SANTA CRUZ BIOTECHNOLOGY, INC.

Clusterin-L1 siRNA (h): sc-72930

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Clusterin, also designated complement lysis inhibitor (CLI), apolipoprotein J (ApoJ), sulfated glycoprotein 2 (SGP2), SP-40 or testosterone-repressed prostate message 2 (TRPM2), is a secretory, heterodimeric glycoprotein that influences immune regulation, cell adhesion, transformation, lipid transportation, tissue remodeling, membrane recycling and cell-cell interactions. Clusterin is synthesized as a 449 amino acid polypeptide that is post-translationally cleaved at an internal bond between Arg 227 and Ser 228. Clusterin-L1 (clusterin-like 1), also known as CLUL1, is a 466 amino acid secreted protein belonging to the Clusterin family and is exclusively expressed in cone photoreceptor cells. The gene encoding Clusterin-L1 is considered a candidate locus for retinal disease such as age-related macular degeneration, which is the leading cause of blindness in the elderly population.

REFERENCES

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3. Young, T.L. 2004. Dissecting the genetics of human high myopia: a molecular biologic approach. Trans. Am. Ophthalmol. Soc. 102: 423-445.
4. Scavello, G.S., et al. 2005. Genomic structure and organization of the high grade Myopia-2 locus (MYP2) critical region: mutation screening of 9 positional candidate genes. Mol. Vis. 11: 97-110.
5. Gehrs, K.M., et al. 2006. Age-related macular degeneration—emerging pathogenetic and therapeutic concepts. Ann. Med. 38: 450-471.
6. Sturgill, G.M., et al. 2006. Mutation screen of the cone-specific gene, CLUL1, in 376 patients with age-related macular degeneration. Ophthalmic Genet. 27: 151-155.
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CHROMOSOMAL LOCATION

Genetic locus: CLUL1 (human) mapping to 18p11.32.

PRODUCT

Clusterin-L1 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Clusterin-L1 shRNA Plasmid (h): sc-72930-SH and Clusterin-L1 shRNA (h) Lentiviral Particles: sc-72930-V as alternate gene silencing products.

For independent verification of Clusterin-L1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72930A, sc-72930B and sc-72930C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Clusterin-L1 siRNA (h) is recommended for the inhibition of Clusterin-L1 expression in human 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 µM in 66 µl. 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 Clusterin-L1 gene expression knockdown using RT-PCR Primer: Clusterin-L1 (h)-PR: sc-72930-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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