Lanicemine dihydrochloride

Cat. No.: HY-108235A

CAS No.: 153322-06-6

Molecular Formula: $C_{13}H_{16}Cl_2N_2$

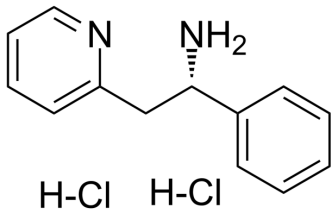
Molecular Weight: 271.19

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 : 240 mg/mL (884.99 mM; Need ultrasonic)

H_2O : ≥ 100 mg/mL (368.75 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6875 mL	18.4373 mL	36.8745 mL
5 mM	0.7375 mL	3.6875 mL	7.3749 mL
10 mM	0.3687 mL	1.8437 mL	3.6875 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (368.75 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 6 mg/mL (22.12 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 6 mg/mL (22.12 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 6 mg/mL (22.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lanicemine (AZD6765) dihydrochloride is a low-trapping NMDA channel blocker (K_i of 0.56-2.1 μM for NMDA receptor; IC_{50}s of 4-7 μM and 6.4 μM in CHO and Xenopus oocyte cells, respectively). Antidepressant effects[1].

IC_{50} & Target

NMDA receptor[1]

In Vivo

Lanicemine produces sustained antidepressant efficacy with minimal psychotomimetic adverse effects[1].Lanicemine (3, 10 or 30 mg/kg; intraperitoneal) not only engages brain circuits involved in the generation of gamma- electroencephalography (EEG), but also influences these networks independent of the broader systems-level disruptions typical of ketamine[1].

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

Animal Model:	Male Sprague-Dawley rats[1]
Dosage:	3, 10 or 30 mg/kg
Administration:	Intraperitoneal
Result:	Produced pronounced dose-dependent elevations in spontaneous gamma-band EEG, but only gamma changes for Ketamine were tightly coupled to increases in locomotor activity.

REFERENCES

[1]. Sanacora G, et al. Lanicemine: a low-trapping NMDA channel blocker produces sustained antidepressant efficacywith minimal psychotomimetic adverse effects. Mol Psychiatry. 2014 Sep;19(9):978-85.

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