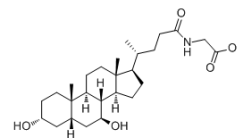


Glycoursodeoxycholic acid

Cat. No.:	HY-N1424		
CAS No.:	64480-66-6		
Molecular Formula:	C ₂₆ H ₄₃ NO ₅		
Molecular Weight:	449.62		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
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 : 250 mg/mL (556.03 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.2241 mL	11.1205 mL	22.2410 mL
		5 mM	0.4448 mL	2.2241 mL	4.4482 mL
10 mM		0.2224 mL	1.1121 mL	2.2241 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.63 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.63 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.63 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Glycoursodeoxycholic acid, a acyl glycine and a bile acid-glycine conjugate, is a metabolite of ursodeoxycholic acid.
In Vitro	The antioxidant compound glycoursodeoxycholic acid (GUDCA) fully abrogates UCB-induced cytochrome c oxidase inhibition and significantly prevents oxidative stress, metabolic alterations, and cell demise ^[1] . GUDCA has shown therapeutic efficacy in neurodegenerative models and diseases. Increased cytosolic SOD1 inclusions were observed in 4 DIV NSC-34/hSOD1(G93A) cells together with decreased mitochondria viability, caspase-9 activation, and apoptosis ^[2] . Glycoursodeoxycholic acid shows preventive and restorative effects against unconjugated bilirubin -induced blood-brain barrier disruption and damage to human brain microvascular endothelial cells ^[3] .

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

REFERENCES

- [1]. Vaz AR, et al. Bilirubin selectively inhibits cytochrome c oxidase activity and induces apoptosis in immature cortical neurons: assessment of the protective effects of glyoursodeoxycholic acid. *J Neurochem*. 2010 Jan;112(1):56-65.
- [2]. Vaz AR, et al. Glyoursodeoxycholic acid reduces matrix metalloproteinase-9 and caspase-9 activation in a cellular model of superoxide dismutase-1 neurodegeneration.
- [3]. Palmela I, et al. Hydrophilic bile acids protect human blood-brain barrier endothelial cells from disruption by unconjugated bilirubin: an in vitro study. *Front Neurosci*. 2015 Mar 13;9:80.
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Caution: Product has not been fully validated for medical applications. For research use only.

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