Perzinfotel

Cat. No.: HY-19168

CAS No.: 144912-63-0

Molecular Formula: $C_9H_{13}N_2O_5P$

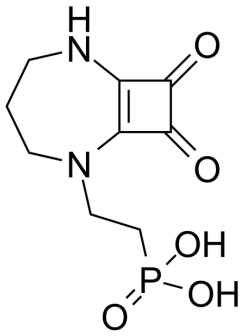
Molecular Weight: 260.18

Target: iGluR

Pathway: Membrane Transporter/Ion Channel; 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 : 20.83 mg/mL (80.06 mM; Need ultrasonic)

H_2O : 5.88 mg/mL (22.60 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.8435 mL	19.2175 mL	38.4349 mL
5 mM	0.7687 mL	3.8435 mL	7.6870 mL
10 mM	0.3843 mL	1.9217 mL	3.8435 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 5 mg/mL (19.22 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (7.99 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.99 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (7.99 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Perzinfotel (EAA-090) is a potent, selective, and competitive NMDA receptor antagonist with neuroprotective effects. Perzinfotel (EAA-090) shows high affinity (IC_{50}=30 nM) for the glutamate site[1][2].

IC_{50} & Target

NMDA receptor[1]

In Vitro	Perzinfotel blocks NMDA-induced currents with an IC_{50} of 0.48 μM and glutamate-induced neurotoxicity with an IC_{50} of 1.6 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Brandt MR, et al. Effects of the N-methyl-D-aspartate receptor antagonist perzinfotel [EAA-090; [2-(8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]phosphonic acid] on chemically induced thermal hypersensitivity. J Pharmacol Exp Ther. 2005 Jun;31

[2]. Kinney WA, et al. Design and synthesis of [2-(8,9-dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]phosphonic acid(EAA-090), a potent N-methyl-D-aspartate antagonist, via the use of 3-cyclobutene-1,2-dione as an achiral alpha-amino acid bioisostere. J

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