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 chromosome 18.

**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, 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, HICP 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, HICP 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.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGx HRP: sc-516102 or m-IgGx HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGx BP-FITC: sc-516140 or m-IgGx BP-PE: sc-516140 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Western blot analysis of LATS1 expression in K-562](image1)

![Western blot analysis of LATS1 expression in K-562](image2)

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**RESEARCH USE**

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.