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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
Purity	>98%
Customer comments	<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! Verified customer</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. Verified customer</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). Verified customer</i></p>

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



Biological Data

Biological description	<p>Caged glutamate that rapidly and efficiently releases glutamate 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_A receptors (IC₅₀ = ~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.

Chemical Data

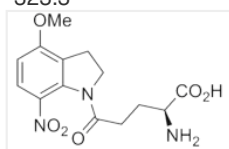
Chemical name

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

Molecular Weight

323.3

Chemical structure



Molecular Formula

C₁₄H₁₇N₃O₆

CAS Number

295325-62-1

PubChem identifier

6604871

SMILES

COC1=C(C=CCN(C2=C(C=C1)[N+](=O)[O-])C(=O)CC[C@H](C(=O)O)N

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-m/s1

InChiKey

GXIDBZKXGUNITQ-VIFPVBQESA-N

Appearance

Yellow solid

References

Photochemical and pharmacological evaluation of 7-nitroindolyl- and 4-methoxy-7-nitroindolyl-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](#)