SANTA CRUZ BIOTECHNOLOGY, INC.

MIC2 (12E7): sc-53148

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

MIC2 (12E7) is a mouse monoclonal antibody raised against 24 amino acids of MIC2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MIC2 (12E7) is available conjugated to agarose (sc-53148 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53148 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53148 PE), fluorescein (sc-53148 FITC), Alexa Fluor® 488 (sc-53148 AF488), Alexa Fluor® 546 (sc-53148 AF546), Alexa Fluor® 594 (sc-53148 AF594) or Alexa Fluor® 647 (sc-53148 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53148 AF680) or Alexa Fluor® 790 (sc-53148 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

MIC2 (12E7) 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 µg per 100-500 µg 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.

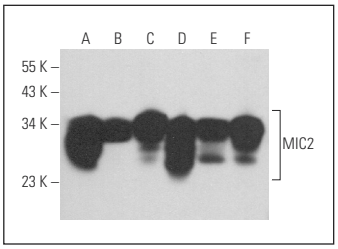
Molecular Weight of MIC2: 32 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Jurkat whole cell lysate: sc-2204 or CCRF-CEM cell lysate: sc-2225.

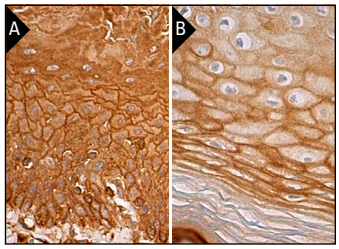
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MIC2 (12E7): sc-53148. Western blot analysis of MIC2 expression in MOLT-4 (**A**), U-937 (**B**), CCRF-CEM (**C**), Jurkat (**D**) and NTERA-2 cl.D1 (**E**) whole cell lysates and human testis tissue extract (**F**).



MIC2 (12E7): sc-53148. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing membrane and cytoplasmic staining of squamous epithelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human uterine cervix tissue showing membrane and cytoplasmic staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Swelam, W.M., et al. 2009. Oral solitary fibrous tumor: a cytogenetic analysis of tumor cells in culture with literature review. Cancer Genet. Cytogenet. 194: 75-81.
2. Oranger, A., et al. 2015. Human myeloma cell lines induce osteoblast downregulation of CD99 which is involved in osteoblast formation and activity. J. Immunol. Res. 2015: 156787.
3. Ventura, S., et al. 2016. CD99 regulates neural differentiation of Ewing sarcoma cells through miR-34a-Notch-mediated control of NFκB signaling. Oncogene 35: 3944-3954.
4. Bedau, T., et al. 2017. Ectodomain shedding of CD99 within highly conserved regions is mediated by the metalloprotease meprin β and promotes transendothelial cell migration. FASEB J. 31: 1226-1237.
5. De Feo, A., et al. 2019. Exosomes from CD99-deprived Ewing sarcoma cells reverse tumor malignancy by inhibiting cell migration and promoting neural differentiation. Cell Death Dis. 10: 471.
6. Balestra, T., et al. 2022. Targeting CD99 compromises the oncogenic effects of the chimera EWS-FLI1 by inducing reexpression of Zyxin and inhibition of GLI1 activity. Mol. Cancer Ther. 21: 58-69.

RESEARCH USE

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