

## gamma-DGG

## Chemical Properties

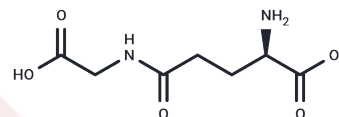
CAS No. : 6729-55-1

Formula: C7H12N2O5

Molecular Weight: 204.18

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	gamma-DGG is a competitive blocker of AMPA receptor.
Targets(IC50)	GluR,iGluR
In vitro	gamma-DGG ( $\gamma$ -DGG) is the most effective antagonist of the excitatory postsynaptic potentials (e.p.s.p.s). Its action is reversible and not associated with any change in the passive membrane properties of the granule cells or in the apparent reversal potential of the e.p.s.p. gamma-DGG blocks less at higher glutamate concentration. gamma-DGG (200-400 $\mu$ M) in the bath decreases the miniature EPSC (mEPSC) amplitude by 26 $\pm$ 2% (n=5 synapses) and shifts both the mEPSC amplitude distribution and the cumulative probability curve to the left [1]. The quantal analysis displays that the reduction in the e. p.s.p. paralleled the reduction in quantal size rather than quantal content, confirming a post-synaptic site of the action of gamma-DGG [2].

## Solubility Information

Solubility	H2O: 150 mg/mL (734.65 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	4.8976 mL	24.4882 mL	48.9764 mL
5 mM	0.9795 mL	4.8976 mL	9.7953 mL
10 mM	0.4898 mL	2.4488 mL	4.8976 mL
50 mM	0.098 mL	0.4898 mL	0.9795 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Wu XS, et al. The origin of quantal size variation: vesicular glutamate concentration plays a significant role. *J Neurosci.* 2007 Mar 14;27(11):3046-56.

Crunelli V, et al. Blockade of amino acid-induced depolarizations and inhibition of excitatory post-synaptic potentials in rat dentate gyrus. *J Physiol.* 1983 Aug;341:627-40.

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