

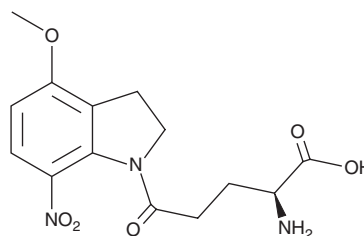
PRODUCT INFORMATION



MNI-caged-L-glutamate

Item No. 9004557

CAS Registry No.: 295325-62-1
Formal Name: αS-amino-2,3-dihydro-4-methoxy-7-nitro-δ-oxo-1H-indole-1-pentanoic acid
Synonym: 4-methoxy-7-nitroindolyl-caged-L-Glutamate
MF: C₁₄H₁₇N₃O₆
FW: 323.3
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MNI-caged-L-glutamate is supplied as a solid. Aqueous solutions of MNI-caged-L-glutamate can be prepared by directly dissolving the solid in aqueous buffers. MNI-caged-L-glutamate is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

MNI-caged-L-glutamate is a photocleavable derivative of the neurotransmitter L-glutamate (L-glutamic acid; Item No. 30377).¹ Upon exposure to light, 4-methoxy-7-nitroindole (MNI) is cleaved and L-glutamate is released.^{1,2} MNI-caged-L-glutamate has been used in the study of neural circuits and synaptic regulation of autophagic vacuole motility in dendrites.^{3,4}

References

1. Canepari, M., Nelson, L., Papageorgiou, G., *et al.* Photochemical and pharmacological evaluation of 7-nitroindolyl- and 4-methoxy-7-nitroindolyl-amino acids as novel, fast caged neurotransmitters. *J. Neurosci. Methods* **112**(1), 29-42 (2001).
2. Papageorgiou, G. and Corrie, J.E.T. Effects of aromatic substituents on the photocleavage of 1-acyl-7-nitroindolines. *Tetrahedron* **56**(41), 8197-8205 (2000).
3. Nikolenko, V., Poskanzer, K.E., and Yuste, R. Two-photon photostimulation and imaging of neural circuits. *Nat. Methods* **4**(11), 943-950 (2007).
4. Kulkarni, V.V., Anand, A., J.B., H., *et al.* Synaptic activity controls autophagic vacuole motility and function in dendrites. *J. Cell. Biol.* **220**(6), e202002084 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/05/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM