

#3477 Store at -20°C

LATS1 (C66B5) Rabbit mAb



✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID # 3661
Swiss-Prot Acc. # Q14653

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, Mk	140 kDa	Rabbit IgG**

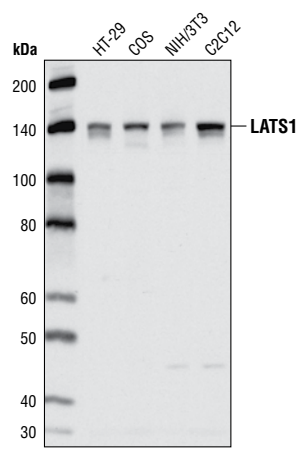
Background: LATS1 (Large tumor suppressor 1) is a putative serine/threonine kinase that belongs to the NDR family (1). It is a tumor suppressor that plays a critical role in the maintenance of ploidy. LATS1 localizes to the centrosome and the mitotic spindle and controls G(2)/M transition by negatively regulating CDC2 kinase activity (2,3). It also plays a role in the G1 tetraploidy checkpoint via control of p53 expression (4).

LATS1 affects cytokinesis by regulating actin polymerization through negative modulation of LIMK1 (5). LATS1 also binds the phosphorylated form of zyxin, a regulator of actin filament assembly. This interaction promotes localization of zyxin to the mitotic spindle, suggesting a role for actin regulatory proteins during mitosis (6). Decreased expression is associated with breast tumor aggressiveness (7), promoter methylation and loss of heterozygosity. Mutations perturbing LATS1 have been associated with human sarcomas and ovarian sarcomas (8,9). LATS1 knock out mice develop soft-tissue sarcomas, ovarian stromal cell tumors and display a high sensitivity to carcinogenic treatments (10).

It has recently been shown that human LATS1 exists in a complex similar to the *Drosophila* Hippo/Salvador/Lats tumor suppressor network, a complex that regulates proliferation and apoptosis to control growth and shape of the fly. The human complex contains Hippo and Salvador homologs RASSF1A, WW45 and MST2 and may control mitotic exit (11).

Specificity/Sensitivity: LATS1 (C66B5) Rabbit mAb detects endogenous levels of total LATS1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with synthetic peptide corresponding to amino acids surrounding Gly180 of human LATS1.



Western blot analysis of extracts from various cell lines using LATS1 (C66B5) Rabbit mAb.

Background References:

- (1) Tao, W. et al. (1999) *Nat Genet* 21, 177–81.
- (2) Yang, X. et al. (2001) *Oncogene* 20, 6516–23.
- (3) Xia, H. et al. (2002) *Oncogene* 21, 1233–41.
- (4) Iida, S. et al. (2004) *Oncogene* 23, 5266–74.
- (5) Yang, X. et al. (2004) *Nat Cell Biol* 6, 609–17.
- (6) Hirota, T. et al. (2000) *J Cell Biol* 149, 1073–86.
- (7) Morinaga, N. et al. (2000) *Int J Oncol* 17, 1125–9.
- (8) Hansen, L.L. et al. (2002) *Cancer Genet Cytogenet* 139, 1–8.
- (9) Hisaoka, M. et al. (2002) *Lab Invest* 82, 1427–35.
- (10) St John, M.A. et al. (1999) *Nat Genet* 21, 182–6.
- (11) Guo, C. et al. (2007) *Curr Biol* 17, 700–5.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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