SANTA CRUZ BIOTECHNOLOGY, INC.

LASS3 (O-25): sc-133725

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 have been characterized (LASS1, LASS2, LASS3, LASS4, LASS5 and LASS6) and they are all involved in sphingolipid synthesis. LASS3 is a 383 amino acid membrane protein almost exclusively expressed in testis, suggesting that LASS3 plays an important role in proper testis function. It is also weakly expressed in skin. A transcriptional variant of LASS3 cDNA exists and can result in the production of a 419 amino acid protein (LASS3-long). LASS3 overproduction raises the level of several ceramide species, including C18:0- and C24:0-ceramides.

REFERENCES

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2. Weinmann, A., et al. 2005. LASS6, an additional member of the longevity assurance gene family. Int. J. Mol. Med. 16: 905-910.
3. Mizutani, Y., et al. 2005. Mammalian LASS6 and its related family members regulate synthesis of specific ceramides. Biochem. J. 390: 263-271.
4. 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.
5. Schulz, A., et al. 2006. The CLN9 protein, a regulator of dihydroceramide synthase. J. Biol. Chem. 281: 2784-2794.
6. Pewzner-Jung, Y., et al. 2006. When do LASSes (longevity assurance genes) become CerS (ceramide synthases)? Insights into the regulation of ceramide synthesis. J. Biol. Chem. 281: 25001-25005.
7. Katsel, P., et al. 2007. Gene expression alterations in the sphingolipid metabolism pathways during progression of dementia and Alzheimer's disease: a shift toward ceramide accumulation at the earliest recognizable stages of Alzheimer's disease? Neurochem. Res. 32: 845-856.
8. Kihara, A., et al. 2007. Metabolism and biological functions of two phosphorylated sphingolipids, sphingosine 1-phosphate and ceramide 1-phosphate. Prog. Lipid Res. 46: 126-144.
9. Senkal, C.E., et al. 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: LASS3 (human) mapping to 15q26.3.

SOURCE

LASS3 (O-25) is an affinity purified rabbit polyclonal antibody raised against synthetic LASS3 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

LASS3 (O-25) is recommended for detection of LASS3 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LASS3 siRNA (h): sc-62547, LASS3 shRNA Plasmid (h): sc-62547-SH and LASS3 shRNA (h) Lentiviral Particles: sc-62547-V.

Molecular Weight (predicted) of LASS3: 46 kDa.

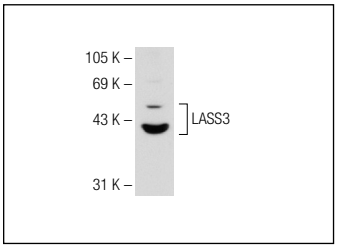
Molecular Weight (observed) of LASS3: 42/46 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or human fetal liver tissue extract.

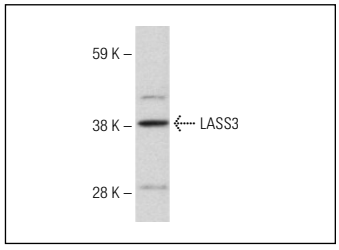
RECOMMENDED SECONDARY REAGENTS

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).

DATA



LASS3 (O-25): sc-133725. Western blot analysis of LASS3 expression in Jurkat nuclear extract.



LASS3 (O-25): sc-133725. Western blot analysis of LASS3 expression in human fetal liver tissue extract.

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.