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DGAT1 (m): 293T Lysate: sc-119756

BACKGROUND

Glucose and Insulin are anabolic signals which upregulate the transcriptions of a series of lipogenic enzymes to convert excess carbohydrate into triglycerides for efficient energy storage. Acyl-coenzyme A: diacylglycerol acyltransferase, also known as DGAT1 and ARGPI, is a microsomal enzyme that assists in the synthesis of fatty acids into triglycerides. DGAT1 catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol (DAG) and fatty acyl CoA as substrates. DGAT1 plays a fundamental role in the metabolism of cellular diacylglycerol and is important in higher eukaryotes for physiologic processes involving triacylglycerol metabolism such as intestinal fat absorption, lipoprotein assembly, adipose tissue formation, and lactation. DGAT1 is involved in fat absorption in the intestine and in basal level triglyceride synthesis in adipose tissue, where it is more highly expressed. Mice lacking DGAT1 have increased energy expenditure and therefore are resistant to obesity. In addition, mice lacking both copies of DGAT1 are completely devoid of milk secretion, most likely because of deficient triglyceride synthesis in the mammary gland.

REFERENCES

1. Cases, S., Smith, S.J., Zheng, Y.W., Myers, H.M., Lear, S.R., Sande, E., Novak, S., Collins, C., Welch, C.B., Lusis, A.J., Erickson, S.K. and Farese, R.V., Jr. 1998. Identification of a gene encoding an acyl CoA: diacyl-glycerol acyltransferase, a key enzyme in triacylglycerol synthesis. *Proc. Natl. Acad. Sci. USA* 95: 13018-13023.
2. Meegalla, R.L., Billheimer, J.T. and Cheng, D. 2002. Concerted elevation of acyl-coenzyme A: diacyl-glycerol acyltransferase (DGAT) activity through independent stimulation of mRNA expression of DGAT1 and DGAT2 by carbohydrate and Insulin. *Biochem. Biophys. Res. Commun.* 298: 317-323.
3. Winter, A., Kramer, W., Werner, F.A., Kollers, S., Kata, S., Durstewitz, G., Buitkamp, J., Womack, J.E., Thaller, G. and Fries, R. 2002. Association of a lysine-232/alanine polymorphism in a bovine gene encoding acyl-CoA: diacylglycerol acyltransferase (DGAT1) with variation at a quantitative trait locus for milk fat content. *Proc. Natl. Acad. Sci. USA* 99: 9300-9305.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604900. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Chen, H.C., Ladha, Z., Smith, S.J. and Farese, R.V., Jr. 2003. Analysis of energy expenditure at different ambient temperatures in mice lacking DGAT1. *Am. J. Physiol. Endocrinol. Metab.* 284: E213-218.

CHROMOSOMAL LOCATION

Genetic locus: Dgat1 (mouse) mapping to 15 D3.

PRODUCT

DGAT1 (m): 293T Lysate represents a lysate of mouse DGAT1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

DGAT1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive DGAT1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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