TOCRIS
a bio-techne brand

Print Date: Sep 5th 2018

Certificate of Analysis

www.tocris.com

Product Name: (*R*)-CPP **Catalog No.: 0247** **Batch No.: 18**

CAS Number: 126453-07-4

IUPAC Name: 3-((*R*)-2-Carboxypiperazin-4-yl)-propyl-1-phosphonic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_8H_{17}N_2O_5P.1¼H_2O$

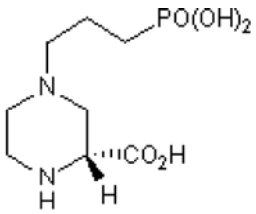
Batch Molecular Weight: 274.73

Physical Appearance: White crystalline solid

Solubility: water to 100 mM
phosphate buffered saline to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.08 (PAW/n-BuOH(2:3))

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = -19.5 (Concentration = 1.2, Solvent = 2N HCl)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	34.98	7.15	10.2
Found	34.82	7.19	10.14

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Information

Product Name: **(*R*)-CPP** **Catalog No.: 0247** **Batch No.: 18**

CAS Number: 126453-07-4

IUPAC Name: 3-((*R*)-2-Carboxypiperazin-4-yl)-propyl-1-phosphonic acid

Description:

Highly potent NMDA antagonist; more active isomer. Shows some selectivity for GluN2A (formally NR2A) containing receptors (K_i values are 0.041, 0.27, 0.63 and 1.99 μM for inhibition of GluN2A-, GluN2B-, GluN2C- and GluN2D-containing recombinant NMDA receptors respectively). Racemate also available. Please refer to IUPHAR Guide to Pharmacology for the most recent naming conventions.

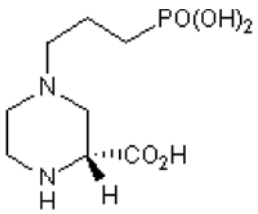
Physical and Chemical Properties:

Batch Molecular Formula: $C_8H_{17}N_2O_5P.1¼H_2O$

Batch Molecular Weight: 274.73

Physical Appearance: White crystalline solid

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
phosphate buffered saline 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:

Feng *et al* (2004) Structure-activity analysis of a novel NR2C/NR2D-preferring NMDA receptor antagonist: 1-(phenanthrene-2-carbonyl) piperazine-2,3-dicarboxylic acid. Br.J.Pharmacol. ***141*** 508. PMID: 14718249.

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.