

SR-B1 siRNA (m): sc-44753

BACKGROUND

The macrophage class A scavenger receptors (SR-A) type I and II mediate the uptake of modified low density lipoprotein (LDL), while the scavenger receptor class B type I (SR-BI) mediates the selective uptake of cholesterol and cholesterol esters (CE) from HDLs into cells. SREC, Ox-LDL-R1, SR-A and SR-BI may all be involved in the early development of atherosclerosis. SR-BI, an integral membrane protein, acts as a receptor for various ligands, including apoptotic cells, cholesterol ester, phospholipids, lipoproteins and phosphatidylserine. SR-B1, which may be involved in phagocytosis of apoptotic cells, enables the movement of cholesterol between the cell surface and extra-cellular donors and acceptors. Although it is widely expressed, it localizes primarily to cholesterol and sphingomyelin-enriched domains within the plasma membrane, called caveolae.

REFERENCES

1. Kawasaki, Y., et al. 2002. Phosphatidylserine binding of class B scavenger receptor type I, a phagocytosis receptor of testicular sertoli cells. *J. Biol. Chem.* 277: 27559-27566.
2. Scarselli, E., et al. 2002. The human scavenger receptor class B type I is a novel candidate receptor for the hepatitis C virus. *EMBO J.* 21: 5017-5025.
3. Morabia, A., et al. 2003. Association of extreme blood lipid profile phenotypic variation with 11 reverse cholesterol transport genes and 10 non-genetic cardiovascular disease risk factors. *Hum. Mol. Genet.* 12: 2733-2743.
4. Tai, E.S., et al. 2003. Polymorphisms at the SR-B1 locus are associated with lipoprotein levels in subjects with heterozygous familial hypercholesterolemia. *Clin. Genet.* 63: 53-58.
5. Bartosch, B., et al. 2003. Cell entry of hepatitis C virus requires a set of co-receptors that include the CD81 tetraspanin and the SR-B1 scavenger receptor. *J. Biol. Chem.* 278: 41624-41630.
6. Dorfman, S.E., et al. 2005. Dietary fatty acids and cholesterol differentially modulate HDL cholesterol metabolism in Golden-Syrian hamsters. *J. Nutr.* 135: 492-498.

CHROMOSOMAL LOCATION

Genetic locus: Scarb1 (mouse) mapping to 5 G1.1.

PRODUCT

SR-B1 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 SR-B1 shRNA Plasmid (m): sc-44753-SH and SR-B1 shRNA (m) Lentiviral Particles: sc-44753-V as alternate gene silencing products.

For independent verification of SR-B1 (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-44753A, sc-44753B and sc-44753C.

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

SR-B1 siRNA (m) is recommended for the inhibition of SR-B1 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 SR-B1 gene expression knockdown using RT-PCR Primer: SR-B1 (m)-PR: sc-44753-PR (20 μ l, 554 bp). 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.