

Certificate of Analysis

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Product Name: D-CPP-ene

Catalog No.: 1265

Batch No.: 3

CAS Number: 117414-74-1

IUPAC Name: D-4-[(2E)-3-Phosphono-2-propenyl]-2-piperazinecarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₁₅N₂O₅P·³/₄H₂O

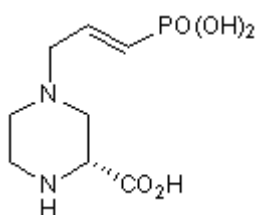
Batch Molecular Weight: 263.7

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -22 (Concentration = 1.1, Solvent = 2N HCl)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	36.44	6.31	10.62
Found	36.4	6.35	10.44

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and competitive NMDA antagonist ($K_i = 40$ nM). Centrally active following systemic administration.

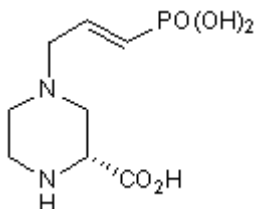
Physical and Chemical Properties:

Batch Molecular Formula: $C_8H_{15}N_2O_5P \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 263.7

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Aebischer et al (1989) 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-phosphono-2-enyl)piperazine-2-carboxylic acid (CPP-ene). *Helv.Chim.Acta* **72** 1043.

Lowe et al (1990) D-CPP-ene (SDZ EAA 494), a potent and competitive N-methyl-D-aspartate (NMDA) antagonist: effect on spontaneous activity and NMDA-induced depolarizations in the rat neocortical slice preparation, compared with other CPP derivatives and MK-801. *Neurosci.Lett.* **113** 315. PMID: 2166255.

Potschka et al (1999) Effects of the NMDA receptor antagonist D-CPPene on extracellular levels of dopamine and dopamine and serotonin metabolites in striatum of kindled and non-kindled rats. *Eur.J.Pharmacol.* **374** 175. PMID: 10422758.

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