SANTA CRUZ BIOTECHNOLOGY, INC.

N-Myc (C-4): sc-515099



BACKGROUND

The v-Myc oncogene, initially identified in the MC29 avian retrovirus, causes myelocytomas, carcinomas, sarcomas and lymphomas, and belongs to a family of oncogenes conserved throughout evolution. In humans, the family consists of five genes: c-Myc, N-Myc, R-Myc, L-Myc and B-Myc. Amplification of the N-Myc gene has been found in human neuroblastomas and cell lines. The extent of N-Myc amplification correlates well with the stage of neuroblastoma disease. Immunological studies have shown that the human N-Myc gene encodes a nuclear phosphoprotein that exhibits relatively short (30 min) half life *in vivo*. The prototype member of the family, c-Myc p67, binds DNA in a sequence-specific manner subsequent to dimerization with a second basic region helix-loop-helix leucine zipper motif protein, designated Max.

REFERENCES

- 1. Schwab, M., et al. 1983. Amplified DNA with limited homology to Myc cellular oncogene is shared by human neuroblastoma cell lines and a neuroblastoma tumor. Nature 305: 245-248.
- Brodeur, G.M., et al. 1984. Amplification of N-Myc in untreated human neuroblastomas correlates with advanced disease stage. Science 224: 1121-1124.
- 3. Cole, M.D. 1986. The Myc oncogene: its role in transformation and differentiation. Annu. Rev. Genet. 20: 361-384.
- LeGouy, E., et al. 1987. Structure and expression of Myc-family genes. In Harlow, E., Alt, F.W. and Ziff, E., eds., Nuclear Oncogenes. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 144-151.

CHROMOSOMAL LOCATION

Genetic locus: MYCN (human) mapping to 2p24.3; Mycn (mouse) mapping to 12 A1.1.

SOURCE

N-Myc (C-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 443-464 within the C-terminus of N-Myc of human origin.

PRODUCT

Each vial contains 200 $\mu g~lg G_1$ 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-515099 X, 200 $\mu g/0.1$ ml.

Blocking peptide available for competition studies, sc-515099 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **D0 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.

APPLICATIONS

N-Myc (C-4) is recommended for detection of N-Myc of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 N-Myc siRNA (h): sc-36003, N-Myc siRNA (m): sc-38087, N-Myc shRNA Plasmid (h): sc-36003-SH, N-Myc shRNA Plasmid (m): sc-38087-SH, N-Myc shRNA (h) Lentiviral Particles: sc-36003-V and N-Myc shRNA (m) Lentiviral Particles: sc-38087-V.

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

Molecular Weight of N-Myc: 67 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, SH-SY5Y cell lysate: sc-3812 or BJAB whole cell lysate: sc-2207.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





N-Myc (C-4): sc-515099. Western blot analysis of N-Myc expression in Y79 (**A**), SJRH30 (**B**) and C6 (**C**) whole cell lysates. N-Myc (C-4): sc-515099. Western blot analysis of N-Myc expression in SH-SY5Y $({\rm A})$ and BJAB $({\rm B})$ whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hiraiwa, T., et al. 2019. Activation of cell migration via morphological changes in focal adhesions depends on shear stress in MYCN-amplified neuroblastoma cells. J. R. Soc. Interface 16: 20180934.



See **N-Myc (B8.4.B): sc-53993** for N-Myc antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.