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Produktinformation

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- 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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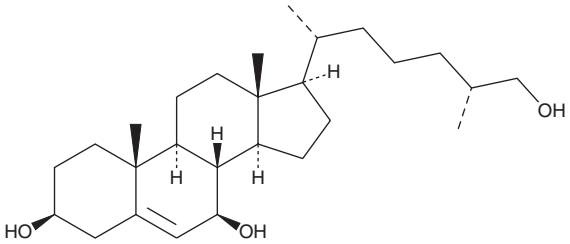
PRODUCT INFORMATION

7β,27-dihydroxy Cholesterol

Item No. 20102

CAS Registry No.:	240129-43-5
Formal Name:	(3β,7β,25R)-cholest-5-ene-3,7,26-triol
Synonym:	7β,27-DHC
MF:	$C_{27}H_{46}O_3$
FW:	418.7
Purity:	≥95%
Supplied as:	A crystalline 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

7β,27-dihydroxy Cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 7β,27-dihydroxy cholesterol in the solvent of choice, which should be purged with an inert gas. 7β,27-dihydroxy Cholesterol is soluble in organic solvents such as ethanol and dimethyl formamide. The solubility of 7β,27-dihydroxy cholesterol in these solvents is approximately 20 and 2 mg/ml, respectively.

7β,27-dihydroxy Cholesterol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 7β,27-dihydroxy cholesterol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 7β,27-dihydroxy 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

7β,27-dihydroxy Cholesterol is an oxysterol and agonist of retinoic acid receptor-related orphan receptor γ (RORγ) and RORγt.[1] It activates RORγ- or RORγt-dependent signaling with EC_{50} values of 691 and 1,045 nM, respectively, in reporter assays using HEK293T cells expressing the recombinant human receptors. 7β,27-dihydroxy Cholesterol is selective for RORγ and RORγt over a panel of eight additional nuclear receptors at 30 µM. It increases IL-17A production in Th17-polarized isolated human naïve $CD4^+$ T cells when used at a concentration of 300 nM. 7β,27-dihydroxy Cholesterol (60 mg/kg) increases IL-17A production in isolated mouse γδ T cells stimulated with 12-myristate 13-acetate (PMA; Item No. 10008014) and ionomycin (Item Nos. 10004974 | 11932).

Reference

1. Soroosh, P., Wu, J., Xue, X., *et al.* Oxysterols are agonist ligands of RORγt and drive Th17 cell differentiation. *Proc. Natl. Acad. Sci. USA* **111(33)**, 12163-12168 (2014).

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