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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

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- Trockeneiszuschlag
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PRODUCT INFORMATION

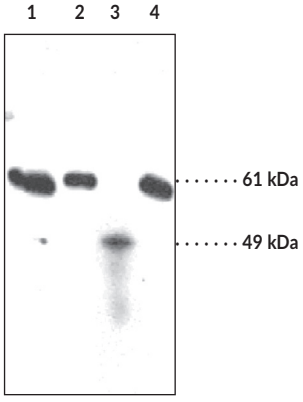
SOAT-2/ACAT-2 Polyclonal Antibody

Item No. 100027

Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonyms:	Acyl-coenzyme A:Cholesterol Acyltransferase-2, Cholesterol Acyltransferase 2, Sterol O-Acyltransferase 2
Immunogen:	Synthetic peptide from the N-terminal region of human SOAT-2/ACAT-2
Species Reactivity:	(+) Human, mouse, ovine, porcine, and rat; other species not tested
Uniprot No.:	O75908
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:	Immunofluorescence (IF), Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution for IF and IHC is 1:500 and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Mouse liver (30 µg)
Lane 2: Human fibroblast cell lysate (30 µg)
Lane 3: Jurkat (human) cell lysate (30 µg)
Lane 4: Rat liver (60 µg)

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PRODUCT INFORMATION

Description

Sterol O-acyltransferase 2 (SOAT-2), also known as acyl-coenzyme A:cholesterol acyltransferase-2 (ACAT-2), is an enzyme encoded by *ACAT2* in humans that catalyzes the intracellular formation of cholesterol esters from cholesterol and long-chain fatty acyl-coenzyme A.[1] It is constitutively expressed in the liver and small intestine and localized to the rough endoplasmic reticulum where it preferentially utilizes oleic acid (Item Nos. 90260 | 24659) or palmitic acid (Item No. 10006627) as fatty acid substrates for the synthesis of cholesterol esters, which are stored intracellularly or packaged into chylomicrons or VLDL and secreted into the blood stream. SOAT-2/ACAT-2 protein levels are increased in macrophages under various pathological conditions, including atherosclerosis.[2] SOAT-2/ACAT-2 activity and protein levels are increased by cholesterol *in vitro* and *in vivo*, and *ACAT2* expression is increased by the transcription factors hepatocyte nuclear factor 1-α (HNF-1-α) and HNF-4-α in Caco-2 cells and human liver, respectively.[1] Genome-wide deletion of *Acat2* reduces intestinal cholesterol absorption and decreases hepatic, but not plasma, total cholesterol levels in mice fed a high-cholesterol diet.[3] Liver ACAT2 activity is negatively correlated with plasma HDL-C and ApoA1 in normolipidemic patients.[4] Cayman's SOAT-2/ACAT-2 Polyclonal Antibody can be used for immunofluorescence (IF), immunohistochemistry (IHC), and Western blot (WB) applications. The antibody recognizes the N-terminal region of SOAT-2/ACAT-2 at approximately 60 kDa from human, mouse, ovine, porcine, and rat samples.

References

1. Pramfalk, C., Eriksson, M., and Parini, P. Cholesteryl esters and ACAT. *Eur. J. Lipid Sci. Technol.* **114(6)**, 624-633 (2012).
2. Sakashita, N., Miyazaki, A., Chang, C.C.Y., *et al*. Acyl-coenzyme A:cholesterol acyltransferase 2 (ACAT2) is induced in monocyte-derived macrophages: In vivo and in vitro studies. *Lab. Invest*. **83(11)**, 1569-1581 (2003).
3. Repa, J.J., Buhman, K.K., Farese, R.V., Jr., *et al*. ACAT2 deficiency limits cholesterol absorption in the cholesterol-fed mouse: impact on hepatic cholesterol homeostasis. *Hepatology* **40(5)**, 1088-1097 (2004).
4. Parini, P., Jiang, Z.-Y., Einarsson, C., *et al*. ACAT2 and human hepatic cholesterol metabolism: identification of important gender-related differences in normolipidemic, non-obese Chinese patients. *Atherosclerosis* **207(1)**, 266-271 (2009).

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