

## (S)-3,4-DCPG HCl

### Chemical Properties

CAS No. :

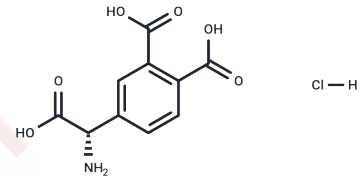
Formula: C<sub>10</sub>H<sub>10</sub>ClNO<sub>6</sub>

Molecular Weight: 275.64

Storage:

Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



### Biological Description

Description	(S)-3,4-DCPG HCl ((S)-3,4-Dicarboxyphenylglycine HCl) is a selective metabotropic glutamate receptor 8a (mGluR8a) agonist that has an effect on human mGluR8-expressing AV12-664 cells with an EC <sub>50</sub> of 31 nM.
Targets(IC <sub>50</sub> )	GluR
In vivo	(S)-3,4-DCPG (3-100 mg/kg, i.p.) made c-Fos as an indicator of neuronal activity in specific brain regions 2 hours after systemic administration. In wild-type mice, (S)-3,4-DCPG (100 mg/kg) significantly increased c-Fos expression in several stress-related brain regions: paraventricular nucleus of the hypothalamus, central nucleus of the amygdala, lateral parabrachial nucleus and locus coeruleus.[2]

### Solubility Information

Solubility	DMSO: 10 mg/mL (36.28 mM),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	3.6279 mL	18.1396 mL	36.2792 mL
5 mM	0.7256 mL	3.6279 mL	7.2558 mL
10 mM	0.3628 mL	1.814 mL	3.6279 mL
50 mM	0.0726 mL	0.3628 mL	0.7256 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

- Thomas NK, et al. (S)-3,4-DCPG, a potent and selective mGlu8a receptor agonist, activates metabotropic glutamate receptors on primary afferent terminals in the neonatal rat spinal cord. *Neuropharmacology*. 2001 ; 40 (3):311-318.
- Linden AM, et al. Systemic administration of the potent mGlu8 receptor agonist (S)-3,4-DCPG induces c-Fos in stress-related brain regions in wild-type, but not mGlu8 receptor knockout mice. *Neuropharmacology*. 2003 ; 45 (4):473-483.
- Jiang FL, et al. Anticonvulsive effect of a selective mGluR8 agonist (S)-3,4-dicarboxyphenylglycine (S-3,4-DCPG) in the mouse pilocarpine model of status epilepticus. *Epilepsia*. 2007 ; 48(4):783-792.
- Marabese I, et al. Effects of (S)-3,4-DCPG, an mGlu8 receptor agonist, on inflammatory and neuropathic pain in mice. *Neuropharmacology*. 2007 ; 52(2):253-262.
- Stachowicz K, et al. Lack of the antianxiety-like effect of (S)-3,4-DCPG, an mGlu8 receptor agonist, after central administration in rats. *Pharmacol Rep*. 2005 ; 57(6):856-860.
- Johnson KA, et al. The metabotropic glutamate receptor 8 agonist (S)-3,4-DCPG reverses motor deficits in prolonged but not acute models of Parkinson's disease. *Neuropharmacology*. 2013 ; 66:187-195.

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