

Certificate of Analysis

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Product Name: ATPA

Catalog No.: 1107

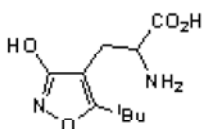
Batch No.: 7

CAS Number: 140158-50-5

IUPAC Name: (RS)-2-Amino-3-(3-hydroxy-5-*tert*-butylisoxazol-4-yl)propanoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₀ H ₁₆ N ₂ O ₄ ·½H ₂ O
Batch Molecular Weight:	237.26
Physical Appearance:	White crystalline powder
Solubility:	water to 10 mM with gentle warming 1eq. NaOH to 20 mM with gentle warming
Storage:	Desiccate at +4°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

TLC:	R _f = 0.75 (Pyridine:Acetic acid:Water:Butanol [3:8:11:22])
HPLC:	Shows >98.6% purity
¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
Microanalysis:	
	Carbon Hydrogen Nitrogen
	Theoretical 50.62 7.22 11.81
	Found 50.51 7.09 11.54

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

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IUPAC Name: (RS)-2-Amino-3-(3-hydroxy-5-*tert*-butylisoxazol-4-yl)propanoic acid

Description:

A selective and potent GluK1 (formerly GluR5) kainate receptor agonist ($K_i = 4.3$ nM), inactive at GluK6 (formerly GluR6) ($K_i > 1$ mM) and only weakly active at AMPA receptors (GluA1-4) and the kainate receptors GluK5 (formerly KA-2) and GluK3 (formerly GluR7) (K_i values of 6 - 14 μ M). Please refer to IUPHAR Guide to Pharmacology for the most recent naming conventions.

Physical and Chemical Properties:

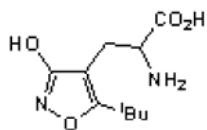
Batch Molecular Formula: $C_{10}H_{16}N_2O_4 \cdot \frac{1}{2}H_2O$

Batch Molecular Weight: 237.26

Physical Appearance: White crystalline powder

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

water to 10 mM with gentle warming

1eq. NaOH to 20 mM with gentle warming

CAUTION - Aqueous solutions of this product can be hard to obtain and warming to 65°C with stirring may be required.

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:

Moldrich et al (1999) Excitotoxic injury profiles of low-affinity kainate receptor agonists in neuronal cultures. *Eur.J.Pharmacol.* **378** R1. PMID: 10478637.

Clarke et al (1997) A hippocampal GluR5 kainate receptor regulating inhibitory synaptic transmission. *Nature* **389** 599. PMID: 9335499.

Matzen et al (1997) AMPA receptor agonists: synthesis, protolytic properties, and pharmacology of 3-isothiazole bioisosteres of glutamic acid. *J.Med.Chem.* **40** 520. PMID: 9046343.

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