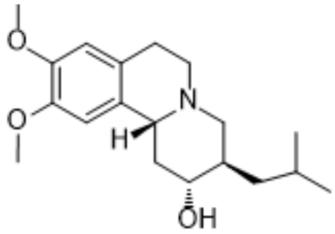
NBI-98782

Cat. No.:	HY-15793
CAS No.:	85081-18-1
Molecular Formula:	$C_{19}H_{29}NO_3$
Molecular Weight:	319.44
Target:	Monoamine Transporter
Pathway:	Membrane Transporter/Ion Channel
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 : 33.33 mg/mL (104.34 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1305 mL	15.6524 mL	31.3048 mL
	5 mM	0.6261 mL	3.1305 mL	6.2610 mL
	10 mM	0.3130 mL	1.5652 mL	3.1305 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 (7.83 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.83 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NBI-98782 is a high affinity and selectivity vesicular monoamine transporter 2 (VMAT2) inhibitor with a K_i of 3 nM. NBI-98782 has antipsychotic activity[1].

In Vivo

NBI-98782 (10 mg/kg, p.o., daily for 7 days) decreases basal and APDs-induced monoamine efflux in both mPFC and dSTR in male C57BL/6J mice[1].

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

Animal Model:	Male C57BL/6J mice[1]
Dosage:	10 mg/kg
Administration:	p.o., daily for 7 days
Result:	Decreased the efflux of DA, 5-HT and NE in mPFC, dSTR, HIP and NAC. Increased the efflux of DOPAC, HVA, and 5-HIAA in mPFC, dSTR, HIP and NAC. Decreased in cortical DA and DOPAC as well as striatal DA, 5-HT and NE efflux combinated with haloperidol (HY-14538, 0.5 mg/kg, i.p.). Decreased cortical Glu and striatal ACh, DA and GABA efflux combinated with Clozapine (HY-14539, 10 mg/kg, i.p.). Reduced PCP-induced increase in LMA between various time points. Suppressed clozapine-, olanzapine- and risperidone-induced DA efflux in both mPFC and dSTR, and ACh efflux in mPFC.

CUSTOMER VALIDATION

- Crit Rev Anal Chem. 2021 Mar 10;1-15.

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REFERENCES

[1]. Huang M, et al. Effects of NBI-98782, a selective vesicular monoamine transporter 2 (VMAT2) inhibitor, on neurotransmitter efflux and phencyclidine-induced locomotor activity: Relevance to tardive dyskinesia and antipsychotic action. Pharmacol Biochem Behav. 2020 Mar;190:172872.

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