(S)-3,5-DHPG

Cat. No.: HY-12598

CAS No.: 162870-29-3

Molecular Formula: $C_8H_9NO_4$

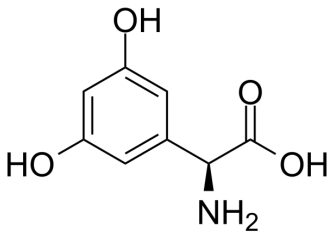
Molecular Weight: 183.16

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 (545.97 mM; Need ultrasonic)

H_2O : 25 mg/mL (136.49 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.4597 mL	27.2985 mL	54.5971 mL
5 mM	1.0919 mL	5.4597 mL	10.9194 mL
10 mM	0.5460 mL	2.7299 mL	5.4597 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 (13.65 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (13.65 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (13.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(S)-3,5-DHPG is a weak, but selective group I metabotropic glutamate receptors (mGluRs) agonist with K_i values of 0.9 μM and 3.9 μM for mGluR1a and mGluR5a, respectively[1]. (S)-3,5-DHPG exhibits anxiolytic activity in rats subjected to hypoxia[2] .

IC_{50} & Target

mGluR1a	mGluR5a
0.9 μM (Ki)	3.9 μM (Ki)

In Vitro	(S)-3,5-DHPG specifically displaces high-affinity quisqualate sites, the putative group I mGlu binding sites[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	(S)-3,5-DHPG (icv; 0.01, 0.1 and 1.0 nmol/5 μL) improves consolidation and retrieval and exhibits anxiolytic activity in dose-dependent manner in male Wistar rats weighing 160-180 g subjected to hypoxia[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. V Mutel, et al. Characterization of [(3)H]Quisqualate Binding to Recombinant Rat Metabotropic Glutamate 1a and 5a Receptors and to Rat and Human Brain Sections. J Neurochem. 2000 Dec;75(6):2590-601.

[2]. Agnieszka Nadlewska, et al. Effect of (S)-3,5-DHPG on Learning, Exploratory Activity and Anxiety in Rats With Experimental Hypoxia. Pol J Pharmacol. Jan-Feb 2002;54(1):11-8.

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