

PRODUCT INFORMATION



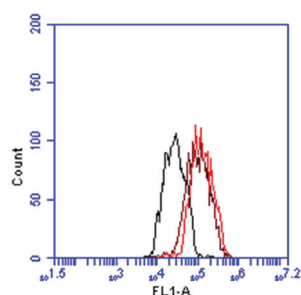
MBOAT2 (Internal) Polyclonal Antibody

Item No. 15647

Overview and Properties

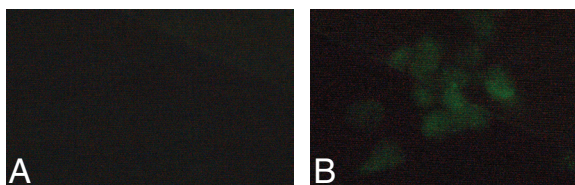
Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonym:	Membrane-bound O-Acyltransferase Domain-containing Protein 2
Immunogen:	Human MBOAT2, internal region (cytoplasmic)
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	Q6ZWT7
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	TBS, pH 7.4, with 50% glycerol, 0.1% BSA, and 0.02% sodium azide
Host:	Rabbit
Applications:	Flow cytometry (FC) and Immunofluorescence (IF); the recommended starting dilution is 1:100 for FC and IF. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Black: Goat Anti-Rabbit IgG FITC (Item No. 10006588) (1:200)
Red: MBOAT2 (Internal) Polyclonal Antibody (1:100)
Dark Red: MBOAT2 (Internal) Polyclonal Antibody (1:50)

RT-4 cells were fixed with 4% formaldehyde and permeabilized with Cayman permeabilization buffer, followed by blocking with 1% fetal bovine serum. Cells were probed with indicated antibodies, washed between steps, and fluorescence was detected with a BD Accuri C6 flow cytometer.



Immunofluorescent staining of RT-4 cells. RT-4 cells were fixed with cytospin, washed with 95% ethanol, and blocked with 1% fetal bovine serum. Cells were probed with the indicated antibodies, washed between steps, and images were captured using a Leica DMIL inverted fluorescence microscope (40X objective). *Panel A:* Control with FITC secondary antibody alone *Panel B:* MBOAT2 (Internal) Polyclonal Antibody (1:50)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Membrane-bound O-acyltransferase 2 (MBOAT2) is a membrane-spanning enzyme of the MBOAT family encoded by the *LPCAT4* gene in humans.¹ It contains multiple transmembrane domains and has two active site residues, an asparagine and a histidine, in common with other MBOAT family members.¹ MBOAT2 is expressed in mouse epididymis, brain, testis, and ovary and is localized to the endoplasmic reticulum in CHO cells.² MBOAT2 has acyltransferase activities, with a preference for using oleoyl-coenzyme A (oleoyl-CoA) as an acyl donor and lysophosphatidylethanolamine (Item No. 25844), lysophosphatidic acid, or lysophosphatidylcholine (Item No. 24331) as acyl acceptors at the *sn*-2 position.³ MBOAT2 expression is increased in the epithelia of patient-derived pancreatic ductal adenocarcinoma (PDAC) tumor tissue and this expression is inversely correlated with patient survival.⁴ In contrast, decreased expression of serum circular MBOAT2 RNA levels are found in patients with hypertrophic cardiomyopathy.⁵ Cayman's MBOAT2 (Internal) Polyclonal Antibody can be used for flow cytometry and immunofluorescence applications. The antibody recognizes the internal (cytoplasmic) portion of MBOAT2.

References

1. Chang, C.C.Y., Sun, J., and Chang, T.-Y. Membrane-bound O-acyltransferases (MBOATs). *Front. Biol.* **6(3)**, 177-182 (2011).
2. Shindou, H. and Shimizu, T. Acyl-CoA:Lysophospholipid acyltransferases. *J. Biol. Chem.* **284(1)**, 1-5 (2009).
3. Gijón, M.A., Riekhof, W.R., Zarini, S., *et al.* Lysophospholipid acyltransferases and arachidonate recycling in human neutrophils. *J. Biol. Chem.* **283(44)**, 30235-30245 (2008).
4. Badea, L., Herlea, V., Dima, S.O., *et al.* Combined gene expression analysis of whole-tissue and microdissected pancreatic ductal adenocarcinoma identifies genes specifically overexpressed in tumor epithelia. *Hepatogastroenterology* **55(88)**, 2015-2026 (2008).
5. Sonnenschein, K., Wilczek, A.L., de Gonzalo-Calvo, D., *et al.* Serum circular RNAs act as blood-based biomarkers for hypertrophic obstructive cardiomyopathy. *Sci. Rep.* **9(1)**, 20350 (2019).

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