

# Human MTSS1 Protein (aa1-250, His & MBP Tag)

Catalog Number: 13085-H10E



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

MIM; MIMA; MIMB

### Protein Construction:

A DNA sequence encoding the human MTSS1 (EAW92073.1) N-terminal fragment (Met 1-Ser 250) was fused with an N-terminal polyhistidine-tagged MBP tag at the N-terminus.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 80 % as determined by SDS-PAGE

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human MTSS1/MBP fusion protein consists of 647 amino acids and has a calculated molecular mass of 71.8 kDa. It migrates as an approximately 66 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

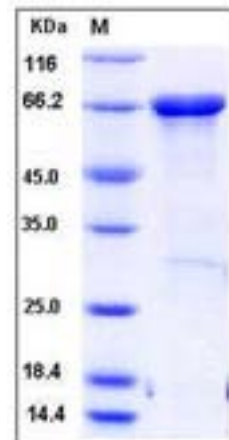
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

MTSS1 (Metastasis suppressor 1), also known as Missing in metastasis (MIM), is a tissue-specific regulator of plasma membrane dynamics. MTSS1 is well described for its function as a metastasis suppressor gene and is expressed in a variety of tissues. MTSS1 might be involved in shaping neuronal membranes in vivo. MTSS1 deforms phosphoinositide-rich membranes through its I-BAR domain and interacts with actin monomers through its WH2 domain. MTSS1/MIM was first identified as a metastasis suppressor missing in metastatic bladder carcinoma cell lines. MTSS1 is a prognostic indicator of disease-free survival in breast cancer patients and demonstrates the ability to play a role in governing the metastatic nature of breast cancer cells. MTSS1 may serve as a useful biomarker for the prediction of outcome of gastric cancer. The down-regulation of MTSS1 that may be caused by DNA methylation was also observed in many other types of cancer. Recent work proposed that MIM also potentiates Sonic hedgehog (Shh)-induced gene expression. MTSS1 as a multiple functional molecular player and has an important role in development, carcinogenesis and metastasis.

## References

1. Hayn-Leichsenring G, *et al.* (2011) Cellular distribution of metastasis suppressor 1 and the shape of cell bodies are temporarily altered in Engrailed-2 overexpressing cerebellar Purkinje cells. *Neuroscience*. 189: 68-78.
2. Xie F, *et al.* (2011) MTSS1: a multifunctional protein and its role in cancer invasion and metastasis. *Front Biosci (Schol Ed)*. 3: 621-31.
3. Saarikangas J, *et al.* (2011) Missing-in-metastasis MIM/MTSS1 promotes actin assembly at intercellular junctions and is required for integrity of kidney epithelia. *J Cell Sci*. 2124(Pt 8): 1245-55.

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