SANTA CRUZ BIOTECHNOLOGY, INC.

DGAT2 (A-18): sc-32399

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 ARGP1, 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 form-ation and lactation. DGAT2, which has no homology to DGAT1, differs from DGAT1 in that its activity has been shown to be inhibited by MgCl in an *in vitro* assay. DGAT2 is expressed primarily in liver and white adipose tissue, which suggests that it plays an important role in mammalian triglyceride metabolism.

CHROMOSOMAL LOCATION

Genetic locus: DGAT2 (human) mapping to 11q13.5; Dgat2 (mouse) mapping to 7 E2.

SOURCE

DGAT2 (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DGAT2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32399 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

DGAT2 (A-18) is recommended for detection of DGAT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DGAT2 (A-18) is also recommended for detection of DGAT2 in additional species, including equine, canine, bovine and porcine.

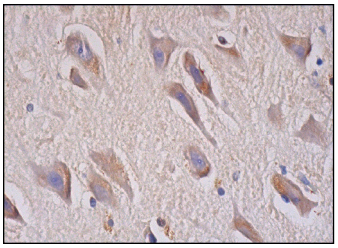
Suitable for use as control antibody for DGAT2 siRNA (h): sc-45520, DGAT2 siRNA (m): sc-45521, DGAT2 shRNA Plasmid (h): sc-45520-SH, DGAT2 shRNA Plasmid (m): sc-45521-SH, DGAT2 shRNA (h) Lentiviral Particles: sc-45520-V and DGAT2 shRNA (m) Lentiviral Particles: sc-45521-V.

Molecular Weight of DGAT2: 44 kDa.

RECOMMENDED SECONDARY REAGENTS

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



DGAT2 (A-18): sc-32399. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and Glial cells.

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2008. Osthole regulates enzyme protein expression of CYP7A1 and DGAT2 via activation of PPARα/γ in fat milk-induced fatty liver rats. J. Asian Nat. Prod. Res. 10: 807-812.
2. Kobayashi, Y., et al. 2010. Ameliorative effects of mulberry (Morus alba L.) leaves on hyperlipidemia in rats fed a high-fat diet: induction of fatty acid oxidation, inhibition of lipogenesis, and suppression of oxidative stress. Biosci. Biotechnol. Biochem. 74: 2385-2395.

RESEARCH USE

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

PROTOCOLS

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