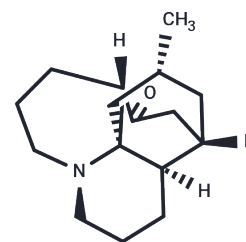


## Lycopodine

## Chemical Properties

CAS No. :	466-61-5
Formula:	C <sub>16</sub> H <sub>25</sub> NO
Molecular Weight:	247.38
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	Lycopodine, a bioactive compound derived from Lycopodium clavatum spores, effectively inhibits the proliferation of HeLa cells through the induction of apoptosis. This process is mediated by caspase-3 activation. In refractory prostate cancer cells, Lycopodine triggers apoptosis by modulating 5-lipoxygenase and depolarizing the mitochondrial membrane potential, without altering p53 activity.
Targets(IC50)	Apoptosis,Caspase,Lipoxygenase
In vitro	Lycopodine (100, 200 µg/mL;?24 hours) increases level of Bax and decreases the mitochondrial cytochrome c. This is followed by an increase in expression of cytochrome c in cytosolic fraction.?Lycopodine also cleaves the caspase-3 in the total cell lysate, while the expression of Bcl-2 is down regulated[2].Lycopodine (5.22-78.3 µg/mL;?12 hours) has 50% viability at 57.62±0.086 µg/mL and 51.46±1.43 µg/mL for PC3 and LnCaP, respectively[1].?Treated with Lycopodine (74-222 mM;?12 hours), the apoptotic index is with respect to the gradual increase in doses for the PC3 and LnCaP cells[1].? Lycopodine (74-222 mM;?12 hours) induces cell cycle arrest at G0/G1 phase in PC3 and LnCaP cells[1].?Lycopodine (0-200 µg/mL;?48 hours) shows cytotoxicity to HeLa cells in a dose and time dependent manner.?However, Lycopodine shows minimal cytotoxic effects in normal peripheral blood mononuclear cells (PBMC) even at the highest dose (200 µg/mL)[2].

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	4.0424 mL	20.2118 mL	40.4236 mL
5 mM	0.8085 mL	4.0424 mL	8.0847 mL
10 mM	0.4042 mL	2.0212 mL	4.0424 mL
50 mM	0.0808 mL	0.4042 mL	0.8085 mL

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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

Bishayee K, et al. Lycopodine triggers apoptosis by modulating 5-lipoxygenase, and depolarizing mitochondrial membrane potential in androgen sensitive and refractory prostate cancer cells without modulating p53 activity: signaling cascade and drug-DNA interaction. *Eur J Pharmacol.* 2013 Jan 5;698(1-3):110-21.

Mandal SK, et al. Lycopodine from *Lycopodium clavatum* extract inhibits proliferation of HeLa cells through induction of apoptosis via caspase-3 activation. *Eur J Pharmacol.* 2010 Jan 25;626(2-3):115-22.

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