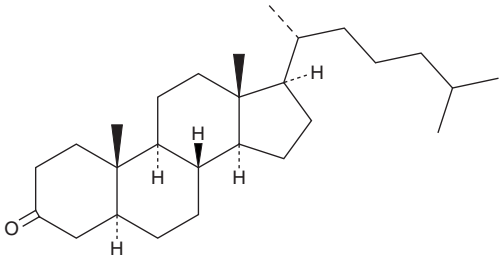
PRODUCT INFORMATION

5α-Cholestan-3-one

Item No. 46817

CAS Registry No.:	566-88-1
Synonyms:	5α-Cholestanone, NSC 11920
MF:	$C_{27}H_{46}O$
FW:	386.7
Purity:	≥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

5α-Cholestan-3-one is supplied as a solid. A stock solution may be made by dissolving the 5α-cholestan-3-one in the solvent of choice, which should be purged with an inert gas. 5α-Cholestan-3-one is soluble (≥10 mg/ml) in chloroform.

Description

5α-Cholestan-3-one is an oxysterol and active metabolite of cholesterol (Item Nos. 9003100 | 39448 | 39088).[1,2] It is formed from cholesterol *via* a cholestenone (Item No. 25713) intermediate by steroid 5α-reductase (SRD5A). 5α-Cholestan-3-one decreases the stability of lipid rafts in the synaptic membrane and reduces synaptic transmission in the neuromuscular junction (NMJ) of mouse diaphragm muscle.[3] It attenuates fenoterol-induced positive inotropic activity and increases nitric oxide (NO) production in isolated mouse left atria.[4]

References

1. Shefer, S., Hauser, S., and Mosbach, E.H. Studies on the biosynthesis of 5α-cholestan-3β-ol I. Cholestenone 5α-reductase of rat liver. *J. Biol. Chem.* **241,** 946-952 (1966).
2. Salen, G., Batta, A.K., Tint, G.S., *et al.* Inverse relationship between plasma cholestanol concentrations and bile acid synthesis in sitosterolemia. *J. Lipid Res.* **35(10),** 1878-1887 (1994).
3. Kasimov, M.R., Giniatullin, A.R., Zefirov, A.L., *et al.* Effects of 5α-cholestan-3-one on the synaptic vesicle cycle at the mouse neuromuscular junction. *Biochim. Biophys. Acta* **1851(5),** 674-685 (2015).
4. Sytchev, V.I., Odnoshivkina, Y.G., Ursan, R.V., *et al.* Oxysterol, 5α-cholestan-3-one, modulates a contractile response to β2-adrenoceptor stimulation in the mouse atria: Involvement of NO signaling. *Life Sci.* **188,** 131-140 (2017).

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
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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