SANTA CRUZ BIOTECHNOLOGY, INC.

LASS1 (H-170): sc-135033

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 cermide 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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2. 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.
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 (H-170) is a rabbit polyclonal antibody raised against amino acids 111-280 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.

RESEARCH USE

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

APPLICATIONS

LASS1 (H-170) 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).

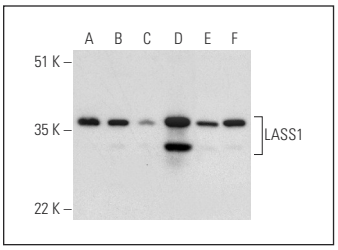
LASS1 (H-170) is also recommended for detection of LASS1 in additional species, including equine, bovine and porcine.

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.

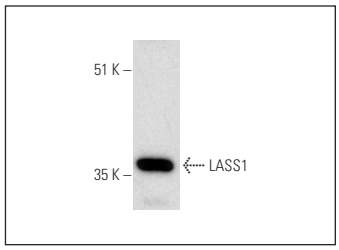
Molecular Weight of LASS1: 39.5 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, LNCaP cell lysate: sc-2231 or MCF7 whole cell lysate: sc-2206.

DATA



LASS1 (H-170): sc-135033. Western blot analysis of LASS1 expression in U-251-MG (**A**), HeLa (**B**), LNCaP (**C**), mouse brain (**D**), MCF7 (**E**) and DU 145 (**F**) whole cell lysates.



LASS1 (H-170): sc-135033. Western blot analysis of LASS1 expression in MDA-MB-231 whole cell lysate.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.