

Product Name: MNI-caged-L-glutamate

Catalog No.: 1490

Batch No.: 53

CAS Number: 295325-62-1

IUPAC Name: (S)- α -Amino-2,3-dihydro-4-methoxy-7-nitro- δ -oxo-1*H*-indole-1-pentanoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₇N₃O₆·³/₄H₂O

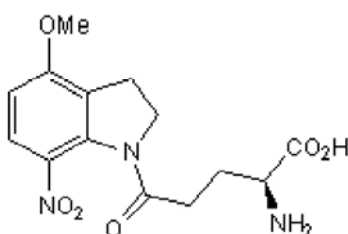
Batch Molecular Weight: 336.81

Physical Appearance: Yellow solid

Solubility: water to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -5.6 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	49.92	5.54	12.48
Found	49.49	5.33	12.28

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

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Description:

MNI-caged glutamate that rapidly and efficiently releases glutamate (Cat. No. 0218) when photolysed (300 - 380 nm excitation). Water-soluble, highly resistant to hydrolysis, stable at neutral pH, and pharmacologically inactive at neuronal glutamate receptors (up to mM concentrations). 2.5-fold more efficient at releasing L-glutamate than NI-caged L-glutamate. View more information regarding MNI-caged-L-glutamate.

Physical and Chemical Properties:

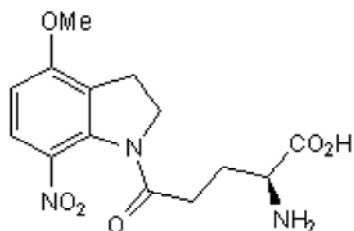
Batch Molecular Formula: C₁₄H₁₇N₃O₆· $\frac{3}{4}$ H₂O

Batch Molecular Weight: 336.81

Physical Appearance: Yellow solid

Minimum Purity: \geq 99%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 50 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.

Licensing Information:

Sold under license from the Medical Research Council

References:

Palma-Cerda et al (2012) New caged neurotransmitter analogs selective for glutamate receptor sub-types based on methoxynitroindoline and nitrophenylethoxycarbonyl caging groups. *Neuropharmacology* **63** 624. PMID: 22609535.

Maier et al (2005) Comparative analysis of inhibitory effects of caged ligands for the NMDA receptor. *J.Neurosci.Methods* **142** 1. PMID: 15652611.

Canepari et al (2001) Photochemical and pharmacological evaluation of 7-nitroindoliny- and 4-methoxy-7-nitroindoliny-amino acids as novel, fast caged neurotransmitters. *J.Neurosci.Methods* **112** 29. PMID: 11640955.

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