

Nmi (D-10): sc-377177

BACKGROUND

Nmi (for N-Myc interactor) is an interferon inducible protein that associates with multiple transcription factors, including c-Myc, n-Myc, Max, and c-Fos, which contain bHLH-ZIP, bHLH, or Zip domains. Nmi is ubiquitously expressed at low levels throughout various fetal and adult tissues and at higher levels in myeloid leukemias and cell lines overexpressing c-Myc. In addition to binding Myc proteins, Nmi also associates with the Stat family of transcription factors, where it enhances Stat-dependent transcription. Although Nmi lacks an intrinsic DNA binding or activation domain, Nmi enhances the transcriptional activity of the Stat proteins, in response to cytokine stimulation, by recruiting the Stat1 and Stat5 transcriptional coactivators, CREB-binding protein (CBP) and p300. *In vitro* studies indicate that Nmi, expressed in conjunction with CBP, enhances the transcriptional responsiveness of Stat5 to IL-2 stimulation five fold over CBP alone by increasing the affinity of Stat proteins for CBP/p300.

REFERENCES

1. Bao, J. and Zervos, A.S. 1996. Isolation and characterization of Nmi, a novel partner of Myc proteins. *Oncogene* 12: 2171-2176.
2. Lebrun, S.J., et al. 1998. Interferon-induced upregulation and cytoplasmic localization of Myc-interacting protein Nmi. *J. Interferon Cytokine Res.* 18: 767-771.
3. Sakamuro, D. and Prendergast, G.C. 1999. New Myc-interacting proteins: a second Myc network emerges. *Oncogene* 18: 2942-2954.
4. Zhu, M., et al. 1999. Functional association of Nmi with Stat5 and Stat1 in IL-2- and IFN γ -mediated signaling. *Cell* 96: 121-130.
5. Gingras, S., et al. 1999. p300/CBP is required for transcriptional induction by interleukin-4 and interacts with Stat6. *Nucleic Acids Res.* 27: 2722-2729.

CHROMOSOMAL LOCATION

Genetic locus: NMI (human) mapping to 2q23.3.

SOURCE

Nmi (D-10) is a mouse monoclonal antibody raised against amino acids 191-280 of Nmi of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ 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-377177 X, 200 μ g/0.1 ml.

Nmi (D-10) is available conjugated to agarose (sc-377177 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377177 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377177 PE), fluorescein (sc-377177 FITC), Alexa Fluor[®] 488 (sc-377177 AF488), Alexa Fluor[®] 546 (sc-377177 AF546), Alexa Fluor[®] 594 (sc-377177 AF594) or Alexa Fluor[®] 647 (sc-377177 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377177 AF680) or Alexa Fluor[®] 790 (sc-377177 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Nmi (D-10) is recommended for detection of Nmi of 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), immunohistochemistry (including paraffin-embedded sections) (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 Nmi siRNA (h): sc-36089, Nmi shRNA Plasmid (h): sc-36089-SH and Nmi shRNA (h) Lentiviral Particles: sc-36089-V.

Nmi (D-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

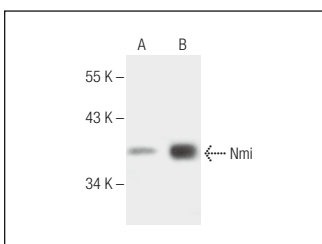
Molecular Weight of Nmi: 38 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A-431 nuclear extract: sc-2122 or K-562 nuclear extract: sc-2130.

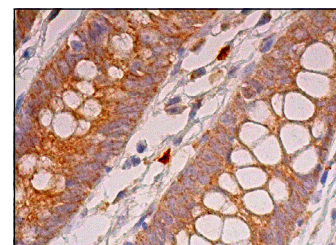
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Nmi (D-10): sc-377177. Western blot analysis of Nmi expression in HeLa (A) and A-431 (B) nuclear extracts.



Nmi (D-10): sc-377177. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and membrane staining of glandular cells.

STORAGE

Store at 4° C, ****DO 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.