# MBOAT1 (N-17): sc-82226



The Power to Question

#### **BACKGROUND**

MBOAT1 (membrane bound 0-acyltransferase domain containing 1), also known as lysophospholipid acyltransferase 1, lysophosphatidylserine acyltransferase, LPSAT, OACT1 or LPEAT1, is a 495 amino acid multi-pass membrane protein belonging to the membrane-bound acyltransferase family. MBOAT1 functions as a lysophosphatidylserine acyltransferase, which mediates the conversion of lysophosphatidylserine into phosphatidylserine and participates in the Lands cycle by catalyzing reacylation of phospholipid remodeling. As a membrane-bound acyltransferase, MBOAT1 transfers organic compounds onto hydroxyl groups of membrane-embedded targets. MBOAT1 is expressed in neutrophils and is known to be partially inhibited by thimerosal. Encoded by a gene that maps to human chromosome 6p22.3, three MBOAT1 isoforms exist as a result of alternative splicing events.

# **REFERENCES**

- Dauwerse, J.G., de Vries, B.B., Wouters, C.H., Bakker, E., Rappold, G., Mortier, G.R., Breuning, M.H. and Peters, D.J. 2007. A t(4;6)(q12;p23) translocation disrupts a membrane-associated O-acetyl transferase gene (MBOAT1) in a patient with a novel brachydactyly-syndactyly syndrome. Eur. J. Hum. Genet. 15: 743-751.
- Tamaki, H., Shimada, A., Ito, Y., Ohya, M., Takase, J., Miyashita, M., Miyagawa, H., Nozaki, H., Nakayama, R. and Kumagai, H. 2007. LPT1 encodes a membrane-bound O-acyltransferase involved in the acylation of lysophospholipids in the yeast *Saccharomyces cerevisiae*. J. Biol. Chem. 282: 34288-34298.
- 3. Matsuda, S., Inoue, T., Lee, H.C., Kono, N., Tanaka, F., Gengyo-Ando, K., Mitani, S. and Arai, H. 2008. Member of the membrane-bound 0-acyltransferase (MBOAT) family encodes a lysophospholipid acyltransferase with broad substrate specificity. Genes Cells 13: 879-888.
- Gijón, M.A., Riekhof, W.R., Zarini, S., Murphy, R.C. and Voelker, D.R. 2008. Lysophospholipid acyltransferases and arachidonate recycling in human neutrophils. J. Biol. Chem. 283: 30235-30245.
- 5. Hishikawa, D., Shindou, H., Kobayashi, S., Nakanishi, H., Taguchi, R. and Shimizu, T. 2008. Discovery of a lysophospholipid acyltransferase family essential for membrane asymmetry and diversity. Proc. Natl. Acad. Sci. USA 105: 2830-2835.
- 6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611732. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

## **CHROMOSOMAL LOCATION**

Genetic locus: MBOAT1 (human) mapping to 6p22.3; Mboat1 (mouse) mapping to 13 A3.2.

### SOURCE

MBOAT1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MBOAT1 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-82226 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

MBOAT1 (N-17) is recommended for detection of MBOAT1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MBOAT1 siRNA (h): sc-75757, MBOAT1 siRNA (m): sc-75758, MBOAT1 shRNA Plasmid (h): sc-75757-SH, MBOAT1 shRNA Plasmid (m): sc-75758-SH, MBOAT1 shRNA (h) Lentiviral Particles: sc-75757-V and MBOAT1 shRNA (m) Lentiviral Particles: sc-75758-V.

Molecular Weight of MBOAT1: 57 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) 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.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**