

LASS2 (C-11): sc-390745

BACKGROUND

The LASS (longevity assurance homolog) family members are highly conserved from yeasts to mammals. Six members of this family of proteins involved in sphingolipid synthesis have been characterized (LASS1, LASS2, LASS3, LASS4, LASS5 and LASS6). LASS2 is a 380 amino acid multi-pass membrane protein expressed in kidney, liver, brain, heart, placenta and lung. LASS2 suppresses the growth of cancer cells and is involved in sphingolipid synthesis. Overproduction of LASS2 increases the levels of long ceramides such as C22:0- and C24:0-ceramides. The N-terminal asparagine residue serves as a site for glycosylation on the luminal side of the endoplasmic reticulum membrane. LASS2 interacts with several membrane-associated receptors or transporters including ASGPR1, ASGPR2 and OCT1.

CHROMOSOMAL LOCATION

Genetic locus: CERS2 (human) mapping to 1q21.3; Cers2 (mouse) mapping to 3 F2.1.

SOURCE

LASS2 (C-11) is a mouse monoclonal antibody raised against amino acids 141-180 mapping within an internal region of LASS2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LASS2 (C-11) is available conjugated to agarose (sc-390745 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390745 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390745 PE), fluorescein (sc-390745 FITC), Alexa Fluor® 488 (sc-390745 AF488), Alexa Fluor® 546 (sc-390745 AF546), Alexa Fluor® 594 (sc-390745 AF594) or Alexa Fluor® 647 (sc-390745 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390745 AF680) or Alexa Fluor® 790 (sc-390745 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LASS2 (C-11) is recommended for detection of LASS2 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).

LASS2 (C-11) is also recommended for detection of LASS2 in additional species, including equine and canine.

Suitable for use as control antibody for LASS2 siRNA (h): sc-62545, LASS2 siRNA (m): sc-62546, LASS2 shRNA Plasmid (h): sc-62545-SH, LASS2 shRNA Plasmid (m): sc-62546-SH, LASS2 shRNA (h) Lentiviral Particles: sc-62545-V and LASS2 shRNA (m) Lentiviral Particles: sc-62546-V.

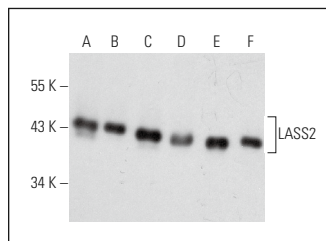
Molecular Weight of LASS2: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, CCRF-CEM cell lysate: sc-2225 or Caki-1 cell lysate: sc-2224.

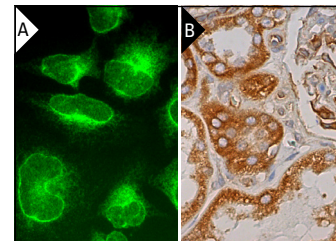
STORAGE

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

DATA



LASS2 (C-11): sc-390745. Western blot analysis of LASS2 expression in Hep G2 (A), CCRF-CEM (B), Caki-1 (C), c4 (D), RAW 264.7 (E) and KNRK (F) whole cell lysates.



LASS2 (C-11): sc-390745. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules (B).

SELECT PRODUCT CITATIONS

- Wang, H., et al. 2017. LASS2 inhibits growth and invasion of bladder cancer by regulating ATPase activity. *Oncol. Lett.* 13: 661-668.
- Chen, Y., et al. 2017. The role of LASS2 in regulating bladder cancer cell tumorigenicity in a nude mouse model. *Oncol. Lett.* 14: 5149-5156.
- Pani, T., et al. 2021. Alternative splicing of ceramide synthase 2 alters levels of specific ceramides and modulates cancer cell proliferation and migration in Luminal B breast cancer subtype. *Cell Death Dis.* 12: 171.
- Zhao, Q., et al. 2023. LASS2 enhances p53 protein stability and nuclear import to suppress liver cancer progression through interaction with MDM2/MDMX. *Cell Death Discov.* 9: 414.
- Huang, Y., et al. 2024. LASS2 suppresses metastasis in multiple cancers by regulating the ferroptosis signalling pathway through interaction with TFRC. *Cancer Cell Int.* 24: 87.
- Jin, J.Y., et al. 2024. Reticulon 3 regulates sphingosine-1-phosphate synthesis in endothelial cells to control blood pressure. *MedComm* 5: e480.

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.

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