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DATASHEET

MNI-caged γ -DGG (MNI-Caged γ -D-Glutamyl-Glycine)

Product overview

Name	MNI-caged γ -DGG (MNI-Caged γ -D-Glutamyl-Glycine)
Cat No	HB9899
Biological action	Antagonist
Purity	>98%
Description	Novel caged, fast-equilibrating glutamate receptor antagonist. Suitable for use as a synaptic probe.

Biological Data

Biological description Novel, caged, fast-equilibrating version of the low-affinity competitive glutamate antagonist γ -DGG. Photo-release (e.g. by flashlamp or laser photolysis) releases γ -DGG. Photo-release of MNI-caged- γ DGG (at concentrations up to 5mM) releases γ -DGG at concentrations up to 1.5mM in 1ms in wide-field flashlamp photolysis at climbing fiber-Purkinje cell (CF-PC) synapses without affecting (CF-PC) transmission. Photo-released γ -DGG has been shown to inhibit the CF- first and second paired EPSCs by ~30-60% respectively at concentrations of 0.55-1.7mM.

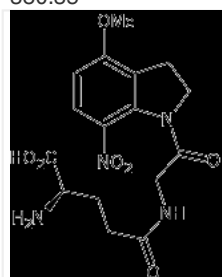
MNI-caged γ -DGG may be used as a synaptic probe as photolysis of MNI-caged γ -DGG resolves timing and extent of transmitter activation of receptors in glutamatergic transmission.

Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in water
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 2,3-dihydro-4-methoxy-7-nitro- δ -oxo-1H-indole-1- γ -D-glutamylglycine
Molecular Weight 380.35
Chemical structure



Molecular Formula C₁₆H₂₀N₄O₇
SMILES O=C(O)[C@H](N)CCC(=O)NCC(=O)N1CCc2c1c(ccc2OC)[N+](O)=O
Source Synthetic
InChi InChI=1S/C16H20N4O7/c1-27-12-4-3-11(20(25)26)15-9(12)6-7-19(15)14(22)8-18-13(21)5-2-10(17)16(23)24/h3-4,10H,2,5-8,17H2,1H3,(H,18,21)(H,23,24)/t10-m/s1
InChiKey YSIDNCLXJKISLU-SNVBAGLBSA-N
Appearance Yellow solid

References

Photolysis of a Caged, Fast-Equilibrating Glutamate Receptor Antagonist, MNI-Caged γ -D-Glutamyl-Glycine, to Investigate Transmitter Dynamics and Receptor Properties at Glutamatergic Synapses.

Palma-Cerda F et al (2018) *Frontiers in cellular neuroscience* 12

PubMedID

[30618624](#)
