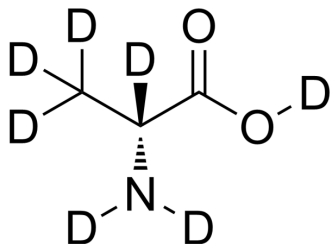
D-Alanine-d_7

Cat. No.:	HY-41700S3
CAS No.:	2483831-62-3
Molecular Formula:	$C_3D_7NO_2$
Molecular Weight:	96.14
Target:	Endogenous Metabolite
Pathway:	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

H_2O : 165 mg/mL (1716.25 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	10.4015 mL	52.0075 mL	104.0150 mL
	5 mM	2.0803 mL	10.4015 mL	20.8030 mL
	10 mM	1.0401 mL	5.2007 mL	10.4015 mL

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

BIOLOGICAL ACTIVITY

Description

D-Alanine-d_7 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]. 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.

[3]. 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.

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