

PRODUCT INFORMATION

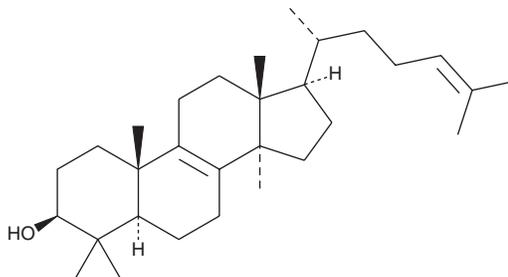


Lanosterol

Item No. 19521

CAS Registry No.: 79-63-0
Formal Name: lanosta-8,24-dien-3 β -ol
Synonyms: 8,24-Lanostadien-3 β -ol, 3 β -hydroxy-8,24-Lanostadiene, NSC60677

MF: C₃₀H₅₀O
FW: 426.7
Purity: \geq 95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Lanosterol is supplied as a crystalline solid. A stock solution may be made by dissolving the lanosterol in the solvent of choice, which should be purged with an inert gas. Lanosterol is soluble in organic solvents such as ethanol and dimethyl formamide. The solubility of lanosterol in these solvents is approximately 0.25 mg/ml and 3 mg/ml, respectively.

Lanosterol 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

Lanosterol is a naturally-occurring sterol and biosynthetic precursor of several animal, fungal, and protozoan sterols, including cholesterol and ergosterol.¹⁻³ Defects in the processing of lanosterol contribute to a wide variety of disorders, including the formation of cataracts.^{2,4} Similarly, certain fungicides act by blocking lanosterol processing by fungi.^{5,6}

References

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2. Clayton, P.T. Disorders of cholesterol biosynthesis. *Arch. Dis. Child.* **78(2)**, 185-189 (1998).
3. Warrillow, A.G., Melo, N., Martel, C.M., et al. Expression, purification, and characterization of *Aspergillus fumigatus* sterol 14-a demethylase (CYP51) isoenzymes A and B. *Antimicrob. Agents Chemother.* **54(10)**, 4225-4234 (2010).
4. Zhao, L., Chen, X.-J., Zhu, J., et al. Lanosterol reverses protein aggregation in cataracts. *Nature* **523(7562)**, 607-611 (2015).
5. Asami, T., Mizutani, M., Shimada, U., et al. Triadimefon, a fungicidal triazole-type P450 inhibitor, induces brassinosteroid deficiency-like phenotypes in plants and binds to DWF4 protein in the brassinosteroid biosynthesis pathway. *Biochem. J.* **369 (Pt 1)**, 71-76 (2003).
6. Saag, M.S. and Dismukes, W.E. Azole antifungal agents: Emphasis on new triazoles. *Antimicrob. Agents Chemother.* **32(1)**, 1-8 (1988).

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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