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MST2 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP7923a

Specification

MST2 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q13188

MST2 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 6788

Other Names
Serine/threonine-protein kinase 3, Mammalian STE20-like protein kinase 2, MST-2, STE20-like kinase MST2, Serine/threonine-protein kinase Krs-1, Serine/threonine-protein kinase 3 36kDa subunit, MST2/N, Serine/threonine-protein kinase 3 20kDa subunit, MST2/C, STK3, KRS1, MST2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7923a was selected from the C-term region of human MST2 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MST2 Antibody (C-term) Blocking Peptide - Protein Information

Name STK3

Synonyms KRS1, MST2

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 (PubMed:23972470).

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. Phosphorylates NKX2-1 (By similarity). Phosphorylates NEK2 and plays a role in centrosome disjunction by regulating the localization of NEK2 to centrosome, and its ability to phosphorylate CROCC and CEP250 (PubMed:21723128). In conjunction with SAV1, activates the transcriptional activity of ESR1 through the modulation of its phosphorylation. Positively regulates RAF1 activation via suppression of the inhibitory phosphorylation of RAF1 on 'Ser-259'. Phosphorylates MOBKL1A and RASSF2. Phosphorylates MOBKL1B on 'Thr-74'. Acts cooperatively with MOBKL1B to activate STK38.

Cellular Location
Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=The caspase-cleaved form cycles between nucleus and cytoplasm (PubMed:19525978, PubMed:11278283). Phosphorylation at Thr-117 leads to inhibition of nuclear translocation (PubMed:19525978)

Tissue Location
Expressed at high levels in adult kidney, skeletal and placenta tissues and at very low levels in adult heart, lung and brain tissues.

MST2 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

MST2 Antibody (C-term) Blocking Peptide - Images

MST2 Antibody (C-term) Blocking Peptide - Background

MST2, a member of the STE20 subfamily of Ser/Thr protein kinases, is an oxidant stress-activated serine/threonine kinase that may play a role in the response to environmental stress. It is expressed at high levels in adult kidney, skeletal and placenta tissues and at very low levels in adult heart, lung and brain tissues. The protein contains 1 SARAH domain.

MST2 Antibody (C-term) Blocking Peptide - References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).Taylor, L.K., et al., Proc. Natl. Acad. Sci. U.S.A. 93(19):10099-10104 (1996).Schultz, S.J., et al., Cell Growth Differ. 4(10):821-830 (1993).Creasy, C.L., et al., Gene 167 (1-2), 303-306 (1995).