

SANTA CRUZ BIOTECHNOLOGY, INC.

## c-Myc (9E10): sc-40



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.
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 8q24.12-q24.13; Myc (mouse) mapping to 15 D2-D3.

### SOURCE

c-Myc (9E10) 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<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Available as phycoerythrin conjugate for flow cytometry, sc-40 PE, 100 tests; agarose conjugate for immunoprecipitation, sc-40 AC, 500 µg/0.25 ml agarose in 1 ml; TransCruz reagent for ChIP application, sc-40 X, 200 µg/0.1 ml; HRP conjugate for Western blotting, sc-40 HRP, 200 µg/1 ml; fluorescein (sc-40 FITC) or rhodamine (sc-40 TRITC) conjugates for use in immunofluorescence, 200 µg/1 ml; and biotin conjugate, sc-40 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.

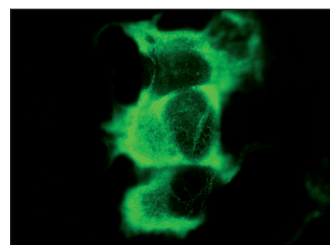
### APPLICATIONS

c-Myc (9E10) is recommended for detection of c-Myc p67 of mouse, rat and human 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells); non cross-reactive with N-Myc or L-Myc proteins.

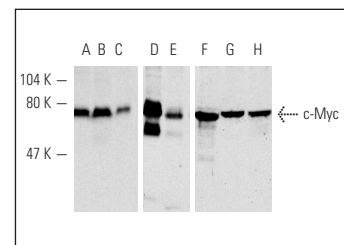
Widely used in combination with eukaryotic expression vectors encoding proteins with c-Myc (amino acids 408-439) epitope tag.

Suitable for use as control antibody for c-Myc siRNA (h): sc-29226 and c-Myc siRNA (m): sc-29227.

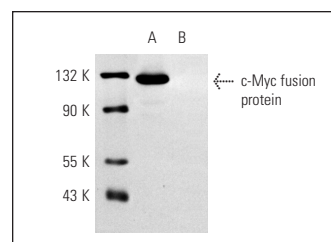
### DATA



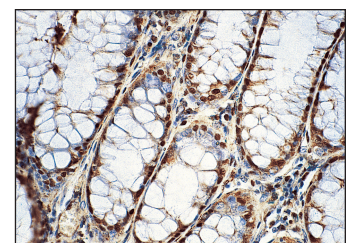
c-Myc (9E10): sc-40. Immunofluorescence staining of methanol-fixed COS cells transfected with c-Myc fusion protein showing cytoplasmic staining.



Western blot analysis of c-Myc expression in HeLa (A, D, F), Jurkat (B), K-562 (C) and NIH/3T3 (G) whole cell lysates and Jurkat (E, H) nuclear extracts. Antibodies tested include c-Myc (9E10): sc-40 (A-C), c-Myc (C-33): sc-42 (D, E) and c-Myc (N-262): sc-764 (F-H).



c-Myc (9E10): sc-40. Western blot analysis of whole cell lysates prepared from Cos cells transfected with a c-Myc fusion protein (A) and untransfected (B) cells.



c-Myc (9E10): sc-40. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human colon showing intense nuclear staining.

### SELECT PRODUCT CITATIONS

1. Cosma, M.P., et al. 2003. The multiple sulfatase deficiency gene encodes an essential and limiting factor for the activity of sulfatases. *Cell* 113: 445-456.
2. Katoh, H., et al. 2003. RhoG activates Rac1 by direct interaction with the Dock180-binding protein Elmo. *Nature* 424: 461-464.
3. Huang, T.T., et al. 2003. Sequential modification of NEMO/IKK γ by SUMO-1 and ubiquitin mediates NFκB activation by genotoxic stress. *Cell* 115: 565-576.

### RESEARCH USE

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