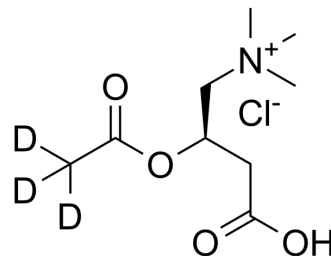


Acetyl-L-carnitine-d3-1 hydrochloride

Cat. No.:	HY-B0762S1
CAS No.:	362049-62-5
Molecular Formula:	C ₉ H ₁₅ D ₃ ClNO ₄
Molecular Weight:	242.72
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
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	H ₂ O : 250 mg/mL (1029.99 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		4.1200 mL	20.5999 mL	41.1997 mL
		5 mM		0.8240 mL	4.1200 mL	8.2399 mL
	10 mM		0.4120 mL	2.0600 mL	4.1200 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (412.00 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	Acetyl-L-carnitine-d3-1 (O-Acetyl-L-carnitine-d3-1) hydrochloride is the deuterium labeled Acetyl-L-carnitine hydrochloride. Acetyl-L-carnitine hydrochloride is a blood-brain permeable acetyl ester of the amino acid L-carnitine found in the body. Acetyl-L-carnitine hydrochloride is often used as a dietary supplement, and exhibits anti-stress-related psychiatric disorders [1].
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]. Marcon M, et al. Acetyl-L-carnitine as a putative candidate for the treatment of stress-related psychiatric disorders: Novel evidence from a zebrafish model. *Neuropharmacology.* 2019 May 15;150:145-152.

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

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