Taurocholic acid sodium

Cat. No.: HY-N0545

CAS No.: 145-42-6

Molecular Formula: $C_{26}H_{44}NNaO_7S$

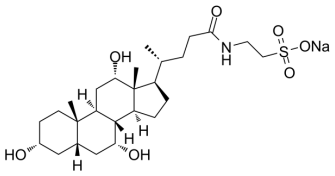
Molecular Weight: 537.68

Target: Endogenous Metabolite; VEGFR

Pathway: Metabolic Enzyme/Protease; Protein Tyrosine Kinase/RTK

Storage: -20°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

DMSO : 250 mg/mL (464.96 mM; Need ultrasonic)

H_2O : 100 mg/mL (185.98 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8598 mL	9.2992 mL	18.5984 mL
5 mM	0.3720 mL	1.8598 mL	3.7197 mL
10 mM	0.1860 mL	0.9299 mL	1.8598 mL

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

BIOLOGICAL ACTIVITY

Description

Taurocholic acid sodium (Sodium taurocholate) has marked bioactive effects such as an inhibitory potential against hepatic artery ligation induced biliary damage by upregulation of VEGF-A expression. Taurocholic acid sodium has immunoregulation effect[1].

IC_{50} & Target

Microbial Metabolite | Human Endogenous Metabolite

In Vitro

Taurocholic acid (100 μM, 24 h) sodium decreases the proportion of CD3+CD8+ T and NK cells in isolated PBMCs from HBeAg-positive CHB patients[2].

Taurocholic acid (100 μM, 24 h) sodium decreases IFN-α stimulated cytokine and cytotoxic granule levels (IFN-γ, TNF-α, granzyme B) in CD3+CD8+ T and NK cells[2].

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

In Vivo

Taurocholic acid (oral gavage, 100 mg/kg, 2 weeks) sodium promotes HBV replication by reducing the percentage of NK and CD3+CD8+ T cells in C57BL/6 mice with tail vein injection with rAAV8-1.3HBV[2].

Taurocholic acid (1% in diet, 1 week) sodium prevents hepatic artery ligation (HAL)-induced cholangiocyte damage in rats by upregulation of VEGF-A expression[3].

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

Animal Model:	C57BL/6 mice[2]
Dosage:	100-mg/kg
Administration:	oral gavage, for 2 weeks after tail vein injection with rAAV8-1.3HBV for 6 weeks
Result:	Reduced the percentage of NK and CD3+CD8+ T cells. Increases serum HBsAg, HBeAg, and HBV DNA levels.

CUSTOMER VALIDATION

- Research (Wash D C). 2022 Nov 2;2022:9784081.
- Antiviral Res. 2019 Jun 27;169:104544.
- Biomolecules. 2022, 12(8), 1063.
- FASEB J. 2022 May;36(5):e22305.
- RSC Adv. 2018 8:8469-8483.

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REFERENCES

[1]. Xun Z,et al. Taurocholic acid inhibits the response to interferon-α therapy in patients with HBeAg-positive chronic hepatitis B by impairing CD8+ T and NK cell function. Cell Mol Immunol. 2021 Feb;18(2):461-471.

[2]. Glaser S, et al. Taurocholic acid prevents biliary damage induced by hepatic artery ligation in cholestatic rats. Dig Liver Dis. 2010 Oct;42(10):709-17.

[3]. Caiyun Wang, et al. Effects of taurocholic acid on immunoregulation in mice. Int Immunopharmacol. 2013 Feb;15(2):217-22.

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