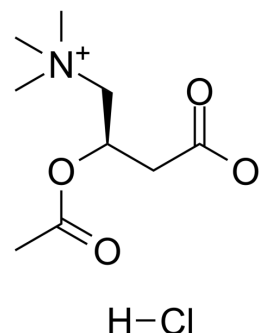


## Acetyl-L-carnitine hydrochloride

<b>Cat. No.:</b>	HY-B0762
<b>CAS No.:</b>	5080-50-2
<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>	Endogenous Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	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<sub>2</sub>O : 100 mg/mL (417.19 mM; Need ultrasonic)  
DMSO : 31.25 mg/mL (130.37 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	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.

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 100 mg/mL (417.19 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (8.68 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (8.68 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (8.68 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Acetyl-L-carnitine (O-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<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

Human Endogenous Metabolite

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## CUSTOMER VALIDATION

- Cytotechnology. 16 January 2022.
- Research Square Preprint. 2024 Feb 15.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. 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.

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

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