SANTA CRUZ BIOTECHNOLOGY, INC.

MGAT2 (H-80): sc-66963

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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2. Yip, B., et al. 1997. Organization of the human β-1,2-N-acetylglucosaminyltransferase I gene (MGAT1), which controls complex and hybrid N-glycan synthesis. Biochem. J. 321: 465-474.
3. Yen, C.L., et al. 2002. Identification of a gene encoding MGAT1, a monoacylglycerol acyltransferase. Proc. Natl. Acad. Sci. USA 99: 8512-8517.
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.
6. Yen, C.L., et al. 2003. MGAT2, a monoacylglycerol acyltransferase expressed in the small intestine. J. Biol. Chem. 278: 18532-18537.
7. Cao, J., et al. 2003. Properties of the mouse intestinal acyl-CoA:monoacylglycerol acyltransferase, MGAT2. J. Biol. Chem. 278: 25657-25663.
8. Cao, J., et al. 2004. A predominant role of acyl-CoA:monoacylglycerol acyltransferase-2 in dietary fat absorption implicated by tissue distribution, subcellular localization, and upregulation by high fat diet. J. Biol. Chem. 279: 18878-18886.

CHROMOSOMAL LOCATION

Genetic locus: MOGAT2 (human) mapping to 11q13.5; Mogat2 (mouse) mapping to 7 E2.

SOURCE

MGAT2 (H-80) is a rabbit polyclonal antibody raised against amino acids 121-200 mapping within an internal region of MGAT2 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.

APPLICATIONS

MGAT2 (H-80) is recommended for detection of MGAT2 of mouse, rat and 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).

MGAT2 (H-80) is also recommended for detection of MGAT2 in additional species, including porcine.

Suitable for use as control antibody for MGAT2 siRNA (h): sc-44468, MGAT2 siRNA (m): sc-44873, MGAT2 shRNA Plasmid (h): sc-44468-SH, MGAT2 shRNA Plasmid (m): sc-44873-SH, MGAT2 shRNA (h) Lentiviral Particles: sc-44468-V and MGAT2 shRNA (m) Lentiviral Particles: sc-44873-V.

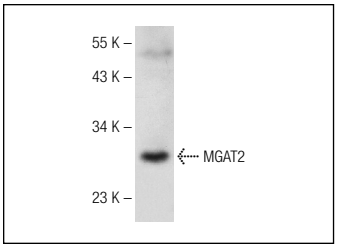
Molecular Weight of MGAT2: 38 kDa.

Positive Controls: Raji whole cell lysate: sc-364236.

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.

DATA



MGAT2 (H-80): sc-66963. Western blot analysis of MGAT2 expression in Raji whole cell lysate.

STORAGE

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

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.