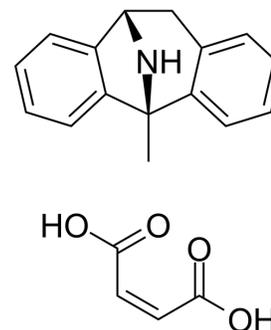


(-)-Dizocilpine maleate

Cat. No.:	HY-15084A
CAS No.:	121917-57-5
Molecular Formula:	C ₂₀ H ₁₉ NO ₄
Molecular Weight:	337.37
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (296.41 mM; Need ultrasonic)
 Ethanol : 25 mg/mL (74.10 mM; Need ultrasonic)
 H₂O : 8.33 mg/mL (24.69 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.9641 mL	14.8205 mL	29.6410 mL
	5 mM	0.5928 mL	2.9641 mL	5.9282 mL
	10 mM	0.2964 mL	1.4821 mL	2.9641 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 4.55 mg/mL (13.49 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (7.41 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.41 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.41 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	(-)-Dizocilpine maleate ((-)-MK-801 maleate) is a less active (-)-enantiomer of Dizocilpine. (-)-Dizocilpine maleate is a selective and non-competitive N-methyl-D-aspartate (NMDA) receptor antagonist with a K_i of 211.7 nM. (-)-Dizocilpine maleate has antidepressant effects ^{[1][2]} .								
IC₅₀ & Target	Ki: 211.7 nM (N-methyl-D-aspartate (NMDA) receptor) ^[1]								
In Vitro	(-)-Dizocilpine maleate ((-)-MK-801 maleate) significantly inhibited the uptake of all three (norepinephrine, dopamine and serotonin) monoamine transporters in a dose-dependent manner in HEK cells. The K_i values of (-)-Dizocilpine on the norepinephrine, dopamine and serotonin transporters are 3.7 μ M, 40 μ M and 47 μ M, respectively ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	(-)-Dizocilpine maleate (0.1 mg/kg; intraperitoneal injection; male adult C57BL/6 mice) treatment induces rapid antidepressant effects in the social defeat stress model ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. <table><tr><td>Animal Model:</td><td>Male adult C57BL/6 mice (20-25g; aged 8 weeks) with social defeat stress model^[1]</td></tr><tr><td>Dosage:</td><td>0.1 mg/kg</td></tr><tr><td>Administration:</td><td>Intraperitoneal injection</td></tr><tr><td>Result:</td><td>Induced rapid antidepressant effects in the social defeat stress model.</td></tr></table>	Animal Model:	Male adult C57BL/6 mice (20-25g; aged 8 weeks) with social defeat stress model ^[1]	Dosage:	0.1 mg/kg	Administration:	Intraperitoneal injection	Result:	Induced rapid antidepressant effects in the social defeat stress model.
Animal Model:	Male adult C57BL/6 mice (20-25g; aged 8 weeks) with social defeat stress model ^[1]								
Dosage:	0.1 mg/kg								
Administration:	Intraperitoneal injection								
Result:	Induced rapid antidepressant effects in the social defeat stress model.								

REFERENCES

- [1]. Yang B, et al. Antidepressant Effects of (+)-MK-801 and (-)-MK-801 in the Social Defeat Stress Model. *Int J Neuropsychopharmacol*. 2016 Dec 30;19(12).
- [2]. Nishimura M, et al. MK-801 blocks monoamine transporters expressed in HEK cells. *FEBS Lett*. 1998 Feb 27;423(3):376-80.

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

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