SANTA CRUZ BIOTECHNOLOGY, INC.

Angptl3 siRNA (m): sc-61912

BACKGROUND

Angiopoietin-like protein 3 (Angptl3) functions as a potent lipoprotein lipase inhibitor and is an important component of plasma triglyceride homeostasis. Angptl3 also plays a role in adipose formation and angiogenesis through its interaction with integrin $\alpha_v\beta_3$. It is secreted by the liver and is functionally defined by the C-terminal fibrinogen (FBN)-like domain and an N-terminal coiled-coil domain. Angptl3 regulates circulating triglyceride levels during different nutritional states thereby mediating the feeding/fasting cycle. A deficiency of Angptl3 results in abnormally low lipid levels, and a repression of the protein may be protective against atherosclerosis. Angptl3 may also play an important role in hyperlipidemia in diabetes.

REFERENCES

1. Koishi, R., et al. 2002. Angptl3 regulates lipid metabolism in mice. Nat. Genet. 30: 151-157.
2. Shimizugawa, T., et al. 2002. ANGPTL3 decrease of lipoprotein lipase. J. Biol. Chem. 277: 33742-33748.
3. Ono, M., et al. 2003. Protein region important for regulation of lipid metabolism in angiopoietin-like 3 (ANGPTL3): ANGPTL3 is cleaved and activated *in vivo.* J. Biol. Chem. 278: 41804-41809.
4. Inukai, K., et al. 2004. ANGPTL3 is increased in both Insulin-deficient and-resistant diabetic states. Biophys. Res. Commun. 317: 1075-1079.
5. Shimizugawa, T., et al. 2004. Angptl3 (angiopoietin-like 3). Nippon Rinsho 62: 1170-1174.
6. Köster, A., et al. 2005. Transgenic angiopoietin-like (angptl)4 overexpression and targeted disruption of angptl4 and angptl3: regulation of triglyceride metabolism. Endocrinology 146: 4943-4950.
7. Fugier, C., et al. 2006. The lipoprotein lipase inhibitor Angptl3 is negatively regulated by thyroid hormone. J. Biol. Chem. 281: 11553-11559.

CHROMOSOMAL LOCATION

Genetic locus: Angptl3 (mouse) mapping to 4 C6.

PRODUCT

Angptl3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Angptl3 shRNA Plasmid (m): sc-61912-SH and Angptl3 shRNA (m) Lentiviral Particles: sc-61912-V as alternate gene silencing products.

For independent verification of Angptl3 (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-61912A, sc-61912B and sc-61912C.

PROTOCOLS

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

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

Angptl3 siRNA (m) is recommended for the inhibition of Angptl3 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 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 Angptl3 gene expression knockdown using RT-PCR Primer: Angptl3 (m)-PR: sc-61912-PR (20 µl). 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.