# PRODUCT INFORMATION

## (R)-CPP

*Item No. 21569*

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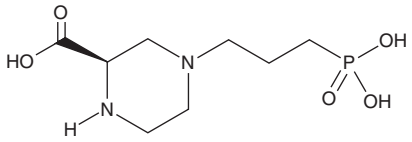
| **CAS Registry No.:** | 126453-07-4 |
| **Formal Name:** | (2R)-4-(3-phosphonopropyl)-2-piperazinecarboxylic acid |
| **MF:** | $C_8H_{17}N_2O_5P$ |
| **FW:** | 252.2 |
| **Purity:** | ≥95% |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |




*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 µM).[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 µM, respectively.[2] It inhibits depolarization induced by NMDA in isolated hemisected 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 µmol/kg) and the myoclonic phase of stroboscopic-induced seizures in *P. papio* photosensitive baboons ($ED_{50}$ = 127 µmol/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).





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