

PRODUCT INFORMATION



3-Methylcrotonyl-L-carnitine-d₃ (chloride)

Item No. 26575

Formal Name: (2R)-3-carboxy-N,N-dimethyl-N-(methyl-d₃)-2-[(3-methyl-1-oxo-2-buten-1-yl)oxy]-1-propanaminium, monochloride

Synonyms: CAR 5:1-d₃, C5:1 Carnitine-d₃, L-Carnitine 3-methylcrotonyl ester-d₃, (R)-3-Methyl-2-butenoyl-L-carnitine-d₃, L-3-Methylcrotonylcarnitine-d₃

MF: C₁₂H₁₉D₃NO₄ • Cl

FW: 282.8

Chemical Purity: ≥98% (3-Methylcrotonyl-L-carnitine)

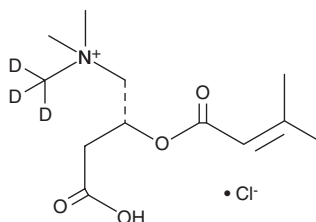
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

3-Methylcrotonyl-L-carnitine-d₃ is intended for use as an internal standard for the quantification of 3-methylcrotonyl-L-carnitine 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).

3-Methylcrotonyl-L-carnitine-d₃ (chloride) is supplied as a solid. A stock solution may be made by dissolving the 3-methylcrotonyl-L-carnitine-d₃ (chloride) in the solvent of choice. 3-Methylcrotonyl-L-carnitine-d₃ (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 3-methylcrotonyl-L-carnitine-d₃ (chloride) in ethanol is approximately 25 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

3-Methylcrotonyl-L-carnitine-d₃ is intended for use as an internal standard for the quantification of 3-methylcrotonyl-L-carnitine by GC- or LC-MS. 3-Methylcrotonyl-L-carnitine is a derivative of L-carnitine (Item No. 21489) and a leucine metabolite.¹ Hepatic and plasma levels of 3-methylcrotonyl-carnitine are increased in mice with diabetes induced by streptozotocin (Item No. 13104).

Reference

1. Giesbertz, P., Ecker, J., Haag, A., *et al.* An LC-MS/MS method to quantify acylcarnitine species including isomeric and odd-numbered forms in plasma and tissues. *J. Lipid Res.* **56**(10), 2029-2039 (2015).

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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