10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MST-1/Krs-2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10504

Specification

MST-1/Krs-2 Antibody - Product Information

Application	**WB**
Primary Accession	Q13043
Other Accession	AAB17262
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**55630**

MST-1/Krs-2 Antibody - Additional Information

Gene ID 6789

Application & Usage	**Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. Jurkat cell lysate can be used as a positive control. The antibody recognizes MST-1/Krs-2 at 50-60 kDa in samples from human, mouse and rat origins. Reactivity to other species has not been tested.**

Other Names
MST1 , MST-1 , KRS2 , STK4 , DKFZp686A2068 , YSK3

Target/Specificity
MST-1/Krs-2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.2mg/ml) protein A purified rabbit anti-MST-1/Krs2 polyclonal antibody in phosphate-buffered saline (PBS) containing 0.1% BSA, 30% glycerol, and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
MST-1/Krs-2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MST-1/Krs-2 Antibody - Protein Information

Name STK4

Synonyms KRS2, MST1

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 TNNI3 (cardiac Tn-I) and alters its binding affinity to TNNC1 (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.

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

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

MST-1/Krs-2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MST-1/Krs-2 Antibody - Images

MST-1/Krs-2 Antibody - Background

MST-1 (Mammalian STE20-like kinase 1) is a serine/threonine kinase that has been implicated to play a role in chromatin condensation. Its C-terminal contains nuclear export signals which are released upon caspase mediated cleavage. The N-terminus portion of MST-1 then translocates to the nucleus and will promote chromatin condensation. The full length of MST-1 is localized to the cytoplasm.