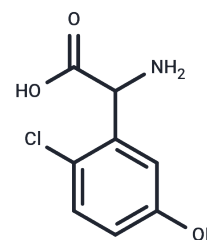


CHPG

Chemical Properties

CAS No. :	170846-74-9
Formula:	C ₈ H ₈ ClNO ₃
Molecular Weight:	201.61
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	CHPG is a selective mGluR5 agonist that reduces LDH release and neuronal apoptosis, activates the ERK and Akt pathways, and protects against traumatic brain injury. It also increases the number of differentiated human OPCs and alleviates LPS-induced inflammation.
Targets(IC50)	ERK,NF-κB,Akt,GluR,Dehydrogenase
In vitro	<p>Methods: The study used BV2 microglial cells to investigate the protective effects of CHPG against SO₂ derivative-induced damage. Cells were treated with CHPG at concentrations of 10-500 μM for 24 hours to assess cell viability and LDH release. In another set of experiments, cells were treated with 0.5 mM CHPG for 30 minutes to evaluate its effects on SO₂-induced apoptosis and the expression levels of TSG-6 at both mRNA and protein levels.</p> <p>Results: CHPG significantly enhanced the viability of BV2 cells, reduced LDH release, and alleviated cellular damage caused by SO₂ derivatives. Additionally, CHPG inhibited SO₂-induced apoptosis and upregulated the expression of TSG-6 at both mRNA and protein levels, indicating its potential neuroprotective effects. [1]</p>
In vivo	<p>Methods: The study used adult male Sprague-Dawley rats weighing 280-320 g, which were injected with 250 nM CHPG daily for 7 consecutive days to evaluate its effect on cerebral lesion volume.</p> <p>Results: CHPG treatment significantly reduced cerebral lesion volume in rats, indicating potential neuroprotective effects. [2]</p>

Solubility Information

Solubility	DMSO: 20 mg/mL (99.2 mM),when pH is adjusted to 2 with 1M HCL. 1M NaOH: 20 mg/mL (99.2 mM),when pH is adjusted to 11 with NaOH. Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.9601 mL	24.8004 mL	49.6007 mL
5 mM	0.992 mL	4.9601 mL	9.9201 mL
10 mM	0.496 mL	2.480 mL	4.9601 mL
50 mM	0.0992 mL	0.496 mL	0.992 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Qiu JL, et al. The selective mGluR5 agonist CHPG attenuates SO₂-induced oxidative stress and inflammation through TSG-6/NF- κ B pathway in BV2 microglial cells. *Neurochem Int.* 2015 Jun-Jul;85-86:46-52.

Chen T, et al. The selective mGluR5 agonist CHPG protects against traumatic brain injury in vitro and in vivo via ERK and Akt pathway. *Int J Mol Med.* 2012 Apr;29(4):630-6.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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