SANTA CRUZ BIOTECHNOLOGY, INC.

# MIA (C-10): sc-377375

## BACKGROUND

Tumorigenesis is a process that is mediated by a network of membrane, cytosolic and nuclear associated factors, which regulate proliferation and cell-matrix interaction through signaling cascades. The phenotype of malignant melanomas *in vivo* depends on the global expression of stimulatory or inhibitory factors generated in both the tumors cells and their environment. One example, Melanoma inhibitory activity (cartilage-derived retinoic acid-sensitive protein (CD-RAP), MIA) is a Src homology 3 (SH3)-like domain containing protein that is secreted from chondrocytes and malignant melanoma cells. MIA is translated as a 131-amino acid pro-form and processed into a mature 107-amino acid protein after cleavage of a secretion signal. MIA is expressed during chondrogenesis and in mature chondrocytes, suggesting that MIA is necessary for normal cartilage cell phenotype. MIA mRNA is present in carcinomas of the colon, ovary, kidney, and head/neck, and may represent a marker to monitor melanomic activity.

## REFERENCES


1. Blesch, A., et al. 1994. Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA. Cancer Res. 54: 5695-5701.
2. Bosserhoff, A.K., et al. 1997. Mouse CD-RAP/MIA gene: structure, chromosomal localization, and expression in cartilage and chondrosarcoma. Dev. Dyn. 208: 516-525.
3. Perez, R.P., et al. 2000. Expression of melanoma inhibitory activity in melanoma and nonmelanoma tissue specimens. Hum. Pathol. 31: 1381-1388.
4. Lougheed, J.C., et al. 2001. Structure of melanoma inhibitory activity protein, a member of a recently identified family of secreted proteins. Proc. Natl. Acad. Sci. USA 98: 5515-5520.


## CHROMOSOMAL LOCATION

Genetic locus: MIA (human) mapping to 19q13.2; Mia (mouse) mapping to 7 A3.

## SOURCE

MIA (C-10) is a mouse monoclonal antibody raised against amino acids 62-131 mapping at the C-terminus of MIA of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MIA (C-10) is available conjugated to agarose (sc-377375 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377375 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377375 PE), fluorescein (sc-377375 FITC), Alexa Fluor® 488 (sc-377375 AF488), Alexa Fluor® 546 (sc-377375 AF546), Alexa Fluor® 594 (sc-377375 AF594) or Alexa Fluor® 647 (sc-377375 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377375 AF680) or Alexa Fluor® 790 (sc-377375 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## APPLICATIONS

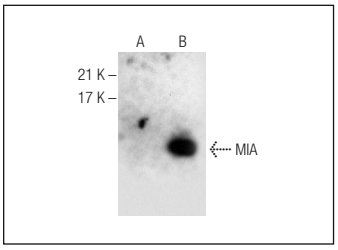
MIA (C-10) is recommended for detection of precursor and mature forms of MIA of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 MIA siRNA (h): sc-40742, MIA siRNA (m): sc-40743, MIA shRNA Plasmid (h): sc-40742-SH, MIA shRNA Plasmid (m): sc-40743-SH, MIA shRNA (h) Lentiviral Particles: sc-40742-V and MIA shRNA (m) Lentiviral Particles: sc-40743-V.

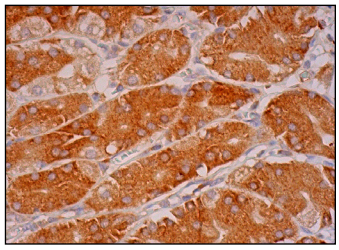
Molecular Weight of MIA: 12 kDa.

Positive Controls: MIA (m): 293T Lysate: sc-127154.

## DATA




MIA (C-10): sc-377375. Western blot analysis of MIA expression in non-transfected: sc-117752 (**A**) and mouse MIA transfected: sc-127154 (**B**) 293T whole cell lysates.



MIA (C-10): sc-377375. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS


1. Yu-Lee, L.Y., et al. 2019. Bone secreted factors induce cellular quiescence in prostate cancer cells. Sci. Rep. 9: 18635.
2. Bordignon, M., et al. 2020. Melanoma inhibitory activity (MIA) is able to induce vitiligo-like depigmentation in an *in vivo* mouse model by direct injection in the tail. Front. Med. 7: 430.
3. Shukla, A., et al. 2021. Injectable hydrogels of newly designed brush biopolymers as sustained drug-delivery vehicle for melanoma treatment. Signal Transduct. Target. Ther. 6: 63.


## 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 for detailed protocols and support products.