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LATS1/2 antibody
Catalog # AP74307

Specification

LATS1/2 antibody - Product Information

Application	**WB**
Primary Accession	O95835
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**

LATS1/2 antibody - Additional Information

Gene ID 9113

Other Names
Serine/threonine-protein kinase LATS1 (EC 2.7.11.1) (Large tumor suppressor homolog 1) (WARTS protein kinase) (h-warts)

Dilution
WB~~WB 1:500-2000, ELISA 1:10000-20000

Format
Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions
-20℃

LATS1/2 antibody - Protein Information

Name LATS1 {ECO:0000312|EMBL:AAD16882.1}

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 (PubMed:10518011, PubMed:10831611, PubMed:18158288, PubMed:26437443, PubMed:28068668). 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 (PubMed:18158288, PubMed:26437443, PubMed:28068668). Phosphorylation of YAP1 by LATS1 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration

(PubMed:18158288, PubMed:26437443, PubMed:28068668). 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 (PubMed:15122335, PubMed:19927127). Negatively regulates G2/M transition by down-regulating CDK1 kinase activity (PubMed:9988268). Involved in the control of p53 expression (PubMed:15122335). Affects cytokinesis by regulating actin polymerization through negative modulation of LIMK1 (PubMed:15220930). May also play a role in endocrine function. Plays a role in mammary gland epithelial cell differentiation, both through the Hippo signaling pathway and the intracellular estrogen receptor signaling pathway by promoting the degradation of ESR1 (PubMed:28068668). Acts as an activator of the NLRP3 inflammasome by mediating phosphorylation of 'Ser-265' of NLRP3 following NLRP3 palmitoylation, promoting NLRP3 activation by NEK7 (PubMed:39173637).

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

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

LATS1/2 antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

LATS1/2 antibody - Images

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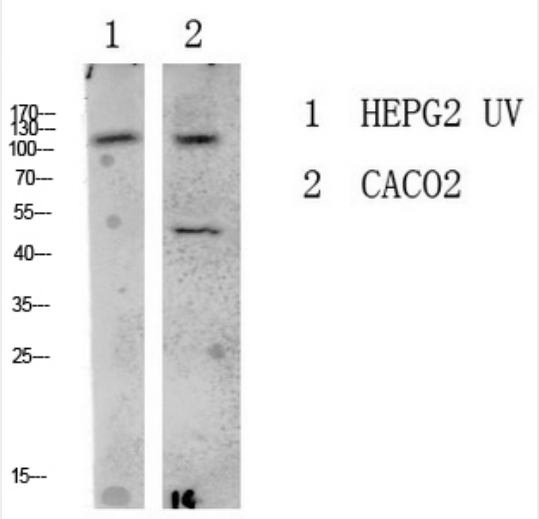

LATS1/2 antibody - Background

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. Plays a role in mammary gland epithelial cells differentiation, both through the Hippo signaling pathway and the intracellular estrogen receptor signaling pathway by promoting the degradation of ESR1 (PubMed:28068668).