

For Research Use Only

# Phospho-MST1 (Thr183)/MST2 (Thr180) Recombinant antibody



Catalog Number: 80093-1-RR **4 Publications**

## Basic Information

<b>Catalog Number:</b> 80093-1-RR	<b>GenBank Accession Number:</b> BC005231	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 500 µg/ml	<b>GeneID (NCBI):</b> 6789	<b>CloneNo.:</b> 1P6
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q13043	<b>Recommended Dilutions:</b> WB 1:2000-1:10000
<b>Isotype:</b> IgG	<b>Full Name:</b> serine/threonine kinase 4	
	<b>Calculated MW:</b> 56 kDa	
	<b>Observed MW:</b> 59 kDa	

## Applications

<b>Tested Applications:</b> FC, WB, ELISA	<b>Positive Controls:</b> WB : Jurkat cells, HeLa cells, Calyculin A treated HeLa cells, Staurosporine treated Ramos cells, Staurosporine treated Jurkat cells
<b>Cited Applications:</b> WB	
<b>Species Specificity:</b> Human	
<b>Cited Species:</b> human, mouse	

## 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
Tianxin Zhao	36493639	J Hazard Mater	WB
Fang-fang Yu	34555722	Ecotoxicol Environ Saf	WB
Qianwen Bu	38453038	Exp Eye Res	WB

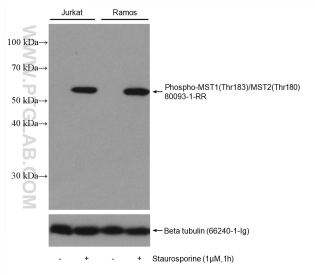
## Storage

**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

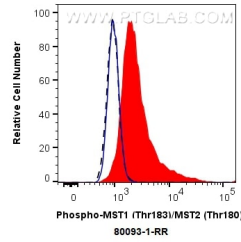
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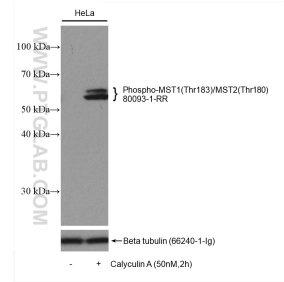
## Selected Validation Data



Non-treated Ramos and Jurkat and Staurosporine treated Ramos and Jurkat cells were subjected to SDS PAGE followed by western blot with 80093-1-RR (Phospho-MST1 (Thr183)/MST2 (Thr180) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



1X10<sup>6</sup> HeLa cells untreated (dashed lines) or treated with Calyculin A (red) were intracellularly stained with 0.25 ug Anti-Human Phospho-MST1 (Thr183)/MST2 (Thr180) (80093-1-RR, Clone:1P6) labeled with FlexAble CoraLite® Plus 555 Antibody Labeling Kit for Rabbit IgG (KFA002), or 0.25 ug Control Antibody (blue). Cells were fixed with 4% PFA and permeabilized with 90% MeOH.



Non-treated HeLa and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 80093-1-RR (Phospho-MST1 (Thr183)/MST2 (Thr180) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.