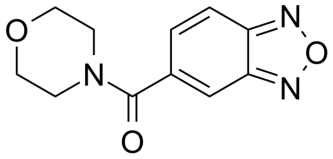
CX 717

Cat. No.:	HY-139897
CAS No.:	867276-98-0
Molecular Formula:	$C_{11}H_{11}N_3O_3$
Molecular Weight:	233.22
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (214.39 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.2878 mL	21.4390 mL	42.8780 mL
	5 mM	0.8576 mL	4.2878 mL	8.5756 mL
	10 mM	0.4288 mL	2.1439 mL	4.2878 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 (10.72 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CX 717 is a positive allosteric modulator of AMPA receptor. Antidepressant-like effect. CX 717 can be used for the research of adult attention deficit hyperactivity disorder (ADHD)[1][2].

In Vivo

CX 717 (CX717; 20 mg/kg) has a rapid (30 min) but short-lasting (up to 24 h) antidepressantlike effect in the forced swim test.CX 717 also produces a rapid (up to 1 h) increase of brain-derived neurotrophic factor (BDNF) and a more sustained (up to 6 h) increase of p11[2].

Intra-cortical infusion of CX 717 (85 mM) increases the efflux of noradrenaline, dopamine, and serotonin, but not glutamate [2].

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

Animal Model:	Male Sprague-Dawley rats weighing 280-350 g[2]
Dosage:	20 mg/kg (administered at 1 mL/kg)
Administration:	Intraperitoneal (i.p.) injection
Result:	Evoked antidepressant-like effects (20 mg/kg, i.p.) did not alter the extracellular concentrations of noradrenaline (NA), dopamine (DA), serotonin (5-HT) and glutamate in the medial prefrontal cortex (mPFC).

REFERENCES

[1]. Linda J Porrino, et al. Facilitation of task performance and removal of the effects of sleep deprivation by an ampakine (CX717) in nonhuman primates. PLoS Biol. 2005 Sep;3(9):e299.

[2]. Marta Gordillo-Salas, et al. Antidepressant-Like Effects of CX717, a Positive Allosteric Modulator of AMPA Receptors. Mol Neurobiol. 2020 Aug;57(8):3498-3507.

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