



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# PRODUCT INFORMATION



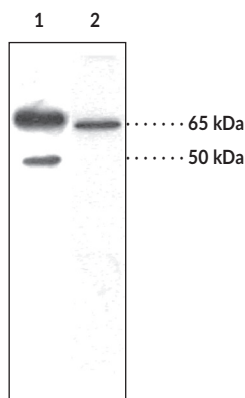
## SOAT-1/ACAT-1 Polyclonal Antibody

Item No. 100028

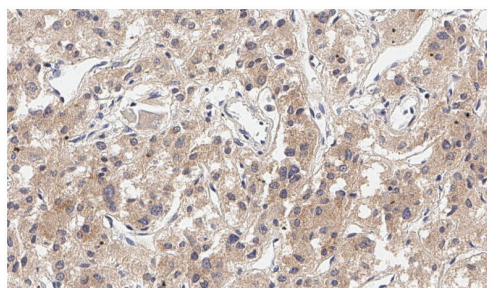
### Overview and Properties

<b>Contents:</b>	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
<b>Synonyms:</b>	Acyl-coenzyme A: Cholesterol Acyltransferase-1, Cholesterol Acyltransferase 1, Sterol O-Acyltransferase 1
<b>Immunogen:</b>	Synthetic peptide from the N-terminal region of human SOAT-1/ACAT-1
<b>Species Reactivity:</b>	(+) Human, mouse, porcine, rat; other species not tested
<b>Uniprot No.:</b>	P35610
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Host:</b>	Rabbit
<b>Applications:</b>	Immunofluorescence (IF), Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

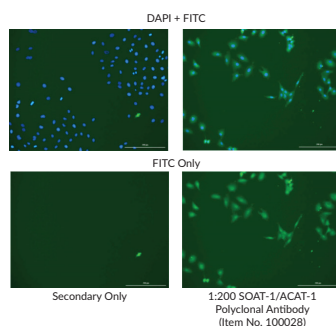
### Images



Lane 1: Rat liver (30 µg)  
Lane 2: HepG2 cell lysate (30 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human adrenal tissue after heat-induced antigen retrieval in pH 6.0 citrate buffer. After incubation with SOAT-1/ACAT-1 Polyclonal Antibody, at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).



Immunofluorescence analysis of paraformaldehyde-fixed A549 cells. After incubation with SOAT-1/ACAT-1 Polyclonal Antibody (Item No. 100028) at a 1:200 dilution (or negative control), cells were incubated with FITC-labeled anti-rabbit IgG (Item No. 10006588), followed by DAPI nuclear stain. Images show FITC alone or both fluorescence channels to highlight nuclear staining (where applicable).

**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.

Copyright Cayman Chemical Company, 10/10/2023

**CAYMAN CHEMICAL**  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

---

Sterol O-acyltransferase 1 (SOAT-1), also known as acyl-coenzyme A:cholesterol acyltransferase-1 (ACAT-1), is an enzyme encoded by *ACAT1* in humans that catalyzes the intracellular formation of cholesterol esters from cholesterol and long-chain fatty acyl-coenzyme A.<sup>1</sup> It is ubiquitously expressed 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-1/ACAT-1 protein levels are increased in macrophages under various pathological conditions, including atherosclerosis.<sup>2</sup> SOAT-1/ACAT-1 activity is increased by cholesterol *in vitro*, and *ACAT1* expression is increased by stimulation with the pro-inflammatory cytokines TNF- $\alpha$  or IFN- $\gamma$  in isolated human and THP-1 monocytes, respectively.<sup>1,3</sup> *ACAT1* silencing in human H4 neuroglioma cells overexpressing amyloid- $\beta$  precursor protein (APP) reduces secretion of soluble amyloid- $\beta$  (A $\beta$ ) and A $\beta$ 42 (Item No. 20574).<sup>4</sup> Genome-wide deletion of *Acat1* reduces macrophage infiltration and neutral lipid deposition in atherosclerotic aortic lesions and decreases serum total cholesterol levels, but increases brain cholesterol deposition, in *ApoE*<sup>-/-</sup> mice fed a Western diet.<sup>5</sup> Cayman's SOAT-1/ACAT-1 Polyclonal Antibody can be used for immunofluorescence (IF), immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes the N-terminus to detect full-length SOAT-1/ACAT-1 at approximately 65 kDa from human, mouse, 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. Chang, T.-Y., Li, B.-L., Chang, C.Y., *et al.* Acyl-coenzyme A:cholesterol acyltransferases. *Am. J. Physiol. Endocrinol. Metab.* **297**(1), E1-E9 (2009).
4. Huttunen, H.J., Greco, C., and Kovacs, D.M. Knockdown of ACAT-1 reduces amyloidogenic processing of APP. *FEBS Lett.* **581**(8), 1688-1692 (2007).
5. Accad, M., Smith, S.J., Newland, D.L., *et al.* Massive xanthomatosis and altered composition of atherosclerotic lesions in hyperlipidemic mice lacking acyl CoA:cholesterol acyltransferase 1. *J. Clin. Invest.* **105**(6), 711-719 (2000).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM