SANTA CRUZ BIOTECHNOLOGY, INC.

Angptl6 siRNA (m): sc-141062

BACKGROUND

Angptl6 (angiopoietin-like 6), also known as AGF or ARP5, is a 470 amino acid secreted protein that contains one fibrinogen C-terminal domain and is a member of the angiopoietin-like family. Expressed abundantly in liver and present at lower levels in testis, kidney, heart, brain and lung, Angptl6 plays a role in wound healing and is also thought to promote neovascularization and enhance the chemotactic activity of endothelial cells. Additionally, Angptl6 may be involved in epidermal proliferation, remodeling and regeneration and may be able to counteract obesity by increasing energy expenditure. Human Angptl6 shares 74% amino acid identity with its mouse counterpart, suggesting a conserved role between species. The gene encoding Angptl6 maps to human chromosome 19p13.2, which is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (Fc Rs).

REFERENCES

1. Oike, Y., et al. 2003. Angiopoietin-related growth factor (AGF) promotes epidermal proliferation, remodeling, and regeneration. Proc. Natl. Acad. Sci. USA 100: 9494-9499.
2. Oike, Y., et al. 2004. Angiopoietin-related growth factor (AGF) promotes angiogenesis. Blood 103: 3760-3765.
3. Oike, Y., et al. 2005. Angiopoietin-related growth factor antagonizes obesity and Insulin resistance. Nat. Med. 11: 400-408.
4. Online Mendelian Inheritance in Man, OMIM™. 2005 Johns Hopkins University, Baltimore, MD. MIM Number: 609336. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Zhang, Y., et al. 2006. Angiopoietin-related growth factor (AGF) supports adhesion, spreading, and migration of keratinocytes, fibroblasts, and endothelial cells through interaction with RGD-binding integrins. Biochem. Biophys. Res. Commun. 347: 100-108.
6. Hato, T., et al. 2008. The role of angiopoietin-like proteins in angiogenesis and metabolism. Trends Cardiovasc. Med. 18: 6-14.

CHROMOSOMAL LOCATION

Genetic locus: Angptl6 (mouse) mapping to 9 A3.

PRODUCT

Angptl6 siRNA (m) is a target-specific 19-25 nt siRNA 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 Angptl6 shRNA Plasmid (m): sc-141062-SH and Angptl6 shRNA (m) Lentiviral Particles: sc-141062-V as alternate gene silencing products.

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

Angptl6 siRNA (m) is recommended for the inhibition of Angptl6 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 Angptl6 gene expression knockdown using RT-PCR Primer: Angptl6 (m)-PR: sc-141062-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.