Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com

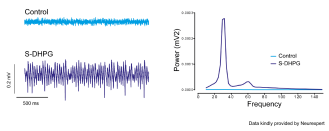
DATASHEET

(S)-3,5-DHPG

Product overview

Name	(S)-3,5-DHPG
Cat No	HB0045
Biological action	Agonist
Purity	>99%
Description	Selective group I mGlu receptor agonist. Induces LTD.

Images



Biological Data

Biological description

(S)-3,5-DHPG is a widely used selective group I mGlu receptor agonist (EC_{50} values are 2 and 6.6 µM at $mGlu_5$ and $mGlu_1$, 106 µM at $mGlu_3$ and >1000 µM at $mGlu_{2,4,7,8}$ receptors respectively).

(S)-3,5-DHPG is the active enantiomer of DHPG. The racemic (R,S)-DHPG is also available.

(S)-3,5-DHPG induces long term depression (LTD) (mGluR/DHPG-LTD). DHPG-LTD can temporarily be reversed by other mGluR antagonists such as (S)-MCPG.

The CaMKII inhibitor KN-62 has also been shown to facilitate DHPG-LTD and (S)-3,5-DHPG-induced LTD is thought to involve rapid protein synthesis which can be antagonized by the protein synthesis inhibitor anisomycin.

Application notes

(S)-3,5-DHPG is active *in vivo* and shows a variety of biological actions.
Figure 1: Gamma-frequency oscillations recorded in CA3 region of rat *in vitro* hippocampal slice preparation.

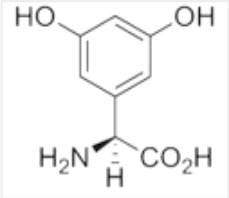
Increase in gamma frequency oscillatory activity (dark blue) following (S)-3,5-DHPG application. Under control conditions there is no gamma activity (light blue).

Data kindly provided by Neurexpert

Solubility & Handling

Storage instructions	-20°C (desiccate). Protect from light.
Solubility overview	Soluble in water (50mM)
Handling continued..	The compound is of high purity, however it is air sensitive and light promoted oxidation may cause slight discoloration of the compound. Product performance should not be affected, and this decolourisation can be ignored. It has been shown that this compound rapidly decomposes when dissolved in alkaline solution. We therefore recommend that you store the solid material at -20°C and protect from light. The compound should be stable for a least 6 months. When possible, you should make up solutions and use immediately. If storage of solutions is required, you should aliquot out the solution into tightly sealed vials and store at -20°C and store these for up to one month. Allow the product to equilibrate to RT for at least one hour before opening and using.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	(*S*)-3,5-Dihydroxyphenylglycine
Molecular Weight	183.16
Chemical structure	
Molecular Formula	$C_8H_9NO_4$
CAS Number	162870-29-3
PubChem identifier	443586
SMILES	C1=C(C=C(C=C1O)O)[C@@H](C(=O)O)N
Source	Synthetic
InChi	InChI=1S/C8H9NO4/c9-7(8(12)13)4-1-5(10)3-6(11)2-4/h1-3,7,10-11H,9H2,(H,12,13)/t7-/m0/s1
InChiKey	HOOWCUZPEFNHDT-ZETCQYMHSA-N
MDL number	MFCD11044457
Appearance	White solid

References

Behavioral and convulsant effects of the (S) enantiomer of the group I metabotropic glutamate receptor agonist 3,5-DHPG in mice.

Barton ME *et al* (2005) Neuropharmacology 48(6)
PubMedID 15829250

Face-washing behavior induced by the group I metabotropic glutamate receptor agonist (S)-3,5-DHPG in mice is mediated by mGlu1 receptor.

Hikichi H *et al* (2008) Eur J Pharmacol 586(1-3)
PubMedID 18378225

(S)-3,5-DHPG: a review.

Wiśniewski K *et al* (2002) CNS Drug Rev 8(1)
PubMedID 12070529