Revision 1

Store at -20C

#3822

MST4 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk B	Endogenous	52	Rabbit	#Q9P289	51765

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

MST4 Antibody recognizes endogenous levels of total MST4 protein independent of phosphorylation. The antibody does not cross-react with MST1-3 proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal residues of human MST4 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 biological processes, including apoptosis, morphogenesis, cell migration, and cytoskeletal rearrangements (1). This group of serine/threonine kinases includes a pair of closely related proteins (MST1, MST2) that are functionally distinct from the more distantly related MST3 and MST4 kinases. All four MST kinases share a conserved amino-terminal kinase domain and carboxy-terminal regulatory and interaction domains (1-3). At least three of these kinases (MST1-3) promote apoptosis and are activated by caspase cleavage followed by nuclear translocation of the active kinase. MST1/2 kinases play a key role in the Hippo signaling pathway, an evolutionarily conserved program that controls organ size by regulating cell proliferation, apoptosis, and stem cell self renewal (4).
Mammalian Sterile 20-like kinase 4 (MST4, STK26, MASK) is a Golgi-localized kinase that is cleaved by caspase-3 *in vitro*. While its potential role in apoptosis is unclear, research studies indicate that MST4 is involved in MAPK and EGF pathway signaling (5,6). MST4 and the serine/threonine kinase YSK1 (STK25) localize to the Golgi apparatus following association with the Golgi scaffold protein GM130. Binding to GM130 activates MST4 through autophosphorylation at Thr178 (7).

Background References

1. Dan, I. et al. (2001) *Trends Cell Biol* 11, 220-30.
2. Creasy, C.L. et al. (1996) *J Biol Chem* 271, 21049-53.
3. Lee, K.K. and Yonehara, S. (2002) *J Biol Chem* 277, 12351-8.
4. Zhao, B. et al. (2011) *Nat Cell Biol* 13, 877-83.
5. Dan, I. et al. (2002) *J Biol Chem* 277, 5929-39.
6. Sung, V. et al. (2003) *Cancer Res* 63, 3356-63.
7. Preisinger, C. et al. (2004) *J Cell Biol* 164, 1009-20.

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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **B:** Bovine

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Limited Uses

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