

Certificate of Analysis

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Product Name: L-Glutamic acid

Catalog No.: 0218

Batch No.: 12

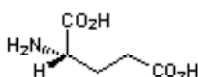
CAS Number: 56-86-0

EC Number: 200-293-7

IUPAC Name: (S)-1-Aminopropane-1,3-dicarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅H₉NO₄
Batch Molecular Weight: 147.13
Physical Appearance: White solid
Solubility: 1eq. NaOH to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.35 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
Melting Point: Between 204 - 205°C
¹H NMR: Consistent with structure
Optical Rotation: [α]_D = +32.4 (Concentration = 1, Solvent = 1M HCl)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	40.81	6.17	9.52
Found	40.82	6.32	9.42

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

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IUPAC Name: (S)-1-Aminopropane-1,3-dicarboxylic acid

Description:

L-Glutamic acid is the predominant excitatory transmitter in the mammalian central nervous system. L-Glutamic acid acts at ionotropic and metabotropic glutamate receptors. MNI-caged-L-glutamate (Cat. No. 1490) also available.

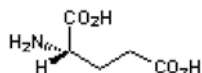
Physical and Chemical Properties:

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Physical Appearance: White solid

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

1eq. NaOH to 100 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:

Yang and Stockwell *et al* (2016) Ferroptosis: Death by lipid peroxidation. *Trends Cell Biol.* **26** 165. PMID: 26653790.

Monaghan *et al* (1989) The excitatory amino acid receptors: their classes, pharmacology and distinct properties in the function of the central nervous system. *Annu.Rev.Pharmacol.Toxicol.* **29** 365. PMID: 2543272.

Watkins and Evans (1981) Excitatory amino acid transmitters. *Annu.Rev.Pharmacol.Toxicol.* **21** 165. PMID: 6112965.

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