SANTA CRUZ BIOTECHNOLOGY, INC.

Angptl6 shRNA (m) Lentiviral Particles: sc-141062-V

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 shRNA (m) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see Angptl6 siRNA (m): sc-141062 and Angptl6 shRNA Plasmid (m): sc-141062-SH as alternate gene silencing products.

PROTOCOLS

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

APPLICATIONS

Angptl6 shRNA (m) Lentiviral Particles is recommended for the inhibition of Angptl6 expression in mouse cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

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.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.