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## DATASHEET

(RS)-CPP

### Product overview

|                          |                                                         |
|--------------------------|---------------------------------------------------------|
| <b>Name</b>              | (RS)-CPP                                                |
| <b>Cat No</b>            | HB0036                                                  |
| <b>Biological action</b> | Antagonist                                              |
| <b>Description</b>       | Potent, selective, competitive NMDA receptor antagonist |

### Images



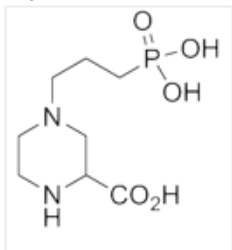
### Biological Data

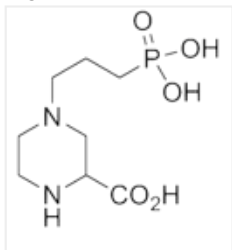
|                               |                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biological description</b> | Potent, selective and competitive NMDA receptor antagonist which reversibly binds to the glutamate binding site. Crosses the blood brain barrier and is active in vivo. Shows various effects (e.g. suppresses seizure activity, interferes with addiction paradigms, blocks LTP and LTD and impairs learning and memory). (R)-CPP also available. |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Solubility & Handling

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage instructions</b> | Room temperature (desiccate)                                                                                                  |
| <b>Solubility overview</b>  | Soluble in water (100mM)                                                                                                      |
| <b>Important</b>            | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

### Chemical Data

|                           |                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------|
| <b>Chemical name</b>      | (RS)-3-(2-Carboxypiperazin-4-yl)-propyl-1-phosphonic acid                           |
| <b>Molecular Weight</b>   | 252.21                                                                              |
| <b>Chemical structure</b> |  |



|                           |                                                                                                  |
|---------------------------|--------------------------------------------------------------------------------------------------|
| <b>Molecular Formula</b>  | C <sub>8</sub> H <sub>17</sub> N <sub>2</sub> O <sub>5</sub> P                                   |
| <b>CAS Number</b>         | 100828-16-8                                                                                      |
| <b>PubChem identifier</b> | 1228                                                                                             |
| <b>SMILES</b>             | C1CN(CC(N1)C(=O)O)CCCP(=O)(O)O                                                                   |
| <b>InChi</b>              | InChI=1S/C8H17N2O5P/c11-8(12)7-6-10(4-2-9-7)3-1-5-16(13,14)15/h7,9H,1-6H2,(H,11,12)(H2,13,14,15) |
| <b>InChiKey</b>           | CUVGUPIVTLGRGI-UHFFFAOYSA-N                                                                      |
| <b>MDL number</b>         | MFCD00055136                                                                                     |

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## References

**CPP, a new potent and selective NMDA antagonist. Depression of central neuron responses, affinity for [3H]D-AP5 binding sites on brain membranes and anticonvulsant activity.**

Davies J *et al* (1986) Brain Res 382(1)

**PubMedID** [2876749](#)

**Action of 3-((+/-)-2-carboxypiperazin-4-yl)-propyl-1-phosphonic acid (CPP): a new and highly potent antagonist of N-methyl-D-aspartate receptors in the hippocampus.**

Harris EW *et al* (1986) Brain Res 382(1)

**PubMedID** [2876750](#)

**CPP, a selective N-methyl-D-aspartate (NMDA)-type receptor antagonist: characterization in vitro and in vivo.**

Lehmann J *et al* (1987) J Pharmacol Exp Ther 240(3)

**PubMedID** [2882014](#)

**Measurement of NMDA Receptor Antagonist, CPP, in Mouse Plasma and Brain Tissue Following Systematic Administration Using Ion-Pair LCMS/MS.**

Gemperline E *et al* (2014) Analytical methods : advancing methods and applications 6

**PubMedID** [25663848](#)

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