

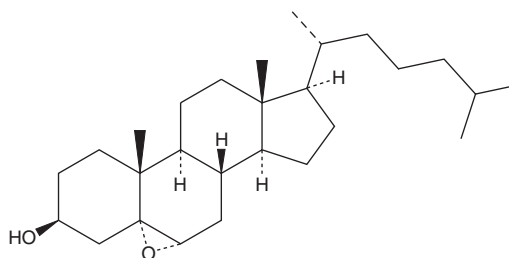
PRODUCT INFORMATION



5 α ,6 α -epoxy Cholesterol

Item No. 25539

CAS Registry No.:	1250-95-9
Formal Name:	(3 β ,5 α ,6 α)-5,6-epoxy-cholestan-3-ol
Synonyms:	Cholesterol 5 α ,6 α -epoxide, 5 α ,6 α -Epoxycholesterol, NSC 18176
MF:	C ₂₇ H ₄₆ O ₂
FW:	402.7
Purity:	≥95%
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

5 α ,6 α -epoxy Cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 5 α ,6 α -epoxy cholesterol in the solvent of choice, which should be purged with an inert gas. 5 α ,6 α -epoxy Cholesterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 5 α ,6 α -epoxy cholesterol in these solvents is approximately 20, 0.1, and 2 mg/ml, respectively.

5 α ,6 α -epoxy Cholesterol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 5 α ,6 α -epoxy cholesterol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 5 α ,6 α -epoxy 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

5 α ,6 α -epoxy Cholesterol is an oxysterol and a metabolite of cholesterol produced by oxidation.¹ 5 α ,6 α -epoxy Cholesterol accumulates in MCF-7 breast cancer cells in a reactive oxygen species-dependent manner following tamoxifen and PBPE application and induces triacylglycerol biosynthesis by binding to liver X receptor β (LXR β).² 5 α ,6 α -epoxy Cholesterol levels are increased in rat aorta and mesenteric artery following orchidectomy, an effect that can be prevented by a DHA-supplemented diet.¹ Levels are also increased in post-mortem frontal and occipital cortex of patients with Alzheimer's disease.³

References

- Villalpando, D.M., Rojas, M.M., García, H.S., *et al.* Dietary docosahexaenoic acid supplementation prevents the formation of cholesterol oxidation products in arteries from orchidectomized rats. *PLoS One* **12(10)**, e0185805 (2017).
- Segala, G., de Medina, P., Iuliano, L., *et al.* 5,6-Epoxy-cholesterols contribute to the anticancer pharmacology of tamoxifen in breast cancer cells. *Biochem. Pharmacol.* **86(1)**, 175-189 (2013).
- Testa, G., Staurengi, E., Zerbinati, C., *et al.* Changes in brain oxysterols at different stages of Alzheimer's disease: Their involvement in neuroinflammation. *Redox Biol.* **10**, 24-33 (2016).

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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