



Rabbit Anti-Phospho-Mst1(Thr183) + Mst2(Thr180) antibody

SL3294R

Product Name:	Phospho-Mst1(Thr183) + Mst2(Thr180)
Chinese Name:	磷酸化蛋白激酶MST抗体
Alias:	MST1/MST2 (phospho T183 + T180); MST1/MST2 (phospho T183); MST1/MST2 (phospho Thr183); Kinase responsive to stress; Krs2; Mammalian STE20 like protein kinase 1; Mammalian STE20-like protein kinase 1; Mammalian sterile 20 like 1; MST-1; Serine/threonine kinase 4; Serine/threonine protein kinase Krs 2; Serine/threonine-protein kinase 4; Serine/threonine-protein kinase Krs-2; STE20 like kinase MST1; Serine/threonine-protein kinase 4 18kDa subunit; Serine/threonine-protein kinase 4 37kDa subunit; STE20-like kinase MST1; STK4; STK4_HUMAN; MST1/N; MST1/C; TIAC; YSK3.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Cow,Horse,Rabbit,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	19/37/56kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human Mst1 around the phosphorylation site of Thr183:RN(p-T)VI
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized

	antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>MST1/STK4 encoded by this gene is a cytoplasmic kinase that is structurally similar to the yeast Ste20p kinase, which acts upstream of the stress-induced mitogen-activated protein kinase cascade. The encoded protein can phosphorylate myelin basic protein and undergoes autophosphorylation. A caspase-cleaved fragment of the encoded protein has been shown to be capable of phosphorylating histone H2B. The particular phosphorylation catalyzed by this protein has been correlated with apoptosis, and it's possible that this protein induces the chromatin condensation observed in this process. [provided by RefSeq].</p> <p>MST2/STK3, Protein kinase activation is a frequent response of cells to treatment with growth factors, chemicals, heat shock, or apoptosis-inducing agents. This protein kinase activation presumably allows cells to resist unfavorable environmental conditions. The yeast 'sterile 20' (Ste20) kinase acts upstream of the mitogen-activated protein kinase (MAPK) cascade that is activated under a variety of stress conditions. MST2 was identified as a kinase that is activated by the proapoptotic agents strausporine and FAS ligand (MIM 134638) (Taylor et al., 1996[PubMed 8816758]; Lee et al., 2001 [PubMed 11278283]).[supplied by OMIM].</p> <p>Function: Stress-activated, pro-apoptotic kinase which, following caspase-cleavage, enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation. Key component of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. STK3/MST2 and STK4/MST1 are required to repress proliferation of mature hepatocytes, to prevent activation of facultative adult liver stem cells (oval cells), and to inhibit tumor formation (By similarity). Phosphorylates 'Ser-14' of histone H2B (H2BS14ph) during apoptosis. Phosphorylates FOXO3 upon oxidative stress, which results in its nuclear translocation and cell death initiation. Phosphorylates MOBKL1A, MOBKL1B and RASSF2. Phosphorylates TNNT3 (cardiac Tn-I) and alters its binding affinity to TNNT1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T). Phosphorylates FOXO1 on 'Ser-212' and regulates its activation and stimulates transcription of PMAIP1 in a FOXO1-dependent manner. Phosphorylates SIRT1 and inhibits SIRT1-mediated p53/TP53 deacetylation, thereby promoting p53/TP53 dependent transcription and apoptosis upon DNA damage. Acts as an inhibitor of PKB/AKT1. Phosphorylates AR on 'Ser-650' and suppresses its activity by intersecting with PKB/AKT1 signaling and antagonizing formation of AR-chromatin complexes.</p>

Subunit:

Homodimer; mediated via the coiled-coil region. Interacts with NORE1, which inhibits autoactivation. Interacts with and stabilizes SAV1. Interacts with RASSF1. Interacts with FOXO3. Interacts with RASSF2 (via SARAH domain). Interacts with AR, PKB/AKT1, TNNI3 and SIRT1.

Subcellular Location:

Cytoplasm. Nucleus. Note=The caspase-cleaved form cycles between the nucleus and cytoplasm.

Tissue Specificity:

Expressed in prostate cancer and levels increase from the normal to the malignant state (at protein level). Ubiquitously expressed.

Post-translational modifications:

Autophosphorylated on serine and threonine residues. Phosphorylation at Thr-120 and Thr-387 by PKB/AKT1, leads to inhibition of its: kinase activity, nuclear translocation and autophosphorylation at Thr-183. It also diminishes its cleavage by caspases and its ability to phosphorylate FOXO3.

Proteolytically cleaved by caspase-3 during apoptosis at Asp-326 and Asp-349 resulting in a 37 kDa or a 39 kDa subunit respectively. The 39 kDa subunit is further cleaved into the 37 kDa form. Proteolytic cleavage results in kinase activation and nuclear translocation of the truncated form (MST1/N). It is less likely that cleavage at Asp-349 is a prerequisite for activation as this site is not conserved in the murine ortholog.

DISEASE:

T-cell immunodeficiency, recurrent infections, and autoimmunity with or without cardiac malformations (TIIAC) [MIM:614868]: A primary T-cell immunodeficiency syndrome characterized by progressive loss of naive T cells, recurrent bacterial, viral, and fungal infections, warts, and abscesses, autoimmune manifestations, and cardiac malformations, including atrial septal defect. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily.

Contains 1 protein kinase domain.

Contains 1 SARAH domain.

SWISS:

Q13043, Q13188

Gene ID:

6789

Database links:

[Entrez Gene: 6789](#)Human

[Entrez Gene: 58231](#)Mouse

[Entrez Gene: 311622](#)Rat

[Omim: 604965](#)Human

[SwissProt: Q13043](#)Human

[SwissProt: Q9JI11](#)Mouse

[Unigene: 472838](#)Human

[Unigene: 479158](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

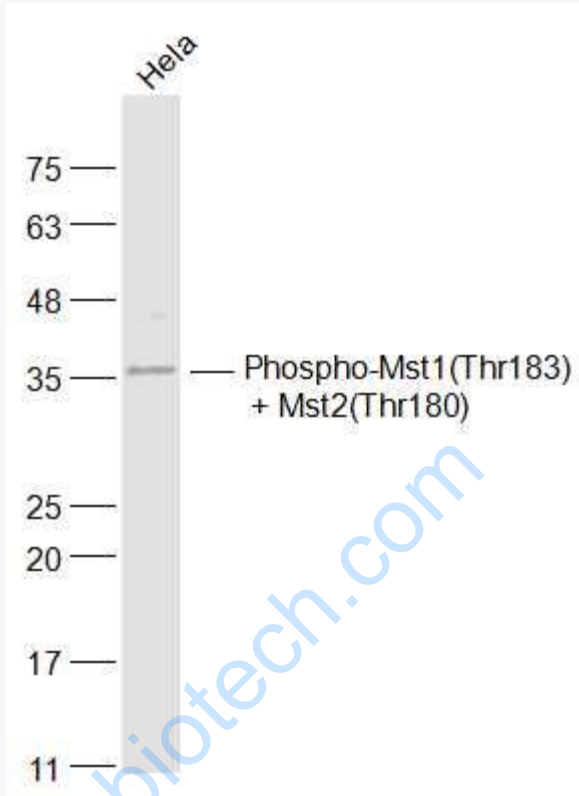
????蛋白激酶MST(Mammalian Sterile20-like Kinase)

是各种组织均有表达的丝氨酸/苏氨酸(Serine/Threonine)蛋白激酶。属于人丝氨酸/苏氨酸激酶的哺乳动物STE20样激酶(MST), MST1和MST2在caspase蛋白酶激活的Apoptosis的上游和下游都起作用。

????Apoptosis中MST1被caspase蛋白酶切割和激活, 能诱导Apoptosis形态上的改变如染色质凝聚。哺乳动物STE20样激酶2 (Mst2)

与Mst1蛋白激酶很相似,有近90%的同源性。

Picture:



Sample:

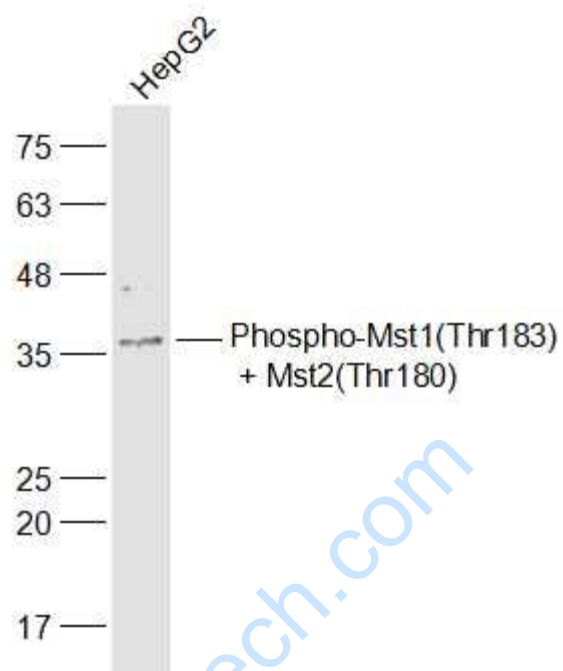
HeLa(Human) Cell Lysate at 30 ug

Primary: Anti-Phospho-Mst1(Thr183) + Mst2(Thr180) (SL3294R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 19/37/56 kD

Observed band size: 37 kD



Sample:

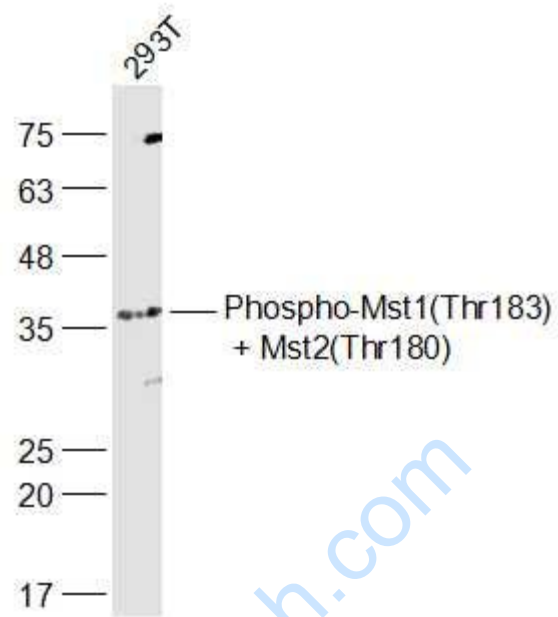
HepG2(Human) Cell Lysate at 30 ug

Primary: Anti-Phospho-Mst1(Thr183) + Mst2(Thr180) (SL3294R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 19/37/56 kD

Observed band size: 37 kD



Sample:

293T(Human) Cell Lysate at 30 ug

Primary: Anti-Phospho-Mst1(Thr183) + Mst2(Thr180) (SL3294R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 19/37/56 kD

Observed band size: 37 kD