
Product Data Sheet

Product Name: Oxy-16
 Cat. No.: GC17713

Chemical Properties

Cas. No. 596-94-1

Chemical Name cholest-5-ene-3 β ,20,22R-triol

SMILES O[C@H](C1)CC[C@@]2(C)C1=CC[C@]3([H])C2CC[C@@]4(C)[C@@]3([H])CC[C@]4([H])[C@@](C)(O)[C@H](O)CCC(C)C

Formula C₂₇H₄₆O₃

M.Wt 418.7

Solubility \leq 10mg/ml in ethanol;1.5mg/ml in DMSO;1.5mg/ml in dimethyl formamide

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

Oxy-16 is an antagonist of hedgehog activity.

Naturally occurring oxysterols that are products of cholesterol oxidation can stimulate the hedgehog (Hh) signaling pathway related to cardiovascular disease and bone formation. Activation of Hh signaling modulates inflammatory responses to additional atherogenic factors including lesion-producing macrophages and enable osteoblast differentiation, which is dependent on the target cell.

In vitro: Oxysterols have been shown to be associated with immunosuppression, apoptosis, atherosclerosis, inflammation, and cholesterol turnover. Other studies also indicated that oxysterols were Hedgehog (Hh) signaling pathway activators and had potent osteoinductive properties. Oxy-16, an oxysterol, was identified as a cell permeable oxygenated derivative of cholesterol that might be the end product or

Caution: Product has not been fully validated for medical applications. For research use only.

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intermediate of the cholesterol excretion pathways. Oxy-16 is currently used as a transport form for cholesterol across the blood brain barrier and membranes. The osteogenic differentiation caused by Oxy-16 was considered to be mediated via a Wnt signaling-related, Dkk-1-inhibitable mechanism [1].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:

[1] 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. *Journal of Cellular Biochemistry* 105(2), 424-436 (2008).

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