

# Nmi (XX-22): sc-101100

## 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., et al. 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. Lee, N.D., et al. 1999. Subcellular localization of interferon-inducible Myc/Stat-interacting protein Nmi is regulated by a novel IFP 35 homologous domain. *J. Interferon Cytokine Res.* 19: 1245-1252.
4. 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.
5. Sakamuro, D., et al. 1999. New Myc-interacting proteins: a second Myc network emerges. *Oncogene* 18: 2942-2954.
6. Zhu, M., et al. 1999. Functional association of Nmi with Stat5 and Stat1 in IL-2- and IFN $\gamma$ -mediated signaling. *Cell* 96: 121-130.

## CHROMOSOMAL LOCATION

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

## SOURCE

Nmi (XX-22) is a mouse monoclonal antibody raised against recombinant Nmi of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

Nmi (XX-22) is recommended for detection of Nmi of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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

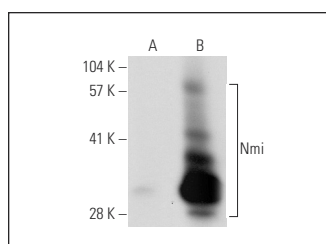
Molecular Weight of Nmi: 38 kDa.

Positive Controls: Nmi (h): 293 Lysate: sc-110568, A-431 nuclear extract: sc-2122 or K-562 nuclear extract: sc-2130.

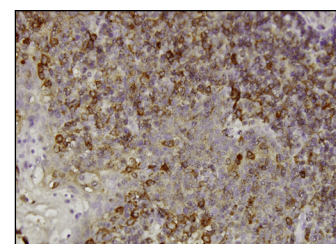
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Nmi (XX-22): sc-101100. Western blot analysis of Nmi expression in non-transfected: sc-110760 (A) and human Nmi transfected: sc-110568 (B) 293 whole cell lysates.



Nmi (XX-22): sc-101100. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Das, A., et al. 2015. Trim21 regulates Nmi-IFI35 complex-mediated inhibition of innate antiviral response. *Virology* 485: 383-392.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.