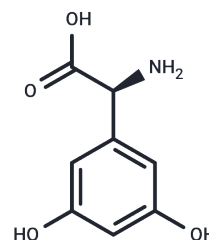


(S)-3,5-DHPG

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 162870-29-3 |
| Formula: | C ₈ H ₉ NO ₄ |
| Molecular Weight: | 183.16 |
| 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 | (S)-3,5-DHPG is a weak but selective agonist of group I metabotropic glutamate receptors with K_i values of 0.9 μ M for mGluR1a and 3.9 μ M for mGluR5a. (S)-3,5-DHPG demonstrates anxiolytic activity in hypoxia-exposed rats, supporting its application in neuropharmacological studies of glutamatergic signaling, stress responses, and anxiety-related behaviors. |
| Targets(IC50) | GluR |
| In vitro | In receptor binding studies, (S)-3,5-DHPG targeted Group I mGlu binding domains with affinity for rat mGluR1a ($K_i = 0.9 \mu$ M) and mGluR5a ($K_i = 3.9 \mu$ M). Selectivity assays confirmed it remained inactive at Group III receptors, showing an $EC_{50} > 100 \mu$ M for stimulating phosphatidylinositol accumulation in mGluR4-expressing cells [1]. |
| In vivo | In male Wistar rats undergoing experimental hypoxia, intracerebroventricular (icv) administration of (S)-3,5-DHPG at dosages of 0.01, 0.1, and 1.0 nmol influenced memory consolidation and retrieval. Under hypoxic conditions, the treatment was associated with anxiolytic activity and a modulation of stress responses related to oxygen deprivation [2]. |

Solubility Information

| | |
|------------|--|
| Solubility | DMSO: 80 mg/mL (436.78 mM), Sonication is recommended. H ₂ O: 20 mg/mL (109.19 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 5.4597 mL | 27.2985 mL | 54.5971 mL |
| 5 mM | 1.0919 mL | 5.4597 mL | 10.9194 mL |
| 10 mM | 0.546 mL | 2.7299 mL | 5.4597 mL |
| 50 mM | 0.1092 mL | 0.546 mL | 1.0919 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

V Mutel, et al. Characterization of [(3)H]Quisqualate Binding to Recombinant Rat Metabotropic Glutamate 1a and 5a Receptors and to Rat and Human Brain Sections. *J Neurochem.* 2000 Dec;75(6):2590-601.

Agnieszka Nadlewska, et al. Effect of (S)-3,5-DHPG on Learning, Exploratory Activity and Anxiety in Rats With Experimental Hypoxia. *Pol J Pharmacol.* Jan-Feb 2002;54(1):11-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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