

## MST1 Monoclonal antibody

Catalog Number: 66663-1-Ig

Featured Product

3 Publications

## Basic Information

<b>Catalog Number:</b> 66663-1-Ig	<b>GenBank Accession Number:</b> BC093768	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 150ul , Concentration: 1900 µg/ml by Nanodrop and 1000 µg/ml by Bradford method using BSA as the standard;	<b>GeneID (NCBI):</b> 6789	<b>CloneNo.:</b> 2G11C1
<b>Source:</b> Mouse	<b>Full Name:</b> serine/threonine kinase 4	<b>Recommended Dilutions:</b> WB 1:2000-1:10000 IHC 1:250-1:1000 IF 1:200-1:800
<b>Isotype:</b> IgG2a	<b>Calculated MW:</b> 487 aa, 56 kDa	
<b>Immunogen Catalog Number:</b> AG17738	<b>Observed MW:</b> 52-56 kDa	

## Applications

## Tested Applications:

IF, IHC, WB, ELISA

## Cited Applications:

IHC, WB

## Species Specificity:

Human, Mouse , Rat

## Cited Species:

human, mouse

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Positive Controls:

**WB :** HeLa cells, HepG2 cells, HEK-293 cells, Jurkat cells, HSC-T6 cells, RAW 264.7 cells

**IHC :** human prostate cancer tissue,

**IF :** PC-3 cells,

## Background Information

Mammalian STE20-like serine-threonine kinase MST1, encoded by the STK4 gene, is a multifunctional protein. MST1 and its closest paralogs MST2 (encoded by the STK3 gene), MST3, and MST4 are members of the Class II Germinal Center Family of Protein Kinases. STK3/4 and LATS1/2 (large tumor suppressor 1 and 2) are core kinase components of the Hippo tumor suppressor pathway in mammals. In the conventional Hippo pathway, the STK3/4 and LATS1/2 signaling cascade phosphorylates and inactivates the transcriptional coactivator YAP1 (yes associated protein 1) and its close paralog WWTR1. YAP1 and WWTR1 do not have DNA binding domains and they exert their biological outputs, such as cell proliferation and survival, by interacting with the TEAD1-4 transcription factors. Lines of evidence have indicated that dysregulation or loss of STK4/Hippo signaling is linked to developmental disorders and carcinogenesis with poor prognosis. STK4 is a stress-induced kinase and it can be activated in response to cell-death inducers. Autophosphorylation of STK4 at Thr183 (Thr180 in STK3) in the activation loop is a key activation mechanism for STK4/3 because phosphorylation of Thr183/180 causes the cleavage of STK4 by caspases under apoptotic conditions. The caspase-cleavage results in a more active STK4 protein (STK4-N, an amino-terminally truncated STK4), which localizes into the nucleus and induces apoptosis through histone modifications and chromatin condensations.

## Notable Publications

Author	Pubmed ID	Journal	Application
Sebastian Mana-Capelli	30266805	J Biol Chem	WB
Nour Abou Nader	36405866	J Endocr Soc	IHC
Wei Wang	34669997	Biofactors	WB

## Storage

## Storage:

Store at -20°C. Stable for one year after shipment.

## Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

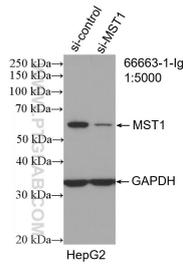
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

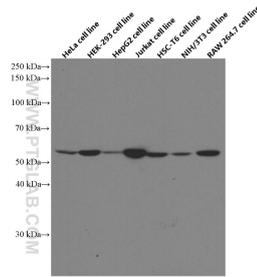
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

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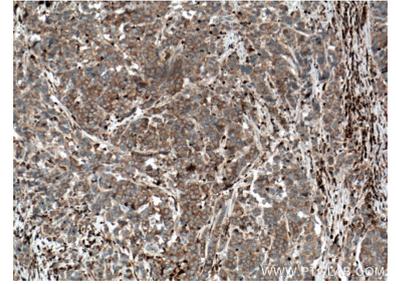
## Selected Validation Data



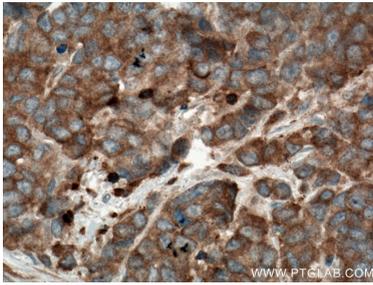
WB result of MST1 antibody (66663-1-Ig; 1:5000; incubated at room temperature for 1.5 hours) with sh-Control and sh-MST1 transfected HepG2 cells.



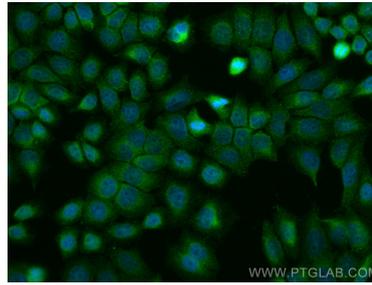
Various lysates were subjected to SDS PAGE followed by western blot with 66663-1-Ig (MST1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue slide using 66663-1-Ig (MST1 antibody) at dilution of 1:500 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue slide using 66663-1-Ig (MST1 antibody) at dilution of 1:500 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed PC-3 cells using MST1 antibody (66663-1-Ig. Clone: 2G11C1 ) at dilution of 1:400 and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).