**BACKGROUND**

The Mts1 gene encodes a small acidic Ca\(^{2+}\)-binding protein, Mts1 (also designated S100A4, calvasculin or metastasin). Mts1 belongs to the S100 family of small Ca\(^{2+}\)-binding proteins and is expressed in a cell-specific manner. Mts1 protein is involved in tumor progression and metastasis, and also has a significant stimulatory effect on angiogenesis. The level of Mts1 protein in serum increases with aging, suggesting that Mts1 may play a role in the induction of tumor progression via stimulation of angiogenesis. In addition, Mts1 cooperates with p53 in apoptosis induction by binding to the C-terminal regulatory domain of p53 to inhibit the DNA binding activity of p53. The ability of Mts1 to enhance p53-dependent apoptosis may accelerate the loss of p53 function in tumors. Thus, Mts1 can contribute to the development of a more aggressive phenotype during tumor progression.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: S100A4 (human) mapping to 1q21.3; S100a4 (mouse) mapping to 3 F1.

**SOURCE**

Mts1 (X9-7) is a mouse monoclonal antibody raised against recombinant Mts1 of human origin.

**PRODUCT**

Each vial contains 100 µg IgG; kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

Mts1 (X9-7) is recommended for detection of Mts1 of mouse, rat and 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Suitable for use as control antibody for Mts1 siRNA (h): sc-106781, Mts1 siRNA (m): sc-149694, Mts1 shRNA Plasmid (h): sc-106781-SH, Mts1 shRNA Plasmid (m): sc-149694-SH, Mts1 shRNA (h) Lentiviral Particles: sc-106781-V and Mts1 shRNA (m) Lentiviral Particles: sc-149694-V. Molecular Weight of Mts1: 11 kDa. Positive Controls: HeLa whole cell lysate: sc-2200 or human Mts1 transfected 293T whole cell lysate.

**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\(^{TM}\) 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\(^{®}\) Mounting Medium: sc-24941 or UltraCruz\(^{®}\) Hard-set Mounting Medium: sc-359850.

**DATA**

![Western blot analysis of Mts1 expression in human Mts1 transfected (A), non-transfected 293T (B) and HeLa (C) whole cell lysates.]

**SELECT PRODUCT CITATIONS**


**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.