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## Product Data Sheet

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Product Name:  $\gamma$ DGG  
 Cat. No.: GC18033

### Chemical Properties

Cas. No. 6729-55-1

Chemical Name (S)-2-amino-5-((carboxymethyl)amino)-5-oxopentanoic acid

SMILES O=C(CC[C@@H](C(O)=O)N)NCC(O)=O

Formula  $C_7H_{12}N_2O_5$  M.Wt 204.18

Solubility Soluble to 100 mM in 1eq. NaOH and to 100 mM in sterile water Storage Store at RT

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Background

gamma-DGG is a competitive AMPA receptor blocker.

gamma-DGG ( $\gamma$ -DGG), a competitive AMPA receptor blocker that blocks less at higher glutamate concentration. At 200-400  $\mu$ M, gamma-DGG in the bath reduces 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]. gamma-DGG ( $\gamma$ -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[2].

References:

**Caution: Product has not been fully validated for medical applications. For research use only.**

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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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