

## Ergosterol peroxide

## Chemical Properties

CAS No. : 2061-64-5

Formula: C<sub>28</sub>H<sub>44</sub>O<sub>3</sub>

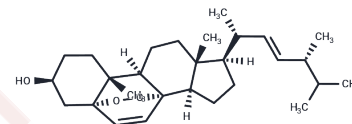
Molecular Weight: 428.65

Keep away from direct sunlight, Keep away from moisture

Storage:

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Ergosterol peroxide (NSC 31324) is a derivative from mushrooms with anti-tumor, pro-apoptotic anti-mycobacterial and anti-proliferative activities. Ergosterol peroxide has anti-inflammatory and antioxidant activities and is toxic to parasites.
Targets(IC50)	Antibacterial
In vitro	Ergosterol peroxide showed an IC <sub>50</sub> of 6.74 µg/mL against T. cruzi, but did not lyse erythrocytes even at concentrations as high as 1600 µg/mL and had no toxic effects on mammalian cells. In vitro experiments showed that Ergosterol peroxide exhibited significant lysogenic activity when interacting with Trypanosoma cruzi, possibly due to rupture of the parasite cell membrane. [1]

## Solubility Information

Solubility	Methanol: 12.5 mg/mL (29.16 mM), Sonication is recommended. DMSO: 3.12 mg/mL (7.28 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3329 mL	11.6645 mL	23.3291 mL
5 mM	0.4666 mL	2.3329 mL	4.6658 mL
10 mM	0.2333 mL	1.1665 mL	2.3329 mL
50 mM	0.0467 mL	0.2333 mL	0.4666 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Ramos-Ligonio A, et al. Trypanocidal activity of ergosterol peroxide from *Pleurotus ostreatus*. *Phytother Res.* 2012 Jun;26(6):938-43.

Wu QP, et al. Ergosterol peroxide isolated from *Ganoderma lucidum* abolishes microRNA miR-378-mediated tumor cells on chemoresistance. *PLoS One.* 2012;7(8):e44579.

Rhee YH, et al. Inhibition of STAT3 signaling and induction of SHP1 mediate antiangiogenic and antitumor activities of ergosterol peroxide in U266 multiple myeloma cells. *BMC Cancer.* 2012 Jan 20;12:28.

Bu M, et al. Synthesis of Ergosterol Peroxide Conjugates as Mitochondria Targeting Probes for Enhanced Anticancer Activity. *Molecules.* 2019 Sep 11;24(18):3307.

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