

# MGAT3 (V-20): sc-32396



The Power to Question

## BACKGROUND

Monoacylglycerol O-acyltransferase (MGAT) catalyzes diacylglycerol (a precursor to triacylglycerol) synthesis. 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 (monoacylglycerol O-acyltransferase 2) is highly expressed in the small intestine as well as in kidney, liver, colon, stomach and white adipose tissue. MGAT 3 (monoacylglycerol O-acyltransferase 3) is highly homologous to MGAT1 and MGAT2. The expression of MGAT3 is restricted to the gastrointestinal tract, most concentrated in the ileum.

## REFERENCES

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2. Yip, B., et al. 1997. Organization of the human  $\beta$ -1,2-N-acetylglucosaminyltransferase I gene (MGAT1), which controls complex and hybrid N-glycan synthesis. *Biochem. J.* 321: 465-474.
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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.
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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 up-regulation by high fat diet. *J. Biol. Chem.* 279: 18878-18886.
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## CHROMOSOMAL LOCATION

Genetic locus: MOGAT3 (human) mapping to 7q22.1.

## SOURCE

MGAT3 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MGAT3 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32396 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MGAT3 (V-20) is recommended for detection of MGAT3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2  $\mu$ g per 100–500  $\mu$ g 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).

MGAT3 (V-20) is also recommended for detection of MGAT3 in additional species, including bovine.

Suitable for use as control antibody for MGAT3 siRNA (h): sc-44469, MGAT3 shRNA Plasmid (h): sc-44469-SH and MGAT3 shRNA (h) Lentiviral Particles: sc-44469-V.

Molecular Weight of MGAT3: 36 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.