TOCRIS bioscience

Print Date: Apr 28th 2015

Certificate of Analysis

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Product Name: **(2*R*,4*R*)-APDC** **Catalog No.: 1208** **Batch No.: 4**

CAS Number: 169209-63-6

IUPAC Name: (2*R*,4*R*)-4-Aminopyrrolidine-2,4-dicarboxylate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_6H_{10}N_2O_4.H_2O$

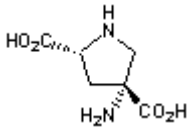
Batch Molecular Weight: 192.18

Physical Appearance: White solid

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

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Pyridine:Acetic acid:Water:Butanol [3:8:11:14])

Melting Point: At 265°C(Dec)

HPLC: Shows >98.5% purity

^{1}H NMR: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +42.2 (Concentration = 1, Solvent = water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen	
Theoretical	37.5	6.29	14.58	0 0 0
Found	37.32	6.35	14.45	0 0 0

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Description:

A highly selective and relatively potent group II metabotropic glutamate receptor agonist. EC_{50} values are 0.4, 0.4, > 100, > 100, > 300 and > 300 µM for human $mGlu_2$, $mGlu_3$, $mGlu_1$, $mGlu_5$, $mGlu_4$ and $mGlu_7$ receptors respectively. Centrally active following systemic administration in vivo. Also available as part of the Group II mGlu Receptor Tocriset™.

Physical and Chemical Properties:

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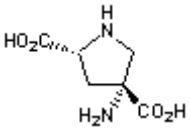
Batch Molecular Weight: 192.18

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 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:

Schoepp *et al* (1995) Selective inhibition of forskolin-stimulated cyclic AMP formation in rat hippocampus by a novel mGluR agonist, 2*R*,4*R*-4-aminopyrrolidine-2,4-dicarboxylate. Neuropharmacology ***34*** 843. PMID: 8532165.

Monn *et al* (1996) Synthesis of the four isomers of 4-aminopyrrolidine-2,4-dicarboxylate: identification of a potent, highly selective, and systemically active agonist for metabotropic glutamate receptors negatively coupled to adenylate cyclase. J.Med.Chem. ***39*** 2990. PMID: 8709133.

Schoepp *et al* (1999) Pharmacological agents acting at subtypes of metabotropic glutamate receptors. Neuropharmacology ***38*** 1431. PMID: 10530808.