

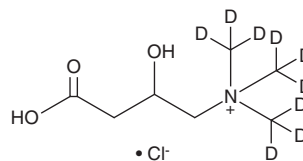
PRODUCT INFORMATION



DL-Carnitine-d₉ (chloride)

Item No. 26566

CAS Registry No.: 1219386-75-0
Formal Name: 3-carboxy-2-hydroxy-N,N,N-tri(methyl-d₃)-1-propanaminium, monochloride
Synonym: (±)-Carnitine-d₉
MF: C₇H₇D₉NO₃ • Cl
FW: 206.7
Chemical Purity: ≥95% (Carnitine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₉); ≤1% d₀
Supplied as: A crystalline 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

DL-Carnitine-d₉ (chloride) is intended for use as an internal standard for the quantification of carnitine (Item Nos. 21489 | 16749) 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).

DL-Carnitine-d₉ (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the DL-carnitine-d₉ (chloride) in the solvent of choice. DL-Carnitine-d₉ (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of DL-carnitine-d₉ (chloride) in these solvents is approximately 25, 20, and 15 mg/ml, respectively.

Description

DL-Carnitine is a racemic mixture of L- and D-carnitine. Unlike L-carnitine, DL-carnitine (60 and 120 μM) does not increase glucose or urea production from L-glutamine (Item No. 23716) in isolated rat liver and does not compensate for carnitine deficiency in the skeletal muscle of rats receiving a carnitine-deficient diet.^{1,2} DL-Carnitine induces tetanic fade in stimulated isolated rat phrenic nerve diaphragm preparations when used at a concentration of 60 μM, an effect that can be blocked by choline.³

References

1. Lopes, G., Gazola, V.A., Galende, S.B., *et al.* Comparative acute effects of *l*-carnitine and *dl*-carnitine on hepatic catabolism of *l*-alanine and *l*-glutamine in rats. *Acta Pharmacol. Sin.* **25(10)**, 1257-1261 (2004).
2. Spasov, A.A., Iezhitsa, I.N., Kravchenko, M.S., *et al.* Effects of L-, D-, and DL-carnitine on morphometric parameters of skeletal muscle and exercise performance of laboratory animals receiving carnitine-deficient diet. *Bull. Exp. Biol. Med.* **142(4)**, 458-460 (2006).
3. Lopes, G., Bazotte, R.B., Curi, R., *et al.* L- and DL-carnitine induce tetanic fade in rat neuromuscular preparation. *Braz. J. Med. Biol. Res.* **36(9)**, 1255-1262 (2003).

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.

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