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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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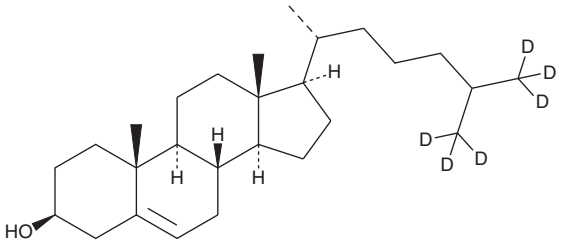
PRODUCT INFORMATION

Cholesterol-d_6

Item No. 25546

CAS Registry No.:	60816-17-3
Formal Name:	cholest-5-en-26,26,26,27,27,27-d_6-3β-ol
Synonym:	Provitamin D-d_6
MF:	$C_{27}H_{40}D_6O$
FW:	392.7
Chemical Purity:	≥95% (Cholesterol)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Cholesterol-d_6 is intended for use as an internal standard for the quantification of cholesterol (Item Nos. 9003100 | 39088) 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).

Cholesterol-d_6 is supplied as a solid. A stock solution may be made by dissolving the cholesterol-d_6 in the solvent of choice. Cholesterol-d_6 is slightly soluble in the organic solvent chloroform, which should be purged with an inert gas.

Description

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 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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