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# Anti-MST1/2 (Phospho-T183) Antibody

Catalog # AP53874

## Product Information

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|---|---|
| **Application** | WB, IHC |
| **Primary Accession** | Q13188 |
| **Other Accession** | Q13043 |
| **Reactivity** | Human, Mouse, Rat, Zebrafish, Pig, Chicken, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 56301 |

## Additional Information

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| **Gene ID** | 6788 |
| **Other Names** | STK3; KRS1; MST2; Serine/threonine-protein kinase 3; Mammalian STE20-like protein kinase 2; MST-2; STE20-like kinase MST2; Serine/threonine-protein kinase Krs-1; STK4; KRS2; MST1; Serine/threonine-protein kinase 4; Mammalian STE20-like protein kinase 1; MST-1; STE20-like kinase MST1; Serine/threonine-protein kinase Krs-2 |
| **Target/Specificity** | KLH-conjugated synthetic phosphopeptide corresponding to residues surrounding T183 of human MST1/2 protein. The exact sequence is proprietary. |
| **Dilution** | WB~~1/500 - 1/1000 IHC~~1/50 - 1/200 |
| **Format** | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

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| **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).

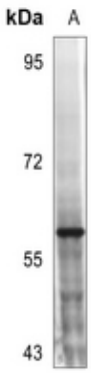
**Cellular Location**

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).

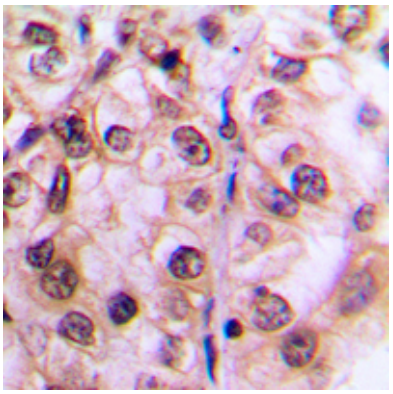
**Tissue Location**

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

## Images

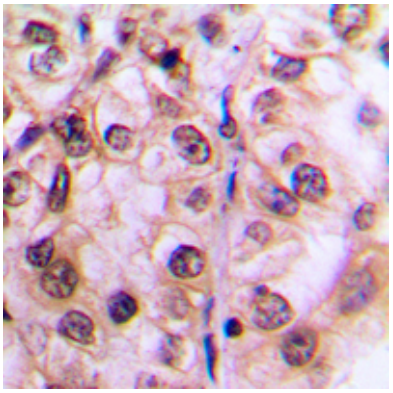



Western blot analysis of MST1/2 (Phospho-T183) expression in HEK293T (A) whole cell lysates. (Predicted band size: 56; 55 kD; Observed band size: 65 kD)



Immunohistochemical analysis of MST1/2 (Phospho-T183) staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunohistochemical analysis of MST1/2 (pT183) staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated



using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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