abcam

Product datasheet

Anti-LATS1/WARTS antibody ab70561

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Overview

Product name	Anti-LATS1/WARTS antibody
Description	Rabbit polyclonal to LATS1/WARTS
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Horse, Dog, Chimpanzee, Gorilla, Chinese hamster
Immunogen	Synthetic peptide corresponding to Human LATS1/WARTS aa 50-100. Database link: **O95835**
Positive control	WB: Whole cell lysate from HeLa Cells, mouse CT26.WT and TCMK-1 cells
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: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	ab70561 was affinity purified using an epitope specific to LATS1/WARTS immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab70561 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	★★★★☆ **(1)**	1/5000 - 1/15000. Detects a band of approximately 160 kDa (predicted molecular weight: 127 kDa).
IP		Use at 2-5 µg/mg of lysate.

Target

Function Negative regulator of YAP1 in the Hippo signaling pathway that 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. Phosphorylation of YAP1 by LATS1 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. Acts as a tumor suppressor which plays a critical role in maintenance of ploidy through its actions in both mitotic progression and the G1 tetraploidy checkpoint. Negatively regulates G2/M transition by down-regulating CDK1 kinase activity. Involved in the control of p53 expression. Affects cytokinesis by regulating actin polymerization through negative modulation of LIMK1. May also play a role in endocrine function.

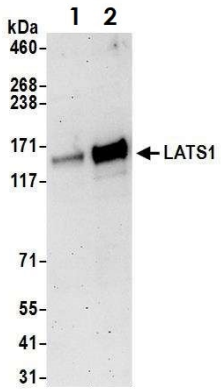
Tissue specificity Expressed in all adult tissues examined except for lung and kidney.

Sequence similarities Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.
Contains 1 AGC-kinase C-terminal domain.
Contains 1 protein kinase domain.
Contains 1 UBA domain.

Post-translational modifications Autophosphorylated and phosphorylated during M-phase of the cell cycle. Phosphorylated by STK3/MST2 at Ser-909 and Thr-1079, which results in its activation. Phosphorylation at Ser-464 by NUAK1 and NUAK2 leads to decreased protein level and is required to regulate cellular senescence and cellular ploidy.

Cellular localization Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Localizes to the centrosomes throughout interphase but migrates to the mitotic apparatus, including spindle pole bodies, mitotic spindle, and midbody, during mitosis.

Images



Western blot - Anti-LATS1/WARTS antibody (ab70561)

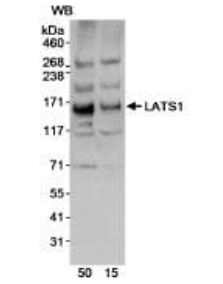
All lanes : Anti-LATS1/WARTS antibody (ab70561) at 0.2 µg/ml

Lane 1 : CT26.WT whole cell lysate
Lane 2 : TCMK-1 whole cell lysate

Lysates/proteins at 50 µg per lane.

Predicted band size: 127 kDa

Exposure time: 3 minutes

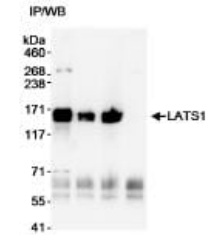


Western blot - Anti-LATS1/WARTS antibody (ab70561)

All lanes : Anti-LATS1/WARTS antibody (ab70561) at 0.02 µg/ml

Lane 1 : Whole cell lysate from Hela cells at 50 µg
Lane 2 : Whole cell lysate from Hela cells at 15 µg

Predicted band size: 127 kDa
Observed band size: 160 kDa
Additional bands at: 117 kDa, 200 kDa, 268 kDa, 71 kDa. We are unsure as to the identity of these extra bands.



Immunoprecipitation - Anti-LATS1/WARTS antibody (ab70561)

Detection of human LATS1/WARTS by Immunoprecipitation in whole cell lysate from HeLa cells (1 mg, 1/4 of immunoprecipitate loaded/lane), using ab70561 at 3 µg/mg of lysate (lane 1). LATS1/WARTS was also immunoprecipitated with an other LATS1/WARTS antibody (lanes 2) and with **ab70562** (lane 3) using 3 µg/mg lysate.
Lane 4: Control IgG immunoprecipitate.
Subsequent Western blot detection of LATS1/WARTS was performed using ab70561 at 0.1 µg/ml.

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