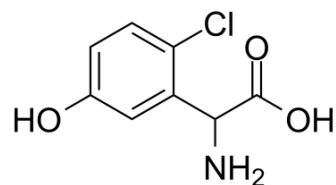


CHPG

Cat. No.:	HY-101364
CAS No.:	170846-74-9
Molecular Formula:	C ₈ H ₈ ClNO 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



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] .																			
IC₅₀ & Target	mGlu ₅	NF-κB	ERK	Akt																
In Vitro	<p>CHPG (10-500 μM; 24 hours) significantly increases the cell viability and decreases the LDH release after SO₂ derivatives treatment^[1].</p> <p>CHPG (0.5 mM; 30 mins) protects BV2 cells against SO₂-induced apoptosis^[1].</p> <p>CHPG (0.5 mM; 30 mins) treatment alone increases the expression of TSG-6 in both mRNA and protein levels^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BV2 microglial cells</td> </tr> <tr> <td>Concentration:</td> <td>10, 50, 100 and 500 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Increased the cell viability.</td> </tr> </table> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BV2 microglial cells</td> </tr> <tr> <td>Concentration:</td> <td>0.5 mM</td> </tr> <tr> <td>Incubation Time:</td> <td>30 mins</td> </tr> <tr> <td>Result:</td> <td>Protected BV2 cells against SO₂-induced apoptosis.</td> </tr> </table> <p>Western Blot Analysis^[1]</p>				Cell Line:	BV2 microglial cells	Concentration:	10, 50, 100 and 500 μM	Incubation Time:	24 hours	Result:	Increased the cell viability.	Cell Line:	BV2 microglial cells	Concentration:	0.5 mM	Incubation Time:	30 mins	Result:	Protected BV2 cells against SO ₂ -induced apoptosis.
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	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 SO₂-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.

Caution: Product has not been fully validated for medical applications. For research use only.

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