

MICA/B (A-6): sc-166959

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 β -2-Microglobulin. The expression is induced on proliferating or heat shock-stressed epithelial cells. MICA and MICB are broadly recognized by intestinal epithelial V δ 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

1. Bahram, S., Bresnahan, M., Geraghty, D.E. and Spies, T. 1994. A second lineage of mammalian major histocompatibility complex class I genes. *Proc. Natl. Acad. Sci. USA* 91: 6259-6263.
2. Bahram, S., Mizuki, N., Inoko, H. and Spies, T. 1996. Nucleotide sequence of the human MHC class I MICA gene. *Immunogenetics* 44: 80-81.
3. Bahram, S., Shiina, T., Oka, A., Tamiya, G. and Inoko, H. 1996. Genomic structure of the human MHC class I MICB gene. *Immunogenetics* 45: 161-162.
4. Groh, V., Bahram, S., Bauer, S., Herman, A., Beauchamp, M. and Spies, T. 1996. Cell stress-regulated human major histocompatibility complex class I gene expressed in gastrointestinal epithelium. *Proc. Natl. Acad. Sci. USA* 93: 12445-12450.
5. Groh, V., Steinle, A., Bauer, S. and Spies, T. 1998. Recognition of stress-induced MHC molecules by intestinal epithelial $\gamma\delta$ T cells. *Science* 279: 1737-1740.
6. Steinle, A., Groh, V. and Spies, T. 1998. Diversification, expression and gd 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.
7. Groh, V., Rhinehart, R., Secrist, H., Bauer, S., Grabstein, K.H. and Spies, T. 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 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 355-385 at the C-terminus of MICA of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

MICA/B (A-6) is recommended for detection of MICA and MICB 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) 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.

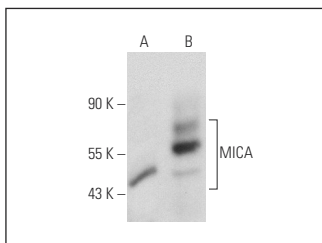
Molecular Weight of glycosylated MICA/B: 62 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, Jurkat whole cell lysate: sc-2204 or MICA (h): 293T Lysate: sc-113460.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MICA/B (A-6): sc-166959. Western blot analysis of MICA expression in non-transfected: sc-117752 (A) and human MICA transfected: sc-113460 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

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