

**LASS5 Antibody**  
**Catalog # ASC10727****Specification****LASS5 Antibody - Product Information**

Application	WB, IF
Primary Accession	<a href="#">Q8N5B7</a>
Other Accession	<a href="#">NP_671723</a> , <a href="#">22218345</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	LASS5 antibody can be used for detection of LASS5 by Western blot at 1 µg/mL. Antibody can also be used for immunofluorescence starting at 20 µg/mL. For immunofluorescence start at 20 µg/mL.

**LASS5 Antibody - Additional Information**Gene ID **91012****Target/Specificity**

LASS5; Multiple isoforms of LASS5 are known to exist. This antibody may 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.

**LASS5 Antibody - Protein Information**Name CERS5 ([HGNC:23749](#))**Function**

Ceramide synthase that catalyzes the transfer of the acyl chain from acyl-CoA to a sphingoid base, with high selectivity toward palmitoyl-CoA (hexadecanoyl-CoA; C16:0-CoA)(PubMed:<a href="http://www.uniprot.org/citations/16951403" target="\_blank">16951403</a>, PubMed:<a href="http://www.uniprot.org/citations/18541923" target="\_blank">18541923</a>, PubMed:<a href="http://www.uniprot.org/citations/22144673" target="\_blank">22144673</a>, PubMed:<a href="http://www.uniprot.org/citations/22661289" target="\_blank">22661289</a>, PubMed:<a href="http://www.uniprot.org/citations/23530041" target="\_blank">23530041</a>, PubMed:<a href="http://www.uniprot.org/citations/26887952" target="\_blank">26887952</a>, PubMed:<a href="http://www.uniprot.org/citations/29632068" target="\_blank">29632068</a>, PubMed:<a href="http://www.uniprot.org/citations/31916624" target="\_blank">31916624</a>). Can use

other acyl donors, but with less efficiency (By similarity). N-acylates sphinganine and sphingosine bases to form dihydroceramides and ceramides in de novo synthesis and salvage pathways, respectively (PubMed:<a href="http://www.uniprot.org/citations/31916624" target="\_blank">31916624</a>). Plays a role in de novo ceramide synthesis and surfactant homeostasis in pulmonary epithelia (By similarity).

#### Cellular Location

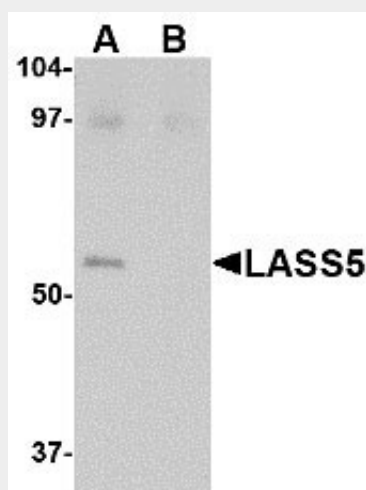
Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9D6K9}; Multi-pass membrane protein

#### LASS5 Antibody - Protocols

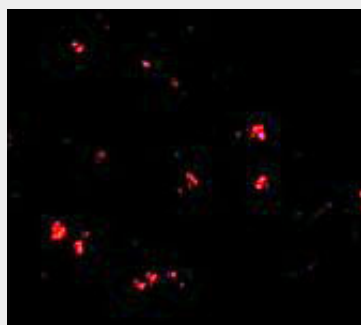
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

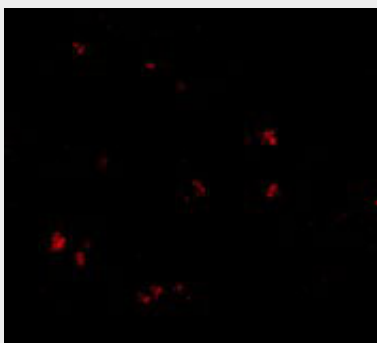
#### LASS5 Antibody - Images



Western blot analysis of LASS5 in SK-N-SH lysate with LASS5 antibody at 1  $\mu$ g/mL in the (A) absence and (B) presence of blocking peptide.



Immunofluorescence of LASS5 in human brain tissue with LASS5 antibody at 20 µg/mL.



Immunofluorescence of LASS5 in Human Brain cells with LASS5 antibody at 20 µg/mL.

### **LASS5 Antibody - 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.

### **LASS5 Antibody - References**

Riebeling C, Allegood JC, Wang E, et al. Two mammalian longevity assurance gene (LAG1) family members, Trh1 and Trh, regulate dihydroceramide synthesis using different fatty acyl-CoA donors. *J. Biol. Chem.*2003; 278:43452-9.

Lahiri S and Futerman AH. LASS5 is a bona fide dihydroceramide synthase that selectively utilizes palmitoyl-CoA as acyl donor. *J. Biol Chem.*2005; 280:33735-8.

Spassieva S, Seo JG, Jiang JC, et al. 2006. Necessary role for the LAG1p motif in (dihydro)ceramide synthase activity. *J. Biol. Chem.*2006; 281:33931-8.

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.