ACSL5 shRNA (h) Lentiviral Particles: sc-60621-V

**BACKGROUND**

Acyl-CoA synthetases, also known as long-chain fatty-acid CoA synthases (FACL) or palmitoyl-CoA ligases, include ACSL1-6, which are all single-pass membrane proteins localizing to the mitochondrion, microsome or peroxisome. ACSL proteins are important for synthesis of cellular lipids and for β-oxidation degradation. Specifically, ACSL proteins catalyze the activation of long-chain fatty acids to acyl-CoAs, which can be metabolized to form CO₂, triacylglycerol (TAG), phospholipids (PL) and cholesteryl esters (CE). ACSL5 utilizes a wide range of saturated fatty acids with a preference for C16-C18 unsaturated fatty acids. It is highly expressed in uterus and spleen. A decrease in expression of ACSL5 is correlated with tumorigenesis, including endometrioid adenocarcinomas and colorectal carcinomas. ACSL5 is also useful as a differentiating marker in the gastrointestinal tract.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: ACSL5 (human) mapping to 10q25.2.

**PRODUCT**

ACSL5 shRNA (h) 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 ACSL5 siRNA (h): sc-60621 and ACSL5 shRNA Plasmid (h): sc-60621-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 for detailed protocols and support products.

**APPLICATIONS**

ACSL5 shRNA (h) Lentiviral Particles is recommended for the inhibition of ACSL5 expression in human 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**

ACSL5 (A-2): sc-365478 is recommended as a control antibody for monitoring of ACSL5 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 reagents are recommended: 1) Western Blotting: use m-IgG® BP-HRP: sc-516102 or m-IgG® BP-PE (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG® BP-FITC: sc-516140 or m-IgG® BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor ACSL5 gene expression knockdown using RT-PCR Primer: ACSL5 (h)-PR: sc-60621-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.