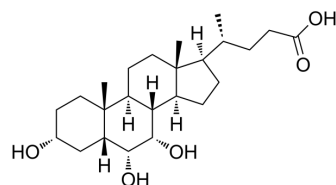


Hyocholic Acid

Cat. No.:	HY-121238		
CAS No.:	547-75-1		
Molecular Formula:	C ₂₄ H ₄₀ O ₅		
Molecular Weight:	408.57		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (152.97 mM; ultrasonic and warming and heat to 60°C)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.4476 mL	12.2378 mL	24.4756 mL
	5 mM	0.4895 mL	2.4476 mL	4.8951 mL
	10 mM	0.2448 mL	1.2238 mL	2.4476 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (6.12 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.12 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Hyocholic Acid is a bile acid found in pig. Hyocholic Acid can also be found in urine samples from patients with cholestasis. Hyocholic Acid promotes GLP-1 secretion via activating TGR5 and inhibiting FXR in enteroendocrine cells. Hyocholic Acid is known for its exceptional resistance to type 2 diabetes ^{[1][2][3]}.

In Vitro

HCA (25 and 50 μM, 24 h) upregulates GLP-1 protein secretion in STC-1 and NCI-H716 cells^[3].
HCA (25 and 50 μM, 24 h) upregulates proglucagon gene transcription in STC-1 and NCI-H716 cells^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

	Western Blot Analysis ^[3]								
Cell Line:	NCI-H716 cells								
Concentration:	50 μ M								
Incubation Time:	48 h								
Result:	Inhibited the high expression of SHP (small heterodimer partner) induced by the FXR agonist.								
In Vivo	<p>Hyocholic Acid (20 mg/kg, p.o.) suppresses BA depletion-induced blood glucose increase in pigs^[3]. Hyocholic Acid (100 mg/kg/day, p.o.) improves serum fasting GLP-1 secretion and glucose homeostasis in diabetic mouse models^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
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REFERENCES

- [1]. Zheng X, et al. Hyocholic acid species as novel biomarkers for metabolic disorders. *Nat Commun.* 2021 Mar 5;12(1):1487.
- [2]. van Berge Henegouwen, et al. Sulphated and unsulphated bile acids in serum, bile, and urine of patients with cholestasis. *Gut* 17(11), 861-869 (1976).
- [3]. Xiaojiao Zheng, et al. Hyocholic acid species improve glucose homeostasis through a distinct TGR5 and FXR signaling mechanism. *Cell Metab.* 2021 Apr 6;33(4):791-803.e7.

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

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