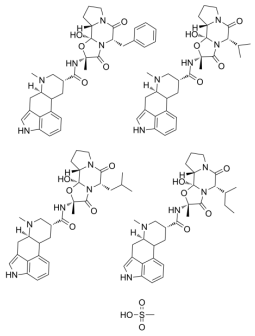
Dihydroergotoxine mesylate



Cat. No.:	HY-B0799
CAS No.:	8067-24-1
Molecular Formula:	$C_{123}H_{156}N_{20}O_{23}S$
Molecular Weight:	2314.74
Target:	GABA Receptor
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (43.20 mM)

H_2O : 2 mg/mL (0.86 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	0.4320 mL	2.1601 mL	4.3201 mL
	5 mM	0.0864 mL	0.4320 mL	0.8640 mL
	10 mM	0.0432 mL	0.2160 mL	0.4320 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (0.90 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (0.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (0.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dihydroergotoxine mesylate is a complex of closely related alkaloid salts; Binds with high affinity to the GABAA receptor Cl-channel, producing an allosteric interaction with the benzodiazepine site.IC50 value:Target: Dihydroergotoxine mesylate also interacts with central dopaminergic, serotonergic and adrenergic (α1) receptors. Dihydroergotoxine mesylate displays antiproliferative activity in vitro (IC50 = 18 - 38 μM in prostate cancer cells) and exhibits cognition-enhancing, anticonvulsant and sedative activity in vivo.

REFERENCES

[1]. Tvrdeic A, et al. Dihydrogenated ergot compounds bind with high affinity to GABAA receptor-associated Cl- ionophore. Eur J Pharmacol. 1991 Sep 4;202(1):109-11.

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[3]. Tvrdeic A, et al. Effect of ergot alkaloids on 3H-flunitrazepam binding to mouse brain GABAA receptors. Coll Antropol. 2003;27 Suppl 1:175-82.

[4]. Abdul M, et al. Expression of gamma-aminobutyric acid receptor (subtype A) in prostate cancer. Acta Oncol. 2008;47(8):1546-50.

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