

# LKB1 (G-12): sc-374300

## BACKGROUND

Peutz-Jeghers syndrome (PJS) is a rare hereditary disease characterized by melanocytic macules lips, gastrointestinal hamartomatous polyps and an increased risk for many classes of cancer. LKB1 (also designated STK11 and PJS) has been identified as the gene mutated in PJS. LKB1 is a 433 amino acid serine/threonine kinase with strong homology to the *Xenopus* cytoplasmic protein kinase XEEK1 and weaker similarity to many other protein kinases. LKB1 is ubiquitously expressed and many frameshift, deletion and splicing mutations have been identified in PJS patients. Despite the increased risk of cancer for PJS patients, LKB1 does not appear to play a major role in colorectal, testicular or breast cancers.

## REFERENCES

- Jenne, D.E., et al. 1998. Peutz-Jeghers syndrome is caused by mutations in a novel serine threonine kinase. *Nat. Genet.* 18: 38-43.
- Mehenni, H., et al. 1998. Loss of LKB1 kinase activity in Peutz-Jeghers syndrome and evidence for allelic and locus heterogeneity. *Am. J. Hum. Genet.* 63: 1641-1650.

## CHROMOSOMAL LOCATION

Genetic locus: STK11 (human) mapping to 19p13.3; Stk11 (mouse) mapping to 10 C1.

## SOURCE

LKB1 (G-12) is a mouse monoclonal antibody raised against amino acids 1-75 mapping at the N-terminus of LKB1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

LKB1 (G-12) is recommended for detection of LKB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LKB1 siRNA (h): sc-35816, LKB1 siRNA (m): sc-35817, LKB1 siRNA (r): sc-270074, LKB1 shRNA Plasmid (h): sc-35816-SH, LKB1 shRNA Plasmid (m): sc-35817-SH, LKB1 shRNA Plasmid (r): sc-270074-SH, LKB1 shRNA (h) Lentiviral Particles: sc-35816-V, LKB1 shRNA (m) Lentiviral Particles: sc-35817-V and LKB1 shRNA (r) Lentiviral Particles: sc-270074-V.

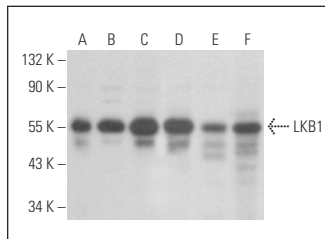
Molecular Weight of LKB1: 52 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

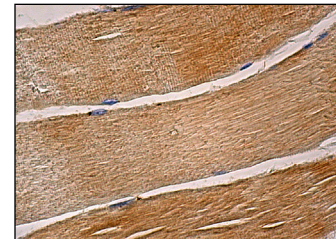
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



LKB1 (G-12): sc-374300. Western blot analysis of LKB1 expression in A-431 (A), Raji (B), K-562 (C), Jurkat (D) and Hep G2 (E) whole cell lysates and human kidney tissue extract (F).



LKB1 (G-12): sc-374300. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

## SELECT PRODUCT CITATIONS

- SHI, Z., et al. 2010. The neuroprotective effect of Batch-2, an aqueous extract from cat's claw (*Uncaria tomentosa*) on 6-OHDA-induced SH-SY5Y cell damage. *Prog. Biochem. Biophys.* 37: 769-778.
- Nagahama, K., et al. 2013. A case of synchronous mucinous metaplasia and neoplasia of the female genital tract without an STK11 or KRAS mutation. *Gynecol. Oncol. Case Rep.* 5: 4-5.
- Zhang, W., et al. 2015. Additive effects of eukaryotic co-expression plasmid carrying GRIM-19 and LKB1 genes on breast cancer *in vitro* and *in vivo*. *Mol. Med. Rep.* 12: 7665-7672.
- Li, N., et al. 2019. Tankyrase disrupts metabolic homeostasis and promotes tumorigenesis by inhibiting LKB1-AMPK signalling. *Nat. Commun.* 10: 4363.
- Lin, W., et al. 2019. Sirtuin4 suppresses the anti-neuroinflammatory activity of infiltrating regulatory T cells in the traumatically injured spinal cord. *Immunology* 158: 362-374.
- Zeng, Y., et al. 2020. Modulation of SIRT1-mediated signaling cascades in the liver contributes to the amelioration of nonalcoholic steatohepatitis in high fat fed middle-aged LDL receptor knockout mice by dihydromyricetin. *Biochem. Pharmacol.* 175: 113927.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **LKB1 (Ley 37D/G6): sc-32245** for LKB1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.