Print Date: Nov 30th 2022

Certificate of Analysis

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Product Name: **(*S*)-AMPA** **Catalog No.: 0254** **Batch No.: 29**

CAS Number: 83643-88-3

IUPAC Name: (*S*)-α-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_7H_{10}N_2O_4.½H_2O$

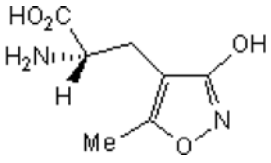
Batch Molecular Weight: 195.18

Physical Appearance: White solid

Solubility: water to 50 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

Chiral HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = -21 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	43.08	5.68	14.35
Found	42.36	5.78	42.34

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

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CAS Number: 83643-88-3

IUPAC Name: (*S*)-α-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid

Description:

(S)-AMPA is an active enantiomer of AMPA (EC_{50} = 3.5 µM). NPEC-caged-(S)-AMPA, Inactive Enantiomer and Racemate also available.

Physical and Chemical Properties:

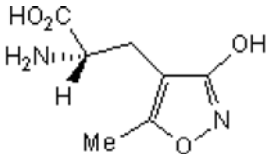
Batch Molecular Formula: $C_7H_{10}N_2O_4.½H_2O$

Batch Molecular Weight: 195.18

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 50 mM

When purchsed as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

Falch *et al* (1998) Heteroaryl analogues of AMPA. 2. Synthesis, absolute stereochemistry, photochemistry, and structure-activity relationships. J.Med.Chem. ***41*** 2513. PMID: 9651156.

Lauridsen *et al* (1985) Ibotenic acid analogues. Synthesis, molecular flexibility, and *in vitro* activity of agonists and antagonists at central glutamic acid receptors. J.Med.Chem. ***28*** 668. PMID: 2859375.

Hansen *et al* (1983) Enzymic resolution and binding to rat brain membranes of the glutamic acid agonist α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid. J.Med.Chem. ***26*** 901. PMID: 6133955.

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