

# LASS6 (L-18): sc-100554

## BACKGROUND

The LASS (longevity assurance homolog) family members are highly conserved from yeasts to mammals. Six members of this family of proteins have been characterized (LASS1, LASS2, LASS3, LASS4, LASS5 and LASS6) and they all are involved in sphingolipid synthesis. LASS6 is a widely expressed 384 amino acid endoplasmic reticulum, multi-pass membrane protein. On the luminal side of the endoplasmic reticulum membrane, the N-terminal asparagine residue is glycosylated. In cells deficient for CLN9, LASS6 corrects growth and apoptosis, and increases the levels of short ceramide species, such as C14:0- and C16:0-ceramides.

## REFERENCES

- Weinmann, A., et al. 2005. LASS6, an additional member of the longevity assurance gene family. *Int. J. Mol. Med.* 16: 905-910.
- Mizutani, Y., et al. 2005. Mammalian LASS6 and its related family members regulate synthesis of specific ceramides. *Biochem. J.* 390: 263-271.
- Schulz, A., et al. 2006. The CLN9 protein, a regulator of dihydroceramide synthase. *J. Biol. Chem.* 281: 2784-2794.
- Mizutani, Y., et al. 2006. LASS3 (longevity assurance homologue 3) is a mainly testis-specific (dihydro)ceramide synthase with relatively broad substrate specificity. *Biochem. J.* 398: 531-538.

## CHROMOSOMAL LOCATION

Genetic locus: CERS6 (human) mapping to 2q24.3; Cers6 (mouse) mapping to 2 C2.

## SOURCE

LASS6 (L-18) is a mouse monoclonal antibody raised against recombinant LASS6 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

LASS6 (L-18) is recommended for detection of LASS6 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 LASS6 siRNA (h): sc-62553, LASS6 siRNA (m): sc-62554, LASS6 shRNA Plasmid (h): sc-62553-SH, LASS6 shRNA Plasmid (m): sc-62554-SH, LASS6 shRNA (h) Lentiviral Particles: sc-62553-V and LASS6 shRNA (m) Lentiviral Particles: sc-62554-V.

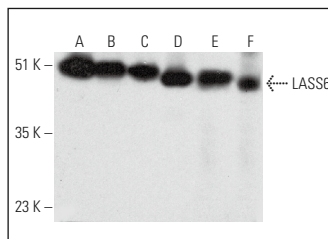
Molecular Weight of LASS6: 45 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, IMR-32 cell lysate: sc-2409 or Hep G2 cell lysate: sc-2227.

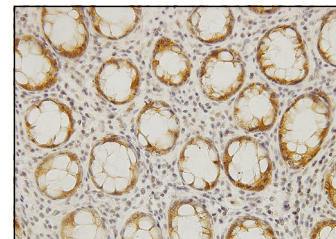
## STORAGE

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

## DATA



LASS6 (L-18): sc-100554. Western blot analysis of LASS6 expression in Jurkat (A), IMR-32 (B), Hep G2 (C), NIH/3T3 (D) and NRK (E) whole cell lysates and mouse kidney tissue extract (F).



LASS6 (L-18): sc-100554. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing membrane and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Eberle, M., et al. 2014. Regulation of ceramide synthase 6 in a spontaneous experimental autoimmune encephalomyelitis model is sex dependent. *Biochem. Pharmacol.* 92: 326-335.
- Chen, T.C., et al. 2017. The glucocorticoid-Angptl4-ceramide axis induces Insulin resistance through PP2A and PKC $\zeta$ . *Sci. Signal.* 10: eaai7905.
- Bickert, A., et al. 2018. Inactivation of ceramide synthase 2 catalytic activity in mice affects transcription of genes involved in lipid metabolism and cell division. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids* 1863: 734-749.
- Zhu, M., et al. 2022. Danhe granule ameliorates nonalcoholic steatohepatitis and fibrosis in rats by inhibiting ceramide *de novo* synthesis related to CerS6 and CerK. *J. Ethnopharmacol.* 295: 115427.
- Momchilova, A., et al. 2022. Resveratrol affects sphingolipid metabolism in A549 lung adenocarcinoma cells. *Int. J. Mol. Sci.* 23: 10870.
- Teo, J.D., et al. 2023. Early microglial response, myelin deterioration and lethality in mice deficient for very long chain ceramide synthesis in oligodendrocytes. *Glia* 71: 1120-1141.
- Gaudioso, A., et al. 2023. Sphingomyelin 16:0 is a therapeutic target for neuronal death in acid sphingomyelinase deficiency. *Cell Death Dis.* 14: 248.
- Wang, X., et al. 2023. CERS6-derived ceramides aggravate kidney fibrosis by inhibiting PINK1-mediated mitophagy in diabetic kidney disease. *Am. J. Physiol. Cell Physiol.* 325: C538-C549.
- Kim, S.J., et al. 2023. Ceramide synthase 4 overexpression exerts oncogenic properties in breast cancer. *Lipids Health Dis.* 22: 183.

## RESEARCH USE

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