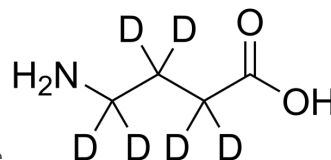


γ -Aminobutyric acid-d₆

| | | |
|---------------------------|---|---------------------------------|
| Cat. No.: | HY-N0067S | |
| CAS No.: | 70607-85-1 | |
| Molecular Formula: | C ₄ H ₃ D ₆ NO ₂ | |
| Molecular Weight: | 109.16 | |
| Target: | GABA Receptor; Endogenous Metabolite | |
| Pathway: | Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease | |
| Storage: | Powder | -20°C 3 years 4°C 2 years |
| | In solvent | -80°C 6 months -20°C 1 month |



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (458.04 mM; Need ultrasonic)
H₂O : 50 mg/mL (458.04 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent | | 1 mg | 5 mg | 10 mg |
|---------------------------|---------------|------|-----------|------------|------------|
| | Concentration | Mass | | | |
| | 1 mM | | 9.1609 mL | 45.8043 mL | 91.6086 mL |
| | 5 mM | | 1.8322 mL | 9.1609 mL | 18.3217 mL |
| | 10 mM | | 0.9161 mL | 4.5804 mL | 9.1609 mL |

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

BIOLOGICAL ACTIVITY

Description

γ -Aminobutyric acid-d₆ is the deuterium labeled γ -Aminobutyric acid. γ -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^[1].
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.

[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.

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

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