

Produktinformation



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SANTA CRUZ BIOTECHNOLOGY, INC.

Angptl4 shRNA (m) Lentiviral Particles: sc-44665-V



BACKGROUND

Angiopoietin-like 4 (Angptl4), also designated hepatic fibrinogen/angiopoietinrelated protein (HFARP), is a secreted protein which, through an endocrine action, exerts a protective function over endothelial cells. The Angptl4 gene has hypoxia-induced expression in endothelial cells. Angptl4 has a highly hydrophobic region at the N-terminus that is typical of a secretory signal sequence and one consensus glycosylation site. Angptl4 is considered a marker of renal cell carcinoma (other renal tumor cells do not produce Angptl4 mRNA). Evidence suggests that Angptl4 is a blood-borne hormone directly involved in regulating glucose homeostasis, lipid metabolism and Insulin sensitivity. Angptl4 exerts distinct effects on glucose and lipid metabolism, and may be useful for the treatment of diabetes.

REFERENCES

- 1. Kim, I., et al. 2000. Hepatic expression, synthesis and secretion of a novel fibrinogen/angiopoietin-related protein that prevents endothelial cell apoptosis. Biochem. J. 346: 603-610.
- 2. Li, K.Q., et al. 2004. Anti-tumor effect of recombinant retroviral vectormediated human Angptl4 gene transfection. Chin. Med. J. 117: 1364-1369.
- 3. Ge, H., et al. 2005. Differential regulation and properties of angiopoietinlike proteins 3 and 4. J. Lipid Res. 46: 1484-1490.
- 4. Yu, X., et al. 2005. Inhibition of cardiac lipoprotein utilization by transgenic overexpression of Angptl4 in the heart. Proc. Natl. Acad. Sci. USA 102: 1767-1772.
- 5. Xu, A., et al. 2005. Angiopoietin-like protein 4 decreases blood glucose and improves glucose tolerance but induces hyperlipidemia and hepatic steatosis in mice. Proc. Natl. Acad. Sci. USA 102: 6086-6091.

CHROMOSOMAL LOCATION

Genetic locus: Angptl4 (mouse) mapping to 17 B1.

PRODUCT

Angptl4 shRNA (m) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10⁶ 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 Angptl4 siRNA (m): sc-44665 and Angptl4 shRNA Plasmid (m): sc-44665-SH as alternate gene silencing products.

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.

PROTOCOLS

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

APPLICATIONS

Angptl4 shRNA (m) Lentiviral Particles is recommended for the inhibition of Angptl4 expression in mouse cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10⁶ 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.

GENE EXPRESSION MONITORING

Angptl4 (L-17): sc-32186 is recommended as a control antibody for monitoring of Angptl4 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Angptl4 gene expression knockdown using RT-PCR Primer: Angptl4 (m)-PR: sc-44665-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.

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.