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**Product Data Sheet**

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Product Name: (±)-Octanoylcarnitine chloride

Cat. No.: GC13909

**Chemical Properties**

Cas. No. 18822-86-1

Chemical Name (S)-3-carboxy-N,N,N-trimethyl-2-(octanoyloxy)propan-1-aminium chloride

SMILES O=C(CCCCCC)O[C@@H](CC(O)=O)C[N+](C)(C)C.[Cl-]Formula  $C_{15}H_{30}ClNO_4$  M.Wt 323.86Solubility  $\geq 12.6\text{mg/mL}$  in DMSO Storage Desiccate at RT

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure (±)-Octanoylcarnitine chloride

**Background**

(±)-Octanoylcarnitine chloride is the chloride salt form of Octanoylcarnitine. Octanoylcarnitine is an esterification product of octanoic acid and carnitine, and is mainly used as a tool compound in research related to fatty acid oxidation, mitochondrial metabolism, and acylcarnitine transport/utilization. (±)-Octanoylcarnitine chloride at 0.5-1mM serves as a substrate for the fatty acid oxidation (FAO) pathway and is used to assess the mitochondrial capacity to utilize fatty acids for energy production<sup>[1][2]</sup>.

## References:

[1] Timón-Gómez A, Doerrier C, Sumbalová Z, et al. Bioenergetic profiles and respiratory control in mitochondrial physiology: Precision analysis of oxidative phosphorylation. *Exp Physiol.* 2026;111(1):179-211.

[2] Nelson WB, Pfeifer BS, Lovell AR, et al. Menstrual cycle influence on skeletal muscle mitochondrial respiration in humans. *Physiol Rep.* 2025;13(13):e70458.

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

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