

MO25 (919I2G): sc-517655

BACKGROUND

Peutz-Jeghers syndrome (PJS) is a rare hereditary disease characterized by melanocytic macules of the lips, gastrointestinal hamartomatous polyps and an increased risk for many classes of cancer. The serine/threonine kinase LKB1 (also designated STK11) has been identified as the gene mutated in PJS. LKB1 activity increases upon the binding of a regulatory complex consisting of the STE20-related adaptor- α (STRAD α) pseudo kinase and the calcium binding protein 39 (MO25 α). STRAD and MO25 determine the subcellular localization of LKB1 by initiating its translocation from the nucleus to the cytoplasm, thus regulating the tumor suppressor activity of LKB1. The LKB1/STRAD/MO25 complex acts as an AMP-activated protein kinase kinase (AMPKK).

REFERENCES

1. Jenne, D.E., Reimann, H., Nezu, J., Friedel, W., Loff, S., Jeschke, R., Muller, O., Back, W. and Zimmer, M. 1998. Peutz-Jeghers syndrome is caused by mutations in a novel serine threonine kinase. *Nat. Genet.* 18: 38-43.
2. Boudeau, J., Scott, J.W., Resta, N., Deak, M., Kieloch, A., Komander, D., Hardie, D.G., Prescott, A.R., van Aalten, D.M. and Alessi, D.R. 2004. Analysis of the LKB1-STRAD-MO25 complex. *J Cell Sci.* 117: 6365-6375.
3. Taylor, E.B., Hurst, D., Greenwood, L.J., Lamb, J.D., Cline, T.D., Sudweeks, S.N. and Winder, W.W. 2004. Endurance training increases LKB1 and MO25 protein but not AMP-activated protein kinase activity in skeletal muscle. *Am. J. Physiol. Endocrinol. Metab.* 287: E1082-E1089.
4. Baas, A.F., Smit, L. and Clevers, H. 2004. LKB1 tumor suppressor protein: PARTAKER in cell polarity. *Trends Cell Biol.* 14: 12-19.
5. Jaleel, M., McBride, A., Lizcano, J.M., Deak, M., Toth, R., Morrice, N.A. and Alessi, D.R. 2005. Identification of the sucrose non-fermenting related kinase SNRK, as a novel LKB1 substrate. *FEBS Lett.* 579: 1417-1423.
6. Taylor, E.B., Ellingson, W.J., Lamb, J.D., Chesser, D.G. and Winder, W.W. 2005. Long-chain acyl-CoA esters inhibit phosphorylation of AMP-activated protein kinase at threonine-172 by LKB1/STRAD/MO25. *Am. J. Physiol. Endocrinol. Metab.* 288: E1055-E1061.

CHROMOSOMAL LOCATION

Genetic locus: CAB39 (human) mapping to 2q37.1; Cab39 (mouse) mapping to 1 C5.

SOURCE

MO25 (919I2G) is a mouse monoclonal antibody raised against recombinant MO25 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

MO25 (919I2G) is recommended for detection of MO25 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for MO25 siRNA (h): sc-61065, MO25 siRNA (m): sc-61066, MO25 shRNA Plasmid (h): sc-61065-SH, MO25 shRNA Plasmid (m): sc-61066-SH, MO25 shRNA (h) Lentiviral Particles: sc-61065-V and MO25 shRNA (m) Lentiviral Particles: sc-61066-V.

Molecular Weight of MO25: 40 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™
Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

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