Sarcosine-d_3

Cat. No.: HY-101037S1

CAS No.: 118685-91-9

Molecular Formula: $C_3H_4D_3NO_2$

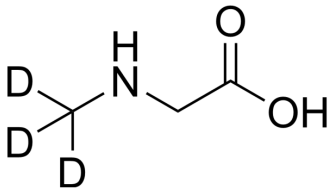
Molecular Weight: 92.11

Target: GlyT; Endogenous Metabolite; Isotope-Labeled Compounds

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease; Others

Storage:

Pure form	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 125 mg/mL (1357.07 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	10.8566 mL	54.2829 mL	108.5658 mL
	5 mM	2.1713 mL	10.8566 mL	21.7132 mL
	10 mM	1.0857 mL	5.4283 mL	10.8566 mL

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

BIOLOGICAL ACTIVITY

Description

Sarcosine-d_3 is the deuterium labeled Sarcosine. Sarcosine (N-Methylglycine), an endogenous amino acid, is a competitive glycine transporter type I (GlyT1) inhibitor and N-methyl-D-aspartate (NMDA) receptor co-agonist. Sarcosine increases the glycine concentration, resulting in an indirect potentiation of the NMDA receptor. Sarcosine is commonly used for the research of schizophrenia[1][2].

IC_{50} & Target

GlyT1

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]. Katarzyna Socała, et al. Effects of sarcosine, a glycine transporter type 1 inhibitor, in two mouse seizure models. Pharmacol Rep. Mar-Apr 2010;62(2):392-7.

[2]. Mei-Yi Lee, et al. Effects of sarcosine and N, N-dimethylglycine on NMDA receptor-mediated excitatory field potentials. J Biomed Sci. 2017; 24: 18.

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

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