

Certificate of Analysis

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Product Name: Spaglumic acid

Catalog No.: 0391

Batch No.: 11

CAS Number: 3106-85-2

IUPAC Name: *N*-Acetyl-L-aspartyl-L-glutamic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₆N₂O₈·¾H₂O

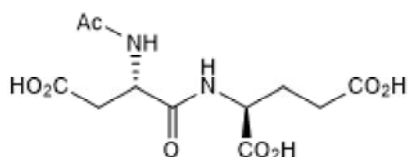
Batch Molecular Weight: 317.77

Physical Appearance: Off White solid

Solubility: water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 96.5% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -37.6 (Concentration = 2, Solvent = Water)

Microanalysis:	Carbon Hydrogen Nitrogen		
Theoretical	41.58	5.55	8.82
Found	41.74	5.56	8.98

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

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CAS Number: 3106-85-2

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Description:

The most abundant peptide neurotransmitter in the mammalian CNS. A weak activator of NMDA receptors, and a highly selective agonist for mGlu₃ receptors. Neuroprotective under non-hydrolysing conditions in vivo.

Physical and Chemical Properties:

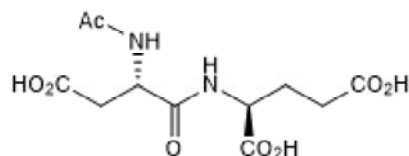
Batch Molecular Formula: C₁₁H₁₆N₂O₈·¾H₂O

Batch Molecular Weight: 317.77

Physical Appearance: Off White solid

Minimum Purity: >96%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

water to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened.

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:

Neale et al (2000) *N*-Acetylasparylglutamate: the most abundant peptide neurotransmitter in the mammalian central nervous system. *J.Neurochem.* **75** 443. PMID: 10899918.

Thomas et al (2000) *N*-Acetylated α-linked acidic dipeptidase converts *N*-acetylasparylglutamate from a neuroprotectant to a neurotoxin. *J.Pharmacol.Exp.Ther.* **295** 16. PMID: 10991955.

Wroblewska et al (1997) *N*-Acetylasparylglutamate selectively activates mGluR3 receptors in transfected cells. *J.Neurochem.* **69** 174. PMID: 9202308.

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