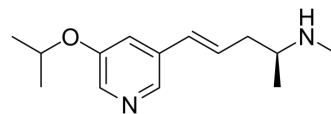


Ispronicline

Cat. No.:	HY-10063	
CAS No.:	252870-53-4	
Molecular Formula:	C ₁₄ H ₂₂ N ₂ O	
Molecular Weight:	234.34	
Target:	nAChR	
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling	
Storage:	Pure form	-20°C 3 years
		4°C 2 years
	In solvent	-80°C 6 months
		-20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (426.73 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
Preparing Stock Solutions	1 mM	4.2673 mL	21.3365 mL	42.6730 mL
	5 mM	0.8535 mL	4.2673 mL	8.5346 mL
	10 mM	0.4267 mL	2.1337 mL	4.2673 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 (10.67 mM); Clear solution			
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (10.67 mM); Clear solution			
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (10.67 mM); Clear solution			

BIOLOGICAL ACTIVITY

Description	Ispronicline (TC-1734), an orally active, brain-selective α4β2 nicotine acetylcholine receptor (nAChR) partial agonist, has shown memory-enhancing properties in rodents and a good tolerability profile. Ispronicline binds to the α4β2 nAChR with high affinity (K _i =11 nM) and is highly selective to other nAChRs such as α7 nAChR and α3β4 nAChR ^{[1][2]} .
In Vivo	Ispronicline (10-20 mg/kg; s.c.) induces c-Fos expression in selective regions of the rat forebrain ^[1] . Ispronicline pharmacokinetics (half-life of 2 h in rats) contrasts with the long-lasting improvement of working memory (18 h to 2 d) ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats weighting 180-200 g ^[1]
Dosage:	10 and 30 mg/kg
Administration:	s.c.
Result:	Induced c-Fos in medial paraventricular nucleus of hypothalamus. Treatment with 30 mg/kg ispronicline, but not 10 mg/kg, increased the number of c-Fos immunoreactive cells significantly as compared to controls within the medial parvocellular part of paraventricular nucleus (PVN).

REFERENCES

[1]. Julie Jacobsen, et al. The $\alpha 4\beta 2$ nicotine acetylcholine receptor agonist ispronicline induces c-Fos expression in selective regions of the rat forebrain. *Neurosci Lett.* 2012 Apr 25;515(1):7-11.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA