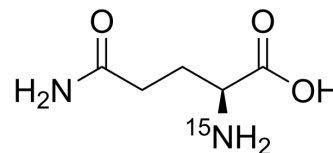


L-Glutamine-¹⁵N

Cat. No.:	HY-N0390S
CAS No.:	80143-57-3
Molecular Formula:	C ₅ H ₁₀ N ¹⁵ NO ₃
Molecular Weight:	147.14
Target:	mGluR; Ferroptosis; Endogenous Metabolite
Pathway:	GPCR/G Protein; Neuronal Signaling; Apoptosis; Metabolic Enzyme/Protease
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 20.83 mg/mL (141.57 mM; ultrasonic and warming and heat to 60°C)
H₂O : 20.83 mg/mL (141.57 mM; ultrasonic and warming and heat to 60°C)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	6.7962 mL	33.9812 mL	67.9625 mL
	5 mM	1.3592 mL	6.7962 mL	13.5925 mL
	10 mM	0.6796 mL	3.3981 mL	6.7962 mL

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

BIOLOGICAL ACTIVITY

Description

L-Glutamine-¹⁵N is the ¹⁵N-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.

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

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