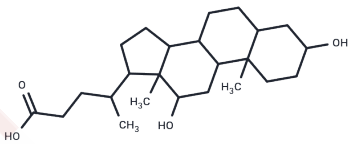
Data Sheet (Cat.No.T2965)

TargetMol

Deoxycholic acid

Chemical Properties



CAS No. : 83-44-3

Formula: C24H40O4

Molecular Weight: 392.57

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Deoxycholic acid (Cholanoic Acid) is a bile acid formed by bacterial action from cholate. It is usually conjugated with glycine or taurine. Deoxycholic acid acts as a detergent to solubilize fats for intestinal absorption, is reabsorbed itself, and is used as a choleretic and detergent.
Targets(IC50)	Endogenous Metabolite,GPCR19
In vitro	Deoxycholic acid inhibits miR-21 expression in primary rat hepatocytes in a dose-dependent manner, and increases miR-21 pro-apoptotic target programmed cell death 4 (PDCD4) and apoptosis. Deoxycholic acid decreases NF-κB activity, shown to represent an upstream mechanism leading to modulation of the miR-21/PDCD4 pathway[1].
In vivo	miR-21 expression is down-regulated upon short exposures to Deoxycholic acid, as is the downstream pathway, with concomitant PIDD processing and activation of caspase-2, which contributes to DCA-induced liver damage[1].
Cell Research	Primary rat hepatocytes were isolated from male rats (100 to 150g) by collagenase perfusion. After isolation, hepatocytes were resuspended in complete Williams E medium and plated on BD Primaria™ culture dishes at 5×104cells/cm2. Cells are kept at 37°C in a humidified atmosphere of 5% CO2 for 4-6h to allow attachment. Plates are then washed with phosphate buffered saline (PBS) 1× in order to remove dead cells and incubated in Williams E medium supplemented with 25 to 200μM DCA or no addition (control) for 24h. Primary rat hepatocytes are processed for total RNA and protein isolation, cell viability, cytotoxicity and caspase activity assays and Hoechst staining. (Only for Reference)

Solubility Information

Solubility	DMSO: 55 mg/mL (140.1 mM),Sonication is recommended. Ethanol: 56 mg/mL (142.65 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5473 mL	12.7366 mL	25.4732 mL
5 mM	0.5095 mL	2.5473 mL	5.0946 mL
10 mM	0.2547 mL	1.2737 mL	2.5473 mL
50 mM	0.0509 mL	0.2547 mL	0.5095 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.

Reference

Pedro M. Rodrigues, et al. Sci Rep. 2015, 5:17528.
Yan Y, Niu Z, Sun C, et al. Hepatic thyroid hormone signalling modulates glucose homeostasis through the regulation of GLP-1 production via bile acid-mediated FXR antagonism. Nature Communications. 2022, 13(1): 1-16.