



LSR siRNA (m): sc-149135

BACKGROUND

LSR (lipolysis stimulated lipoprotein receptor), also known as ILDR3 or LISCH7, is a 649 amino acid single-pass membrane protein that contains one immunoglobulin-like domain and localizes to the cell membrane. Existing as a homotrimer or a homotetramer, LSR is thought to play a role in the clearing of triglyceride-rich lipoproteins from blood, specifically via binding to low density lipoproteins (LDLs) and very low density lipoproteins (VLDLs) and facilitating their uptake into cells. Overexpression of LSR may be associated with increased colon tumor growth, suggesting an involvement for LSR in tumor formation and metastasis. Multiple isoforms of LSR exist due to alternative splicing events. The gene encoding LSR maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

REFERENCES

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2. Hauge, H., et al. 2004. Characterization of a novel immunoglobulin-like domain containing receptor. *Biochem. Biophys. Res. Commun.* 323: 970-978.
3. Kim, J.E., et al. 2005. Global phosphoproteome of HT-29 human colon adenocarcinoma cells. *J. Proteome Res.* 4: 1339-1346.
4. García, J.M., et al. 2007. Prognostic value of LISCH7 mRNA in plasma and tumor of colon cancer patients. *Clin. Cancer Res.* 13: 6351-6358.
5. Herbsleb, M., et al. 2008. Increased cell motility and invasion upon knockdown of lipolysis stimulated lipoprotein receptor (LSR) in SW780 bladder cancer cells. *BMC Med. Genomics* 1: 31.
6. Yen, F.T., et al. 2008. Lipolysis stimulated lipoprotein receptor: a novel molecular link between hyperlipidemia, weight gain, and atherosclerosis in mice. *J. Biol. Chem.* 283: 25650-25659.
7. Voshol, P.J., et al. 2009. Effect of plasma triglyceride metabolism on lipid storage in adipose tissue: Studies using genetically engineered mouse models. *Biochim. Biophys. Acta* 1791: 479-485.
8. Narvekar, P., et al. 2009. Liver-specific loss of lipolysis-stimulated lipoprotein receptor triggers systemic hyperlipidemia in mice. *Diabetes* 58: 1040-1049.

CHROMOSOMAL LOCATION

Genetic locus: Lsr (mouse) mapping to 7 B1.

PRODUCT

LSR 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 LSR shRNA Plasmid (m): sc-149135-SH and LSR shRNA (m) Lentiviral Particles: sc-149135-V as alternate gene silencing products.

For independent verification of LSR (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-149135A, sc-149135B and sc-149135C.

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

LSR siRNA (m) is recommended for the inhibition of LSR 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LSR gene expression knockdown using RT-PCR Primer: LSR (m)-PR: sc-149135-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Takano, K., et al. 2017. Histone deacetylase inhibition prevents cell death induced by loss of tricellular tight junction proteins in temperature-sensitive mouse cochlear cells. *PLoS ONE* 12: e0182291.

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.