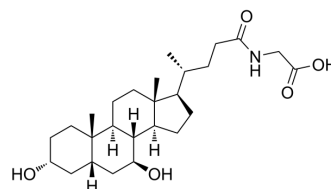


## Glycoursodeoxycholic acid

Cat. No.:	HY-N1424		
CAS No.:	64480-66-6		
Molecular Formula:	C <sub>26</sub> H <sub>43</sub> NO <sub>5</sub>		
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 : 100 mg/mL (222.41 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	1. 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				
	2. 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				
	3. 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.	
IC <sub>50</sub> & Target	Microbial Metabolite	Human Endogenous Metabolite
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 <sup>[1]</sup> . GUDCA has shown therapeutic efficacy in neurodegenerative models and diseases. Increased cytosolic SOD1 inclusions were observed in 4 DIV	

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NSC-34/hSOD1(G93A) cells together with decreased mitochondria viability, caspase-9 activation, and apoptosis<sup>[2]</sup>.  
Glycoursodeoxycholic acid shows preventive and restorative effects against unconjugated bilirubin -induced blood-brain barrier disruption and damage to human brain microvascular endothelial cells<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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- [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 glycoursodeoxycholic acid. *J Neurochem.* 2010 Jan;112(1):56-65.
- [2]. Vaz AR, et al. Glycoursodeoxycholic 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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