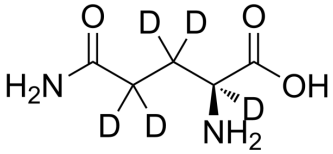
L-Glutamine-d_5

Cat. No.:	HY-N0390S2
CAS No.:	14341-78-7
Molecular Formula:	$C_5H_5D_5N_2O_3$
Molecular Weight:	151.18
Target:	mGluR; Ferroptosis; Endogenous Metabolite
Pathway:	GPCR/G Protein; Neuronal Signaling; Apoptosis; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 12.5 mg/mL (82.68 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.6146 mL	33.0732 mL	66.1463 mL
	5 mM	1.3229 mL	6.6146 mL	13.2293 mL
	10 mM	0.6615 mL	3.3073 mL	6.6146 mL

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

BIOLOGICAL ACTIVITY

Description

L-Glutamine-d_5 is the deuterium labeled L-Glutamine. L-Glutamine (L-Glutamic acid 5-amide) is a non-essential amino acid present abundantly throughout the body and involved in many metabolic processes. L-Glutamine provides a source of carbons for oxidation in some cells[1][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]. Mary Corless , et al. Glutamine Regulates Expression of Key Transcription Factor, Signal Transduction, Metabolic Gene, and Protein Expression in a Clonal Pancreatic Beta-Cell Line. J Endocrinol. 2006 Sep;190(3):719-27.

[2]. Newsholme P, et al. Glutamine and glutamate as vital metabolites. Braz J Med Biol Res. 2003 Feb;36(2):153-63. Epub 2003 Jan 29.

[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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