PHCCC

Cat. No.: HY-100409

CAS No.: 179068-02-1

Molecular Formula: $C_{17}H_{14}N_2O_3$

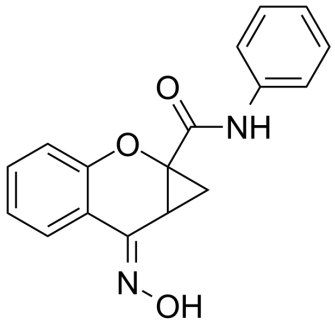
Molecular Weight: 294.3

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 : 12.5 mg/mL (42.47 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.3979 mL	16.9895 mL	33.9789 mL
5 mM	0.6796 mL	3.3979 mL	6.7958 mL
10 mM	0.3398 mL	1.6989 mL	3.3979 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: ≥ 1.25 mg/mL (4.25 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (4.25 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (4.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PHCCC is a Group I mGluR antagonist with an IC_{50} of 3 μM. PHCCC is a selective positive modulator of mGlu4 receptor. Antiparkinsonian effect[1][2].

IC_{50} & Target

Group I mGluR receptors
3 μM (IC_{50})

In Vitro

PHCCC potentiated the effect of L-(+)-2-amino-4-phosphonobutyric acid (L-AP4) in inhibiting transmission at the

	striatopallidal synapse[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	PHCCC (75 nmol/2.5 μl; intracerebroventricular) produces an antiparkinsonian effect in a dopamine depletion akinesia model[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Marino MJ et al. Allosteric modulation of group III metabotropic glutamate receptor 4: a potential approach to Parkinson's disease treatment. Proc Natl Acad Sci U S A. 2003 Nov 11;100(23):13668-73.

[2]. Récasens M, et al. Metabotropic glutamate receptors as drug targets. Curr Drug Targets. 2007;8(5):651-681.

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