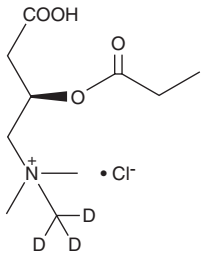
PRODUCT INFORMATION

Propionyl-L-carnitine-d_3 (chloride)

Item No. 26579

CAS Registry No.: 1334532-19-2
Formal Name: (2R)-3-carboxy-N,N-dimethyl-N-(methyl-d_3)-2-(1-oxopropoxy)-1-propanaminium, monochloride
Synonyms: C3:0 Carnitine-d_3, CAR 3:0-d_3, L-Carnitine propionyl ester-d_3, Levocarnitine propionate-d_3, L-Propionylcarnitine-d_3
MF: $C_{10}H_{17}D_3NO_4 \bullet Cl$
FW: 256.7
Chemical Purity: ≥98% (Propionyl-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

Propionyl-L-carnitine-d_3 (chloride) is intended for use as an internal standard for the quantification of propionyl-L-carnitine (Item No. 9001873) 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).

Propionyl-L-carnitine-d_3 (chloride) is supplied as a solid. A stock solution may be made by dissolving the propionyl-L-carnitine-d_3 (chloride) in the solvent of choice. Propionyl-L-carnitine-d_3 (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of propionyl-L-carnitine-d_3 (chloride) in these solvents is approximately 25, 20, and 15 mg/ml, respectively.

Description

Propionyl-L-carnitine is a naturally occurring carnitine derivative formed by carnitine acetyltransferase during β-oxidation of uneven chain fatty acids.[1] Propionyl-L-carnitine increases the basal release of prostaglandin E_2 (PGE_2; Item No. 14010) and 6-keto Prostaglandin $F_{1\alpha}$ (Item No. 15210) in carrageenan-stimulated isolated rat peritoneal cells contaminated with neutrophils and increases the basal release of thromboxane B_2 (TXB_2; Item No. 19030) in non-contaminated cells.[1] It reduces the production of reactive oxygen species (ROS) and decreases the expression of NADPH oxidase 2 (NOX2), NOX4, and ICAM-1 in human umbilical vein endothelial cells (HUVECs). It also increases the rate of revascularization and the hind limb vascular area in a rabbit model of hind limb ischemia when administered at a dose of 10 mg per animal.[2] Propionyl-L-carnitine reduces mitochondrial dysfunction induced by ischemia, preventing mitochondrial calcium overload, and depletion of ATP tissue stores in a rabbit model of ischemia.[3]

References

1. Garrelds, I.M., Elliott, G.R., Pruimboom, W.M., *et al. Mediators Inflamm.* **2(7)**, S57-S62 (1993).
2. Stasi, M.A., Scioli, M.G., Arcuri, G., *et al. Arterioscler. Thromb. Vasc. Biol.* **30(3),** 426-435 (2010).
3. Ferrari, R., Ceconi, C., Cargnoni, A., *et al. Cardiovasc. Drugs Ther.* **5(Suppl 1),** 57-65 (1991).

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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