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DATASHEET

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

Product overview

MNI-caged y-DGG (MNI-Caged y-D-Glutamyl-Glycine) Name

Cat No HB9899 **Biological action** Antagonist >98% **Purity**

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-cagedyDGG (at concentrations up to 5mM) releases y-DGG at concentrations up to 1.5mM in 1ms in widefield flashlamp photolysis at climbing fiber-Purkinje cell (CF-PC) synapses without affecting (CF-PC) transmission. Photo-released y-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 y-DGG may be used as a synaptic probe as photolysis of MNI-caged y-DGG resolves timing and extent of transmitter activation of receptors in glutamatergic transmission.

Solubility & Handling

Solubility overview Storage instructions Storage of solutions

Shipping Conditions

Important

Soluble in water

-20°C

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

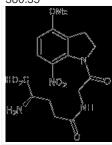
Stable for ambient temperature shipping. Follow storage instructions on receipt.

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 Molecular Weight Chemical structure 2,3-dihydro-4-methoxy-7-nitro-δ-oxo-1H-indole-1-y-D-glutamylglycine 380.35



Molecular Formula **SMILES**

Source InChi

C₁₆H₂₀N₄O₇

O=C(O)[C@H](N)CCC(=O)NCC(=O)N1CCc2c1c(ccc2OC)[N+]([O-])=O

Synthetic

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 Appearance YSIDNCLXJKISLU-SNVBAGLBSA-N 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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