

Certificate of Analysis

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Product Name: (S)-(-)-5-Fluorowillardiine

Catalog No.: 0306

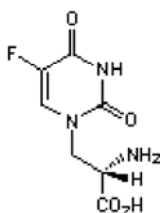
Batch No.: 11

CAS Number: 140187-23-1

IUPAC Name: (S)-(-)- α -Amino-5-fluoro-3,4-dihydro-2,4-dioxo-1(2H)pyridinepropanoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇H₈FN₃O₄
Batch Molecular Weight: 217.16
Physical Appearance: White crystalline solid
Solubility: 1.1eq. NaOH to 50 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.22 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
Chiral HPLC: Shows 99.1% purity
¹H NMR: Consistent with structure
Optical Rotation: [α]_D = -22 (Concentration = 1, Solvent = 6N HCl)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	38.72	3.71	19.35
Found	38.71	3.74	19.24

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

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Product Information

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IUPAC Name: (S)-(-)- α -Amino-5-fluoro-3,4-dihydro-2,4-dioxo-1(2H)pyridinepropanoic acid

Description:

A more potent and selective AMPA receptor agonist (at hGluR1 and hGluR2) than AMPA itself (K_i = 14.7, 25.1, and 1820 nM for hGluR1, hGluR2 and hGluR5 respectively).

Physical and Chemical Properties:

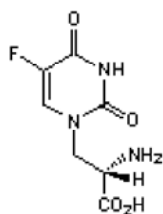
Batch Molecular Formula: $C_7H_8FN_3O_4$

Batch Molecular Weight: 217.16

Physical Appearance: White crystalline solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

1.1eq. NaOH to 50 mM

Keep solutions frozen up to 1 week; make up fresh where possible.

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:

Jane et al (1997) Synthesis of willardiine and 6-azawillardiine analogs: pharmacological characterization on cloned homomeric human AMPA and kainate receptor subtypes. *J.Med.Chem.* **40** 3645. PMID: 9357531.

Hawkins et al (1995) Binding of the new radioligand (S)-[³H]-AMPA to rat brain synaptic membranes: effects of a series of structural analogues of the non-NMDA receptor agonist willardiine. *Neuropharmacology* **34** 405. PMID: 7566471.

Wong et al (1994) Willardiines differentiate agonist binding sites for kainate-versus AMPA-preferring glutamate receptors in DRG and hippocampal neurones. *J.Neurosci.* **14** 3881. PMID: 7515954.

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