Isocorynoxeine

Cat. No.: HY-N0775

CAS No.: 51014-29-0

Molecular Formula: $C_{22}H_{26}N_2O_4$

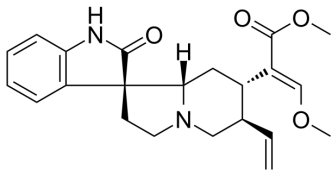
Molecular Weight: 382.45

Target: 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (65.37 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6147 mL	13.0736 mL	26.1472 mL
	5 mM	0.5229 mL	2.6147 mL	5.2294 mL
	10 mM	0.2615 mL	1.3074 mL	2.6147 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 (6.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isocorynoxeine, an isorhynchophylline-related alkaloid, exhibits a dose-dependent inhibition of 5-HT_{2A} receptor-mediated current response with an IC_{50} of 72.4 μM.

IC_{50} & Target

5-HT_{2A} Receptor
72.4 μM (IC_{50})

In Vitro

Isocorynoxeine inhibits 5-HT_{2A} receptor-mediated 5-HT currents. Isocorynoxeine prefer to interact with 5-HT_{2A} receptors rather than with 5-HT_{2C} receptors in the brain.Isocorynoxeine exhibits less potent inhibitory activity (with IC_{50} values of > 100 μM) against the 5-HT_{2C} receptor-mediated response than the 5-HT_{2A} receptor-mediated response in oocytes. Isocorynoxeine dose-dependently and competitively inhibits 5-HT-evoked currents in Xenopus oocytes expressing 5-HT_{2A}

	receptors, but has less of a suppressive effect on those in oocytes expressing 5-HT_{2C} receptors[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The effects of Rhynchophylline, Corynoxeine, and Isocorynoxeine, isorhynchophylline-related alkaloids present are tested in Uncaria species, on 5-MeO-DMT-induced head-twitch behaviour in reserpinized mice. Neither Rhynchophylline [H=1.369, P=0.504] nor Corynoxeine [H=0.242, P=0.886] affects the behaviour, while Isocorynoxeine significantly attenuates it at 30 mg/kg (i.p.) [H=7.582, P<0.01][1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice[1] Male ICR mice are pretreated with Reserpine (5 mg/kg, i.p.) 3 h before the start of the experiments. Rhynchophylline (RHY), Corynoxeine (COX), Isocorynoxeine (ICOX, 10 and 30 mg/kg) or vehicle is injected i.p. 30 min before 5-MeO-DMT[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Matsumoto K, et al. Suppressive effects of isorhynchophylline on 5-HT2A receptor function in the brain: behavioural and electrophysiological studies. Eur J Pharmacol. 2005 Jul 11;517(3):191-9.

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