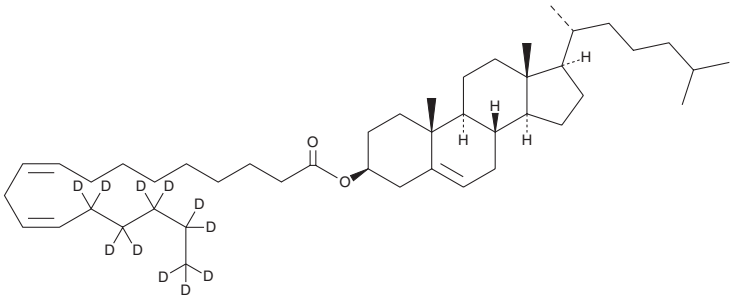
PRODUCT INFORMATION

Cholesteryl Linoleate-d_{11}

Item No. 37920

Formal Name:	cholest-5-en-3β-ol, 3-[(9Z,12Z)-9,12-octadecadienoate-14,14,15,15,16,16,17,17,18,18,18-d_{11}]
Synonyms:	18:2(9Z,12Z)-d_{11} CE, C18:2(9Z,12Z)-d_{11} Cholesteryl ester, CE(18:2)-d_{11}, Cholest-5-en-3β-yl (9Z,12Z-octadecadienoate-d_{11}), Cholesterol Linoleate-d_{11}, Linoleic Acid cholesterol ester-d_{11}
MF:	$C_{45}H_{65}D_{11}O_2$
FW:	660.2
Chemical Purity:	≥95% (Cholesteryl Linoleate)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_{11}); ≤1% d_0
Supplied as:	A 100 µg/ml solution in methyl acetate
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Cholesteryl linoleate-d_{11} is intended for use as an internal standard for the quantification of cholesteryl linoleate (Item No. 22597) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Description

Cholesteryl linoleate is a pro-atherogenic cholesterol ester.[1,2] It has been found in the plasma membrane of macrophages as a component of LDL, where it undergoes oxidation to form cholesteryl linoleate hydroperoxides (Item No. 48001).[1] Cholesteryl linoleate levels are increased in apoB-lipoproteins and positively correlated with hepatic cholesterol levels and the number of atherosclerotic lesions in transgenic mice overexpressing human *ABCA1*.[2] Lipoprotein levels of cholesteryl linoleate are increased and associated with lipid radical formation in patients with β-thalassemia.[3]

References

1. Takahashi, Y., Zhu, H., Xu, W., *et al.* Selective uptake and efflux of cholesteryl linoleate in LDL by macrophages expressing 12/15-lipoxygenase. *Biochem. Biophys. Res. Commun.* **338(1),** 128-135 (2005).
2. Joyce, C.W., Wagner, E.M., Basso, F., *et al.* ABCA1 overexpression in the liver of LDLr-KO mice leads to accumulation of pro-atherogenic lipoproteins and enhanced atherosclerosis. *J. Biol. Chem.* **281(44),** 33053-33065 (2006).
3. Lerksaipheng, P., Paiboonsukwong, K., Sanvarinda, P., *et al.* Kinetics of lipid radical formation in lipoproteins from β-thalassemia: Implication of cholesteryl esters and α-tocopherol. *Biomed. Pharmacother.* **154,** 113624 (2022).

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