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MST2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7923a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13188
Reactivity	Human, Mouse, Monkey, Rat
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1196
Calculated MW	56301
Antigen Region	396-425

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	This MST2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 396-425 amino acids from the C-terminal region of human MST2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MST2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	STK3 (HGNC:11406)
Function	Stress-activated, pro-apoptotic kinase which, following caspase-cleavage,

	enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation (PubMed:11278283, PubMed:8566796, PubMed:8816758). 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:15688006, PubMed:16930133, PubMed:23972470, PubMed:28087714, PubMed:29063833, PubMed:30622739). Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration (PubMed:15688006, PubMed:16930133, PubMed:23972470, PubMed:28087714). 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:21076410, PubMed:21723128). In conjunction with SAV1, activates the transcriptional activity of ESR1 through the modulation of its phosphorylation (PubMed:21104395). Positively regulates RAF1 activation via suppression of the inhibitory phosphorylation of RAF1 on 'Ser-259' (PubMed:20212043). Phosphorylates MOBKL1A and RASSF2 (PubMed:19525978). Phosphorylates MOBKL1B on 'Thr- 74'. Acts cooperatively with MOBKL1B to activate STK38 (PubMed:18328708, PubMed:18362890).
Cellular Location	Cytoplasm. Nucleus Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=The caspase-cleaved form cycles between nucleus and cytoplasm (PubMed:11278283, PubMed:19525978) 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.

Background

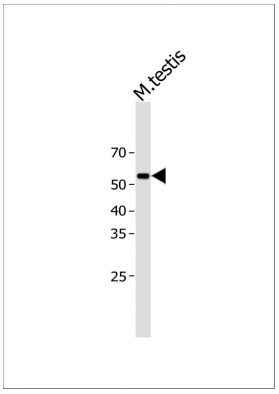
MST2, a member of the STE20 subfamily of Ser/Thr protein kinases, is an oxidant stress-activated serine/threonine kinase that may play a role in the response to environmental stress. It is expressed at high levels in adult kidney, skeletal and placenta tissues and at very low levels in adult heart, lung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

References

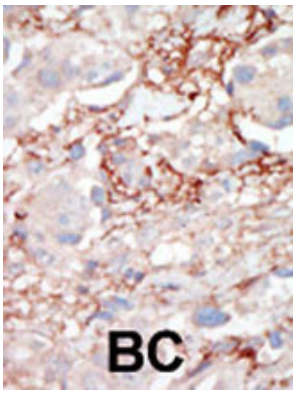
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Taylor, L.K., et al., Proc. Natl. Acad. Sci. U.S.A. 93(19):10099-10104 (1996).
Schultz, S.J., et al., Cell Growth Differ. 4(10):821-830 (1993).
Creasy, C.L., et al., Gene 167 (1-2), 303-306 (1995).

Images

All lanes: Anti-MST2 Antibody (C-term) at 1:1000 dilution + Mouse testis lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band



size: 56 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- The mammalian Ste20-like kinase 2 (Mst2) modulates stress-induced cardiac hypertrophy.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.