

## Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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Lieferung & Zahlungsart siehe unsere Liefer- und Versandbedingungen

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

#### SZABO-SCANDIC HandelsgmbH

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# **PRODUCT** INFORMATION



4β-hydroxy Cholesterol-d<sub>7</sub>

Item No. 25971

CAS Registry No.: Formal Name:	1246302-80-6 cholest-5-ene-25,26,26,26,27,27,27-d <sub>7</sub> -3β,4β-diol	
MF:	$C_{27}H_{39}D_7O_2$	
FW:	409.7	
Chemical Purity:	≥98% (4β-hydroxy Cholesterol)	
Deuterium		
Incorporation:	≥99% deuterated forms (d <sub>1</sub> -d <sub>7</sub> ); ≤1% d <sub>0</sub>	
Supplied as:	A solid	HO
Storage:	-20°C	OH
Stability:	≥2 years	
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Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

#### Laboratory Procedures

 $4\beta$ -hydroxy Cholesterol-d<sub>7</sub> is intended for use as an internal standard for the quantification of  $4\beta$ -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).

 $4\beta$ -hydroxy Cholesterol-d<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the 4 $\beta$ -hydroxy cholesterol-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas.  $4\beta$ -hydroxy Cholesterol-d<sub>7</sub> is slightly soluble in chloroform.

#### Description

4β-hydroxy Cholesterol is a major oxysterol cholesterol metabolite and a precursor in the synthesis of bile acids that is found in human circulation.<sup>1</sup> It is formed from cholesterol by the cytochrome P450 (CYP) isoforms CYP3A4 and CYP3A5.<sup>1</sup>  $4\beta$ -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  $7\alpha$ -hydroxylation, which is the rate-limiting step for further conversion into bile acids.

#### Reference

1. Dicfalusy, U., Kanebratt, K.P., Bredberg, E., et al. 4β-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.

#### SAFFTY 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

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