

LASS4 (M-68): sc-135037

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 are all involved in sphingolipid synthesis. LASS4 is a 394 amino acid endoplasmic reticulum, multi-pass membrane protein. LASS4 increases the levels of long ceramides such as C22:0- and C24:0-ceramides. In cells deficient for CLN9, as observed in neuronal ceroid lipofuscinosis (NCL) or Batten disease, LASS4 can increase ceramide levels and partially correct growth and apoptosis.

REFERENCES

1. Riebeling, C., Allegood, J.C., Wang, E. and Futerman, A.H. 2003. Two mammalian longevity assurance gene (LAG1) family members, trh1 and trh4, regulate dihydroceramide synthesis using different fatty acyl-CoA donors. *J. Biol. Chem.* 278: 43452-43459.
2. Mizutani, Y., Kihara, A. and Igarashi, Y. 2005. Mammalian LASS6 and its related family members regulate synthesis of specific ceramides. *Biochem. J.* 390: 263-271.
3. Schulz, A., Mousallem, T., Venkataramani, M., Persaud-Sawin, D.A., Zucker, A., Luberto, C., Bielawska, A., Bielawski, J., Holthuis, J.C., Jazwinski, S.M., Kozhaya, L., Dbaibo, G.S. and Boustany, R.M. 2006. The CLN9 protein, a regulator of dihydroceramide synthase. *J. Biol. Chem.* 281: 2784-2794.
4. Mizutani, Y., Kihara, A. and Igarashi, Y. 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: *Lass4* (mouse) mapping to 8 A1.1.

SOURCE

LASS4 (M-68) is a rabbit polyclonal antibody raised against amino acids 326-393 mapping at the C-terminus of LASS4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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.

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.

APPLICATIONS

LASS4 (M-68) is recommended for detection of LASS4 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LASS4 siRNA (m): sc-62550, LASS4 shRNA Plasmid (m): sc-62550-SH and LASS4 shRNA (m) Lentiviral Particles: sc-62550-V.

Molecular Weight of LASS4: 47 kDa.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.