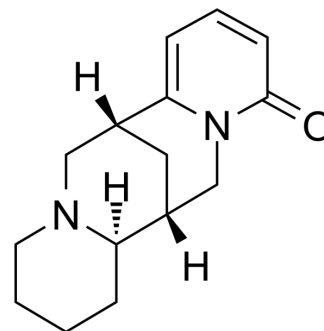


Anagryne

Cat. No.:	HY-121027
CAS No.:	486-89-5
Molecular Formula:	C ₁₅ H ₂₀ N ₂ O
Molecular Weight:	244.33
Target:	mAChR; nAChR
Pathway:	GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (102.32 mM; Need ultrasonic)					
	H ₂ O : 25 mg/mL (102.32 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	4.0928 mL	20.4641 mL	40.9283 mL
			5 mM	0.8186 mL	4.0928 mL	8.1857 mL
10 mM			0.4093 mL	2.0464 mL	4.0928 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 mg/mL (8.19 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2 mg/mL (8.19 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% saline Solubility: ≥ 2 mg/mL (8.19 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Anagryne ((-)-Anagryne) is a quinolizidine alkaloid that has been found in <i>Lupinus albus</i> . Anagryne binds to muscarinic and nicotinic acetylcholine receptors with IC ₅₀ values of 132 and 2096 μM respectively. Anagryne is a potent and effective desensitizer of nAChR, and Anagryne can directly, without metabolism, desensitize nAChR ^{[1][2][3]} .
In Vitro	Anagryne acts as a partial agonist in both cell lines with EC ₅₀ values of 4.2 and 231 μM in SH-SY5Y and TE-671 cells, respectively. Anagryne is a desensitizer of nAChR with DC ₅₀ values of 6.9 and 139 μM in SH-SY5Y and TE-671 cells, respectively ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Green BT, et al. Anagryne desensitization of peripheral nicotinic acetylcholine receptors. A potential biomarker of quinolizidine alkaloid teratogenesis in cattle. *Res Vet Sci.* 2017 Dec;115:195-200.
- [2]. Schmeller T, et al. Binding of quinolizidine alkaloids to nicotinic and muscarinic acetylcholine receptors. *J Nat Prod.* 1994 Sep;57(9):1316-9.
- [3]. Matsuda, K., et al. Nematicidal activities of (-)-N-methylcytisine and (-)-anagryne from *Sophora flavescens* against pine wood nematodes. *Agr. Biol. Chem.* 53(8), 2287-2288 (1989).
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Caution: Product has not been fully validated for medical applications. For research use only.

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