SANTA CRUZ BIOTECHNOLOGY, INC.

CAB39L (Q32): sc-100390

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Peutz-Jegers 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

1. Jenne, D.E., et al. 1998. Peutz-Jeghers syndrome is caused by mutations in a novel serine threonine kinase. Nat. Genet. 18: 38-43.
2. Boudeau, J., et al. 2004. Analysis of the LKB1-STRAD-MO25 complex. J. Cell Sci. 117: 6365-6375.

CHROMOSOMAL LOCATION

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

SOURCE

CAB39L (Q32) is a mouse monoclonal antibody raised against recombinant CAB39L of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CAB39L (Q32) 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), 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 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.

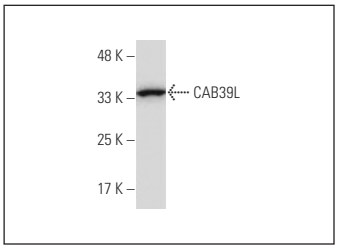
Molecular Weight of CAB39L: 39 kDa.

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

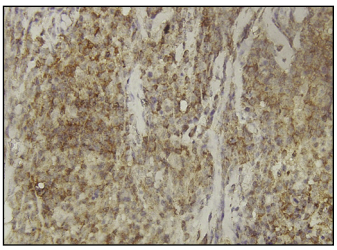
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CAB39L (Q32): sc-100390. Western blot analysis of CAB39L expression in K-562 whole cell lysate.



CAB39L (Q32): sc-100390. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lymphoma tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Zhang, W.J., et al. 2013. The expression and functional characterization associated with cell apoptosis and proteomic analysis of the novel gene MLAA-34 in U937 cells. Oncol. Rep. 29: 491-506.
2. Zhang, P., et al. 2017. Leukemia-associated gene MLAA-34 reduces arsenic trioxide-induced apoptosis in HeLa cells via activation of the Wnt/β-catenin signaling pathway. PLoS ONE 12: e0186868.
3. Li, W., et al. 2018. CAB39L elicited an anti-Warburg effect via a LKB1-AMPK-PGC1α axis to inhibit gastric tumorigenesis. Oncogene 37: 6383-6398.
4. Kortenoeven, M.L.A., et al. 2021. An *in vivo* protein landscape of the mouse DCT during high dietary K^+ or low dietary Na^+ intake. Am. J. Physiol. Renal Physiol. 320: F908-F921.

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 for detailed protocols and support products.