SZABO SCANDIC

Part of Europa Biosite

Produktinformation

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

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

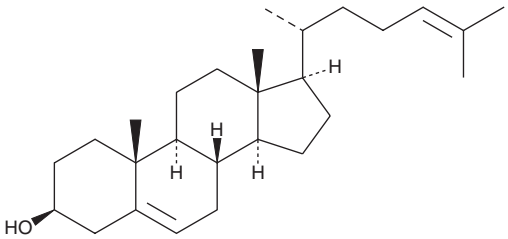
linkedin.com/company/szaboscandic

PRODUCT INFORMATION

24-dehydro Cholesterol

Item No. 14943

CAS Registry No.:	313-04-2
Formal Name:	(3β)-cholesta-5,24-dien-3-ol
Synonyms:	Desmosterol, NSC 226126
MF:	$C_{27}H_{44}O$
FW:	384.6
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

24-dehydro Cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 24-dehydro cholesterol in the solvent of choice. 24-dehydro Cholesterol is soluble in organic solvents such as ethanol and dimethyl formamide, which should be purged with an inert gas. The solubility of 24-dehydro cholesterol in these solvents is approximately 0.25 and 50 mg/ml, respectively.

24-dehydro Cholesterol is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

24-dehydro Cholesterol is an immediate precursor to cholesterol in the Bloch pathway of cholesterol biosynthesis. Structurally, it varies from cholesterol only by a single double bond at carbon 24 and has been used as cholesterol substitute in cellular membrane studies.[1] During brain development, 24-dehydro cholesterol transiently accumulates, composing up to 30% of total brain sterol, where it is poised to rapidly enrich membrane sterols.[2] However, defects in cholesterol synthesis can lead to a condition called, desmosterolosis, which results in an accumulation of excess 24-dehydro cholesterol.[3] 24-dehydro Cholesterol has been reported to activate liver X receptor-target genes in both the liver of cholesterol-free mice and in cholesterol-starved macrophage foam cells in atherosclerotic lesions.[4-5]

References

1. Huster, D., Scheidt, H.A., Arnold, K., *et al.* Desmosterol may replace cholesterol in lipid membranes. *Biophys. J.* **88(3)**, 1838-1844 (2005).
2. Jansen, M., Wang, W., Greco, D., *et al.* What dictates the accumulation of desmosterol in the developing brain? *FASEB J.* **27(3)**, 865-870 (2013).
3. Clayton, P.T. Disorders of cholesterol biosynthesis. *Arch. Dis. Child.* **78(2)**, 185-189 (1998).
4. Heverin, M., Meaney, S., Brafman, A., *et al.* Studies on the cholesterol-free mouse: Strong activation of LXR-regulated hepatic genes when replacing cholesterol with desmosterol. *Arterioscler. Thromb. Vasc. Biol.* **27(10)**, 2191-2197 (2007).
5. Spann, N.J., Garmire, L.X., McDonald, J.G., *et al.* Regulated accumulation of desmosterol integrates macrophage lipid metabolism and inflammatory responses. *Cell* **151(1)**, 138-152 (2012).

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