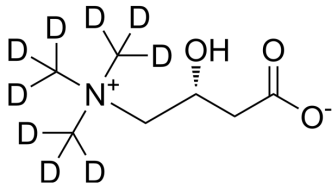
L-Carnitine-d_9

Cat. No.:	HY-B0399S
CAS No.:	126827-79-0
Molecular Formula:	$C_7H_6D_9NO_3$
Molecular Weight:	170.25
Target:	Endogenous Metabolite; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H2O : ≥ 50 mg/mL (293.69 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.8737 mL	29.3686 mL	58.7372 mL
5 mM	1.1747 mL	5.8737 mL	11.7474 mL
10 mM	0.5874 mL	2.9369 mL	5.8737 mL

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

BIOLOGICAL ACTIVITY

Description

L-Carnitine-d_9 is the deuterium labeled L-Carnitine. L-Carnitine (Levocarnitine) is an endogenous molecule involved in fatty acid metabolism, biosynthesized within the human body using amino acids: L-lysine and L-methionine, as substrates. L-Carnitine functions to transport long chain fatty acyl-CoAs into the mitochondria for degradation by β-oxidation. L-carnitine can ameliorate metabolic imbalances in many inborn errors of metabolism[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]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Ferreira GC, et al. L-Carnitine and Acetyl-L-carnitine Roles and Neuroprotection in Developing Brain. Neurochem Res. 2017;42(6):1661-1675.

[3]. Miyagawa T, et al. Effects of oral L-carnitine administration in narcolepsy patients: a randomized, double-blind, cross-over and placebo-controlled trial. PLoS One. 2013;8(1):e53707.

[4]. Abd Eldaim MA, et al. l-Carnitine-induced amelioration of HFD-induced hepatic dysfunction is accompanied by a reduction in hepatic TNF-α and TGF-β1. Biochem Cell Biol. 2018;96(6):713-725.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA