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Print Date: Jan 13th 2016

Certificate of Analysis

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Product Name: **(±)-HIP-A** **Catalog No.: 2217** **Batch No.: 2**

CAS Number: 227619-64-9

IUPAC Name: (±)-3-Hydroxy-4,5,6,6a-tetrahydro-3a*H*-pyrrolo[3,4-*d*]isoxazole-4-carboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_6H_8N_2O_4$

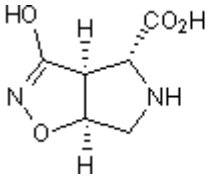
Batch Molecular Weight: 172.14

Physical Appearance: White solid

Solubility: water to 10 mM

Storage: Store at +4°C

Batch Molecular Structure:



(and enantiomer)

2. ANALYTICAL DATA

TLC: R_f = 0.5 (2-Propanol:Water:Acetic acid]10:9:1])

HPLC: Shows >99.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	41.86	4.68	16.27
Found	41.86	4.71	16.03

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Description:

Potent, non-competitive excitatory amino acid transporter (EAAT) blocker. Preferentially inhibits glutamate-induced [^{3}H]D-aspartate release (IC_{50} = 1.6 µM) rather than [^{3}H]L-glutamate uptake (IC_{50} = 18 µM). Moderately selective; displays no affinity for NMDA and metabotropic glutamate receptors, and low affinity for AMPA and kainate receptors (IC_{50} values are 43 and 8 µM respectively). .

Physical and Chemical Properties:

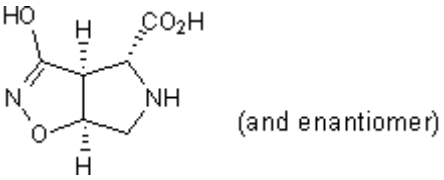
Batch Molecular Formula: $C_6H_8N_2O_4$

Batch Molecular Weight: 172.14

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



(and enantiomer)

Storage: Store at +4°C

Solubility & Usage Info:

water to 10 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* (1999) Synthesis and enantiopharmacology of new AMPA-kainate receptor agonists. J.Med.Chem. ***42*** 4099. PMID: 10514280.

Conti *et al* (1999) Synthesis of new bicyclic analogues of glutamic acid. Tetrahedron ***55*** 5623.

Funicello *et al* (2004) Dissociation of [^{3}H]glutamate uptake from glutamate-induced [^{3}H]D-Aspartate release by 3-hydroxy-4,5,6,6a-tetrahydro-3a*H*-pyrrolo[3,4-*d*]isoxazole-4-carboxylic acid and 3-hydroxy-4,5,6,6a-tetrahydro-3a*H*-pyrrolo[3,4-*d*]isoxazole-6-carboxylic acid, two conformationally constrained aspartate and glutamate analogs. Mol.Pharmacol. ***66*** 522. PMID: 15322243.