRNA (m): sc-38070, B-Myc shRNA Plasmid (m): sc-38070-SH and B-Myc shRNA (m) Lentiviral Particles: sc-38070-V.

p-B-Myc (Ser 68) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-16303): use donkey anti-goat IgG-HRP: sc-2020 (range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (range: 1:2000-1:5000), for rabbit primary antibody (sc-16303-R): use goat anti-rabbit IgG-HRP: sc-2004 (range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (range: 1:2000-1:5000); Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: for goat primary antibody (sc-16303): use donkey anti-goat IgG-FITC: sc-2024 (range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (range: 1:100-1:400), for rabbit primary antibody (sc-16303-R): use goat anti-rabbit IgG-FITC: sc-2012 (range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Liu, J., Puscheck, E.E., Wang, F., Trostinskaia, A., Barisic, D., Maniere, G., Wygle, D., Zhong, W., Rings, E.H. and Rappolee, D.A. 2004. Serine-threonine kinases and transcription factors active in signal transduction are detected at high levels of phosphorylation during mitosis in preimplantation embryos and trophoblast stem cells. Reproduction 128: 643-654.

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.