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Produktinformation

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- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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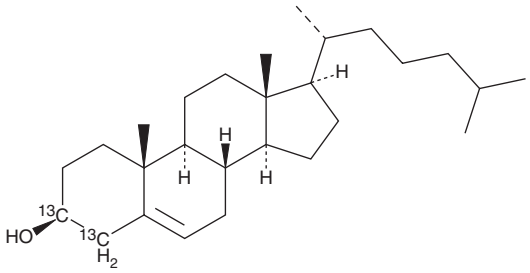
PRODUCT INFORMATION

Cholesterol-3,4-$^{13}C_2$

Item No. 40278

CAS Registry No.:	78887-48-6
Formal Name:	(3β)-cholest-5-en-3-ol-3,4-$^{13}C_2$
Synonyms:	Provitamin D-3,4-$^{13}C_2$
MF:	$C_{25}[^{13}C]_2H_{46}O$
FW:	388.7
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Cholesterol-3,4-$^{13}C_2$ is supplied as a solid. A stock solution may be made by dissolving the cholesterol-3,4-$^{13}C_2$ in the solvent of choice, which should be purged with an inert gas. Cholesterol-3,4-$^{13}C_2$ is soluble in chloroform and ethanol.

Description

Cholesterol-3,4-$^{13}C_2$ is intended for use as an internal standard for the quantification of cholesterol (Item Nos. 9003100 | 39088) by GC- or LC-MS. Cholesterol-3,4-$^{13}C_2$ is an isotopically labeled form of cholesterol containing ^{13}C at the carbon-3 and -4 positions. Cholesterol is a major sterol produced in mammalian cells that is required for cell viability and proliferation.[1] It is a component of mammalian cell membranes that interacts with membrane phospholipids, sphingolipids, and proteins to influence their behavior. It is also a component of various lipid-based drug delivery (LBDD) systems, including liposomes and lipid nanoparticles (LNPs), where it has a role in membrane stability.[2] Cholesterol is a precursor of steroid hormones, bile acids, and the active form of vitamin D. Impaired cholesterol homeostasis is related to the development of various diseases, including fatty liver, diabetes, gallstones, dyslipidemia, atherosclerosis, heart attack, and stroke.[3]

References

1. Ohvo-Rekilä, H., Ramstedt, B., Leppimäki, P., *et al.* Cholesterol interactions with phospholipids in membranes. *Prog. Lipid Res.* **41(1)**, 66-97 (2002).
2. Tenchov, R., Bird, R., Curtze, A.E., *et al.* Lipid nanoparticles-from liposomes to mRNA vaccine delivery, a landscape of research diversity and advancement. *ACS Nano* **15(11)**, 16982-17015 (2021).
3. Yamanashi, Y., Takada, T., and Suzuki, H. Associations between lifestyle-related diseases and transporters involved in intestinal absorption and biliary excretion of cholesterol. *Biol. Pharm. Bull.* **41(1)**, 1-10 (2018).

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