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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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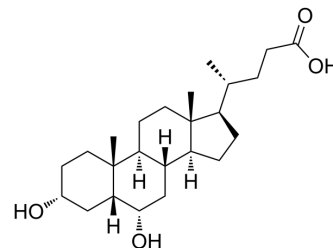
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Hyodeoxycholic acid

Cat. No.:	HY-N0169
CAS No.:	83-49-8
Molecular Formula:	C ₂₄ H ₄₀ O ₄
Molecular Weight:	393
Target:	Endogenous Metabolite; G protein-coupled Bile Acid Receptor 1
Pathway:	Metabolic Enzyme/Protease; GPCR/G Protein
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (254.45 mM; Need ultrasonic) H ₂ O : < 0.1 mg/mL (insoluble)				
	Preparing Stock Solutions	<div>Solvent Concentration</div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	2.5445 mL	12.7226 mL	25.4453 mL
		5 mM	0.5089 mL	2.5445 mL	5.0891 mL
		10 mM	0.2545 mL	1.2723 mL	2.5445 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 50% PEG300 >> 50% saline Solubility: 25 mg/mL (63.61 mM); Suspended solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.36 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.36 mM); Clear solution				
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.36 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Hyodeoxycholic acid is a secondary bile acid formed in the small intestine by the gut flora, and acts as a TGR5 (GPCR19) agonist, with an EC ₅₀ of 31.6 μM in CHO cells.	
IC ₅₀ & Target	Microbial Metabolite	Human Endogenous Metabolite
In Vitro	Hyodeoxycholic acid is a secondary hydrophilic bile acid formed in the small intestine by the gut flora, and acts as an agonist	

of TGR5, with an EC₅₀ of 31.6 μ M in CHO cells^[1]. Hyodeoxycholic acid (50, 100 μ M) increases the expression of genes (Abca1, Abcg1, and Apoe) involved in cholesterol efflux in RAW 264.7 cells^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Hyodeoxycholic acid (HDCA; 1.25% (wt/wt)) obviously decreases fat mass and increases lean mass but does not raise the serum levels of any organ toxicity markers in LDLRKO mice. Hyodeoxycholic acid inhibits atherosclerotic lesion formation in LDLRKO at multiple sites, improves plasma lipoprotein profiles, decreases plasma glucose level and intestinal cholesterol absorption efficiency and increases daily cholesterol excretion through fecal output. Hyodeoxycholic acid also improves HDL function as measured by a cholesterol efflux assay^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration ^[2]

Mice^[2]

For atherosclerosis studies, 8-wk-old female LDLRKO mice are fed a Western diet (21% fat, 0.15% cholesterol; TD.88137) for 8 wk. One group of mice (baseline group) is euthanized at this time point for lesion measurement in the aortic root region and in the innominate artery. Atherosclerotic lesion in the whole aorta is not examined in the baseline group. The remaining mice are then divided into 2 groups and fed the following diets for another 15 wk before euthanasia: group 1, chow diet (5% fat, AIN-76A Rodent Diet); and group 2, chow diet + 1.25% (wt/wt) Hyodeoxycholic acid. For other studies, 8-wk-old female LDLRKO mice are fed a chow diet or chow diet + 1.25% Hyodeoxycholic acid for 3 wk before phenotype measurements. Food consumption and body weight are recorded weekly. Animals are measured for total body fat mass and lean mass by magnetic resonance imaging (MRI) using Bruker Minispec with software from Eco Medical Systems^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sato H, et al. Novel potent and selective bile acid derivatives as TGR5 agonists: biological screening, structure-activity relationships, and molecular modeling studies. J Med Chem. 2008 Mar 27;51(6):1831-41.

[2]. Shih DM, et al. Hyodeoxycholic acid improves HDL function and inhibits atherosclerotic lesion formation in LDLR-knockout mice. FASEB J. 2013 Sep;27(9):3805-17.

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

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