



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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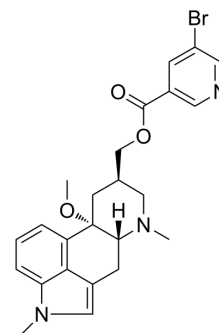
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## Nicergoline

<b>Cat. No.:</b>	HY-B0702		
<b>CAS No.:</b>	27848-84-6		
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>26</sub> BrN <sub>3</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	484.39		
<b>Target:</b>	Adrenergic Receptor		
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (206.45 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	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.					
<b>In Vivo</b>	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

<b>Description</b>	Nicergoline, an ergoline derivative ester of bromonicotinic acid, is a potent, selective and orally active antagonist of $\alpha_{1A}$ -adrenoceptor. Nicergoline has vasodilator effects. Nicergoline also has ameliorative effects on cognitive function in mouse models of Alzheimer's disease <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	$\alpha$ adrenergic receptor
<b>In Vitro</b>	Nicergoline (0.3-30 $\mu$ M; 24 h) attenuates activated microglia- and astrocytes-induced neuronal cell death <sup>[3]</sup> . Nicergoline (0.3-30 $\mu$ M; 48 h) suppresses the production of proinflammatory cytokines and superoxide anion by activated microglia <sup>[3]</sup> . 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<sup>[2]</sup>.  
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<sup>[2]</sup>.  
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 <sup>[2]</sup>
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 A $\beta$ -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.

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

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