SANTA CRUZ BIOTECHNOLOGY, INC.

MIA (A-20): sc-17047

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.
5. Stoll, R., et al. 2001. The extracellular human melanoma inhibitory activity (MIA) protein adopts an SH3 domain-like fold. EMBO J. 20: 340-349.

CHROMOSOMAL LOCATION

Genetic locus: MIA (human) mapping to 19q13.2; Mia1 (mouse) mapping to 7 A3.

SOURCE

MIA (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MIA of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-17047 P, (100 µg 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

MIA (A-20) is recommended for detection of MIA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

MIA (A-20) is also recommended for detection of MIA in additional species, including equine, canine, bovine and porcine.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. El Fitori, J., et al. 2005. Melanoma inhibitory activity (MIA) increases the invasiveness of pancreatic cancer cells. Cancer Cell Int. 5: 3.
2. De Martino, I., et al. 2007. The MIA/CD-RAP gene expression is downregulated by the high-mobility group A proteins in mouse pituitary adenomas. Endocr. Relat. Cancer 14: 875-886.

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.