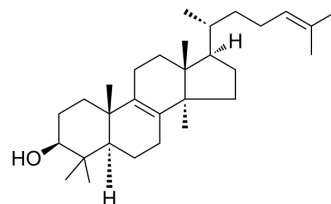


## Lanosterol

<b>Cat. No.:</b>	HY-W020033		
<b>CAS No.:</b>	79-63-0		
<b>Molecular Formula:</b>	C <sub>30</sub> H <sub>50</sub> O		
<b>Molecular Weight:</b>	426.72		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	Ethanol : 3.57 mg/mL (8.37 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.3435 mL	11.7173 mL	23.4346 mL
		5 mM	0.4687 mL	2.3435 mL	4.6869 mL
		10 mM	---	---	---
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1 mg/mL (2.34 mM); Clear solution  2. Add each solvent one by one: 10% EtOH >> 90% corn oil Solubility: ≥ 1 mg/mL (2.34 mM); Clear solution				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Lanosterol is an intermediate of cholesterol synthesis and use of lanosterol induces ubiquitination and degradation of a rate-controlling enzyme of cholesterol synthesis, i.e., HMG CoA reductase. Lanosterol suppresses the aggregation and cytotoxicity of misfolded proteins linked with neurodegenerative diseases <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Human Endogenous Metabolite
<b>In Vitro</b>	<p>Lanosterol diminishes aberrant proteotoxic aggregation and mitigates their cytotoxicity via induced expression of co-chaperone CHIP and elevated autophagy<sup>[1]</sup>.</p> <p>Lanosterol is a precursor of meiosis-activating sterols in the cholesterol biosynthetic pathway and induces a physiological signal that instructs the oocyte to reinitiate meiosis<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

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## CUSTOMER VALIDATION

- Cell Death Dis. 2023 Nov 14;14(11):740.
- Cell Chem Biol. 2024 May 16;31(5):920-931.e6.
- Commun Biol. 2023 Jan 3;6(1):1.

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## REFERENCES

- [1]. Upadhyay A, et al. Lanosterol Suppresses the Aggregation and Cytotoxicity of Misfolded Proteins Linked with Neurodegenerative Diseases. Mol Neurobiol. 2018;55(2):1169-1182.
- [2]. Lee S, et al. Lanosterol influences cytoplasmic maturation of pig oocytes in vitro and improves preimplantation development of cloned embryos. Theriogenology. 2016;85(4):575-584.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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