(-)-Bicuculline methobromide

Cat. No.: HY-100783

CAS No.: 73604-30-5

Molecular Formula: $C_{21}H_{20}BrNO_6$

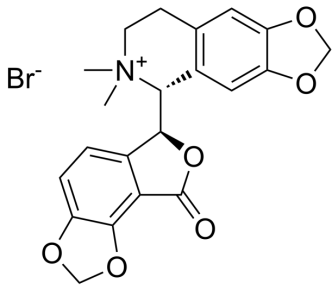
Molecular Weight: 462.29

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 : 50 mg/mL (108.16 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1631 mL	10.8157 mL	21.6314 mL
	5 mM	0.4326 mL	2.1631 mL	4.3263 mL
	10 mM	0.2163 mL	1.0816 mL	2.1631 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 (5.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(-)-Bicuculline methobromide (l-Bicuculline methobromide) is a potent $GABA_A$ receptor antagonist. (-)-Bicuculline methobromide blocks afterhyperpolarizations (AHPs) mediated by Ca^{2+}-activated K^+ channels in various types of neurons[1].

IC_{50} & Target

$GABA_A$[1]

In Vivo

(-)-Bicuculline methobromide (0.6 nmol/rat) attenuates the antiallodynic effect of Neurotropin[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Rat L5-SNL model[2]
Dosage:	0.6 nmol/rat
Administration:	Intrathecal injection, 5 minutes before administration of Neurotropin (100 NU/kg, i.v.)
Result:	Attenuated the antiallodynic effect of Neurotropin.

REFERENCES

[1]. Seutin V, et al. Recent advances in the pharmacology of quaternary salts of bicuculline. Trends Pharmacol Sci. 1999 Jul;20(7):268-70.

[2]. Okazaki R, et al. The antiallodynic effect of Neurotropin is mediated via activation of descending pain inhibitory systems in rats with spinal nerve ligation. Anesth Analg. 2008 Sep;107(3):1064-9.

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