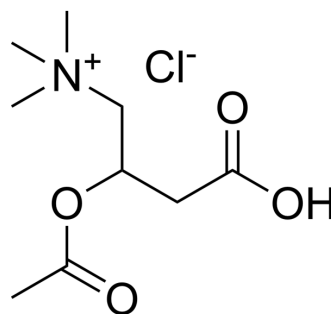


## (±)-Acetylcarnitine chloride

<b>Cat. No.:</b>	HY-100907
<b>CAS No.:</b>	2504-11-2
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>18</sub> ClNO <sub>4</sub>
<b>Molecular Weight:</b>	239.7
<b>Target:</b>	Cholinesterase (ChE)
<b>Pathway:</b>	Neuronal Signaling
<b>Storage:</b>	-20°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<sub>2</sub>O : 100 mg/mL (417.19 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.1719 mL	20.8594 mL	41.7188 mL
	5 mM	0.8344 mL	4.1719 mL	8.3438 mL
	10 mM	0.4172 mL	2.0859 mL	4.1719 mL

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

### BIOLOGICAL ACTIVITY

#### Description

(±)-Acetylcarnitine chloride (Acetyl dl-carnitine chloride) is a weak cholinergic agonist with cholinergic properties. (±)-Acetylcarnitine chloride is an important intermediate in lipid metabolism<sup>[1][2]</sup>.

#### In Vitro

Large increases of Acetylcarnitine concentration during the flight of the blowfly and the presence of an active Acetylcarnitine transferase indicate that Acetylcarnitine is important in carbohydrate metabolism. Acetylcarnitine has been synthesized by the choline acetylase system isolated from brain tissue and is destroyed by cholinesterase<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

In rats, the infusion of 2 mg (±)-Acetylcarnitine chloride decreases blood flow through the hind limb vasculature 50%. (±)-Acetylcarnitine chloride also potentiates the inhibitory effect of adrenaline on the isolated rabbit duodenum<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. RA Chalmers, et al. Urinary excretion of l-carnitine and acylcarnitines by patients with disorders of organic acid metabolism: evidence for secondary insufficiency of l-

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carnitine. *Pediatr Res.* 1984 Dec;18(12):1325-8.

[2]. R L Sass, et al. Acetylcarnitine: on the relationship between structure and function. *Biochem Biophys Res Commun.* 1973 Dec 10;55(3):736-42.

[3]. R T Louis-Ferdinand, et al. Flow decrease through rat hind limb vasculature by (plus or minus)-carnitine, (plus or minus)-acetylcarnitine and (plus or minus)-chloroacetylcarnitine chlorides. *J Pharm Pharmacol.* 1970 Sep;22(9):704-5.

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

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