

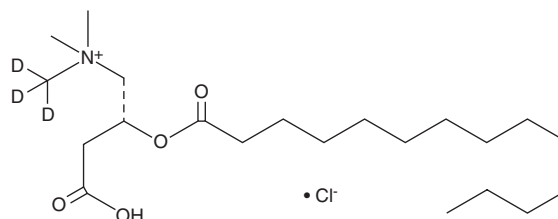
# PRODUCT INFORMATION



## Myristoyl-L-carnitine-d<sub>3</sub> (chloride)

Item No. 26581

**CAS Registry No.:** 1334532-25-0  
**Formal Name:** (R)-3-carboxy-N,N-dimethyl-N-(methyl-d<sub>3</sub>)-2-(tetradecanoyloxy)propan-1-aminium, monochloride  
**Synonyms:** CAR 14:0-d<sub>3</sub>, C14:0 Carnitine-d<sub>3</sub>, L-Carnitine myristoyl ester-d<sub>3</sub>, L-Carnitine tetradecanoyl ester-d<sub>3</sub>, L-Myristoylcarnitine-d<sub>3</sub>, L-Tetradecanoylcarnitine-d<sub>3</sub>, Tetradecanoyl-L-carnitine-d<sub>3</sub>  
**MF:** C<sub>21</sub>H<sub>39</sub>D<sub>3</sub>NO<sub>4</sub> • Cl  
**FW:** 411.0  
**Chemical Purity:** ≥95% (Myristoyl-L-carnitine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Myristoyl-L-carnitine-d<sub>3</sub> (chloride) is intended for use as an internal standard for the quantification of myristoyl-L-carnitine (Item No. 26559) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Myristoyl-L-carnitine-d<sub>3</sub> (chloride) is supplied as a solid. A stock solution may be made by dissolving the myristoyl-L-carnitine-d<sub>3</sub> (chloride) in the solvent of choice, which should be purged with an inert gas. Myristoyl-L-carnitine-d<sub>3</sub> (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of myristoyl-L-carnitine-d<sub>3</sub> (chloride) in ethanol and DMF is approximately 20 mg/ml and approximately 14 mg/ml in DMSO.

### Description

Myristoyl-L-carnitine is a naturally occurring long-chain acylcarnitine.<sup>1</sup> Plasma levels of myristoyl-L-carnitine are decreased in patients with chronic fatigue syndrome and increased in patients with end-stage renal disease.<sup>1,2</sup>

### References

1. Reuter, S.E., Evans, A.M., Faull, R.J., *et al.* Impact of haemodialysis on individual endogenous plasma acylcarnitine concentrations in end-stage renal disease. *Ann. Clin. Biochem.* **42**(Pt 5), 387-393 (2005).
2. Reuter, S.E. and Evans, A.M. Long-chain acylcarnitine deficiency in patients with chronic fatigue syndrome. Potential involvement of altered carnitine palmitoyltransferase-I activity. *J. Intern. Med.* **270**(1), 76-84 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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