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Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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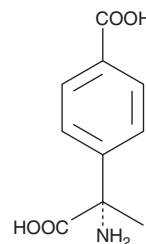
PRODUCT INFORMATION



(S)-MCPG

Item No. 21450

CAS Registry No.: 150145-89-4
Formal Name: (αS)-α-amino-4-carboxy-α-methyl-benzeneacetic acid
Synonyms: (S)-α-methyl-4-Carboxyphenylglycine, (+)-MCPG
MF: C₁₀H₁₁NO₄
FW: 209.2
Purity: ≥98%
UV/Vis.: λ_{max}: 232 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(S)-MCPG is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-MCPG in the solvent of choice, which should be purged with an inert gas. (S)-MCPG is soluble in DMSO.

Description

(S)-MCPG is an antagonist of metabotropic glutamate receptors (mGluRs) and the active component of (±)-MCPG, which is selective for Group I and Group II mGluRs.^{1,2} (S)-MCPG inhibits motoneuron depolarization induced by 1-amino-1,3-dicarboxycyclopentane (ACPD) in neonatal rat spinal cord *in vitro* and ACPD-induced intracellular calcium increases in CHO cells expressing mGluR1α (IC₅₀ = 120 μM).³ (S)-MCPG also has agonist activity at mGluR2.^{4,5} It induces long-term depression in the rat hippocampal dentate gyrus, an effect that can be blocked by the mGluR2 antagonist MCCG, and blocks long-term potentiation in the CA1 region.

References

1. Jane, D.E., Jones, P.L., Pook, P.C., *et al.* Stereospecific antagonism by (+)-α-methyl-4-carboxyphenylglycine (MCPG) of (1S,3R)-ACPD-induced effects in neonatal rat motoneurons and rat thalamic neurons. *Neuropharmacology* **32(7)**, 725-727 (1993).
2. Schoepp, D.D., Jane, D.E., and Monn, J.A. Pharmacological agents acting at subtypes of metabotropic glutamate receptors. *Neuropharmacology* **38(10)**, 1431-1476 (1999).
3. Seal, A.J., Irving, A.J., Henley, J.M., *et al.* Stereoselective antagonism of the metabotropic glutamate receptor mGluR1α by α-methyl-4-carboxyphenylglycine. *Biochem. Soc. Trans.* **22**, 138S (1994).
4. Huang, L., Rowan, M.J., and Anwyl, R. Induction of long-lasting depression by (+)-α-methyl-4-carboxyphenylglycine and other group II mGlu receptor ligands in the dentate gyrus of the hippocampus *in vitro*. *Eur. J. Pharmacol.* **366(2-3)**, 151-158 (1999).
5. Breakwell, N.A., Rowan, M.J., and Anwyl, R. (+)-MCPG blocks induction of LTP in CA1 of rat hippocampus via agonist action at an mGluR group II receptor. *J. Neurophysiol.* **79(3)**, 1270-1276 (1998).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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