Lappaconitine hydrobromide

Cat. No.: HY-N0118

CAS No.: 97792-45-5

Molecular Formula: $C_{32}H_{45}BrN_2O_8$

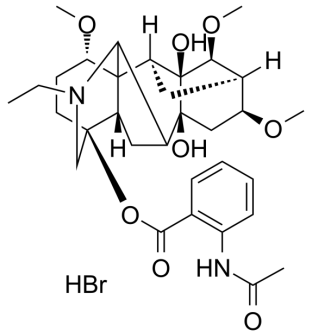
Molecular Weight: 665.61

Target: Others

Pathway: Others

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 : 50 mg/mL (75.12 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5024 mL	7.5119 mL	15.0238 mL
	5 mM	0.3005 mL	1.5024 mL	3.0048 mL
	10 mM	0.1502 mL	0.7512 mL	1.5024 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: ≥ 2.5 mg/mL (3.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.76 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.76 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lappaconitine hydrobromide, a diterpene alkaloid, is a drug for the treatment of cardiac arrhythmias.IC50 value:Target: A natural product for anti-cardiac arrhythmiasIn vitro: Lappaconitine hydrobromide was found to exert an inhibitory effect on inward tetrodotoxin-sensitive sodium currents without changing their voltage dependence [1]. In vivo: The effect of Lappaconitine hydrobromide on aconitine--induced arrhythmias is due to modulation of genes encoding Na(+)-, K(+)-, Ca(2+)-channels, conducting ionic currents (I(Na), I(to), I(Ks), I(K1), I(CaT)), which are involved in the formation of different phases of the action potential [2]. Lappaconitine hydrobromide was found to be beneficial both in ventricular and supraventricular premature beats. Oral allapinine usually showed its effect 40-60 minutes following its administration, its maximum action being 4-5 hours later, its duration was some 8 hours. The optimal dose of the drug amounted to 75 mg/day [3].

REFERENCES

[1]. A. E. Valeev, et al. Effects of allapinine on sodium currents in neurons isolated from the rat trigeminal ganglion and cardiomyocytes. Neurophysiology, 1990, 22 (2): 157-162.

[2]. Vakhitova IuV, et al. To the mechanisms of antiarrhythmic action of Allapinine. Bioorg Khim, 2013, 39 (1):105-16

[3]. Abdalla A., et al. Allapinine pharmacodynamics and potential adverse effects. Kardiologiya. 29(7): 29-32

Caution: Product has not been fully validated for medical applications. For research use only.

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