

MTSS1 (M7-P3A7): sc-101390

BACKGROUND

MTSS1 (metastasis suppressor 1), also known as MIM, MIM-A or MIM-B, is a 755 amino acid protein that contains one Actin-binding WH2 (Wiskott-Aldrich syndrome protein homology-2) domain and one IMD domain. Expressed in a variety of tissues including testis, thymus, prostate, spleen, colon, uterus and blood, MTSS1 is thought to bind to Actin and, via this binding, may affect the dynamics of the cytoskeleton. Through its association with the cytoskeleton, MTSS1 plays a role in controlling the progression and metastasis of carcinomas in various organ sites throughout the body and, when expressed at normal levels, functions as a tumor suppressor. Overexpression of MTSS1 results in the formation of abnormal Actin structures, an event that may lead to tumorigenesis. Three isoforms of MTSS1 exist due to alternative splicing events.

REFERENCES

- Lee, Y.G., et al. 2002. MIM, a potential metastasis suppressor gene in bladder cancer. *Neoplasia* 4: 291-294.
- Woodings, J.A., et al. 2003. MIM-B, a putative metastasis suppressor protein, binds to Actin and to protein tyrosine phosphatase δ . *Biochem. J.* 371: 463-471.
- Mattila, P.K., et al. 2003. Mouse MIM, a tissue-specific regulator of cytoskeletal dynamics, interacts with ATP-Actin monomers through its C-terminal WH2 domain. *J. Biol. Chem.* 278: 8452-8459.
- Nixdorf, S., et al. 2004. Expression and regulation of MIM (missing in metastasis), a novel putative metastasis suppressor gene, and MIM-B, in bladder cancer cell lines. *Cancer Lett.* 215: 209-220.

CHROMOSOMAL LOCATION

Genetic locus: MTSS1 (human) mapping to 8q24.13.

SOURCE

MTSS1 (M7-P3A7) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 679-688 of MTSS1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MTSS1 (M7-P3A7) is available conjugated to agarose (sc-101390 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101390 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101390 PE), fluorescein (sc-101390 FITC), Alexa Fluor[®] 488 (sc-101390 AF488), Alexa Fluor[®] 546 (sc-101390 AF546), Alexa Fluor[®] 594 (sc-101390 AF594) or Alexa Fluor[®] 647 (sc-101390 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-101390 AF680) or Alexa Fluor[®] 790 (sc-101390 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

MTSS1 (M7-P3A7) is recommended for detection of MTSS1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MTSS1 siRNA (h): sc-77651, MTSS1 shRNA Plasmid (h): sc-77651-SH and MTSS1 shRNA (h) Lentiviral Particles: sc-77651-V.

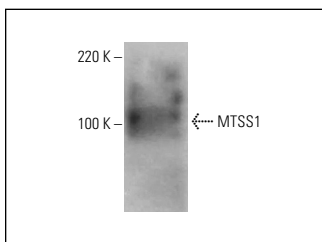
Molecular Weight of MTSS1: 82 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Calu6 cell extract.

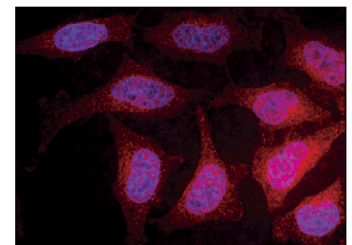
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



MTSS1 (M7-P3A7): sc-101390. Western blot analysis of MTSS1 expression in Calu6 cell extract.



MTSS1 (M7-P3A7): sc-101390. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Dobson, J.R., et al. 2014. hsa-mir-30c promotes the invasive phenotype of metastatic breast cancer cells by targeting NOV/CCN3. *Cancer Cell Int.* 14: 73.
- Kawabata Galbraith, K., et al. 2018. MTSS1 regulation of Actin-nucleating formin DAAM1 in dendritic filopodia determines final dendritic configuration of Purkinje cells. *Cell Rep.* 24: 95-106.e9.
- Vadakekolathu, J., et al. 2018. MTSS1 and SCAMP1 cooperate to prevent invasion in breast cancer. *Cell Death Dis.* 9: 344.

RESEARCH USE

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