

# MIC2 (1C3): sc-53898

## BACKGROUND

MIC2, also designated CD99, is a T cell surface protein that is involved in the aggregation of lymphocytes. Two forms of MIC2, which are differentially expressed, are produced by alternative splicing. The major form induces cellular adhesion, whereas the truncated form inhibits the adhesion process. MIC2 regulates the LFA-1/ICAM-1-mediated adhesion of lymphocytes. Overexpression of the truncated form results in downregulated expression of LFA-1. Cells with downregulated MIC2 exhibit a Hodgkin's and Reed-Sternberg (H-RS) phenotype, indicating that MIC2 plays an important role in regulating cell function and morphology.

## REFERENCES

1. Posnett, D.N., et al. 1988. A novel method for producing anti-peptide antibodies. Production of site-specific antibodies to the T cell antigen receptor  $\beta$ -chain. *J. Biol. Chem.* 263: 1719-1725.
2. Gelin, C., et al. 1989. The E2 antigen, a 32 kDa glycoprotein involved in T cell adhesion processes, is the MIC2 gene product. *EMBO J.* 8: 3253-3259.
3. Banting, G.S., et al. 1989. The MIC2 gene product: epitope mapping and structural prediction analysis define an integral membrane protein. *Mol. Immunol.* 26: 181-188.
4. Weidner, N. and Tjoe, J. 1994. Immunohistochemical profile of monoclonal antibody O13: antibody that recognizes glycoprotein p30/32MIC2 and is useful in diagnosing Ewing's sarcoma and peripheral neuroepithelioma. *Am. J. Surg. Pathol.* 18: 486-494.
5. Reynolds, G.M., et al. 1994. Microwave oven antigen retrieval applied to the immunostaining of cytopathology specimens. *Cytopathology* 5: 345-358.
6. Hahn, J.H., et al. 1997. CD99 (MIC2) regulates the LFA-1/ICAM-1-mediated adhesion of lymphocytes and its gene encodes both positive and negative regulators of cellular adhesion. *J. Immunol.* 159: 2250-2258.
7. Kim, S.H., et al. 1998. Generation of cells with Hodgkin's and Reed-Sternberg phenotype through downregulation of CD99 (MIC2). *Blood* 92: 4287-4295.
8. Choi, E.Y., et al. 1998. Engagement of CD99 induces upregulation of TCR and MHC class I and II molecules on the surface of human thymocytes. *J. Immunol.* 161: 749-754.
9. Wingett, D., et al. 1999. A role for CD99 in T cell activation. *Cell. Immunol.* 193: 17-23.

## CHROMOSOMAL LOCATION

Genetic locus: CD99 (human) mapping to Xp22.33/Yp11.31.

## SOURCE

MIC2 (1C3) is a mouse monoclonal antibody raised against cells from stem T cell leukemia of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

MIC2 (1C3) is recommended for detection of MIC2 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MIC2 siRNA (h): sc-35933, MIC2 shRNA Plasmid (h): sc-35933-SH and MIC2 shRNA (h) Lentiviral Particles: sc-35933-V.

Molecular Weight of MIC2: 32 kDa.

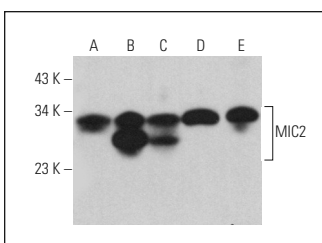
Positive Controls: U-937 cell lysate: sc-2239, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

## RECOMMENDED SUPPORT REAGENTS

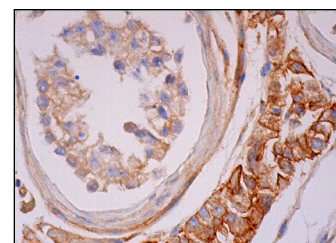
To ensure optimal results, the following support reagents are recommended:

- 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<sup>™</sup> 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



MIC2 (1C3): sc-53898. Western blot analysis of MIC2 expression in U-937 (A), MOLT-4 (B), Jurkat (C) and NTERA-2 cl.D1 (D) whole cell lysates and human testis tissue extract (E).



MIC2 (1C3): sc-53898. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing faint cytoplasmic staining of cells in seminiferous ducts and membrane and cytoplasmic staining of Leydig 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.

## PROTOCOLS

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