

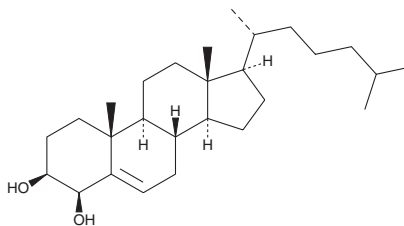
PRODUCT INFORMATION



4 β -hydroxy Cholesterol

Item No. 19518

CAS Registry No.: 17320-10-4
Formal Name: cholest-5-ene-3 β ,4 β -diol
MF: C₂₇H₄₆O₂
FW: 402.7
Purity: \geq 95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 2 years



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

Laboratory Procedures

4 β -hydroxy Cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 4 β -hydroxy cholesterol in the solvent of choice. 4 β -hydroxy Cholesterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 4 β -hydroxy cholesterol in these solvents is approximately 20, 0.1, and 2 mg/ml, respectively.

4 β -hydroxy Cholesterol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4 β -hydroxy cholesterol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 4 β -hydroxy Cholesterol has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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.

References

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.

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