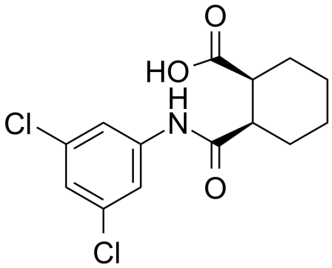
VU0155041

Cat. No.:	HY-14417
CAS No.:	1093757-42-6
Molecular Formula:	$C_{14}H_{15}Cl_2NO_3$
Molecular Weight:	316.18
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Powder -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 (316.28 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1628 mL	15.8138 mL	31.6276 mL
	5 mM	0.6326 mL	3.1628 mL	6.3255 mL
	10 mM	0.3163 mL	1.5814 mL	3.1628 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 (7.91 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.91 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.91 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

VU0155041 is a potent, selective positive allosteric modulator (PAM) of mGluR4, with EC_{50}s of 798 nM and 693 nM for human and rat mGluR4, respectively. VU0155041 has potential for the research of Parkinson's disease (PD)[1].

IC_{50} & Target

Human $mGlu_4$	Rat $mGlu_4$
798 nM (EC50)	693 nM (EC50)

In Vitro

VU0155041 (10 μM) does not affect NMDA receptor currents in striatal medium spiny neurons[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	VU0155041 (31 nmol, 93 nmol; i.c.v.) reverses catalepsy induced by the dopamine D2 receptor antagonist Haloperidol (1.5 mg/kg, i.p.) in rats[1]. VU0155041 (93 nnmol, 316 nmol; i.c.v.) reverses Reserpine (HY-N0480)-induced akinesia in rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Third ventricle cannulated (TVC) Male Sprague-Dawley rats (225-255 g)[1]
Dosage:	31 nmol, 93 nmol (10 μL)
Administration:	Intracerebroventrical injection, after the Haloperidol (1.5 mg/kg) treatment 2 hours
Result:	Decreased the cataleptic effects of Haloperidol, and the effects still presented 30 min after infusion.

REFERENCES

[1]. Niswender CM, et, al. Discovery, characterization, and antiparkinsonian effect of novel positive allosteric modulators of metabotropic glutamate receptor 4. Mol Pharmacol. 2008 Nov; 74(5): 1345-58.

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