10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Goat Anti-LASS1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1614a

Specification

Goat Anti-LASS1 Antibody - Product Information

Application	**WB, E**
Primary Accession	P27544
Other Accession	NP_937850, 10715, 93898 (mouse), 306351 (rat)
Reactivity	**Human**
Predicted	**Mouse, Pig**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**39536**

Goat Anti-LASS1 Antibody - Additional Information

Gene ID 10715

Other Names
Ceramide synthase 1, CerS1, LAG1 longevity assurance homolog 1, Longevity assurance gene 1 protein homolog 1, Protein UOG-1, CERS1, LAG1, LASS1, UOG1

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-LASS1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-LASS1 Antibody - Protein Information

Name CERS1 {ECO:0000303|PubMed:17977534, ECO:0000312|HGNC:HGNC:14253}

Function

Ceramide synthase that catalyzes the transfer of the acyl chain from acyl-CoA to a sphingoid base, with high selectivity toward stearoyl-CoA (octadecanoyl-CoA; C18:0-CoA) (PubMed:17977534, PubMed:23530041, PubMed:26887952, PubMed:31916624). N-acylates sphinganine and sphingosine bases to form dihydroceramides and ceramides in de novo synthesis and salvage pathways, respectively (PubMed:17977534, PubMed:23530041, PubMed:24782409, PubMed:26887952, PubMed:31916624). Plays a predominant role in skeletal muscle in regulating C18 ceramide and dihydroceramide levels with an impact on whole-body glucose metabolism and insulin sensitivity. Protects from diet-induced obesity by suppressing the uptake of glucose in multiple organs in a FGF21-dependent way (By similarity). Generates C18 ceramides in the brain, playing a critical role in cerebellar development and Purkinje cell function (By similarity). In response to cellular stress mediates mitophagy, a known defense mechanism against cell transformation and aging. Upon mitochondria fission, generates C18 ceramides that anchor lipidated MAP1LC3B/LC3B-II autophagolysosomes to outer mitochondrial membranes to eliminate damaged mitochondria (PubMed:22922758).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein

Goat Anti-LASS1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-LASS1 Antibody - Images

AF1614a (1 µg/ml) staining of Frontal Cortex lysate (35 µg protein in RIPA buffer). Primary

incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-LASS1 Antibody - Background

This gene encodes a member of the bone morphogenetic protein (BMP) family and the TGF-beta superfamily. This group of proteins is characterized by a polybasic proteolytic processing site that is cleaved to produce a mature protein containing seven conserved cysteine residues. Members of this family are regulators of cell growth and differentiation in both embryonic and adult tissues. Studies in yeast suggest that the encoded protein is involved in aging. This protein is transcribed from a monocistronic mRNA as well as a bicistronic mRNA, which also encodes growth differentiation factor 1.

Goat Anti-LASS1 Antibody - References

HRAS1 and LASS1 with APOE are associated with human longevity and healthy aging. Jazwinski SM, et al. Aging Cell, 2010 Oct. PMID 20569235. Stress-induced ER to Golgi translocation of ceramide synthase 1 is dependent on proteasomal processing. Sridevi P, et al. Exp Cell Res, 2010 Jan 1. PMID 19800881. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Gerhard DS, et al. Genome Res, 2004 Oct. PMID 15489334. Defects in cell growth regulation by C18:0-ceramide and longevity assurance gene 1 in human head and neck squamous cell carcinomas. Koybasi S, et al. J Biol Chem, 2004 Oct 22. PMID 15317812. The DNA sequence and biology of human chromosome 19. Grimwood J, et al. Nature, 2004 Apr 1. PMID 15057824.