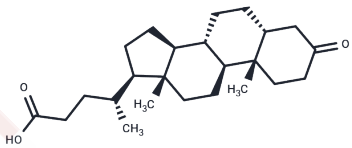
Data Sheet (Cat.No.T13502)

TargetMol

3-Oxo-5β-cholanoic acid

Chemical Properties



CAS No. : 1553-56-6

Formula: C24H38O3

Molecular Weight: 374.56

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	3-Oxo-5β-cholanoic acid (Dehydrolithocholic acid) is a bile acid metabolite that inhibits TH17 cell differentiation by directly binding to the transcription factor RORγt with a Kd of 1.13 μM.
Targets(IC50)	ROR
In vitro	Treatment with 3-Oxo-5β-cholanoic acid significantly reduces the RORγt reporter's activity, likely by directly interacting with RORγt, thereby inhibiting TH17 cell differentiation by suppressing its transcriptional activity.
In vivo	3-Oxo-5β-cholanoic acid (Dehydrolithocholic acid) (0.3% (w/w); p.o.; for 1 week) significantly reduces the percentage of ileal TH17 cells[1].

Solubility Information

Solubility	DMSO: 65 mg/mL (173.54 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.34 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6698 mL	13.349 mL	26.698 mL
5 mM	0.534 mL	2.6698 mL	5.3396 mL
10 mM	0.267 mL	1.3349 mL	2.6698 mL
50 mM	0.0534 mL	0.267 mL	0.534 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hang S, et al. Bile acid metabolites control TH17 and Treg cell differentiation. Nature. 2019 Dec;576(7785):143-148.