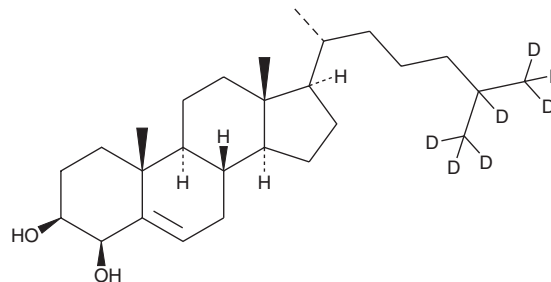


PRODUCT INFORMATION



4 β -hydroxy Cholesterol-d₇ Item No. 25971

CAS Registry No.: 1246302-80-6
Formal Name: cholest-5-ene-25,26,26,26,27,27,27-d₇-3 β ,4 β -diol
MF: C₂₇H₃₉D₇O₂
FW: 409.7
Chemical Purity: \geq 95% (4 β -hydroxy Cholesterol)
Deuterium Incorporation: \geq 99% deuterated forms (d₁-d₇); \leq 1% d₀
Supplied as: A solid
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

4 β -hydroxy Cholesterol-d₇ is intended for use as an internal standard for the quantification of 4 β -hydroxy cholesterol (Item No. 19518) 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).

4 β -hydroxy Cholesterol-d₇ is supplied as a solid. A stock solution may be made by dissolving the 4 β -hydroxy cholesterol-d₇ in the solvent of choice, which should be purged with an inert gas. 4 β -hydroxy Cholesterol-d₇ is slightly soluble in chloroform.

Description

4 β -hydroxy Cholesterol is a major oxysterol cholesterol metabolite and a precursor in the synthesis of bile acids that is found in human circulation.¹ It is formed from cholesterol by the cytochrome P450 (CYP) isoforms CYP3A4 and CYP3A5.¹ 4 β -hydroxy Cholesterol has an unusually long half-life in plasma (~60 hours) as a result of slow elimination, particularly due to a slow rate of 7 α -hydroxylation, which is the rate-limiting step for further conversion into bile acids.

Reference

1. Diczfalusy, U., Kanebratt, K.P., Bredberg, E., *et al.* 4 β -hydroxycholesterol as an endogenous marker for CYP3A4/5 activity. Stability and half-life of elimination after induction with rifampicin. *Br. J. Clin. Pharmacol.* **67**(1), 38-43 (2009).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/02/2024

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