

# Nmi (K-17): sc-9483

## 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; Nmi (mouse) mapping to 2 C1.1.

## SOURCE

Nmi (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Nmi of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9483 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9483 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

Nmi (K-17) is recommended for detection of Nmi of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 siRNA (m): sc-36090, Nmi shRNA Plasmid (h): sc-36089-SH, Nmi shRNA Plasmid (m): sc-36090-SH, Nmi shRNA (h) Lentiviral Particles: sc-36089-V and Nmi shRNA (m) Lentiviral Particles: sc-36090-V.

Nmi (K-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

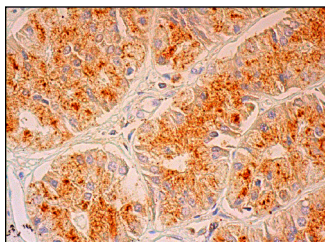
Molecular Weight of Nmi: 38 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Nmi (K-17): sc-9483. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic 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.