

LASS1 (I-16): sc-65098

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

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3. 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.
4. Wang, B., Shi, G., Fu, Y. and Xu, X. 2007. Cloning and characterization of a LASS1-GDF1 transcript in rat cerebral cortex: conservation of a bicistronic structure. *DNA Seq.* 18: 92-103.
5. Senkal, C.E., Ponnusamy, S., Rossi, M.J., Bialewski, J., Sinha, D., Jiang, J.C., Jazwinski, S.M., Hannun, Y.A. and Ogretmen, B. 2007. Role of human longevity assurance gene 1 and C18-ceramide in chemotherapy-induced cell death in human head and neck squamous cell carcinomas. *Mol. Cancer Ther.* 6: 712-722.

CHROMOSOMAL LOCATION

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

SOURCE

LASS1 (I-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-65098 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-65098 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LASS1 (I-16) 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), 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 (I-16) is also recommended for detection of LASS1 in additional species, including equine, canine, bovine, porcine and avian.

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 (I-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LASS1: 40 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **LASS1 (3F9): sc-293497**, our highly recommended monoclonal alternative to LASS1 (I-16).