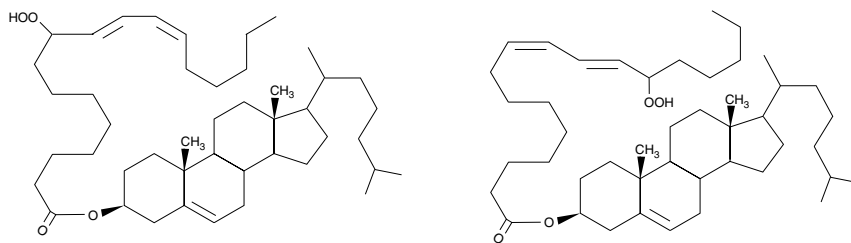


Product Information



Cholesteryl Linoleate Hydroperoxides

Item No. 48001



Purity:	≥98% for each hydroperoxide
Stability:	≥6 months at -80°C
Supplied as:	A solution in ethanol
UV/Vis:	λ_{max} : 234 nm ϵ : 23,000

Laboratory Procedures

For long term storage, we suggest that cholesteryl linoleate hydroperoxide be stored as supplied at -80°C. It should be stable for at least six months.

Cholesteryl linoleate hydroperoxides are supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. A solvent such as dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of cholesteryl linoleate hydroperoxides in DMF is approximately 50 mg/ml.

Cholesteryl linoleate hydroperoxides are sparingly soluble in aqueous buffers (<20 µg/ml in PBS pH 7.2), therefore further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant since organic solvents may have physiological effects at low concentrations. Linoleate hydroperoxides are extremely unstable in aqueous solutions. We recommend that the cholesteryl linoleate hydroperoxides diluted in aqueous solution be used as soon as possible, preferably within 15 minutes.

Cholesteryl linoleate hydroperoxides are derived from the autoxidation of cholesteryl linoleate and contain a mixture of racemic 9- and 13-HpODE cholesteryl esters. Oxidative modification of LDL is suggested to play an important role in atherosclerosis. (±)9- and (±)13-HODE cholesteryl esters were originally extracted from atherosclerotic lesions and shown to be produced by Cu²⁺-catalyzed oxidation of LDL.^{1,2} Later studies determined that 15-lipoxygenase, from rabbit reticulocytes and activated human monocytes, oxygenates cholesteryl linoleate to both 9- and 13-hydroperoxy linoleate cholesteryl esters.^{3,4} Cholesteryl ester hydroperoxides may be transferred from LDL to HDL, reduced to the corresponding hydroxides, and cleared *via* the liver.^{5,6}

References

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2. Lenz, M.L., Hughes, H., Mitchell, J.R., *et al. J. Lipid Res.* **31**, 1043-1050 (1990).
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5. Sattler, W. and Stocker, R. *Biochem. J.* **294**, 771-778 (1993).
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Related Products

9(S)-HODE cholesteryl ester - Item No. 38411 • 13(S)-HODE cholesteryl ester - Item No. 38611 • 9(S)-HpODE - Item No. 48410 • 13(S)-HpODE - Item No. 48610 • Athero-PAK - Item No. 10005292

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com