

#3952 Store at -20C

MST2 Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk B	Endogenous	60	Rabbit	#Q13188	6788

Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:25
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	MST2 Antibody recognizes endogenous levels of total MST2 protein. This antibody does not cross-react with MST1, MST3, or MST4 proteins.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal residues of human MST2 protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Mammalian sterile-20-like (MST) kinases are upstream regulators of mitogen-activated protein kinase (MAPK) signaling pathways that regulate multiple cellular processes, including proliferation, apoptosis, migration, and cytoskeletal rearrangement (1). This family of serine/threonine kinases includes MST1 (STK4) and MST2 (STK3), two functionally related proteins with conserved amino-terminal kinase domains and carboxy-terminal regulatory domains that contain nuclear export signals (1-3). During apoptosis, caspase-mediated cleavage of MST1/2 removes the inhibitory regulatory domain, triggering autophosphorylation and activation of the kinase domain, which is translocated to the nucleus. Nuclear translocation of the active kinase induces chromatin condensation and other events associated with apoptotic progression (4). Research studies indicate that MST1/2 are orthologous to <i>Drosophila</i> Hippo (Hpo), one of the core regulatory proteins in the Hippo signaling pathway. This evolutionarily conserved program controls tissue growth and organ size by regulating cell proliferation, apoptosis, and stem cell self-renewal. The mammalian Hippo signaling pathway involves a kinase cascade, where the MST1/2 kinases and the SAV1 scaffold protein form a complex that leads to phosphorylation and activation of LATS1/2. The LATS1/2 kinases phosphorylate YAP and TAZ, promoting cytoplasmic sequestration and inhibition of these transcription coactivators (5).	
Background References	1. Dan, I. et al. (2001) <i>Trends Cell Biol</i> 11, 220-30. 2. Creasy, C.L. et al. (1996) <i>J Biol Chem</i> 271, 21049-53. 3. Lee, K.K. and Yonehara, S. (2002) <i>J Biol Chem</i> 277, 12351-8. 4. Ura, S. et al. (2001) <i>Proc Natl Acad Sci U S A</i> 98, 10148-53. 5. Zhao, B. et al. (2011) <i>Nat Cell Biol</i> 13, 877-83.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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