

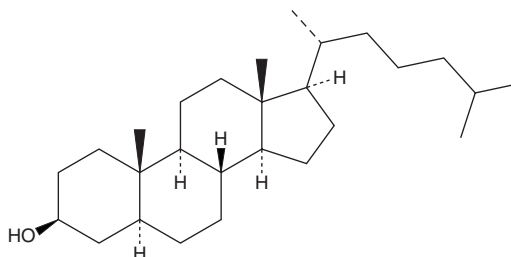
# PRODUCT INFORMATION



## Cholestanol

Item No. 9003101

CAS Registry No.: 80-97-7  
Formal Name: (5 $\alpha$ )-cholestan-3 $\beta$ -ol  
Synonyms:  $\beta$ -Cholestanol,  
(+)-Dihydrocholesterol,  
NSC 18188  
MF: C<sub>27</sub>H<sub>48</sub>O  
FW: 388.7  
Purity:  $\geq 95\%$   
Supplied as: A 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

Cholestanol is supplied as a solid. A stock solution may be made by dissolving the cholestanol in the solvent of choice, which should be purged with an inert gas. Cholestanol is slightly soluble in chloroform and methanol.

### Description

Cholestanol is a cholesterol metabolite formed by oxidation and an intermediate in the biosynthesis of chenodeoxycholic acid (Item No. 10011286).<sup>1</sup> Cholestanol (10  $\mu\text{g/ml}$ ) induces apoptosis in cornea and lens epithelial cells and increases the activity of IL-1 $\beta$  converting enzyme (ICE) and CPP32 proteases.<sup>2</sup> Dietary administration of 1% cholestanol to mice increases serum and liver cholestanol levels and leads to corneal opacities and gallstones and in rats it leads to cholestanol deposition in the cerebellum.<sup>3</sup> Cholestanol levels are increased in plasma of patients with cerebrotendinous xanthomatosis (CTX), a disease characterized by a deficiency in the mitochondrial enzyme sterol 27-hydroxylase (CYP27A1) that leads to progressive neurological symptoms.<sup>4</sup>

### References

1. Serizawa, S., Otsuka, H., Seyama, Y., *et al.* Studies on the biosynthesis of cholestanol in cultured cells. *J. Biochem.* **92**(5), 1547-1557 (1982).
2. Inoue, K., Kubota, S., Tsuru, T., *et al.* Cholestanol induces apoptosis of corneal endothelial and lens epithelial cells. *Invest. Ophthalmol. Vis. Sci.* **41**(5), 991-997 (2000).
3. Seyama, Y. Cholestanol metabolism, molecular pathology, and nutritional implications. *J. Med. Food* **6**(3), 217-224 (2003).
4. Pilo de la Fuente, B., Sobrido, M.J., Girós, M., *et al.* Usefulness of cholestanol levels in the diagnosis and follow-up of patients with cerebrotendinous xanthomatosis. *Neurologia* **26**(7), 397-404 (2011).

#### 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.

Copyright Cayman Chemical Company, 11/09/2022

#### 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