L-Phenylalanine-3-^{13}C

Cat. No.: HY-N0215S7

CAS No.: 136056-02-5

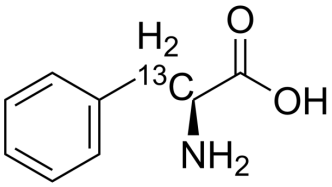
Molecular Formula: $C_8{}^{13}CH_{11}NO_2$

Molecular Weight: 166.18

Target: Calcium Channel; iGluR; Endogenous Metabolite

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; 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 : 100 mg/mL (601.76 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.0176 mL	30.0879 mL	60.1757 mL
	5 mM	1.2035 mL	6.0176 mL	12.0351 mL
	10 mM	0.6018 mL	3.0088 mL	6.0176 mL

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

BIOLOGICAL ACTIVITY

Description

L-Phenylalanine-3-^{13}C 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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