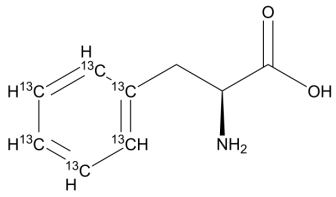
L-Phenylalanine-$^{13}C_6$

Cat. No.:	HY-N0215S8
CAS No.:	180268-82-0
Molecular Formula:	$C_3{}^{13}C_6H_{11}NO_2$
Molecular Weight:	171.15
Target:	Calcium Channel; iGluR; Endogenous Metabolite; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease; Others
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 6.67 mg/mL (38.97 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	5.8428 mL	29.2141 mL	58.4283 mL
	5 mM	1.1686 mL	5.8428 mL	11.6857 mL
	10 mM	0.5843 mL	2.9214 mL	5.8428 mL

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

BIOLOGICAL ACTIVITY

Description

L-Phenylalanine-$^{13}C_6$ is the ^{13}C-labeled L-Phenylalanine. L-Phenylalanine ((S)-2-Amino-3-phenylpropionic acid) is an essential amino acid isolated from Escherichia coli. L-Phenylalanine is a α2δ subunit of voltage-dependent Ca+ channels antagonist with a Ki of 980 nM. L-phenylalanine is a competitive antagonist for the glycine- and glutamate-binding sites of N-methyl-D-aspartate receptors (NMDARs) (KB of 573 μM) and non-NMDARs, respectively. L-Phenylalanine is widely used in the production of food flavors and pharmaceuticals[1][2][3][4].

IC_{50} & Target

NMDA Receptor

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.

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