

LASS6 siRNA (m): sc-62554

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 all are involved in sphingolipid synthesis. LASS6 is a widely expressed 384 amino acid endoplasmic reticulum, multi-pass membrane protein. On the luminal side of the endoplasmic reticulum membrane, the N-terminal Asparagine residue is glycosylated. In cells deficient for CLN9, LASS6 corrects growth and apoptosis, and increases the levels of short ceramide species, such as C14:0- and C16:0-ceramides.

REFERENCES

1. Weinmann, A., Galle, P.R. and Teufel, A. 2005. LASS6, an additional member of the longevity assurance gene family. *Int. J. Mol. Med.* 16: 905-910.
2. 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.
3. 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.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: LASS6 (mouse) mapping to 2 C2.

PRODUCT

LASS6 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LASS6 shRNA Plasmid (m): sc-62554-SH and LASS6 shRNA (m) Lentiviral Particles: sc-62554-V as alternate gene silencing products.

For independent verification of LASS6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62554A, sc-62554B and sc-62554C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

LASS6 siRNA (m) is recommended for the inhibition of LASS6 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

LASS6 (L-18): sc-100554 is recommended as a control antibody for monitoring of LASS6 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LASS6 gene expression knockdown using RT-PCR Primer: LASS6 (m)-PR: sc-62554-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.