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LASS5 Antibody

Catalog # ASC10812

Product Information

Application	WB, E, IHC-P
Primary Accession	Q8N5B7
Other Accession	NP_671723, 22218345
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	45752
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LASS5 antibody can be used for detection of LASS5 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL.

Additional Information

Gene ID	91012
Other Names	Ceramide synthase 5, CerS5, 2.3.1.24, LAG1 longevity assurance homolog 5, CERS5, LASS5
Target/Specificity	LASS5; Multiple isoforms of LASS5 are known to exist. This antibody is predicted not to cross-react with the highly homologous LASS6.
Reconstitution & Storage	LASS5 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LASS5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CERS5 (HGNC:23749)
Function	Ceramide synthase that catalyzes the transfer of the fatty acyl chain from fatty acyl-CoA to a sphingoid base, with high selectivity toward palmitoyl-CoA (hexadecanoyl-CoA; C16:0-CoA) (PubMed:16951403, PubMed:18541923, PubMed:22144673, PubMed:22661289, PubMed:23530041, PubMed:26887952, PubMed:29632068, PubMed:31916624). Can use different sphingoid bases as substrates for ceramide synthesis, such as sphinganine in de novo synthesis, and sphing-4E-enine (sphingosine), (4R)-hydroxysphinganine (phytosphingosine) or sphinga- 4E,14Z-dienine in

	salvage pathways (PubMed:31916624). Other fatty acyl- CoAs such as long-chain saturated stearoyl-CoA (octadecanoyl-CoA; C18:0-CoA), myristoyl-CoA (tetradecanoyl-CoA; C14:0-CoA), and monounsaturated oleoyl-CoA (9Z-octadecenoyl-CoA; C18:1-CoA) can also act as acyl donors, but with less efficiency than hexadecanoyl-CoA (By similarity). Plays a role in de novo ceramide synthesis and surfactant homeostasis in pulmonary epithelia (By similarity).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9D6K9}; Multi-pass membrane protein

Background

LASS5 Antibody: The LASS (longevity assurance homolog) family members represent a subgroup of the homeobox gene family and are highly conserved from yeasts to mammals. Six members of this family of proteins have been characterized (LASS1-6) and all are involved in ceramide synthesis during cell growth regulation and cancer differentiation. LASS5, also called Trh4, is a 392 amino acid endoplasmic reticulum, multi-pass membrane protein. Functioning as a dihydro-ceramide synthase, LASS5 is involved in the production of sphingolipids containing mainly one fatty acid donor (N-linked palmitoyl-ceramide) in a fumonisin B1-independent manner. It uses palmitoyl-CoA as an acyl donor and is involved in the synthesis of C14, C16 and C18-ceramide. LASS5 is the most abundantly expressed and predominant ceramide synthase isoform in lung epithelia. Recent studies show that LASS5 partially correct growth and apoptosis.

References

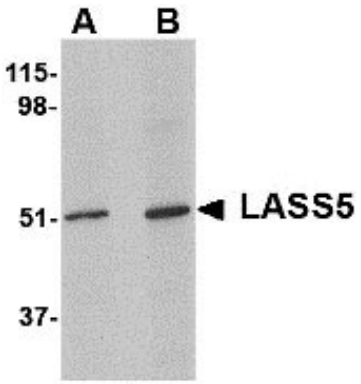
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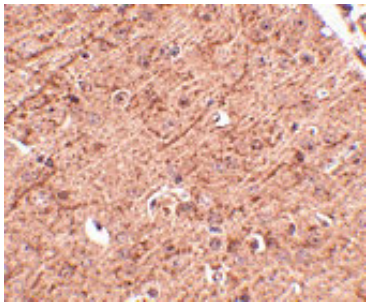
Xu Z, Zhou J, McCoy DM, et al. LASS5 is the predominant ceramide synthase isoform involved in de novo sphingolipid synthesis in lung epithelia. J. Lipid Res.2005; 46:1229-38.

Images



Western blot analysis of LASS5 in SK-N-SH lysate with LASS5 antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of LASS5 in mouse brain tissue with LASS5 antibody at 2.5 µg/mL.



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