abcam

Product datasheet

Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] ab51134

KO VALIDATED Recombinant RabMAb

24 References 7 Images

Overview

Product name	Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y]
Description	Rabbit monoclonal [EP1465Y] to Serine/threonine-protein kinase 4/MST-1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, ICC/IF, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Serine/threonine-protein kinase 4/MST-1 aa 1-100 (N terminal). The exact sequence is proprietary.
Positive control	WB: Jurkat, Ramos and HeLa cell lysate and mouse spleen, rat spleen and human urinary bladder tissues. ICC/IF: Raw264.7 cells. IHC-P:Human gastric carcinoma. IP: Jurkat cell lysate. Flow Cyt (intra): HeLa cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.21% BSA
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EP1465Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab51134 in the following tested applications.

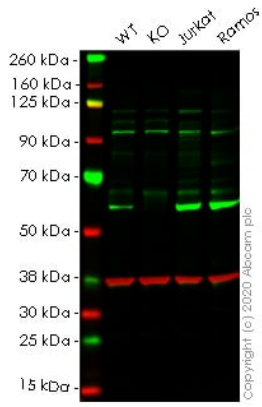
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/50.
WB		1/10000. Detects a band of approximately 59 kDa (predicted molecular weight: 56 kDa).
IHC-P		1/50 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. We strongly recommend that customers perform an antigen retrieval step.
ICC/IF		1/100 - 1/250.
IP		1/30 - 1/100.

Target

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 MST1/MST2, 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. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. MST1/MST2 are required to repress proliferation of mature hepatocytes, to prevent activation of facultative adult liver stem cells (oval cells), and to inhibit tumor formation (By similarity). Phosphorylates 'Ser-14' of histone H2B (H2BS14ph) during apoptosis. Phosphorylates FOXO3 upon oxidative stress, which results in its nuclear translocation and cell death initiation.
Tissue specificity	Ubiquitously expressed.
Sequence similarities	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily. Contains 1 protein kinase domain. Contains 1 SARAH domain.
Post-translational modifications	Autophosphorylated on serine and threonine residues.
Cellular localization	Cytoplasm. Nucleus. The caspase-cleaved form cycles between the nucleus and cytoplasm.

Images



Western blot - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

All lanes : Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : STK4 knockout HeLa cell lysate
Lane 3 : Jurkat cell lysate
Lane 4 : Ramos cell lysate

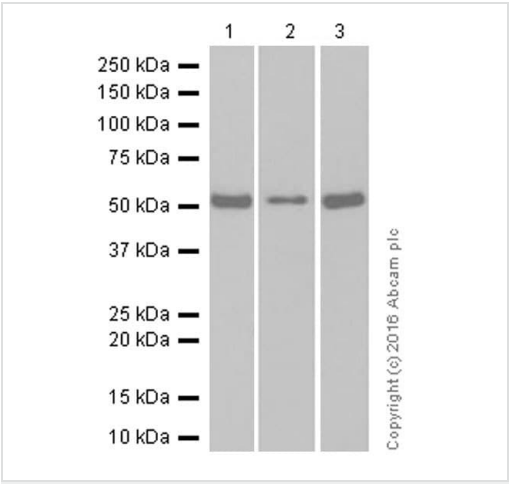
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 56 kDa

Lanes 1-4: Merged signal (red and green). Green - ab51134 observed at 52 kDa. Red - loading control **ab8245** observed at 37 kDa.

ab51134 Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] was shown to specifically react with MST-1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265442** (knockout cell lysate **ab258215**) was used. Wild-type and MST-1 knockout samples were subjected to SDS-PAGE. ab51134 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

All lanes : Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134) at 1/50000 dilution

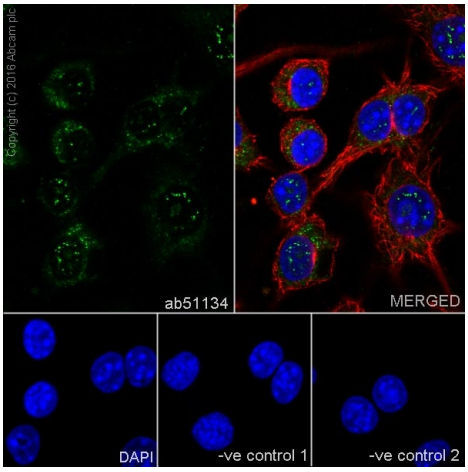
Lane 1 : Jurkat (human acute T cell leukemia) whole cell lysate
Lane 2 : Mouse spleen
Lane 3 : Rat spleen

Lysates/proteins at 1/20 dilution per lane.

Secondary
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 56 kDa

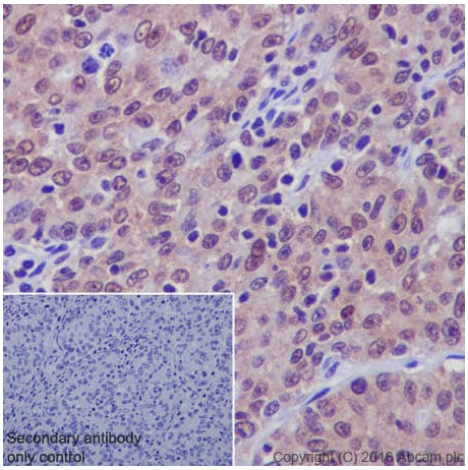
Diluting and blocking buffer: 5% NFDM/TBST



Immunocytochemistry/ Immunofluorescence - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

ab51134 staining Serine/threonine-protein kinase 4/MST-1 in Raw264.7 (mouse abelson murine leukemia virus-induced tumor) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 100% methanol and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/100. A goat anti rabbit IgG (Alexa Fluor® 488) (**ab150077**) was used as the secondary antibody at a concentration of 1/1000. **ab7291** anti-Tubulin (mouse mAb) (1/1000) and **ab150120** AlexaFluor®594 Goat anti-Mouse secondary (1/1000) were used as counterstains for primary antibody ab51134 and secondary antibody **ab150077** respectively and DAPI was used as a nuclear counterstain.

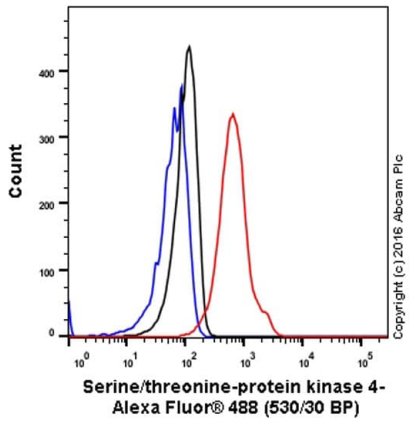
Negative control 1: Rabbit primary antibody and anti-mouse secondary antibody (**ab150120**)
Negative control 2: Mouse primary antibody (**ab7291**) and anti-rabbit secondary antibody (**ab150077**)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

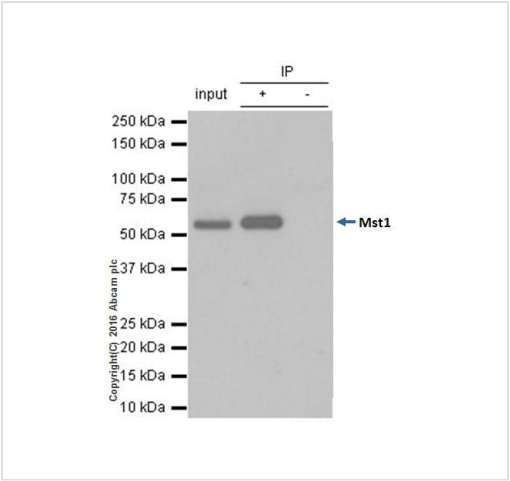
ab51134 staining Serine/threonine-protein kinase 4/MST-1 in human gastric carcinoma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/50. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at a dilution of 1/500.

Negative control 1: PBS in place of primary antibody.



Flow Cytometry (Intracellular) - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

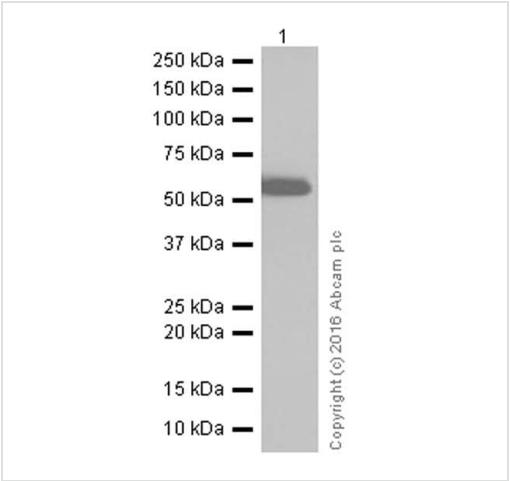
Intracellular Flow Cytometry analysis of HeLa cells labelling Serine/theronine-protein kinase 4/MST-1 with purified ab51134 at a dilution of 1/50 (red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. An Alexa Flour® 488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunoprecipitation - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

ab51134 immunoprecipitating Serine/threonine-protein kinase 4/MST-1. 10µg of cell lysate was incubated with primary antibody at a dilution of 1/30 and VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at a dilution of 1/1000.

Lane 1: Jurkat (human acute T cell leukemia) whole cell lysate (10ug)
Lane 2: Jurkat (human acute T cell leukemia) whole cell lysate
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab51134 in Jurkat (human acute T cell leukemia) whole cell lysate



Western blot - Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134)

Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134) at 1/10000 dilution + HeLa (human cervix adenocarcinoma) whole cell lysate at 20 µg

Secondary
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 56 kDa

Diluting and blocking buffer: 5% NFDM/TBST

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors