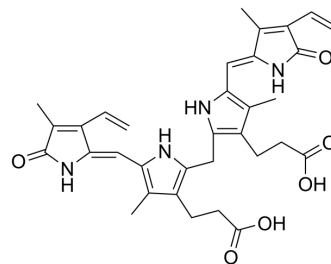


Bilirubin

Cat. No.:	HY-N0323
CAS No.:	635-65-4
Molecular Formula:	C ₃₃ H ₃₆ N ₄ O ₆
Molecular Weight:	584.66
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 4 mg/mL (6.84 mM; ultrasonic and warming and heat to 60°C)				
	0.1 M HCL : < 1 mg/mL (insoluble)				
	0.1 M NaOH : < 1 mg/mL (ultrasonic;warming;adjust pH to 9 with H ₂ O;heat to 60°C) (insoluble)				
	Preparing Stock Solutions	Solvent	1 mg	5 mg	10 mg
		Concentration			
1 mM		1.7104 mL	8.5520 mL	17.1040 mL	
5 mM		0.3421 mL	1.7104 mL	3.4208 mL	
	10 mM	---	---	---	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 50% PEG300 >> 50% saline Solubility: 10 mg/mL (17.10 mM); Suspended solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	Bilirubin is a yellow breakdown product of heme catabolism ^[1] . Bilirubin exhibits antioxidant and antimutagenic effects ^[2] .
IC ₅₀ & Target	Human Endogenous Metabolite
In Vitro	Unconjugated Bilirubin inhibits the cleavage of F485-rVWF73-H, D633-rVWF73-H, and GST-rVWF71-11K by ADAMTS13 in a concentration-dependent manner with a half-maximal inhibitory concentration (IC ₅₀) of ~13 μM, ~70 μM, and ~17 μM, respectively. Unconjugated Bilirubin also dose-dependently inhibits the cleavage of multimeric VWF by ADAMTS13 under denaturing conditions ^[1] . Bilirubin exhibits antioxidant and antimutagenic effects in vitro ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Hepatology. 2024 Feb 20.

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REFERENCES

- [1]. Lu RN, et al. Unconjugated Bilirubin inhibits proteolytic cleavage of von Willebrand factor by ADAMTS13 protease. J Thromb Haemost. 2015 Jun;13(6):1064-72.
- [2]. Mölzer C, et al. Bilirubin and related tetrapyrroles inhibit food-borne mutagenesis: a mechanism for antigenotoxic action against a model epoxide. J Nat Prod. 2013 Oct 25;76(10):1958-65.
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Caution: Product has not been fully validated for medical applications. For research use only.

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