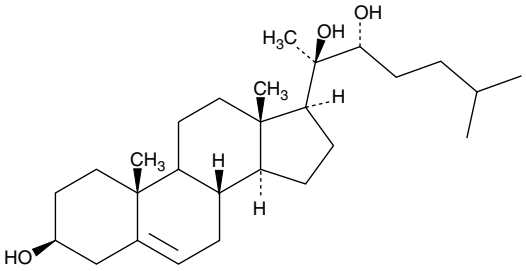
Product Information

Oxy-16

Item No. 9000395

CAS Registry No.:	596-94-1
Formal Name:	cholest-5-ene-3β,20,22R-triol
Synonym:	20(R),22(R)-dihydroxy Cholesterol
MF:	$C_{27}H_{46}O_3$
FW:	418.7
Purity:	≥95%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid



Laboratory Procedures

For long term storage, we suggest that oxy-16 be stored as supplied at -20°C. It should be stable for at least two years.

Oxy-16 is supplied as a crystalline solid. A stock solution may be made by dissolving the oxy-16 in the solvent of choice. Oxy-16 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of oxy-16 in ethanol is approximately 10 mg/ml and approximately 1.5 mg/ml in DMSO and DMF.

If aqueous stock solutions are required for biological experiments, they can best be prepared by dissolving the compound in aqueous buffers or isotonic saline. Ensure that 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.

Naturally occurring oxysterols are products of cholesterol oxidation that can stimulate the hedgehog (Hh) signaling pathway in target cells associated with cardiovascular disease and with bone formation.[1] Depending on the target cell, activation of Hh signaling can modulate inflammatory responses to additional atherogenic factors such as lesion-producing macrophages or enable osteoblast differentiation.[2,3] Oxy-16 is a synthetic oxysterol compound that may function as an antagonist of hedgehog activity. Published data regarding its efficacy remains forthcoming.

References

1. Dwyer, J.R., Sever, N., Carlson, M., *et al.* Oxysterols are novel activators of the hedgehog signaling pathway in pluripotent mesenchymal cells. *J. Biol. Chem.* **282(12)**, 8959-8968 (2007).
2. Björkhem, I. and Diczfalusy, U. Oxysterols: Friends, foes, or just fellow passengers? *Arterioscler. Thromb. Vasc. Biol.* **22**, 734-742 (2002).
3. Amantea, C.M., Kim, W.-K., Meliton, V., *et al.* Oxysterol-induced osteogenic differentiation of marrow stromal cells is regulated by Dkk-1 inhibitable and PI3-kinase mediated signaling. *J. Cell. Biochem.* **105(2)**, 424-436 (2008).

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