

LKB1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10738**Specification**

LKB1 Antibody - Product Information

Application	WB
Primary Accession	Q9WTK7
Other Accession	ACE73833.1
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	49267

LKB1 Antibody - Additional Information**Gene ID** 20869

Positive Control	Jurkat cell lysate, 3T3 cell lysate, rat kidney tissue lysate
Application & Usage	The antibody can be used for Western blotting (0.5-4 µg/ml).

Other Names

Serine/threonine kinase 11, Serine/threonine protein kinase 11, Renal carcinoma antigen NY-REN-19, polarization-related protein LKB1

Target/Specificity

LKB1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit anti-LKB1 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

LKB1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

LKB1 Antibody - Protein Information

Name Stk11 {ECO:0000312|MGI:MGI:1341870}

Function

Tumor suppressor serine/threonine-protein kinase that controls the activity of AMP-activated protein kinase (AMPK) family members, thereby playing a role in various processes such as cell metabolism, cell polarity, apoptosis and DNA damage response. Acts by phosphorylating the T-loop of AMPK family proteins, thus promoting their activity: phosphorylates PRKAA1, PRKAA2, BRSK1, BRSK2, MARK1, MARK2, MARK3, MARK4, NUA1, NUA2, SIK1, SIK2, SIK3 and SNRK but not MELK. Also phosphorylates non-AMPK family proteins such as STRADA, PTEN and possibly p53/TP53. Acts as a key upstream regulator of AMPK by mediating phosphorylation and activation of AMPK catalytic subunits PRKAA1 and PRKAA2 and thereby regulates processes including: inhibition of signaling pathways that promote cell growth and proliferation when energy levels are low, glucose homeostasis in liver, activation of autophagy when cells undergo nutrient deprivation, and B-cell differentiation in the germinal center in response to DNA damage. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton. Required for cortical neuron polarization by mediating phosphorylation and activation of BRSK1 and BRSK2, leading to axon initiation and specification. Involved in DNA damage response: interacts with p53/TP53 and recruited to the CDKN1A/WAF1 promoter to participate in transcription activation. Able to phosphorylate p53/TP53; the relevance of such result in vivo is however unclear and phosphorylation may be indirect and mediated by downstream STK11/LKB1 kinase NUA1. Also acts as a mediator of p53/TP53-dependent apoptosis via interaction with p53/TP53: translocates to the mitochondrion during apoptosis and regulates p53/TP53-dependent apoptosis pathways. Regulates UV radiation-induced DNA damage response mediated by CDKN1A. In association with NUA1, phosphorylates CDKN1A in response to UV radiation and contributes to its degradation which is necessary for optimal DNA repair (PubMed:25329316).

Cellular Location

Nucleus. Cytoplasm. Membrane. Mitochondrion. Note=Translocates to mitochondrion during apoptosis (By similarity). A small fraction localizes at membranes. Relocates to the cytoplasm when bound to STRAD (STRADA or STRADB) and CAB39/MO25 (CAB39/MO25alpha or CAB39L/MO25beta). PTEN promotes cytoplasmic localization (By similarity).

Tissue Location

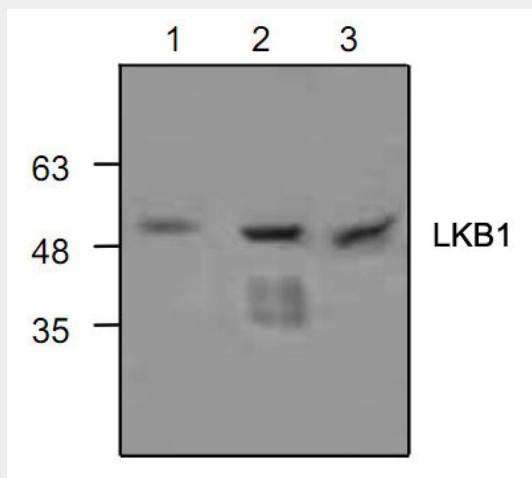
[Isoform 1]: Widely expressed. [Isoform 3]: Expressed in adult brain and liver and absent from tissues derived from postnatal day 7

LKB1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

LKB1 Antibody - Images



Western blot analysis of LKB1 with lysate from Hela cells (Lane 1), 3T3 cells (Lane 2) and rat kidney (Lane 3).

LKB1 Antibody - Background

LKB1 is a tumor suppressor that belongs to the serine/threonine kinase family. Mutation in LKB1 is link to Peutz Jeghers syndrome (PJS), a disorder characterized by the growth of polyps in the gastrointestinal tract. LKB1 regulate AMPK signaling pathway and may also play a role in chromatin remodeling, cell cycle arrest and cell polarity