SANTA CRUZ BIOTECHNOLOGY, INC.

LASS4 (D-6): sc-376497



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. LASS4 is a 394 amino acid endoplasmic reticulum, multi-pass membrane protein. LASS4 increases the levels of long ceramides such as C22:0- and C24:0-ceramides. In cells deficient for CLN9, as observed in neuronal ceroid lipofuscinosis (NCL) or Batten disease, LASS4 can increase ceramide levels and partially correct growth and apoptosis.

REFERENCES

- Riebeling, C., Allegood, J.C., Wang, E. and Futerman, A.H. 2003. Two mammalian longevity assurance gene (LAG1) family members, trh1 and trh4, regulate dihydroceramide synthesis using different fatty acyl-CoA donors. J. Biol. Chem. 278: 43452-43459.
- Mizutani, Y., Kihara, A. and Igarashi, Y. 2005. Mammalian LASS6 and its related family members regulate synthesis of specific ceramides. Biochem. J. 390: 263-271.
- Schulz, A., Mousallem, T., Venkataramani, M., Persaud-Sawin, D.A., Zucker, A., Luberto, C., Bielawska, A., Bielawski, J., Holthuis, J.C., Jazwinski, S.M., Kozhaya, L., Dbaibo, G.S. and Boustany, R.M. 2006. The CLN9 protein, a regulator of dihydroceramide synthase. J. Biol. Chem. 281: 2784-2794.
- Mizutani, Y., Kihara, A. and Igarashi, Y. 2006. LASS3 (longevity assurance homologue 3) is a mainly testis-specific (dihydro)ceramide synthase with relatively broad substrate specificity. Biochem. J. 398: 531-538.
- Rosenthal, E.A., Ronald, J., Rothstein, J., Rajagopalan, R., Ranchalis, J., Wolfbauer, G., Albers, J.J., Brunzell, J.D., Motulsky, A.G., Rieder, M.J., Nickerson, D.A., Wijsman, E.M. and Jarvik, G.P. 2011. Linkage and association of phospholipid transfer protein activity to LASS4. J. Lipid Res. 52: 1837-1846.

CHROMOSOMAL LOCATION

Genetic locus: CERS4 (human) mapping to 19p13.2.

SOURCE

LASS4 (D-6) is a mouse monoclonal antibody raised against amino acids 326-394 mapping at the C-terminus of LASS4 of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lgG_1$ kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

LASS4 (D-6) is available conjugated to agarose (sc-376497 AC), 500 μ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376497 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376497 PE), fluorescein (sc-376497 FITC), Alexa Fluor[®] 488 (sc-376497 AF488), Alexa Fluor[®] 546 (sc-376497 AF546), Alexa Fluor[®] 594 (sc-376497 AF594) or Alexa Fluor[®] 647 (sc-376497 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376497 AF680) or Alexa Fluor[®] 790 (sc-376497 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LASS4 (D-6) is recommended for detection of LASS4 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LASS4 siRNA (h): sc-62549, LASS4 shRNA Plasmid (h): sc-62549-SH and LASS4 shRNA (h) Lentiviral Particles: sc-62549-V.

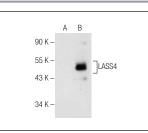
Molecular Weight of LASS4: 47 kDa.

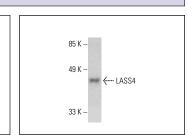
Positive Controls: LASS4 (h): 293T Lysate: sc-173489, HeLa whole cell lysate: sc-2200 or LNCaP cell lysate: sc-2231.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





LASS4 (D-6): sc-376497. Western blot analysis of LASS4 expression in non-transfected: sc-117752 (A) and human LASS4 transfected: sc-173489 (B) 293T whole cell lysates. LASS4 (D-6): sc-376497. Western blot analysis of LASS4 expression in LNCaP whole cell lysate.

STORAGE

Store at 4° C, **D0 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 for detailed protocols and support products.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA