

# LATS1 (H-300): sc-28223

## 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.

## REFERENCES

1. Johnston, L.H., et al. 1990. The product of the *Saccharomyces cerevisiae* cell cycle gene DBF2 has homology with protein kinases and is periodically expressed in the cell cycle. *Mol. Cell. Biol.* 10: 1358-1366.
2. Yarden, O., et al. 1992. cot-1, a gene required for hyphal elongation in *Neurospora crassa*, encodes a protein kinase. *EMBO J.* 11: 2159-2166.

## CHROMOSOMAL LOCATION

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

## SOURCE

LATS1 (H-300) is a rabbit polyclonal antibody raised against amino acids 161-460 mapping near the N-terminus of LATS1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

LATS1 (H-300) is recommended for detection of LATS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LATS1 (H-300) is also recommended for detection of LATS1 in additional species, including equine, canine, bovine and porcine.

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.

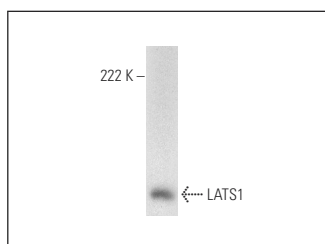
Molecular Weight of LATS1: 150 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or K-562 whole cell lysate: sc-2203.

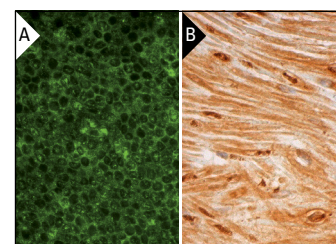
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



LATS1 (H-300): sc-28223. Western blot analysis of LATS1 expression in K-562 whole cell lysate.



LATS1 (H-300): sc-28223. Immunofluorescence staining of normal mouse lymph node frozen section showing cytoplasmic and nuclear staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing nuclear and cytoplasmic staining of glandular cells (B).

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **LATS1 (G-12): sc-398560**, our highly recommended monoclonal alternative to LATS1 (H-300).