

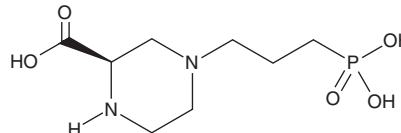
PRODUCT INFORMATION



(R)-CPP

Item No. 21569

CAS Registry No.: 126453-07-4
Formal Name: (2R)-4-(3-phosphonopropyl)-2-piperazinecarboxylic acid
MF: $C_8H_{17}N_2O_5P$
FW: 252.2
Purity: $\geq 95\%$
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years



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

Laboratory Procedures

(R)-CPP is supplied as a crystalline solid. A stock solution may be made by dissolving the (R)-CPP in water. The solubility of (R)-CPP in water is approximately 100 mM. We do not recommend storing the aqueous solution for more than one day.

Description

(R)-CPP is an NMDA receptor antagonist ($K_i = 0.14 \mu\text{M}$).¹ It binds to NMDA receptors containing GluN2A, GluN2B, GluN2C, and GluN2D subunits with K_i values of 0.04, 0.3, 0.6, and $2 \mu\text{M}$, respectively.² It inhibits depolarization induced by NMDA in isolated hemisectioned frog spinal cord ($pA_2 = 6.56$) and NMDA-induced sodium efflux from rat brain slices ($pA_2 = 6.2$).¹ (R)-CPP inhibits the clonic phase of sound-induced seizures in DBA/2 mice ($ED_{50} = 65.8 \mu\text{mol/kg}$) and the myoclonic phase of stroboscopic-induced seizures in *P. papio* photosensitive baboons ($ED_{50} = 127 \mu\text{mol/kg}$).³

References

1. Aebischer, B., Frey, P., Haeter, H.-P., *et al.* Synthesis and NMDA antagonistic properties of the enantiomers of 4-(3-phosphonopropyl)piperazine-2-carboxylic acid (CPP) and of the unsaturated analogue (E)-4-(3-phosphonoprop-2-enyl)piperazine-2-carboxylic acid (CPP-ene). *Helvetica Chimica Acta* **72**(5), 1043-1051 (1989).
2. Peoletti, P. and Neyton, J. NMDA receptor subunits: Function and pharmacology. *Curr. Opin. Pharmacol.* **7**(1), 39-47 (2007).
3. Patel, S., Chapman, A.G., Graham, J.L., *et al.* Anticonvulsant activity of the NMDA antagonists, D(-)-4-(3-phosphonopropyl) piperazine-2-carboxylic acid (D-CPP) and D(-)-(E)-4-(3-phosphonoprop-2-enyl) piperazine-2-carboxylic acid (D-CPPene) in a rodent and a primate model of reflex epilepsy. *Epilepsy Res.* **7**(1), 3-10 (1990).

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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