

# LATS1 (G-12): sc-398560

## BACKGROUND

The *Drosophila* tumor suppressor protein LATS (for large tumor suppressor) is a putative protein kinase that shares homology with three proteins in *Neurospora* and budding yeast that are involved in cell cycle and growth regulation: *S. cerevisiae* Dbf2 and Dbf20, and *Neurospora* cot-1. Mosaic screens in *Drosophila* have identified the LATS gene as a tumor suppressor in this species. The human homolog, designated LATS1, was shown to inhibit tumor growth in LATS-deficient *Drosophila*. Human LATS1 binds to Cdc2 in early mitosis and appears to negatively regulate the kinase activity of Cdc2. LATS1-deficient mice are highly sensitive to carcinogenic treatments and develop soft-tissue sarcomas and ovarian stromal cell tumors, indicating a role for mammalian LATS1 in tumorigenesis.

## CHROMOSOMAL LOCATION

Genetic locus: LATS1 (human) mapping to 6q25.1; Lats1 (mouse) mapping to 10 A1.

## SOURCE

LATS1 (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-28 at the N-terminus of LATS1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LATS1 (G-12) is available conjugated to agarose (sc-398560 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398560 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398560 PE), fluorescein (sc-398560 FITC), Alexa Fluor® 488 (sc-398560 AF488), Alexa Fluor® 546 (sc-398560 AF546), Alexa Fluor® 594 (sc-398560 AF594) or Alexa Fluor® 647 (sc-398560 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398560 AF680) or Alexa Fluor® 790 (sc-398560 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398560 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

LATS1 (G-12) is recommended for detection of LATS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LATS1 siRNA (h): sc-35797, LATS1 siRNA (m): sc-35798, LATS1 shRNA Plasmid (h): sc-35797-SH, LATS1 shRNA Plasmid (m): sc-35798-SH, LATS1 shRNA (h) Lentiviral Particles: sc-35797-V and LATS1 shRNA (m) Lentiviral Particles: sc-35798-V.

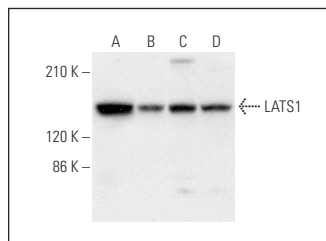
Molecular Weight of LATS1: 150 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

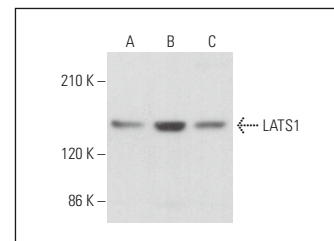
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



LATS1 (G-12): sc-398560. Western blot analysis of LATS1 expression in K-562 (A), NIH/3T3 (B), MCF7 (C) and HeLa (D) whole cell lysates.



LATS1 (G-12): sc-398560. Western blot analysis of LATS1 expression in K-562 (A), HEL 92.1.7 (B) and T-47D (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- An, F., et al. 2017. MiR-21 inhibition of LATS1 promotes proliferation and metastasis of renal cancer cells and tumor stem cell phenotype. *Oncol. Lett.* 14: 4684-4688.
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- Li, L., et al. 2019. Mesenchymal stem cells with downregulated Hippo signaling attenuate lung injury in mice with lipopolysaccharide-induced acute respiratory distress syndrome. *Int. J. Mol. Med.* 43: 1241-1252.
- Gogia, N., et al. 2020. Inactivation of hippo and cJun-N-terminal kinase (JNK) signaling mitigate FUS mediated neurodegeneration *in vivo*. *Neurobiol. Dis.* 140: 104837.
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- Xiong, Q., et al. 2022. METTL3-mediated m<sup>6</sup>A RNA methylation regulates dorsal lingual epithelium homeostasis. *Int. J. Oral Sci.* 14: 26.
- Zhang, Y.R., et al. 2022. NEK2 inactivates the Hippo pathway to advance the proliferation of cervical cancer cells by cooperating with STRIPAK complexes. *Cancer Lett.* 549: 215917.
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- Kim, C.W., et al. 2022. 12-O-tetradecanoylphorbol-13-acetate reduces activation of hepatic stellate cells by inhibiting the Hippo pathway transcriptional coactivator YAP. *Cells* 12: 91.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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