SANTA CRUZ BIOTECHNOLOGY, INC.

# c-Myc (0.N.222): sc-70463

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. 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 and Mxi1, and Mad-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.


## CHROMOSOMAL LOCATION

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

## SOURCE

c-Myc (0.N.222) is a mouse monoclonal antibody epitope corresponding to amino acids 408-439 within the C-terminal domain of c-Myc of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as phycoerythrin conjugate for flow cytometry, sc-70463 PE, 100 tests.

Available as agarose conjugate for immunoprecipitation, sc-70463 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-70463 HRP, 200 µg/1 ml.

Available as fluorescein (sc-70463 FITC) and rhodamine (sc-70463 TRITC) conjugates for immunofluorescence, 200 µg/1 ml.

Available as biotin conjugate, sc-70463 B, 200 µg/1 ml.

## STORAGE

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

## APPLICATIONS

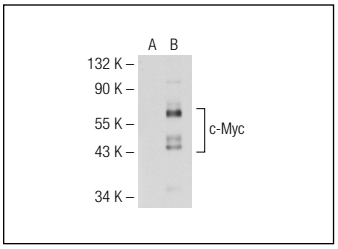
c-Myc (0.N.222) is recommended for detection of c-Myc p67 of mouse, rat, human, feline and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x $10^6$ cells).

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

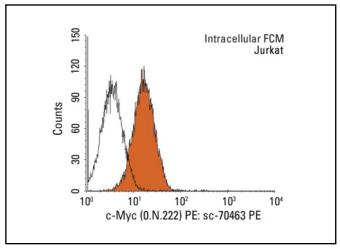
Molecular Weight of c-Myc: 67 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, c-Myc (h): 293T Lysate: sc-110502 or Jurkat whole cell lysate: sc-2204.

## DATA




c-Myc (0.N.222): sc-70463. Western blot analysis of c-Myc expression in non-transfected: sc-117752 (**A**) and human c-Myc transfected: sc-110502 (**B**) 293T whole cell lysates.




c-Myc (0.N.222) PE: sc-70463 PE. Intracellular FCM analysis of fixed and permeabilized Jurkat cells. Black line histogram represents the isotype control, normal mouse $IgG_1$: sc-2866.

## SELECT PRODUCT CITATIONS


1. Francalanci, F., et al. 2009. Structural and functional differences between KRIT1A and KRIT1B isoforms: a framework for understanding CCM pathogenesis. Exp. Cell Res. 315: 285-303.
2. Zheng, B., et al. 2009. Intergenic transcription by RNA polymerase II coordinates Pol IV and Pol V in siRNA-directed transcriptional gene silencing in *Arabidopsis*. Genes Dev. 23: 2850-2860.
3. Jeong, J.H. and Chang, Y.C. 2010. Ascochlorin, an isoprenoid antibiotic, induces $G_1$ arrest via downregulation of c-Myc in a p53-independent manner. Biochem. Biophys. Res. Commun. 398: 68-73.
4. Jeong, J.H., et al. 2010. p53-independent induction of $G_1$ arrest and $p21^{WAF1/CIP1}$ expression by ascofuranone, an isoprenoid antibiotic, through downregulation of c-Myc. Mol. Cancer Ther. 9: 2102-2113.
5. Fiorito, F., et al. 2011. 2,3,7,8-Tetrachlorodibenzo-p-dioxin induced autophagy in a bovine kidney cell line. Toxicology 290: 258-270.


## RESEARCH USE

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