SANTA CRUZ BIOTECHNOLOGY, INC.

N-Myc (NCM II 100): sc-56729

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

N-Myc (NCM II 100) is a mouse monoclonal antibody raised against recombinant N-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.

N-Myc (NCM II 100) is available conjugated to agarose (sc-56729 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56729 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56729 PE), fluorescein (sc-56729 FITC), Alexa Fluor® 488 (sc-56729 AF488), Alexa Fluor® 546 (sc-56729 AF546), Alexa Fluor® 594 (sc-56729 AF594) or Alexa Fluor® 647 (sc-56729 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56729 AF680) or Alexa Fluor® 790 (sc-56729 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

N-Myc (NCM II 100) is recommended for detection of N-Myc encoded proteins and their cleavage products 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

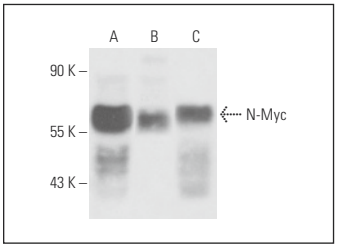
Molecular Weight of N-Myc: 67 kDa.

Positive Controls: N-Myc (m): 293T Lysate: sc-121906, IMR-32 cell lysate: sc-2409 or SH-SY5Y cell lysate: sc-3812.

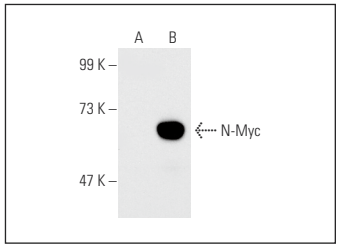
STORAGE

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

DATA



N-Myc (NCM II 100): sc-56729. Western blot analysis of N-Myc expression in IMR-32 (**A**), SH-SY5Y (**B**) and BE (2)-M17 (**C**) whole cell lysates.



N-Myc (NCM II 100): sc-56729. Western blot analysis of N-Myc expression in non-transfected: sc-117752 (**A**) and mouse N-Myc transfected: sc-121906 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kapeli, K. and Hurlin, P.J. 2011. Differential regulation of N-Myc and c-Myc synthesis, degradation, and transcriptional activity by the Ras/mitogen-activated protein kinase pathway. J. Biol. Chem. 286: 38498-38508.
2. Vilborg, A., et al. 2012. Wig-1, a novel regulator of N-Myc mRNA and N-Myc-driven tumor growth. Cell Death Dis. 3: e298.
3. Annibali, D., et al. 2012. A new module in neural differentiation control: two microRNAs upregulated by retinoic acid, miR-9 and -103, target the differentiation inhibitor ID2. PLoS ONE 7: e40269.
4. Neri, F., et al. 2012. Myc regulates the transcription of the PRC2 gene to control the expression of developmental genes in embryonic stem cells. Mol. Cell. Biol. 32: 840-851.
5. Masserot, C., et al. 2015. WT1 expression is inversely correlated with MYCN amplification or expression and associated with poor survival in non-MYCN-amplified neuroblastoma. Mol. Oncol. 10: 240-252.
6. Neri, F., et al. 2015. TET1 is controlled by pluripotency-associated factors in ESCs and downmodulated by PRC2 in differentiated cells and tissues. Nucleic Acids Res. 43: 6814-6826.
7. Fagnocchi, L., et al. 2016. A Myc-driven self-reinforcing regulatory network maintains mouse embryonic stem cell identity. Nat. Commun. 7: 11903.
8. Kaur, G., et al. 2016. Bromodomain and hedgehog pathway targets in small cell lung cancer. Cancer Lett. 371: 225-239.
9. Tan, J.K., et al. 2016. γ-tocotrienol acts as a BH3 mimetic to induce apoptosis in neuroblastoma SH-SY5Y cells. J. Nutr. Biochem. 31: 28-37.
10. Qi, D.L. and Cobrinik, D. 2016. MDM2 but not MDM4 promotes retinoblastoma cell proliferation through p53-independent regulation of MYCN translation. Oncogene 36: 1760-1769.

RESEARCH USE

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