CHPG

Cat. No.: HY-101364

CAS No.: 170846-74-9

Molecular Formula: $C_8H_8ClNO_3$

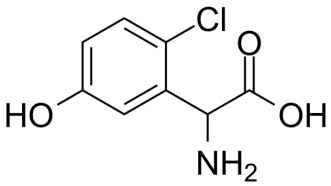
Molecular Weight: 201.61

Target: mGluR; NF-κB; ERK; Akt

Pathway: GPCR/G Protein; Neuronal Signaling; NF-κB; MAPK/ERK Pathway; Stem Cell/Wnt; PI3K/Akt/mTOR

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

1M NaOH : 25 mg/mL (124.00 mM; ultrasonic and adjust pH to 11 with NaOH)
DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.9601 mL	24.8004 mL	49.6007 mL
5 mM	0.9920 mL	4.9601 mL	9.9201 mL
10 mM	0.4960 mL	2.4800 mL	4.9601 mL

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

BIOLOGICAL ACTIVITY

Description

CHPG is a selective mGluR5 agonist, and attenuates SO_2-induced oxidative stress and inflammation through TSG-6/NF-κB pathway in BV2 microglial cells[1]. CHPG protects against traumatic brain injury (TBI) in vitro and in vivo by activation of the ERK and Akt signaling pathways[2].

IC_{50} & Target			
	$mGlu_5$	NF-κB	ERK

In Vitro

CHPG (10-500 μM; 24 hours) significantly increases the cell viability and decreases the LDH release after SO_2 derivatives treatment[1].
CHPG (0.5 mM; 30 mins) protects BV2 cells against SO_2-induced apoptosis[1].
CHPG (0.5 mM; 30 mins) treatment alone increases the expression of TSG-6 in both mRNA and protein levels[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	BV2 microglial cells
Concentration:	10, 50, 100 and 500 μM
Incubation Time:	24 hours
Result:	Increased the cell viability.

Apoptosis Analysis[1]

Cell Line:	BV2 microglial cells
Concentration:	0.5 mM
Incubation Time:	30 mins
Result:	Protected BV2 cells against SO_2-induced apoptosis.

Western Blot Analysis[1]

Cell Line:	BV2 microglial cells
Concentration:	0.5 mM
Incubation Time:	30 mins
Result:	Increased the expression of TSG-6 in both mRNA and protein levels.

In Vivo

CHPG (injection; 250 nM; for 7 days) reduces significantly cerebral lesion volume[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult Sprague-Dawley male rats weighing 280-320 g[2]
Dosage:	250 nM
Administration:	Injection; for 7 days
Result:	Reduced significantly cerebral lesion volume.

REFERENCES

[1]. Qiu JL, et al. The selective mGluR5 agonist CHPG attenuates SO_2-induced oxidative stress and inflammation through TSG-6/NF-κB pathway in BV2 microglial cells. Neurochem Int. 2015 Jun-Jul;85-86:46-52.

[2]. 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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA