

# MICA/B (H-300): sc-20931

## BACKGROUND

MICA and MICB are stress-induced antigens that are related to major histocompatibility complex (MHC) class I molecules. MICA and MICB are frequently expressed in epithelial tumors. These highly glycosylated cell surface proteins are stably expressed without conventional class I peptide ligands or association with  $\beta$ -2-Microglobulin. The expression is induced on proliferating or heat shock-stressed epithelial cells. MICA and MICB are broadly recognized by intestinal epithelial V $\delta$ 1  $\gamma\delta$  T cells expressing variable TCRs, suggesting that these antigens may play a central role in the signaling of cellular distress to evoke immune responses in the intestinal epithelium.

## REFERENCES

- Bahram, S., et al. 1994. A second lineage of mammalian major histocompatibility complex class I genes. *Proc. Natl. Acad. Sci. USA* 91: 6259-6263.
- Bahram, S., et al. 1996. Nucleotide sequence of the human MHC class I MICA gene. *Immunogenetics* 44: 80-81.
- Bahram, S., et al. 1996. Genomic structure of the human MHC class I MICB gene. *Immunogenetics* 45: 161-162.
- Groh, V., et al. 1996. Cell stress-regulated human major histocompatibility complex class I gene expressed in gastrointestinal epithelium. *Proc. Natl. Acad. Sci. USA* 93: 12445-12450.
- Groh, V., et al. 1998. Recognition of stress-induced MHC molecules by intestinal epithelial  $\gamma\delta$  T cells. *Science* 279: 1737-1740.
- Steinle, A., et al. 1998. Diversification, expression and  $\gamma\delta$  T cell recognition of evolutionarily distant members of the MIC family of major histocompatibility complex class I-related molecules. *Proc. Natl. Acad. Sci. USA* 95: 12510-12515.
- Groh, V., et al. 1999. Broad tumor-associated expression and recognition by tumor-derived  $\gamma\delta$  T cells of MICA and MICB. *Proc. Natl. Acad. Sci. USA* 96: 6879-6884.

## CHROMOSOMAL LOCATION

Genetic locus: MICA/MICB (human) mapping to 6p21.33.

## SOURCE

MICA/B (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of MICA 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.

## 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

MICA/B (H-300) is recommended for detection of MICA and MICB 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

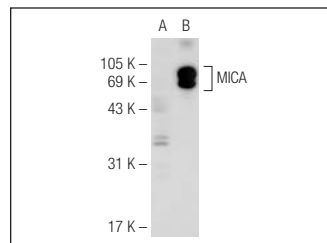
Suitable for use as control antibody for MICA/B siRNA (h): sc-43931, MICA/B shRNA Plasmid (h): sc-43931-SH and MICA/B shRNA (h) Lentiviral Particles: sc-43931-V.

Molecular Weight of truncated MICA/B: 38 kDa.

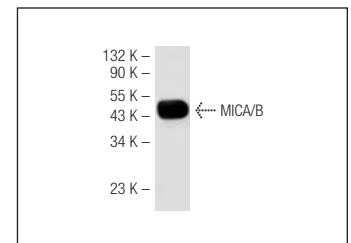
Molecular Weight of glycosylated MICA/B: 62 kDa.

Positive Controls: MICA (h2): 293T lysate: sc-113460, U-87 MG cell lysate: sc-2411 or MCF7 whole cell lysate: sc-2206.

## DATA



MICA/B (H-300): sc-20931. Western blot analysis of MICA expression in non-transfected: sc-117752 (A) and human MICA transfected: sc-113460 (B) 293T whole cell lysates.



MICA/B (H-300): sc-20931. Western blot analysis of MICA and MICB expression in MCF7 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Wu, J.D., et al. 2004. Prevalent expression of the immunostimulatory MHC class I chain-related molecule is counteracted by shedding in prostate cancer. *J. Clin. Invest.* 114: 560-568.
- Sconocchia, G., et al. 2005. The antileukemia effect of HLA-matched NK and NK-T cells in chronic myelogenous leukemia involves NKG2D-target-cell interactions. *Blood* 106: 3666-3672.

## PROTOCOLS

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