

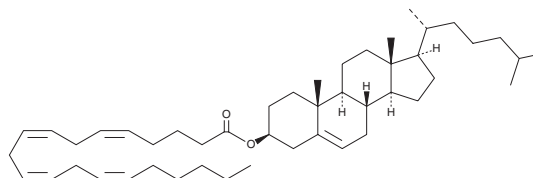
PRODUCT INFORMATION



Cholesteryl Arachidonate

Item No. 22595

CAS Registry No.: 604-34-2
Formal Name: (3 β)-cholest-5-en-3-ol 3-[(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenoate]
Synonyms: Arachidonic Acid cholesteryl ester, Cholesterol Arachidonate, Cholesterol 5Z,8Z,11Z,14Z-Eicosatetraenoic Acid ester, 20:4 Cholesteryl ester
MF: C₄₇H₇₆O₂
FW: 673.1
Purity: \geq 98%
Supplied as: A neat oil
Storage: -20°C
Stability: \geq 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cholesteryl arachidonate is supplied as a neat solid. A stock solution may be made by dissolving the cholesteryl arachidonate in the solvent of choice, which should be purged with an inert gas. Cholesteryl arachidonate is soluble in the organic solvent chloroform at a concentration of approximately 10 mg/ml.

Description

Cholesteryl arachidonate is a cholesterol ester that is found in plasma and the adrenal gland.¹ It is a component of low-density lipoprotein (LDL) and oxidation of the arachidonate moiety contributes to macrophage activation and foam cell formation in atherosclerosis.² Cholesteryl arachidonate undergoes hydrolysis to release arachidonic acid during ACTH-stimulated prostaglandin synthesis in rat adrenocortical cells.³ Levels of cholesteryl arachidonate are increased in the bronchoalveolar lavage fluid (BALF) in pediatric cystic fibrosis patients compared to healthy controls as well as in placentas of women with chorioamnionitis.^{4,5}

References

1. Cheng, B., Al-Shammari, F.H., Ghader, I.A., *et al.* Fundamental studies of adrenal retinoid-X-receptor: Protein isoform, tissue expression, subcellular distribution, and ligand availability. *J. Steroid. Biochem. Mol. Biol.* **171**, 110-120 (2017).
2. Choi, S.-H., Yin, H., Ravandi, A., *et al.* Polyoxygenated cholesterol ester hydroperoxide activates TLR4 and SYK dependent signaling in macrophages. *PLoS One* **8(12)**, e83145 (2013).
3. Vahouny, G.V., Chanderbhan, R., Hodges, V.A., *et al.* Cholesterol arachidonate as a prostaglandin precursor in adrenocortical cells. *Prostaglandins* **16(2)**, 207-220 (1978).
4. Ma, D.C., Yoon, A.J., Faull, K.F., *et al.* Cholesteryl esters are elevated in the lipid fraction of bronchoalveolar lavage fluid collected from pediatric cystic fibrosis patients. *PLoS One* **10(4)**, e0125326 (2015).
5. Delmis, J. Placental lipid contents in preterm labor complicated by chorioamnionitis. *J. Perinat. Med.* **17(6)**, 417-422 (1989).

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.

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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