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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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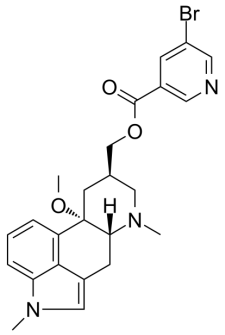
Nicergoline

Cat. No.:	HY-B0702
CAS No.:	27848-84-6
Molecular Formula:	$C_{24}H_{26}BrN_3O_3$
Molecular Weight:	484.39
Target:	Adrenergic 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 : 100 mg/mL (206.45 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0645 mL	10.3223 mL	20.6445 mL
	5 mM	0.4129 mL	2.0645 mL	4.1289 mL
	10 mM	0.2064 mL	1.0322 mL	2.0645 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 (5.16 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nicergoline, an ergoline derivative ester of bromonicotinic acid, is a potent, selective and orally active antagonist of α_{1A}-adrenoceptor. Nicergoline has vasodilator effects. Nicergoline also has ameliorative effects on cognitive function in mouse models of Alzheimer's disease[1][2].

IC_{50} & Target

α1A-adrenoceptor[1]

In Vitro

Nicergoline (0.3-30 μM; 24 h) attenuates activated microglia- and astrocytes-induced neuronal cell death[3].
Nicergoline (0.3-30 μM; 48 h) suppresses the production of proinflammatory cytokines and superoxide anion by activated microglia[3].

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

In Vivo

Nicergoline (10 mg/kg; i.v. once daily for 60 d) improves impaired neurogenesis and cognitive competence in mice with Alzheimer's disease[2].

Nicergoline (10 mg/kg; i.v. once daily for 60 d) inhibits apoptosis, inflammation and oxidative stress in hippocampal cells, and regulates the activity of hippocampal cells through the PI3K/AKT signaling pathway in mice[2].

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

Animal Model:	3×Tg-AD mice (male, 28-35 g, 6 weeks) with the Alzheimer's disease[2]
Dosage:	10 mg/kg
Administration:	I.v. once daily for 60 days
Result:	Improved neurogenesis and cognitive competence. Decreased the degree of dementia. Downregulated pathogenic Aβ-42 and -40 peptides and APP in the hippocampi. Increased Levels of the neuroprotective forkhead box protein P2 (Foxp2), Src homology 2-containing inositol phosphatase (SxIP) and end-binding proteins (EB) in the hippocampi. Exhibited marked differences in the dispersion of the pyramidal cell layer between the nicergoline-treated and control groups.

REFERENCES

[1]. Alvarez-Guerra, M., N. Bertholom, and R.P. Garay, Selective blockade by nicergoline of vascular responses elicited by stimulation of alpha 1A-adrenoceptor subtype in the rat. Fundam Clin Pharmacol, 1999. 13(1): p. 50-8.

[2]. Zang G, et, al. Ameliorative effect of nicergoline on cognitive function through the PI3K/AKT signaling pathway in mouse models of Alzheimer's disease. Mol Med Rep. 2018 May;17(5):7293-7300.

[3]. Mizuno T, et, al. Protective effects of nicergoline against neuronal cell death induced by activated microglia and astrocytes. Brain Res. 2005 Dec 20;1066(1-2):78-85.

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