

# Anti-LKB1 Antibody

## HA500143



|                            |   |
|----------------------------|---|
| <b>Product Type:</b>       | Rabbit polyclonal IgG, primary antibodies |
| <b>Species reactivity:</b> | Human, Mouse, Rat                         |
| <b>Applications:</b>       | WB, IHC-P                                 |
| <b>Molecular Wt:</b>       | Predicted band size: 49 kDa.              |

**Description:** 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.

|                               |   |
|-------------------------------|---|
| <b>Immunogen:</b>             | Recombinant protein within human LKB1 aa 1-200.   |
| <b>Positive control:</b>      | Rat testis tissue lysate, human liver tissue lysate, mouse liver tissue lysate, human liver tissue, rat testis tissue.                      |
| <b>Subcellular location:</b>  | Cytoplasm, Membrane, Mitochondrion, Nucleus.  |
| <b>Database links:</b>        | SwissProt: Q15831 Human   Q9WTK7 Mouse   D4AE59 Rat   |
| <b>Recommended Dilutions:</b> |   |
| <b>WB</b>                     | 1:500-1:1,000   |
| <b>IHC-P</b>                  | 1:100-1:500   |
| <b>Storage Buffer:</b>        | 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.  |
| <b>Storage Instruction:</b>   | Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term. |
| <b>Purity:</b>                | Immunogen affinity purified.  |

Hangzhou Huaan Biotechnology Co., Ltd.

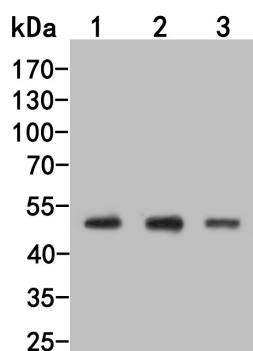
Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn

## Images



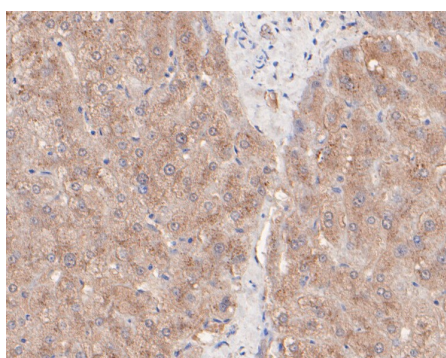
**Fig1:** Western blot analysis of LKB1 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (HA500143, 1/1,000) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

**Positive control:**

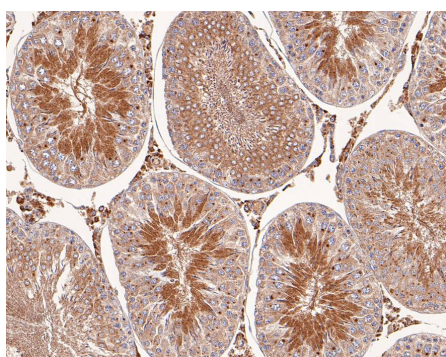
Lane 1: Rat testis tissue lysate

Lane 2: Human liver tissue lysate

Lane 3: Mouse liver tissue lysate



**Fig2:** Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-LKB1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA500143, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig3:** Immunohistochemical analysis of paraffin-embedded rat testis tissue with Rabbit anti-LKB1 antibody (HA500143) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA500143) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Karuman P. et. al. The Peutz-Jegher gene product LKB1 is a mediator of p53-dependent cell death. Mol. Cell 7:1307-1319(2001).

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn