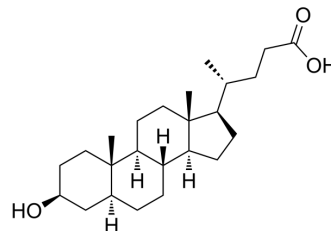


## Isoallolithocholic acid

Cat. No.:	HY-B0172A		
CAS No.:	2276-93-9		
Molecular Formula:	C <sub>24</sub> H <sub>40</sub> O <sub>3</sub>		
Molecular Weight:	376.57		
Target:	Others		
Pathway:	Others		
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 : 83.33 mg/mL (221.29 mM; ultrasonic and warming and heat to 60°C)  
 H<sub>2</sub>O : < 0.1 mg/mL (ultrasonic;warming;adjust pH to 12 with NaOH;heat to 60°C) (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.6555 mL	13.2777 mL	26.5555 mL
	5 mM	0.5311 mL	2.6555 mL	5.3111 mL
	10 mM	0.2656 mL	1.3278 mL	2.6555 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Isoallolithocholic acid (3β-Hydroxy-5α-cholanic acid), a derivative of [Lithocholic acid](#) (HY-10219), is a T cell regulator. Isoallolithocholic acid enhances regulatory T cells (Tregs) differentiation<sup>[1]</sup>.

#### In Vitro

Isoallolithocholic acid (3β-Hydroxy-5α-cholanic acid) (20 μM) reduces Th17 cell differentiation by ~50% without affecting RORγt expression<sup>[1]</sup>.  
 Isoallolithocholic acid does not affect T cell differentiation into Th1 or Th2 cells, the modulatory effect of Isoallolithocholic acid on Tregs is cell-type specific<sup>[1]</sup>.  
 Isoallolithocholic acid-dependent enhanced expression of FoxP3 requires mitoROS<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Isoallolithocholic acid (0.03%; in diet; 7 days) enhances Treg cells in B6 mice<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Segmented filamentous bacteria (SFB)-colonized Jax-B6 mice <sup>[1]</sup>
Dosage:	0.03% (w/w)
Administration:	In diet, 7 days
Result:	Was insufficient to enhance Treg percentages both at steady state and following anti-CD3 treatment alone. Significantly enhanced the Treg population in mice treated with anti-CD3 compared to control diet in combination with 0.3% (w/w) 3-oxolithocholic acid (3-oxoLCA). Reduced the number of CD45.1 <sup>+</sup> T effector cells.

## CUSTOMER VALIDATION

- Research Square Preprint. 2023 May 23.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Hang S, et al. Bile acid metabolites control TH17 and Treg cell differentiation. Nature. 2019 Dec;576(7785):143-148.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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