

c-Myc (G-4): sc-373712

BACKGROUND

c-Myc-, N-Myc- and L-Myc-encoded proteins function in cell proliferation, differentiation and neoplastic disease. Myc proteins are nuclear proteins with 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, while the N-Myc gene has been found amplified in neuroblastomas. The L-Myc gene has been reported to be amplified and expressed at high level in human small cell lung carcinomas. The presence of three sequence motifs in the c-Myc COOH terminus, including the leucine zipper, the helix-loop-helix and a basic region provided initial evidence for a sequence-specific binding function. A basic region helix-loop-helix leucine zipper motif (bHLH-zip) protein, designated Max, specifically associates with c-Myc, N-Myc and L-Myc proteins. The Myc-Max complex binds to DNA in a sequence-specific manner under conditions where neither Max nor Myc exhibit appreciable binding. Max can also form heterodimers with at least two additional bHLH-zip proteins, Mad 1 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.

CHROMOSOMAL LOCATION

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

SOURCE

c-Myc (G-4) is a mouse monoclonal antibody raised against amino acids 1-262 of c-Myc of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-373712 X, 200 µg/0.1 ml.

c-Myc (G-4) is available conjugated to agarose (sc-373712 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373712 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373712 PE), fluorescein (sc-373712 FITC), Alexa Fluor® 488 (sc-373712 AF488), Alexa Fluor® 546 (sc-373712 AF546), Alexa Fluor® 594 (sc-373712 AF594) or Alexa Fluor® 647 (sc-373712 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373712 AF680) or Alexa Fluor® 790 (sc-373712 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

c-Myc (G-4) is recommended for detection of c-Myc p67 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).

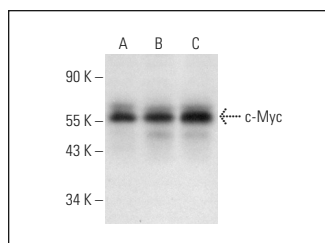
Suitable for use as control antibody for c-Myc siRNA (h): sc-29226, c-Myc siRNA (m): sc-29227, c-Myc siRNA (r): sc-270149, c-Myc shRNA Plasmid (h): sc-29226-SH, c-Myc shRNA Plasmid (m): sc-29227-SH, c-Myc shRNA Plasmid (r): sc-270149-SH, c-Myc shRNA (h) Lentiviral Particles: sc-29226-V, c-Myc shRNA (m)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

c-Myc (G-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of c-Myc: 67 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

DATA



c-Myc (G-4): sc-373712. Western blot analysis of c-Myc expression in HeLa (A), Jurkat (B) and K-562 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Schweitzer, C.J., et al. 2012. Knockdown of the cellular protein LRPPRC attenuates HIV-1 infection. *PLoS ONE* 7: e40537.
- Kapadia, B., et al. 2018. Fatty acid synthase induced S6Kinase facilitates USP11-eIF4B complex formation for sustained oncogenic translation in DLBCL. *Nat. Commun.* 9: 829.
- Gao, S., et al. 2019. MiR-9 depletion suppresses the proliferation of osteosarcoma cells by targeting p16. *Int. J. Oncol.* 54: 1921-1932.
- Alajati, A., et al. 2020. CDCP1 overexpression drives prostate cancer progression and can be targeted *in vivo*. *J. Clin. Invest.* 130: 2435-2450.
- Zhang, Q., et al. 2021. P4HA1 regulates human colorectal cancer cells through HIF1 α -mediated Wnt signaling. *Oncol. Lett.* 21: 145.

STORAGE

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