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phospho-LATS1+LATS2 (Thr1079 +Thr1041) Rabbit pAb

Catalog # AP96852

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q9NRM7
Other Accession	Q9NRM7
Reactivity	Human, Mouse, Rabbit
Predicted	Rat, Pig, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	120136
Physical State	Liquid
Immunogen	KLH conjugated synthesised phosphopeptide derived from human LATS1 around the phosphorylation site of Thr1079
Epitope Specificity	EF(P-T)FR
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.Contains 1 AGC-kinase C-terminal domain.Contains 1 protein kinase domain.Contains 1 UBA domain.
SUBUNIT	Interacts with and is phosphorylated by AURKA. Binds to AR. Interacts with AJUBA during mitosis and this complex regulates organization of the spindle apparatus through recruitment of gamma-tubulin to the centrosome. Interacts (via PPxY motif) with YAP1 (via WW domains). Interacts with MOB1A and MOB1B. Interacts with LIMD1, WTIP and AJUBA.
Post-translational modifications	Autophosphorylated and phosphorylated during M-phase and the G1/S-phase of the cell cycle. Phosphorylated and activated by STK3/MST2.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a serine/threonine protein kinase belonging to the LATS tumor suppressor family. The protein localizes to centrosomes during interphase, and early and late metaphase. It interacts with the centrosomal proteins aurora-A and ajuba and is required for accumulation of gamma-tubulin and spindle formation at the onset of mitosis. It also interacts with a negative regulator of p53 and may function in a positive feedback loop with p53 that responds to cytoskeleton damage. Additionally, it can function as a co-repressor of androgen-responsive gene expression. [provided by RefSeq].

Additional Information

Gene ID	26524
Other Names	KPM; 4932411G09Rik; LATS2_HUMAN; LATS2; Kinase phosphorylated during mitosis protein; Large tumor suppressor homolog 2; Serine/threonine-protein

	kinase kpm; Warts-like kinase; 2.7.11.1; LATS2_MOUSE; large tumor suppressor kinase 1; LATS (large tumor suppressor, Drosophila) homolog 1; LATS, large tumor suppressor, homolog 1 (Drosophila); LATS1 & LATS2 (phospho-T1079/T1041); p-LATS1 & LATS2; phospho-LATS1 & LATS2; LATS1 & LATS2 (phospho-Thr1079/Thr1041)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	LATS2 {ECO:0000312|EMBL:BAA92381.1}
Synonyms	KPM
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 (PubMed:18158288, PubMed:26437443, PubMed:26598551, PubMed:34404733). 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 (PubMed:26437443, PubMed:26598551, PubMed:34404733). Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration (PubMed:26598551, PubMed:34404733). Also phosphorylates YAP1 in response to cell contact inhibition-driven WWP1 ubiquitination of AMOTL2, which results in LATS2 activation (PubMed:34404733). Acts as a tumor suppressor which plays a critical role in centrosome duplication, maintenance of mitotic fidelity and genomic stability (PubMed:10871863). Negatively regulates G1/S transition by down-regulating cyclin E/CDK2 kinase activity (PubMed:12853976). Negative regulator of the androgen receptor (PubMed:15131260). Phosphorylates SNAI1 in the nucleus leading to its nuclear retention and stabilization, which enhances its epithelial-mesenchymal transition and tumor cell invasion/migration activities (PubMed:21952048). This tumor-promoting activity is independent of its effects upon YAP1 or WWTR1/TAZ (PubMed:21952048). Acts as an activator of the NLRP3 inflammasome by mediating phosphorylation of 'Ser-265' of NLRP3 following NLRP3 palmitoylation, promoting NLRP3 activation by NEK7 (PubMed:39173637).
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm. Cytoplasm, cytoskeleton, spindle pole Nucleus. Note=Colocalizes with AURKA at the centrosomes during interphase, early prophase and cytokinesis. Migrates to the spindle poles during mitosis, and to the midbody during cytokinesis Translocates to the nucleus upon mitotic stress by nocodazole treatment
Tissue Location	Expressed at high levels in heart and skeletal muscle and at lower levels in all other tissues examined

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