abcam

Product datasheet

Anti-STK3/MST-2 antibody [3067C3a] ab71960

KO VALIDATED

1 References 3 Images

Overview

Product name	Anti-STK3/MST-2 antibody [3067C3a]
Description	Mouse monoclonal [3067C3a] to STK3/MST-2
Host species	Mouse
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human, Recombinant fragment
Immunogen	Recombinant fragment corresponding to Human STK3/MST-2. Database link: **Q13188**
Positive control	WB: HeLa, HAP1 and NIH3T3 cell lysates; Recombinant human STK3/MST-2.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.05% Sodium azide Constituents: 1% BSA, 0.03% Potassium phosphate, 0.812% Sodium chloride, 0.1312% Sodium phosphate, 0.0225% Potassium chloride, PBS
Purity	Protein G purified
Purification notes	ab71960 was purified using protein G column chromatography from culture supernatant of hybridoma cultured in a medium containing bovine IgG-depleted (approximately 95%) fetal bovine serum and filtered through a 0.22µm membrane.
Clonality	Monoclonal

Clone number	3067C3a
Isotype	IgG2b

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab71960 in the following tested applications.

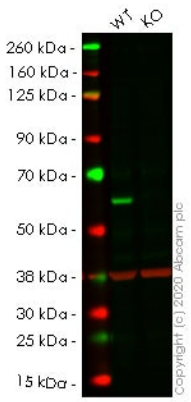
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 37 kDa (predicted molecular weight: 56 kDa).

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. Phosphorylates NKX2-1.
Tissue specificity	Expressed at high levels in adult kidney, skeletal and placenta tissues and at very low levels in adult heart, lung and brain tissues.
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.
Cellular localization	Cytoplasm. Nucleus. The caspase-cleaved form cycles between nucleus and cytoplasm.

Images



Western blot - Anti-STK3/MST-2 antibody [3067C3a] (ab71960)

All lanes : Anti-STK3/MST-2 antibody [3067C3a] (ab71960) at 1/10000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : STK3 knockout HeLa cell lysate

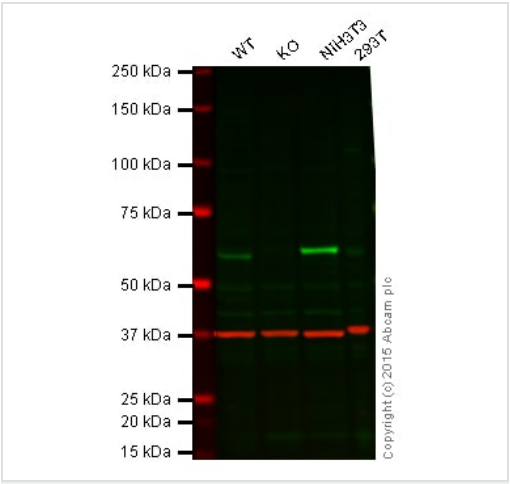
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 56 kDa
Observed band size: 56 kDa

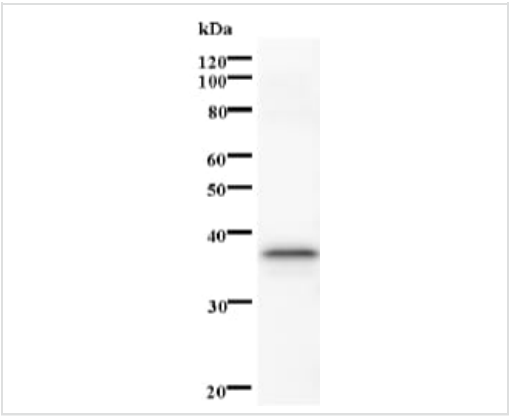
Lanes 1- 2: Merged signal (red and green). Green - ab71960 observed at 56 kDa. Red - Anti-GAPDH antibody[EPR16891] - Loading Control (**ab181602**) observed at 37 kDa.

ab71960 was shown to react with STK3/MST-2 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab265082** (knockout cell lysate **ab257714**) was used. Wild-type HeLa and STK3 knockout HeLa cell lysates were subjected to SDS-PAGE. ab71960 and Anti-GAPDH antibody[EPR16891] - Loading Control (**ab181602**) were incubated overnight at 4°C at a 1 in 10000 Dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye®800CW) preadsorbed (**ab216772**) and Goat Anti-Rabbit IgG H&L (IRDye®680RD) preadsorbed (**ab216777**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-STK3/MST-2 antibody [3067C3a] (ab71960)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: STK3/MST-2 knockout HAP1 cell lysate (20 µg)
Lane 3: NIH/3T3 cell lysate (20 µg)
Lane 4: 293T cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab71960 observed at 56 kDa. Red - loading control, **ab181602**, observed at 37 kDa.
ab71960 was shown to recognize STK3/MST-2 when STK3/MST-2 knockout samples were used, along with additional cross-reactive bands. Wild-type and STK3/MST-2 knockout samples were subjected to SDS-PAGE. ab71960 and **ab181602** (loading control to STK3/MST-2) were diluted 1 µg/mL and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed **ab216772** and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed **ab216777** secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-STK3/MST-2 antibody [3067C3a] (ab71960)

Anti-STK3/MST-2 antibody [3067C3a] (ab71960) + immunising recombinant protein

Predicted band size: 56 kDa
Observed band size: 37 kDa

The molecular weight of the band on the western blot does not correspond to the molecular weight of the natural protein because only a fragment of the protein was used.

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