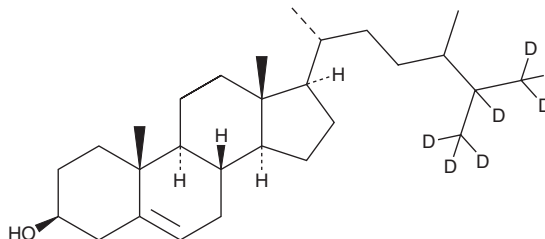


# PRODUCT INFORMATION



## Campesterol-d<sub>7</sub> Item No. 45690

**CAS Registry No.:** 2483832-11-5  
**Formal Name:** (3 $\beta$ ,24 $\xi$ )-ergost-5-en-25,26,26,26,27,27,27-d<sub>7</sub>-3-ol  
**MF:** C<sub>28</sub>H<sub>41</sub>D<sub>7</sub>O  
**FW:** 407.7  
**Chemical Purity:**  $\geq$ 98% (Campesterol)  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>);  $\leq$ 1% d<sub>0</sub>  
**Supplied as:** A 1 mg/ml solution in ethyl acetate  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Description

Campesterol-d<sub>7</sub> is intended for use as an internal standard for the quantification of campesterol (Item No. 41695) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Campesterol is a phytosterol that has been found in *D. innoxia* and has diverse biological activities.<sup>1-4</sup> It inhibits basic FGF-induced proliferation in, and vessel formation by, human umbilical vein endothelial cells (HUVECs) when used at concentrations of 1, 5, or 10  $\mu$ M.<sup>2</sup> Campesterol (15  $\mu$ M) decreases the proliferation of MCF-7 and ZR-75-1 breast cancer cells.<sup>3</sup> It reduces the levels of estrogen receptor  $\alpha$  (ER $\alpha$ ) in, and the diameter of, patient-derived breast cancer organoids when used at a concentration of 10  $\mu$ M. Campesterol has been used as a marker of cholesterol intestinal absorption in humans.<sup>4</sup>

### References

1. Ramadan, M.F., Zayed, R., and El-Shamy, H. Screening of bioactive lipids and radical scavenging potential of some solanaceae plants. *Food Chem.* **103(3)**, 885-890 (2007).
2. Choi, J.M., Lee, E.O., Lee, H.J., et al. Identification of campesterol from *Chrysanthemum coronarium* L. and its antiangiogenic activities. *Phytother. Res.* **21(10)**, 954-959 (2007).
3. Majumder, R., Banerjee, S., Mandal, M., et al. A virtual drug discovery screening illuminates campesterol as a potent estrogen receptor alpha inhibitor in breast cancer. *J. Med. Chem.* **67(12)**, 10321-10335 (2024).
4. Wu, A.H., Ruan, W., Todd, J., et al. Biological variation of  $\beta$ -sitosterol, campesterol, and lathosterol as cholesterol absorption and synthesis biomarkers. *Clin. Chim. Acta* **430**, 43-47 (2014).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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