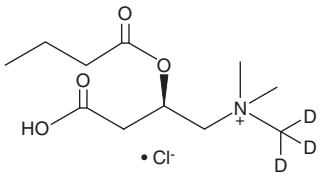
PRODUCT INFORMATION

Butyryl-L-carnitine-d_3 (chloride)

Item No. 26567

CAS Registry No.:	1334532-21-6
Formal Name:	3-carboxy-N,N-dimethyl-N-(methyl-d_3)-2R-(1-oxobutoxy)-1-propanaminium, monochloride
Synonyms:	L-Butyrylcarnitine-d_3, CAR 4:0-d_3, C4:0 Carnitine-d_3, L-Carnitine butyryl ester-d_3
MF:	$C_{11}H_{19}D_3NO_4$ • Cl
FW:	270.8
Chemical Purity:	≥98% (Butyryl-L-carnitine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
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

Butyryl-L-carnitine-d_3 (chloride) is intended for use as an internal standard for the quantification of butyryl-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).

Butyryl-L-carnitine-d_3 (chloride) is supplied as a solid. A stock solution may be made by dissolving the butyryl-L-carnitine-d_3 (chloride) in the solvent of choice, which should be purged with an inert gas. Butyryl-L-carnitine-d_3 (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of butyryl-L-carnitine-d_3 (chloride) in ethanol and DMF is approximately 20 mg/ml and approximately 10 mg/ml in DMSO.

Description

Butyryl-L-carnitine is a butyrate ester of carnitine.[1] It is an inhibitor of intestinal transporters, blocking carnitine uptake by the carnitine transporter and glycine transport by the amino acid transporter in human retinal pigment epithelial (HRPE) cells (IC_{50}s = 1.5 µM and 4.6 mM, respectively).

Reference

1. Srinivas, S.R., Prasad, P.D., Umapathy, N.S., *et al.* Transport of butyryl-L-carnitine, a potential prodrug, *via* the carnitine transporter OCTN2 and the amino acid transporter $ATB^{0,+}$. *Am. J. Physiol. Gastrointest. Liver Physiol.* **293(5)**, G1046-G1053 (2007).

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