

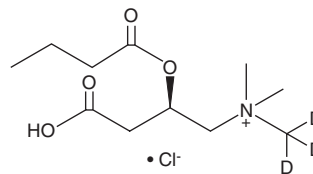
# PRODUCT INFORMATION



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

Item No. 26567

**CAS Registry No.:** 1334532-21-6  
**Formal Name:** 3-carboxy-N,N-dimethyl-N-(methyl-d<sub>3</sub>)-2R-(1-oxobutoxy)-1-propanaminium, monochloride  
**Synonyms:** L-Butyrylcarnitine-d<sub>3</sub>, CAR 4:0-d<sub>3</sub>, C4:0 Carnitine-d<sub>3</sub>, L-Carnitine butyryl ester-d<sub>3</sub>  
**MF:** C<sub>11</sub>H<sub>19</sub>D<sub>3</sub>NO<sub>4</sub> • Cl  
**FW:** 270.8  
**Chemical Purity:** ≥98% (Butyryl-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:** ≥2 years



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

### Laboratory Procedures

Butyryl-L-carnitine-d<sub>3</sub> (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<sub>3</sub> (chloride) is supplied as a solid. A stock solution may be made by dissolving the butyryl-L-carnitine-d<sub>3</sub> (chloride) in the solvent of choice, which should be purged with an inert gas. Butyryl-L-carnitine-d<sub>3</sub> (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of butyryl-L-carnitine-d<sub>3</sub> (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.<sup>1</sup> 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<sub>50</sub>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<sup>0+</sup>. *Am. J. Physiol. Gastrointest. Liver Physiol.* **293**(5), G1046-G1053 (2007).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM