

N-Myc (B8.4.B): sc-53993

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 (B8.4.B) is a mouse monoclonal antibody raised against N-terminal recombinant N-Myc of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

N-Myc (B8.4.B) is available conjugated to agarose (sc-53993 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53993 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53993 PE), fluorescein (sc-53993 FITC), Alexa Fluor® 488 (sc-53993 AF488), Alexa Fluor® 546 (sc-53993 AF546), Alexa Fluor® 594 (sc-53993 AF594) or Alexa Fluor® 647 (sc-53993 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53993 AF680) or Alexa Fluor® 790 (sc-53993 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

N-Myc (B8.4.B) is recommended for detection of N-Myc of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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 RAW 264.7 whole cell lysate: sc-2211.

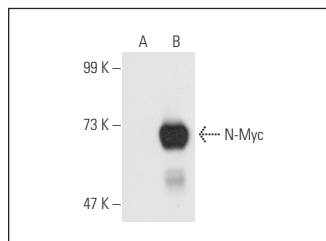
RESEARCH USE

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

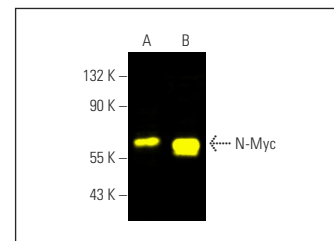
STORAGE

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

DATA



N-Myc (B8.4.B): sc-53993. 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.



N-Myc (B8.4.B) Alexa Fluor® 488: sc-53993 AF488. Direct fluorescent western blot analysis of N-Myc expression in RAW 264.7 (A) and IMR-32 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

- Westermann, F., et al. 2008. Distinct transcriptional MycN/c-Myc activities are associated with spontaneous regression or malignant progression in neuroblastomas. *Genome Biol.* 9: R150.
- King, B., et al. 2016. The ubiquitin ligase Huwe1 regulates the maintenance and lymphoid commitment of hematopoietic stem cells. *Nat. Immunol.* 17: 1312-1321.
- Rinaldi, L., et al. 2017. Mitochondrial AKAP1 supports mTOR pathway and tumor growth. *Cell Death Dis.* 8: e2842.
- Ferrucci, F., et al. 2018. MAX to MYCN intracellular ratio drives the aggressive phenotype and clinical outcome of high risk neuroblastoma. *Biochim. Biophys. Acta* 1861: 235-245.
- Montemurro, L., et al. 2019. A novel MYCN-specific antigene oligonucleotide deregulates mitochondria and inhibits tumor growth in MYCN-amplified neuroblastoma. *Cancer Res.* 79: 6166-6177.
- George, S.L., et al. 2020. Novel therapeutic strategies targeting telomere maintenance mechanisms in high-risk neuroblastoma. *J. Exp. Clin. Cancer Res.* 39: 78.
- Bownes, L.V., et al. 2021. EZH2 inhibition decreases neuroblastoma proliferation and *in vivo* tumor growth. *PLoS ONE* 16: e0246244.
- Lampis, S., et al. 2022. The MYCN inhibitor BGA002 restores the retinoic acid response leading to differentiation or apoptosis by the mTOR block in MYCN-amplified neuroblastoma. *J. Exp. Clin. Cancer Res.* 41: 160.
- Condurat, A.L., et al. 2023. Verteporfin-induced proteotoxicity impairs cell homeostasis and survival in neuroblastoma subtypes independent of YAP/TAZ expression. *Sci. Rep.* 13: 3760.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.