SANTA CRUZ BIOTECHNOLOGY, INC.

MGAT1 (H-85): sc-66961

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Monoacylglycerol O-acyltransferase (MGAT) catalyzes synthesis of diacylglycerol (a precursor to triacylglycerol). MGAT is important in intestinal absorption of dietary fat because resynthesis of triacylglycerol is needed for the assembly of the lipoproteins that transport absorbed fat to tissues. MGAT1 is expressed in stomach, kidney, liver and adipose tissue but is not found in the intestine. On the contrary, MGAT2 is highly expressed in the small intestine as well as in kidney, liver, colon, stomach and white adipose tissue. MGAT 3 is highly homologous to MGAT1 and 2. The expression of MGAT3 is restricted to the gastrointestinal tract, with highest concentration in the ileum.

REFERENCES

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4. Cheng, D., et al. 2003. Identification of acyl coenzyme A:monoacylglycerol acyltransferase 3, an intestinal specific enzyme implicated in dietary fat absorption. J. Biol. Chem. 278: 13611-13614.
5. Cao, J., et al. 2003. Cloning and functional characterization of a mouse intestinal acyl-CoA:monoacylglycerol acyltransferase, MGAT2. J. Biol. Chem. 278: 13860-13866.
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7. Cao, J., et al. 2003. Properties of the mouse intestinal acyl-CoA:monoacylglycerol acyltransferase, MGAT2. J. Biol. Chem. 278: 25657-25663.
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9. Shi, S., et al. 2004. Inactivation of the MGAT1 gene in oocytes impairs oogenesis, but embryos lacking complex and hybrid N-glycans develop and implant. Mol. Cell. Biol. 24: 9920-9929. Erratum in Mol. Cell. Biol. 25: 1214.

CHROMOSOMAL LOCATION

Genetic locus: MOGAT1 (human) mapping to 2q36.1; Mogat1 (mouse) mapping to 1 C4.

SOURCE

MGAT1 (H-85) is a rabbit polyclonal antibody raised against amino acids 121-205 mapping within an internal region of MGAT1 of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

MGAT1 (H-85) is recommended for detection of MGAT1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MGAT1 siRNA (h): sc-44467, MGAT1 shRNA Plasmid (h): sc-44467-SH and MGAT1 shRNA (h) Lentiviral Particles: sc-44467-V.

Molecular Weight of MGAT1: 33 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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