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# **DATASHEET**

MNI-caged-L-Glutamate

#### **Product overview**

Name MNI-caged-L-Glutamate

Cat No HB0423

Alternative names MNI-Glu, Caged glutamate, MNI-Glutamate,

**Biological action** Activator >98%

Customer comments 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! Verified customer

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. Verified customer

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). Verified customer

**Description**Caged glutamate that rapidly and efficiently releases glutamate when photolysed

## **Images**





### **Biological Data**

**Biological description** 

Caged glutamate that rapidly and efficiently releases glutamate when photolysed (300 - 380 nm excitation).

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.

MNI-caged-L-Glutamate is inactive at glutamate receptors and transporters at mM concentrations but does interfere with synpatic activation of  $GABA_A$  receptors ( $IC_{50} = \sim 0.5$  mM).

MNI-caged-L-Glutamate is water soluble, resistant to hydrolysis and stable at neutral pH.

## **Solubility & Handling**

Solubility overview Storage instructions Storage of solutions

Handling

Soluble in water (50mM) with gentle warming

-20°C (protect from light)

Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

- 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.

**Shipping Conditions Important** 

Stable for ambient temperature shipping. Follow storage instructions on receipt.

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

#### **Chemical Data**

Chemical name

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

Molecular Weight 323.3

Chemical structure

OMe NO<sub>2</sub>O NH<sub>2</sub>

Source Synthetic

InChi 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-/m0/s1

InChiKey GXIDBZKXGUNITQ-VIFPVBQESA-N

Appearance Yellow solid

#### 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