SANTA CRUZ BIOTECHNOLOGY, INC.

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

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

c-Myc-, N-Myc- and L-Myc-encoded proteins function in cell proliferation, differentiation and neoplastic disease. Amplification of the c-Myc gene has been found in several types of human tumors including lung, breast and colon 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 exhibits 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

1. 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.
2. 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.
3. 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

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 IgG_1 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.

STORAGE

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

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).

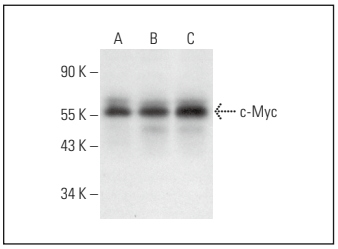
Suitable for use as control antibody for c-Myc siRNA (h): sc-29226, c-Myc siRNA (m): sc-29227, c-Myc siRNA (r): sc-270149, c-Myc shRNA Plasmid (h): sc-29226-SH, c-Myc shRNA Plasmid (m): sc-29227-SH, c-Myc shRNA Plasmid (r): sc-270149-SH, c-Myc shRNA (h) Lentiviral Particles: sc-29226-V, c-Myc shRNA (m)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

1. Schweitzer, C.J., et al. 2012. Knockdown of the cellular protein LRPPRC attenuates HIV-1 infection. PLoS ONE 7: e40537.
2. Gao, S., et al. 2019. MiR-9 depletion suppresses the proliferation of osteosarcoma cells by targeting p16. Int. J. Oncol. 54: 1921-1932.
3. Alajati, A., et al. 2020. CDCP1 overexpression drives prostate cancer progression and can be targeted *in vivo*. J. Clin. Invest. 130: 2435-2450.
4. Zhang, Q., et al. 2021. P4HA1 regulates human colorectal cancer cells through HIF1α-mediated Wnt signaling. Oncol. Lett. 21: 145.
5. Kayastha, F., et al. 2022. Novel eIF4A1 inhibitors with anti-tumor activity in lymphoma. Mol. Med. 28: 101.

RESEARCH USE

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