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## DATASHEET

### MNI-caged-L-Glutamate

#### Product overview

<b>Name</b>	MNI-caged-L-Glutamate
<b>Cat No</b>	HB0423
<b>Description</b>	Caged glutamate that rapidly and efficiently releases glutamate when photolysed
<b>Alternative names</b>	MNI-Glu, Caged glutamate, MNI-Glutamate,
<b>Biological action</b>	Activator
<b>Purity</b>	>98%
<b>Customer comments</b>	<p><i>We are very pleased to have such a company like yours that offers products like MNI-caged-glutamate (MNI-Glu) at a very good price and still with a high quality. So we will rate your product 5 stars! <b>Verified customer</b></i></p> <p><i>We confirmed Hello Bio MNI-caged-glutamate works very well for our two-photon uncaging experiment. I would be very happy to recommend your MNI glutamate. <b>Verified customer</b></i></p> <p><i>Works very well. We will be buying MNI-caged glutamate from Hello Bio from now on. We are happy that MNI-caged glutamate from Hello Bio works well for slice electrophysiological recordings in our focal laser stimulation experiments with DPSS laser (350nm). <b>Verified customer</b></i></p>

#### Images



#### Biological Data

<b>Biological description</b>	<p>Caged glutamate that rapidly and efficiently releases <b>glutamate</b> when photolysed (300 - 380 nm excitation).</p> <p>Peak absorption is at 340 nm, the quantum yield is 0.085 and photo release following a light pulse has a half-time of 200 ns.</p> <p>MNI-caged-L-Glutamate is inactive at glutamate receptors and transporters at mM concentrations but does interfere with synaptic activation of GABA<sub>A</sub> receptors (IC<sub>50</sub> = ~0.5 mM).</p> <p>MNI-caged-L-Glutamate is water soluble, resistant to hydrolysis and stable at neutral pH.</p>
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#### Solubility & Handling

**Storage instructions**  
**Solubility overview**  
**Handling**

-20 °C (protect from light)  
Soluble in water (50mM) with gentle warming

- This compound is light sensitive; exposure to light may affect compound performance. We therefore recommend storing the material in the dark and protecting from light.
- Although stable to hydrolysis and soluble in water (50 mM) it is often necessary to warm stock solutions after thawing.

**Important**

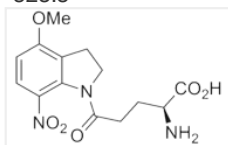
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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## Chemical Data

**Chemical name**  
**Molecular Weight**  
**Chemical structure**

(S)- $\alpha$ -Amino-2,3-dihydro-4-methoxy-7-nitro- $\delta$ -oxo-1*H*-indole-1-pentanoic acid  
323.3



**Molecular Formula**  
**CAS Number**  
**PubChem identifier**  
**SMILES**  
**Source**  
**InChi**

C<sub>14</sub>H<sub>17</sub>N<sub>3</sub>O<sub>6</sub>  
295325-62-1  
6604871  
COC1=C2CCN(C2=C(C=C1)[N+](=O)[O-])C(=O)CC[C@H](C(=O)O)N  
Synthetic  
1S/C14H17N3O6/c1-23-11-4-3-10(17(21)22)13-8(11)6-7-16(13)12(18)5-2-9(15)14(19)20/h3-4,9H,2,5-7,15H2,1H3,(H,19,20)/t9-m/s1

**InChiKey**  
**Appearance**

GXIDBZKXGUNITQ-VIFPVBQESA-N  
Yellow solid

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## References

**Photochemical and pharmacological evaluation of 7-nitroindolinyl- and 4-methoxy-7-nitroindolinyl-amino acids as novel, fast caged neurotransmitters.**

Canepari et al (2001) J Neurosci Methods 112(1)  
**PubMedID** [11640955](#)

**Comparative analysis of inhibitory effects of caged ligands for the NMDA receptor.**

Maier et al (2005) J Neurosci Methods 142(1)  
**PubMedID** [15652611](#)

**New caged neurotransmitter analogs selective for glutamate receptor sub-types based on methoxynitroindoline and nitrophenylethoxycarbonyl caging groups.**

Palma-Cerda et al (2012) Neuropharmacology 63(4)  
**PubMedID** [22609535](#)