

LKB1 Blocking Peptide
Catalog # PBV10462b**Specification**

LKB1 Blocking Peptide - Product Information

Primary Accession	Q9WTK7
Other Accession	ACE73833.1
Gene ID	20869
Calculated MW	49267

LKB1 Blocking Peptide - Additional Information**Gene ID** 20869**Application & Usage**

The peptide is used for blocking the antibody activity of LKB1. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

Other Names

Serine/threonine-protein kinase STK11, 2.7.11.1, Liver kinase B1 homolog, LKB1, mLKB1, Stk11 {ECO:0000312|MGI:MGI:1341870}

Target/Specificity

LKB1

Formulation

50 µg (0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA and 0.02% thimerosal.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

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

LKB1 Blocking Peptide - 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 Blocking Peptide - 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 Blocking Peptide - Images