SANTA CRUZ BIOTECHNOLOGY, INC.

LKB1 (T-22): sc-133742

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

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2. Hemminki, A., et al. 1998. A serine/threonine kinase gene defective in Peutz-Jeghers syndrome. Nature 391: 184-187.
3. 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.
4. Bignell, G.R., et al. 1998. Low frequency of somatic mutations in the LKB1/Peutz-Jeghers syndrome gene in sporadic breast cancer. Cancer Res. 58: 1384-1386.
5. Avizienyte, E., et al. 1998. Somatic mutations in LKB1 are rare in sporatic colorectal and testicular tumors. Cancer Res. 58: 2087-2090.
6. Resta, N., et al. 1998. STK11 mutations in Peutz-Jeghers syndrome and sporatic colon cancer. Cancer Res. 58: 4799-4801.
7. Baas, A.F., et al. 2004. LKB1 tumor suppressor protein: PARtaker in cell polarity. Trends Cell Biol. 14: 312-319.
8. Shaw, R.J., et al. 2004. The LKB1 tumor suppressor negatively regulates mTOR signaling. Cancer Cell 6: 91-99.
9. Spicer, J., et al. 2004. LKB1 kinase: master and commander of metabolism and polarity. Curr. Biol. 14: R383-R385.

CHROMOSOMAL LOCATION

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

SOURCE

LKB1 (T-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic LKB1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

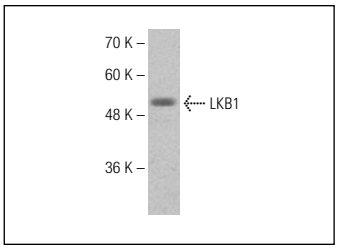
LKB1 (T-22) is recommended for detection of LKB1 of mouse, rat, human and zebrafish origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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.

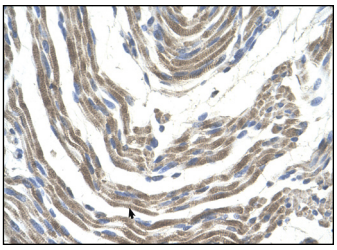
Molecular Weight of LKB1: 52 kDa.

Positive Controls: mouse kidney extract: sc-2255, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

DATA



LKB1 (T-22): sc-133742. Western blot analysis of LKB1 expression in Jurkat whole cell lysate.



LKB1 (T-22): sc-133742. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human muscle tissue showing cytoplasmic localization.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **LKB1 (E-9): sc-374334** or **LKB1 (H-3): sc-374324**, our highly recommended monoclonal aternatives to LKB1 (T-22).