D-Alanine-d_3

Cat. No.: HY-41700S

CAS No.: 177614-69-6

Molecular Formula: $C_3H_4D_3NO_2$

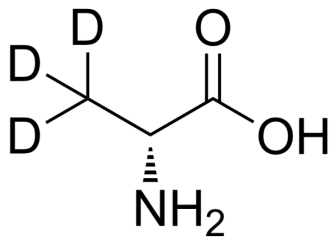
Molecular Weight: 92.11

Target: Endogenous Metabolite; Isotope-Labeled Compounds

Pathway: Metabolic Enzyme/Protease; Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (1085.66 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

D-Alanine-d_3 is the deuterium labeled D-Alanine. D-Alanine is a weak GlyR (inhibitory glycine receptor) and PMBA agonist, with an EC50 of 9 mM for GlyR.

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

[2]. Schmieden V, et al. Pharmacology of the inhibitory glycine receptor: agonist and antagonist actions of amino acids and piperidine carboxylic acid compounds. Mol Pharmacol. 1995 Nov;48(5):919-27.

[3]. Saitoh T, et al. A novel antagonist, phenylbenzene omega-phosphono-alpha-amino acid, for strychnine-sensitive glycine receptors in the rat spinal cord. Br J Pharmacol. 1994 Sep;113(1):165-70.

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