

LASS1 (C-14): sc-65096

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). LASS1, also called LAG1, is a 350 amino acid ceramide synthase located in the membrane of the endoplasmic reticulum. The gene coding LASS1 is bicistronic, containing both the LASS1 and GDF1 open reading frames. Two isoforms of LASS1 have been characterized. Isoform 2 lacks the last 13 amino acids of the intact protein (isoform 1). The cell death and growth inhibition in head and neck squamous cell carcinoma (HNSCC) brought on by the chemotherapeutic agents gemcitabine and doxorubicin via the activation of caspase-3 and caspase-9 may involve LASS1 overexpression.

REFERENCES

1. Venkataraman, K., et al. 2002. Upstream of growth and differentiation factor 1 (UOG1), a mammalian homolog of the yeast longevity assurance gene 1 (LAG1), regulates N-stearoyl-sphinganine (C18-(dihydro) ceramide) synthesis in a fumonisin B1-independent manner in mammalian cells. *J. Biol. Chem.* 277: 35642-35649.
2. Riebeling, C., et al. 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.
3. 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.
4. Wang, B., et al. 2007. Cloning and characterization of a LASS1-GDF1 transcript in rat cerebral cortex: conservation of a bicistronic structure. *DNA Seq.* 18: 92-103.

CHROMOSOMAL LOCATION

Genetic locus: CERS1 (human) mapping to 19p13.11; LASS1 (mouse) mapping to 8 B3.3.

SOURCE

LASS1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of LASS1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-65096 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-65096 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

LASS1 (C-14) is recommended for detection of LASS1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LASS1 (C-14) is also recommended for detection of LASS1 in additional species, including equine.

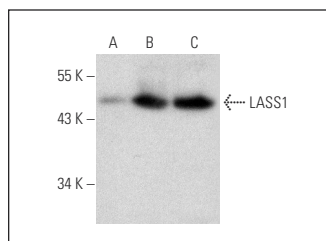
Suitable for use as control antibody for LASS1 siRNA (h): sc-62543, LASS1 siRNA (m): sc-62544, LASS1 shRNA Plasmid (h): sc-62543-SH, LASS1 shRNA Plasmid (m): sc-62544-SH, LASS1 shRNA (h) Lentiviral Particles: sc-62543-V and LASS1 shRNA (m) Lentiviral Particles: sc-62544-V.

LASS1 (C-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LASS1: 40 kDa.

Positive Controls: LASS1 (h): 293T Lysate: sc-111580 or Daoy whole cell lysate: sc-364381.

DATA



LASS1 (C-14): sc-65096. Western blot analysis of LASS1 expression in non-transfected 293T: sc-117752 (A), human LASS1 transfected 293T: sc-111580 (B) and Daoy (C) whole cell lysates.

PROTOCOLS

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