Certificate of Analysis

Product Name: **(1*S*,3*R*)-ACPD** **Catalog No.: 0284** **Batch No.: 29**

CAS Number: 111900-32-4

IUPAC Name: (1*S*,3*R*)-1-Aminocyclopentane-1,3-dicarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_7H_{11}NO_4$

Batch Molecular Weight: 173.17

Physical Appearance: White solid

Solubility: water to 30 mM
1eq. NaOH to 100 mM

Storage: Store at RT

Batch Molecular Structure:

2. ANALYTICAL DATA

TLC: R_f = 0.16 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

Chiral HPLC: Shows 99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = -22 (Concentration = 0.5, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.55	6.4	8.09
Found	48.28	6.44	8.03

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IUPAC Name: (1*S*,3*R*)-1-Aminocyclopentane-1,3-dicarboxylic acid

Description:

Active isomer of (±)-trans-ACPD. Agonist at both group I and II mGlu receptors (EC_{50} values are 5, 15, 42 and 60 µM at $mGluR_2$, $mGluR_5$, $mGluR_1$ and $mGluR_6$ respectively). NPEC-caged-(1S,3R)-ACPD, (±)-trans-ACPD and cis-ACPD also available.

Physical and Chemical Properties:

Batch Molecular Formula: $C_7H_{11}NO_4$

Batch Molecular Weight: 173.17

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:

Storage: Store at RT

Solubility & Usage Info:

water to 30 mM
1eq. NaOH 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:

Conti *et al* (2002) Synthesis and pharmacology of 3-hydroxy-Δ²-isoxazoline-cyclopentance analogues of glutamic acid. Farmaco ***57*** 889. PMID: 12484537.

Mistry and Challis (1996) Differences in agonist and antagonist activities for two indicies of metabotropic glutamate receptor-stimulated phosphoinositide turnover. Br.J.Pharmacol. ***117*** 1735. PMID: 8732284.

Knopfel *et al* (1995) Metabotropic glutamate receptors: novel targets for drug development. J.Med.Chem. ***38*** 1417. PMID: 7738999.