

LRP1B siRNA (m): sc-60969

BACKGROUND

Members of the LDL receptor gene family, including LDLR (low density lipoprotein receptor), LRP5 (low density lipoprotein related proteins), megalin (also designated GP330), VLDLR (very low density lipoprotein receptor) and ApoER2, mediate the endocytosis of extracellular ligands. LRP1B is a member of the LRP subfamily that regulates the endocytic trafficking of the transmembrane protein β -Amyloid precursor protein (APP). Proteolytic processing of APP produces Amyloid- β peptide ($A\beta$), a molecule that is involved in the pathogenesis of Alzheimer's disease. LRP1B also regulates the catabolism of the platelet derived growth factor (PDGF) β -receptor, influencing the migration of smooth muscle cells, thereby implicating LRP1B in the development of atherosclerosis, a disease that affects the arterial blood vessel. LRP1B is also an important factor in the tumorigenesis of non-small cell lung cancer.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Lrp1b (mouse) mapping to 2 B.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

LRP1B 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 LRP1B shRNA Plasmid (m): sc-60969-SH and LRP1B shRNA (m) Lentiviral Particles: sc-60969-V as alternate gene silencing products.

For independent verification of LRP1B (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-60969A, sc-60969B and sc-60969C.

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

LRP1B siRNA (m) is recommended for the inhibition of LRP1B 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 LRP1B gene expression knockdown using RT-PCR Primer: LRP1B (m)-PR: sc-60969-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.