

LASS5 Antibody

LASS5 (CT): Longevity Assurance Homolog 5, LAG1, TRH4

CATALOG No.: 4695

BACKGROUND:

The LASS (longevity assurance homolog) family members represent a subgroup of the homeobox gene family and are highly conserved from yeasts to mammals (1). 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 (1-3). LASS5 is the most abundantly expressed and predominant ceramide synthase isoform in lung epithelia (4). Recent studies show that LASS5 partially correct growth and apoptosis (5). Multiple isoforms of LASS5 are known to exist. This antibody may cross-react with the highly homologous LASS6.

SOURCE:

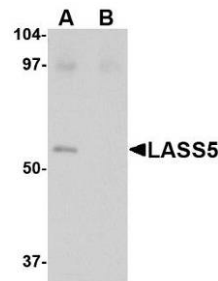
Rabbit polyclonal LASS5 antibody was raised against a 17 amino acid peptide near the carboxy terminus of the human LASS5 (GenBank accession no. NP_671723).

APPLICATION:

LASS5 antibody can be used for detection of LASS5 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) SK-N-SH lysate can be used as positive control. LASS5 antibody is human, mouse and rat reactive. **For research use only.**

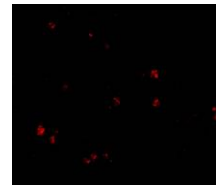
STORAGE:

LASS5 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of LASS5 in SK-N-SH lysate with LASS5 antibody at 1 µg/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.



RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4695P**.
SK-N-SH Cell Lysate, Catalog No. **1220**.
LASS5 Antibody (NT), Catalog No. **4697**.
LASS5 Antibody (NT2), Catalog No. **4939**.
LASS6 Antibody, Catalog No. **4941**.
Bcl-2 Antibody (CT), Catalog No. **3335**.

REFERENCES:

1. 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.
2. 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.
3. 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.
4. 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.
5. Schulz A, Mousallem T, Venkataramani M, et al. The CLN9 protein, a regulator of dihydroceramide synthase. *J. Biol. Chem.* 2006; 281:2784-94.
(08-02D)