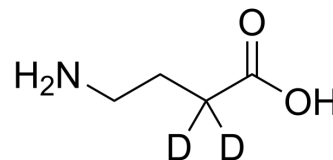


## $\gamma$ -Aminobutyric acid-d<sub>2</sub>

<b>Cat. No.:</b>	HY-N0067S1												
<b>CAS No.:</b>	67910-98-9												
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>7</sub> D <sub>2</sub> NO <sub>2</sub>												
<b>Molecular Weight:</b>	105.13												
<b>Target:</b>	GABA Receptor; Endogenous Metabolite; Isotope-Labeled Compounds												
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease; Others												
<b>Storage:</b>	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O :  $\geq$  50 mg/mL (475.60 mM)  
 \* " $\geq$ " means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		9.5120 mL	47.5602 mL	95.1203 mL
	5 mM		1.9024 mL	9.5120 mL	19.0241 mL
	10 mM		0.9512 mL	4.7560 mL	9.5120 mL

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

### BIOLOGICAL ACTIVITY

#### Description

$\gamma$ -Aminobutyric acid-d<sub>2</sub> is the deuterium labeled  $\gamma$ -Aminobutyric acid.  $\gamma$ -Aminobutyric acid (4-Aminobutyric acid) is a major inhibitory neurotransmitter in the adult mammalian brain[1][2], binding to the ionotropic GABA receptors (GABAA receptors) and metabotropic receptors (GABAB receptors)[2].

#### In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Chen S, et al. Effects of dietary gamma-aminobutyric acid supplementation on the intestinal functions in weaning piglets. Food Funct. 2019 Jan 2.

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[2]. Okada R, et al. Gamma-aminobutyric acid (GABA)-mediated neural connections in the Drosophila antennal lobe. J Comp Neurol. 2009 May 1;514(1):74-91.

[3]. Watanabe M, et al. GABA and GABA receptors in the central nervous system and other organs. Int Rev Cytol. 2002;213:1-47.

[4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA