
Product Data Sheet

Product Name: MDNI-caged-L-glutamate

Cat. No.: GC50263

Chemical Properties

Cas. No. 864085-92-7

SMILES O=C(CC[C@H](N)C(O)=O)N1C2=C([N+])([O-])=O)C=C([N+])([O-])=O)C(OC)=C2CC1Formula C₁₄H₁₆N₄O₈ M.Wt 368.3

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Rapidly and efficiently releases glutamate when photolysed (350 - 365 nm excitation). Water soluble and stable at neutral pH, and pharmacologically inactive at neuronal glutamate receptors (up to 200 μM). 5.5 times more photosensitive than MNI-caged L-glutamate . Laser activation of MDNI-glu evokes a rapid increase in intracellular Ca²⁺ concentration in astrocytes.

Fedoryak et al (2005) Synthesis of a caged glutamate for efficient one- and two-photon photorelease on living cells. Chem. Commun. (Camb.) 7 3664 PMID:16027904

|Papageorgiou et al (2005) Synthetic and photochemical studies of substituted 1-acyl-7-nitroindolines. Photochem. Photobiol. Sci. 4 887 PMID:16252044 |Popovic et al (2015)

Electrical behaviour of dendritic spines as revealed by voltage imaging. Nat. Commun. 6 8436 PMID:26436431

Caution: Product has not been fully validated for medical applications. For research use only.

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