

CAB39L (E-12): sc-84044

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. Mutations in the gene encoding the serine/threonine kinase LKB1 (also designated STK11) are the cause of 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, also known as CAB39). 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). CAB39L (calcium binding protein 39-like), also known as MO25L (MO25-like) or MO2L, is a 337 amino acid protein that is similar to MO25 and is found in the serum of nearly half of all patients diagnosed with acute monocytic leukemia. This suggests a role for CAB39L in carcinogenesis.

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.
- Boudeau, J., et al. 2004. Analysis of the LKB1-STRAD-MO25 complex. *J. Cell Sci.* 117: 6365-6375.
- Taylor, E.B., et al. 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.
- Baas, A.F., et al. 2004. LKB1 tumor suppressor protein: PARtaker in cell polarity. *Trends Cell Biol.* 14: 312-319.
- Jaleel, M., et al. 2005. Identification of the sucrose non-fermenting related kinase SNRK, as a novel LKB1 substrate. *FEBS Lett.* 579: 1417-1423.
- Taylor, E.B., et al. 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.
- Chen, G., et al. 2005. Serological identification of immunogenic antigens in acute monocytic leukemia. *Leuk. Res.* 29: 503-509.

CHROMOSOMAL LOCATION

Genetic locus: CAB39L (human) mapping to 13q14.2; Cab39l (mouse) mapping to 14 C3.

SOURCE

CAB39L (E-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of CAB39L of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-84044 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CAB39L (E-12) is recommended for detection of CAB39L of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CAB39L (E-12) is also recommended for detection of CAB39L in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CAB39L siRNA (h): sc-105169, CAB39L siRNA (m): sc-141958, CAB39L shRNA Plasmid (h): sc-105169-SH, CAB39L shRNA Plasmid (m): sc-141958-SH, CAB39L shRNA (h) Lentiviral Particles: sc-105169-V and CAB39L shRNA (m) Lentiviral Particles: sc-141958-V.

Molecular Weight of CAB39L: 39 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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