

MICA/B (C-19): sc-5459

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., et al. 1994. A second lineage of mammalian major histocompatibility complex class I genes. *Proc. Natl. Acad. Sci. USA* 91: 6259-6263.
2. Bahram, S., et al. 1996. Nucleotide sequence of the human MHC class I MICA gene. *Immunogenetics* 44: 80-81.
3. Bahram, S., et al. 1996. Genomic structure of the human MHC class I MICB gene. *Immunogenetics* 45: 161-162.
4. 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.
5. Groh, V., et al. 1998. Recognition of stress-induced MHC molecules by intestinal epithelial $\gamma\delta$ T cells. *Science* 279: 1737-1740.
6. 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.
7. 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 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MICA of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5459 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MICA/B (C-19) 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 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).

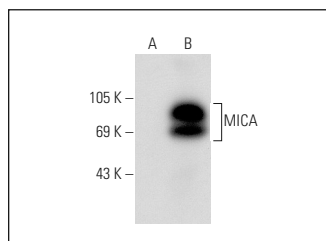
Suitable for use as control antibody for MICA/B siRNA (h): sc-43931, MICA/B shRNA Plasmid (h): sc-43931-SH and MICA/B shRNA (h) Lentiviral Particles: sc-43931-V.

Molecular Weight of truncated MICA/B: 38 kDa.

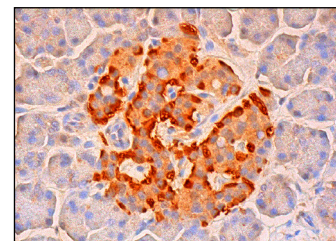
Molecular Weight of glycosylated MICA/B: 62 kDa.

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 (C-19): sc-5459. 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 (C-19): sc-5459. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans.

SELECT PRODUCT CITATIONS

1. Cebo, C., et al. 2006. The decreased susceptibility of Bcr/Abl targets to NK cell-mediated lysis in response to imatinib mesylate involves modulation of NKG2D ligands, GM1 expression and synapse formation. *J. Immunol.* 176: 864-872.
2. Viaud, S., et al. 2009. Dendritic cell-derived exosomes promote natural killer cell activation and proliferation: a role for NKG2D ligands and IL-15R α . *PLoS ONE* 4: e4942.

RESEARCH USE

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

PROTOCOLS

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