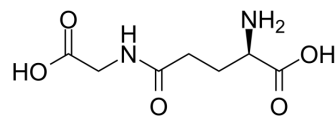


## gamma-DGG

<b>Cat. No.:</b>	HY-100785		
<b>CAS No.:</b>	6729-55-1		
<b>Molecular Formula:</b>	C <sub>7</sub> H <sub>12</sub> N <sub>2</sub> O <sub>5</sub>		
<b>Molecular Weight:</b>	204.18		
<b>Target:</b>	iGluR		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 150 mg/mL (734.65 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	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

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 25 mg/mL (122.44 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

### BIOLOGICAL ACTIVITY

#### Description

gamma-DGG is a competitive AMPA receptor blocker.

#### IC<sub>50</sub> & Target

AMPA receptor<sup>[1]</sup>

#### In Vitro

gamma-DGG (γ-DGG), a competitive AMPA receptor blocker that blocks less at higher glutamate concentration. At 200-400 μM, gamma-DGG in the bath reduces the miniature EPSC (mEPSC) amplitude by 26±2% (n=5 synapses), and shifts both the mEPSC amplitude distribution and the cumulative probability curve to the left<sup>[1]</sup>. gamma-DGG (γ-DGG) is the most effective antagonist of the excitatory post-synaptic 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. Quantal analysis shows that the reduction in the e.p.s.p. paralleled the decrease in quantal size rather than quantal content, confirming a post-synaptic site of the action of gamma-DGG<sup>[2]</sup>.

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MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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- [1]. 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.
- [2]. 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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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