SANTA CRUZ BIOTECHNOLOGY, INC.

DGAT2L6 siRNA (m): sc-143021

BACKGROUND

The human acyl-CoA: diacylglycerol acyltransferase (DGAT) 2 gene superfamily includes seven members, four of which have been previously implicated in the synthesis of di- or triacylglycerol. Belonging to the diacylglycerol acyltransferase family, DGAT2L6 (diacylglycerol O-acyltransferse 2-like protein 6), also known as DC3 (diacylglycerol O-acyltransferase candidate 3), is a 337 amino acid multi-pass membrane protein of the endoplasmic reticulum. DGAT2L6 has no wax synthase to produce wax esters and is believed to function as an acyltransferase, with fatty acyl-CoA as its substrate. DGAT2L6 is expressed in a variety of tissues, with the exception of pancreas. The gene encoding DGAT2L6 maps to human chromosome Xq13.1 and mouse chromosome X C3.

REFERENCES

1. Oelkers, P., et al. 1998. Characterization of two human genes encoding acyl coenzyme A:cholesterol acyltransferase-related enzymes. J. Biol. Chem. 273: 26765-26771.
2. Cases, S., et al. 1998. Identification of a gene encoding an acyl CoA:diacylglycerol acyltransferase, a key enzyme in triacylglycerol synthesis. Proc. Natl. Acad. Sci. USA 95: 13018-13023.
3. Lardizabal, K.D., et al. 2001. DGAT2 is a new diacylglycerol acyltransferase gene family: purification, cloning, and expression in insect cells of two polypeptides from *Mortierella ramanniana* with diacylglycerol acyltransferase activity. J. Biol. Chem. 276: 38862-38869.
4. Cases, S., et al. 2001. Cloning of DGAT2, a second mammalian diacylglycerol acyltransferase, and related family members. J. Biol. Chem. 276: 38870-38876.
5. Winter, A., et al. 2003. Genomic organization of the DGAT2/MOGAT gene family in cattle *(Bos taurus)* and other mammals. Cytogenet. Genome Res. 102: 42-47.
6. Turkish, A.R., et al. 2005. Identification of two novel human acyl-CoA wax alcohol acyltransferases: members of the diacylglycerol acyltransferase 2 (DGAT2) gene superfamily. J. Biol. Chem. 280: 14755-14764.

CHROMOSOMAL LOCATION

Genetic locus: Dgat2l6 (mouse) mapping to X C3.

PRODUCT

DGAT2L6 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 DGAT2L6 shRNA Plasmid (m): sc-143021-SH and DGAT2L6 shRNA (m) Lentiviral Particles: sc-143021-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

DGAT2L6 siRNA (m) is recommended for the inhibition of DGAT2L6 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 DGAT2L6 gene expression knockdown using RT-PCR Primer: DGAT2L6 (m)-PR: sc-143021-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.