Chenodeoxycholic acid-^{13}C

Cat. No.: HY-76847S2

CAS No.: 52918-92-0

Molecular Formula: $C_{23}{}^{13}CH_{40}O_4$

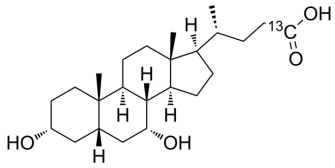
Molecular Weight: 393.56

Target: FXR; Autophagy; Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease; Autophagy

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (317.61 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5409 mL	12.7045 mL	25.4091 mL
	5 mM	0.5082 mL	2.5409 mL	5.0818 mL
	10 mM	0.2541 mL	1.2705 mL	2.5409 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.29 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.29 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.29 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Chenodeoxycholic acid-^{13}C is the ^{13}C-labeled Chenodeoxycholic Acid. Chenodeoxycholic Acid is a hydrophobic primary bile acid that activates nuclear receptors (FXR) involved in cholesterol metabolism.

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

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

REFERENCES

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[2]. Casaburi I, et al. Chenodeoxycholic acid through a TGR5-dependent CREB signaling activation enhances cyclin D1 expression and promotes human endometrial cancer cell proliferation. Cell Cycle. 2012 Jul 15;11(14):2699-710

[3]. Stauffer AT, et al. Chenodeoxycholic acid and deoxycholic acid inhibit 11 beta-hydroxysteroid dehydrogenase type 2 and cause cortisol-induced transcriptional activation of the mineralocorticoid receptor. J Biol Chem. 2002 Jul 19;277(29):26286-92

[4]. Kawabe Y, et al. The molecular mechanism of the induction of the low density lipoprotein receptor by chenodeoxycholic acid in cultured human cells. Biochem Biophys Res Commun. 1995 Mar 8;208(1):405-11.

[5]. Ao M, et al. Chenodeoxycholic acid stimulates Cl(-) secretion via cAMP signaling and increases cystic fibrosis transmembrane conductance regulator phosphorylation in T84 cells. Am J Physiol Cell Physiol. 2013 Aug 15;305(4):C447-56

[6]. Noh K, et al. Farnesoid X receptor activation by chenodeoxycholic acid induces detoxifying enzymes through AMP-activated protein kinase and extracellular signal-regulated kinase 1/2-mediated phosphorylation of CCAAT/enhancer binding protein β. Drug Metab

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