

**LATS1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7035a****Specification**

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**LATS1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [O95835](#)**LATS1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 9113**Other Names**

Serine/threonine-protein kinase LATS1, Large tumor suppressor homolog 1, WARTS protein kinase, h-warts, LATS1 {ECO:0000312|EMBL:AAD168821}

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7035a](/product/products/AP7035a) was selected from the N-term region of human LATS1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**LATS1 Antibody (N-term) Blocking Peptide - 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. 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 cell differentiation, both through the Hippo signaling pathway and the intracellular estrogen receptor signaling pathway by promoting the degradation of ESR1 (PubMed: <http://www.uniprot.org/citations/28068668> target="\_blank">28068668</a>).

#### **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 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

### **LATS1 Antibody (N-term) Blocking Peptide - Images**

### **LATS1 Antibody (N-term) Blocking Peptide - Background**

LATS1 is a serine/threonine kinase that localizes to the mitotic apparatus and complexes with cell cycle controller CDC2 kinase in early mitosis. LATS1 is a tumor suppressor which plays a critical role in maintenance of ploidy through its actions in both mitotic progression and the G1 tetraploidy checkpoint. It negatively regulates G2/M transition by down-regulating CDC2 kinase activity, as well as being involved in the control of p53 expression. LATS1 affects cytokinesis by regulating actin polymerization through negative modulation of LIMK1. This protein may also play a role in endocrine function. This protein is phosphorylated in a cell-cycle dependent manner, with late prophase phosphorylation remaining through metaphase. Studies in LATS1 knockout mice show development of soft-tissue sarcomas, ovarian stromal cell tumors and a high sensitivity to carcinogenic treatments.

### **LATS1 Antibody (N-term) Blocking Peptide - References**

Blume-Jensen P, et al. Nature 2001. 411: 355. Cantrell D, J. Cell Sci. 2001. 114: 1439. Jhian S  
Oncogene 2000. 19: 5590. Manning G, et al. Science 2002. 298: 1912. Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359. Robertson, S. et al. Trends Genet. 2000. 16: 368. Robinson D, et al. Oncogene 2000. 19: 5548. Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889. Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561. Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.