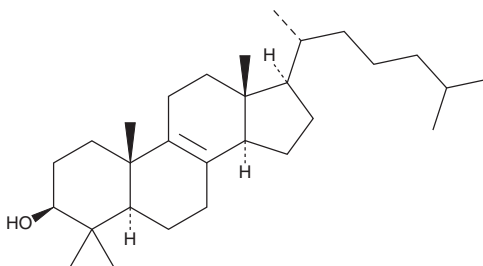


PRODUCT INFORMATION

Dihydro T-MAS

Item No. 29532

CAS Registry No.: 5241-24-7
Formal Name: (3 β ,5 α)-4,4-dimethyl-cholest-8-en-3-ol
Synonyms: Dihydro Testis Meiosis-activating Sterol, MAS-414
MF: C₂₉H₅₀O
FW: 414.7
Purity: $\geq 98\%$
Supplied as: A 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

Dihydro T-MAS is supplied as a solid. A stock solution may be made by dissolving the dihydro T-MAS in the solvent of choice, which should be purged with an inert gas. Dihydro T-MAS is slightly soluble (0.1-1 mg/ml) in ethyl acetate and chloroform.

Description

Dihydro testis meiosis-activating sterol (dihydro T-MAS) is an intermediate in the biosynthesis of cholesterol in the Kandutsch-Russell pathway.^{1,2} It is formed from dihydro FF-MAS (Item No. 29530) by either lamin-B receptor (LBR) or 14-dehydrocholesterol reductase (DHCR14) and subsequently converted to zymostenol (Item No. 26209). Dihydro T-MAS induces resumption of meiosis in isolated mouse naked oocytes and cumulus-enclosed oocytes.³ It reduces the expression of sterol regulatory element binding protein (SREBP) target genes and increases the expression of peroxisome proliferator-activated receptor γ (PPAR γ) target genes in primary mouse hepatocytes.⁴

References

1. Mitsche, M.A., McDonald, J.G., Hobbs, H.H., *et al.* Flux analysis of cholesterol biosynthesis in vivo reveals multiple tissue and cell-type specific pathways. *eLife* **4**, e07999 (2015).
2. Capell-Hattam, I.M., Sharpe, L.J., Qian, L., *et al.* Twin enzymes, divergent control: The cholesterologenic enzymes DHCR14 and LBR are differentially regulated transcriptionally and post-translationally. *J. Biol. Chem.* **295**(9), 2850-2865 (2020).
3. Byskov, A.G., Andersen, C.Y., Nordholm, L., *et al.* Chemical structure of sterols that activate oocyte meiosis. *Nature* **374**(6522), 559-562 (1995).
4. Ma, M.Y., Deng, G., Zhu, W.Z., *et al.* Defects in CYB5A and CYB5B impact sterol-C4 oxidation in cholesterol biosynthesis and demonstrate regulatory roles of dimethyl sterols. *Cell Rep.* **43**(11), 114912 (2024).

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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