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# DATASHEET

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

## Product overview

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| **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

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| **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-γDGG (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.<br><br>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

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| **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

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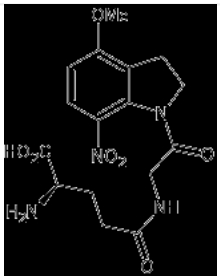
| **Chemical name** | 2,3-dihydro-4-methoxy-7-nitro-δ-oxo-1H-indole-1-γ-D-glutamylglycine |
| **Molecular Weight** | 380.35 |
| **Chemical structure** |  |
| **Molecular Formula** | $C_{16}H_{20}N_4O_7$ |
| **SMILES** | O=C(O)[C@H](N)CCC(=O)NCC(=O)N1CCc2c1c(ccc2OC)[N+]([O-])=O |
| **Source** | Synthetic |
| **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-/m1/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

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