10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Lats2 Antibody(C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19422b

Product Information

Application	IHC-P, WB, E
Primary Accession	Q7TSJ6
Other Accession	NP_056586.2
Reactivity	Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40566
Calculated MW	115472
Antigen Region	1000-1027

Additional Information

Gene ID	50523
Other Names	Serine/threonine-protein kinase LATS2, Kinase phosphorylated during mitosis protein, Large tumor suppressor homolog 2, Serine/threonine-protein kinase kpm, Lats2 {ECO:0000312|EMBL:AAH530281}
Target/Specificity	This Mouse Lats2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1000-1027 amino acids from the C-terminal region of mouse Lats2.
Dilution	IHC-P~~1:100 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Lats2 Antibody(C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Lats2 {ECO:0000312|EMBL:AAH53028.1}
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 (By similarity). 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 (By similarity). Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration (By similarity). Also phosphorylates YAP1 in response to cell contact inhibition-driven WWP1 ubiquitination of AMOTL2, which results in LATS2 activation (By similarity). Acts as a tumor suppressor which plays a critical role in centrosome duplication, maintenance of mitotic fidelity and genomic stability (PubMed:15343267). Negatively regulates G1/S transition by down-regulating cyclin E/CDK2 kinase activity (By similarity). Negative regulator of the androgen receptor (By similarity). Phosphorylates SNAI1 in the nucleus leading to its nuclear retention and stabilization, which enhances its epithelial-mesenchymal transition and tumor cell invasion/migration activities (By similarity). This tumor-promoting activity is independent of its effects upon YAP1 or WWTR1/TAZ (By similarity). 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 (By similarity). Migrates to the spindle poles during mitosis, and to the midbody during cytokinesis. Translocates to the nucleus upon mitotic stress by nocodazole treatment (By similarity)
Tissue Location	Expressed at high levels in ovary and testis and at lower levels in all other tissues examined

Background

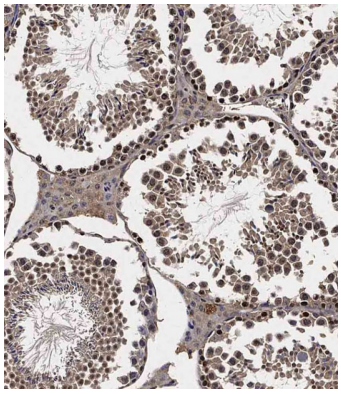
Negative regulator of YAP1 in the Hippo signaling pathway that plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein MST1/MST2, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. Acts as a tumor suppressor which plays a critical role in centrosome duplication, maintenance of mitotic fidelity and genomic stability. Negatively regulates G1/S transition by down-regulating cyclin E/CDK2 kinase activity. Negative regulator of the androgen receptor (By similarity).

References

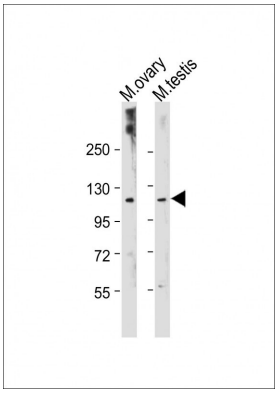
Zhang, N., et al. Dev. Cell 19(1):27-38(2010)
Oh, S., et al. Mol. Cell. Biol. 29(23):6309-6320(2009)
Quina, L.A., et al. J. Neurosci. 29(45):14309-14322(2009)
Nishioka, N., et al. Dev. Cell 16(3):398-410(2009)
Matsui, Y., et al. Circ. Res. 103(11):1309-1318(2008)

Images

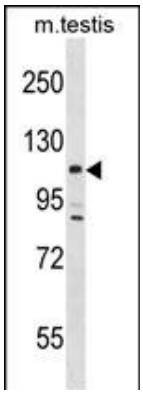
Immunohistochemical analysis of AP19422B on



paraffin-embedded Mouse testis tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1 hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



All lanes : Anti-Mouse Lats2 Antibody(C-term) at 1:2000 dilution Lane 1: Mouse ovary tissue lysate Lane 2: Mouse testis tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 115 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Mouse Lats2 Antibody (C-term)(Cat. #AP19422b) western blot analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the Mouse Lats2 antibody detected the Mouse Lats2 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.