TOCRIS bioscience

Print Date: May 4th 2013

Certificate of Analysis

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Product Name: L-Quisqualic acid **Catalog No.: 0188** **Batch No.: 33**

CAS Number: 52809-07-1

IUPAC Name: (L)-(+)-α-Amino-3,5-dioxo-1,2,4-oxadiazolidine-2-propanoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_5H_7N_3O_5$

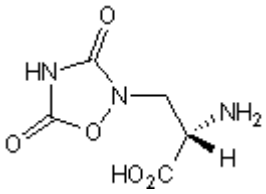
Batch Molecular Weight: 189.13

Physical Appearance: Off-white powder

Solubility: 1eq. NaOH to 100 mM
water to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.26 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

Chiral HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +18.8 (Concentration = 1, Solvent = 6N HCl)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	31.75	3.73	22.22
Found	31.59	3.51	22.27

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Description:

Glutamate receptor agonist acting at AMPA receptors and metabotropic glutamate receptors positively linked to phosphoinositide hydrolysis. Sensitizes neurons in hippocampus to depolarization by L-AP6 (the so called 'quis' effect). Also available as part of the Group I mGlu Receptor Tocriset™.

Physical and Chemical Properties:

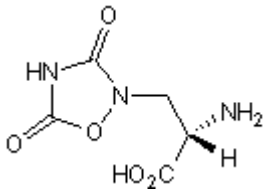
Batch Molecular Formula: $C_5H_7N_3O_5$

Batch Molecular Weight: 189.13

Physical Appearance: Off-white powder

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

1eq. NaOH to 100 mM
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:

Porter *et al* (1992) (S)-Homoquisqualate: a potent agonist at the glutamate metabotropic receptor. Br.J.Pharmacol. ***106*** 509. PMID: 1324071.

Schulte *et al* (1994) Utilization of the resolved L-isomer of 2-amino-6-phosphohexanoic acid (L-AP6) as a selective agonist for a quisqualate-sensitized site in hippocampal CA1 pyramidal neurons. Brain Res. ***649*** 203. PMID: 7953634.

Littman *et al* (1995) Effects of quisqualic acid analogs on metabotropic glutamate receptors coupled to phosphoinositide hydrolysis in rat hippocampus. Neuropharmacology ***34*** 829. PMID: 8532164.