

p-c-Myc (E-3): sc-377552

BACKGROUND

c-Myc-, N-Myc- and L-Myc-encoded proteins function in cell proliferation, differentiation and neoplastic disease. They are located in the nucleus and have relatively short half lives. Amplification of the c-Myc gene has been found in several types of human tumors including lung, breast and colon carcinomas. The presence of a leucine zipper, the helix-loop-helix and a basic region in the c-Myc COOH terminus provided initial evidence for a sequence-specific binding function. A basic region helix-loop-helix leucine zipper motif protein, called Max, specifically associates with c-Myc, N-Myc and L-Myc. The Myc-Max complex binds to DNA in a sequence-specific. Max can also form heterodimers with at least two additional bHLH-Zip proteins, Mad and Mxi1, and Mad 1-Max dimers have been shown to repress transcription through interaction with mSin3.

REFERENCES

- Alitalo, K., et al. 1983. Homogeneously staining chromosomal regions contain amplified copies of an abundantly expressed cellular oncogene (c-Myc) in malignant neuroendocrine cells from a human colon carcinoma. *Proc. Natl. Acad. Sci. USA* 80: 1707-1711.
- Nau, M.N., et al. 1985. L-Myc, a new Myc-related gene amplified and expressed in human small cell lung cancer. *Nature* 318: 69-73.
- Nisen, P.D., et al. 1986. Enhanced expression of the N-Myc gene in Wilms' tumors. *Cancer Res.* 46: 6217-6222.

CHROMOSOMAL LOCATION

Genetic locus: MYC (human) mapping to 8q24.21; Myc (mouse) mapping to 15 D1.

SOURCE

p-c-Myc (E-3) is a mouse monoclonal antibody raised against a short amino acid sequence containing Thr 58 and Ser 62 dually phosphorylated c-Myc of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377552 X, 200 µg/0.1 ml.

p-c-Myc (E-3) is available conjugated to agarose (sc-377552 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377552 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377552 PE), fluorescein (sc-377552 FITC), Alexa Fluor® 488 (sc-377552 AF488), Alexa Fluor® 546 (sc-377552 AF546), Alexa Fluor® 594 (sc-377552 AF594) or Alexa Fluor® 647 (sc-377552 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377552 AF680) or Alexa Fluor® 790 (sc-377552 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377552 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

p-c-Myc (E-3) is recommended for detection of Thr 58 and Ser 62 dually phosphorylated c-Myc of broad species 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

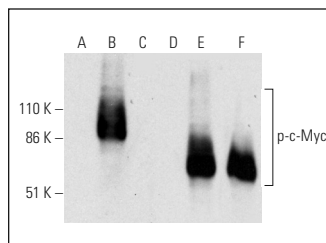
Suitable for use as control antibody for c-Myc siRNA (h): sc-29226, c-Myc siRNA (m): sc-29227, c-Myc siRNA (r): sc-270149, c-Myc shRNA Plasmid (h): sc-29226-SH, c-Myc shRNA Plasmid (m): sc-29227-SH, c-Myc shRNA Plasmid (r): sc-270149-SH, c-Myc shRNA (h) Lentiviral Particles: sc-29226-V, c-Myc shRNA (m) Lentiviral Particles: sc-29227-V and c-Myc shRNA (r) Lentiviral Particles: sc-270149-V.

p-c-Myc (E-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

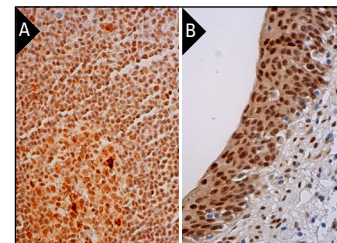
Molecular Weight of p-c-Myc: 67 kDa.

Positive Controls: c-Myc (m): 293T Lysate: sc-118892.

DATA



Western blot analysis of c-Myc phosphorylation in non-transfected: sc-117752 (A,D), untreated mouse c-Myc transfected: sc-118892 (B,E) and lambda protein phosphatase (sc-200312A) treated mouse c-Myc transfected: sc-118892 (C,F) 293T whole cell lysates. Antibodies tested include p-c-Myc (E-3): sc-377552 (A,B,C) and c-Myc (N-262): sc-764 (D,E,F).



p-c-Myc (E-3): sc-377552. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining in germinal center and cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells (B).

SELECT PRODUCT CITATIONS

- Moreno-Felici, J., et al. 2019. Phosphoenolpyruvate from glycolysis and PEPCK regulate cancer cell fate by altering cytosolic Ca²⁺. *Cells* 9: 18.
- Lou, Z., et al. 2021. Alkaline phosphatase downregulation promotes lung adenocarcinoma metastasis via the c-Myc/RhoA axis. *Cancer Cell Int.* 21: 217.

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.