Cholic acid sodium

Cat. No.: HY-N0324A

CAS No.: 361-09-1

Molecular Formula: $C_{24}H_{39}NaO_5$

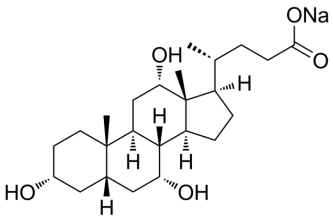
Molecular Weight: 430.55

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 250 mg/mL (580.65 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Concentration \ Mass (Solvent)	1 mg	5 mg	10 mg
1 mM	2.3226 mL	11.6131 mL	23.2261 mL
5 mM	0.4645 mL	2.3226 mL	4.6452 mL
10 mM	0.2323 mL	1.1613 mL	2.3226 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (232.26 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Cholic acid sodium is a major primary bile acid produced in the liver and usually conjugated with glycine or taurine. It facilitates fat absorption and cholesterol excretion. Cholic acid sodium is orally active[1][2].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Cholic acid (1 mg/mL, 30 min) competitively binds Na^+/taurocholate cotransporting polypeptide (NTCP) on HepG2 cells and significantly inhibits the uptake of Cholic acid (CA)-nanoliposomes (LPs)-Doxorubicin (DOX)-HCl, which indicates that CA-LPs-DOX-HCl are also uptaken via NTCP-mediated endocytosis pathway[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Cholic acid? (1% (w/w) Cholic acid-supplemented diet; p.o.; 14 days) decreases SHP (small heterodimer partner) protein expression, potentially via the upregulation of miR142-3p. Cholic acid increases CYP2D6 expression and activity[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Tg-CYP2D6 adult male mice (8 weeks of age and weighing 20–25 g)[2]
Dosage:	1% (w/w) Cholic acid-supplemented diet
Administration:	Oral, 14 days
Result:	Decreases SHP expression and increased CYP2D6 activity.

CUSTOMER VALIDATION

- Cell Res. 2019 Mar;29(3):193-205.
- Cell Host Microbe. 2024 Jan 11:S1931-3128(23)00510-3.
- Front Cell Dev Biol. 22 July 2022.
- Mol Neurobiol. 2024 Apr 16.
- Aquaculture. 2023 Sep 18, 740123.

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REFERENCES

[1]. Li Y, et al. Mechanism of hepatic targeting via oral administration of DSPE-PEG-Cholic acid-modified nanoliposomes. Int J Nanomedicine. 2017 Feb 28;12:1673-1684.

[2]. Pan X, et al. Cholic acid Feeding Leads to Increased CYP2D6 Expression in CYP2D6-Humanized Mice. Drug Metab Dispos. 2017 Apr;45(4):346-352.

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