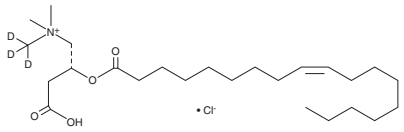
PRODUCT INFORMATION

Oleoyl-L-carnitine-d_3 (chloride)

Item No. 26578

Formal Name:	(R)-3-carboxy-N,N-dimethyl-N-(methyl-d_3)-2-(oleoyloxy)propan-1-aminium, monochloride
Synonyms:	CAR 18:1-d_3, C18:1 Carnitine-d_3, L-Carnitine octadecanoyl ester-d_3, L-Carnitine oleoyl ester-d_3, Octadecanoyl-L-carnitine-d_3, L-Octadecanoylcarnitine-d_3, L-Oleoylcarnitine-d_3
MF:	$C_{25}H_{45}D_3NO_4 \bullet Cl$
FW:	465.1
Chemical Purity:	≥85% (Oleoyl-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

Oleoyl-L-carnitine-d_3 (chloride) is intended for use as an internal standard for the quantification of oleoyl-L-carnitine by (Item Nos. 26557 | 39014) 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).

Oleoyl-L-carnitine-d_3 (chloride) is supplied as a solid. A stock solution may be made by dissolving the oleoyl-L-carnitine-d_3 (chloride) in the solvent of choice. Oleoyl-L-carnitine-d_3 (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 oleoyl-L-carnitine-d_3 (chloride) in ethanol and DMF is approximately 20 mg/ml and approximately 14 mg/ml in DMSO.

Description

Oleoyl-L-carnitine is a long-chain acylcarnitine and an inhibitor of glycine transporter 2 (GlyT2; IC_{50} = 340 nM).[1,2] It is selective for GlyT2 over GlyT1 (IC_{50} = >10,000 nM). Plasma levels of oleoyl-L-carnitine are increased in patients with chronic kidney disease or end-stage renal disease receiving incident hemodialysis and these are associated with cardiovascular mortality.[1]

References

1. Kalim, S., Clish, C.B., Wenger, J., *et al*. A plasma long-chain acylcarnitine predicts cardiovascular mortality in incident dialysis patients. *J. Am. Heart Assoc*. **2(6)**, e000542 (2013).
2. Carland, J.E., Mansfield, R.E., Ryan, R.M., *et al*. Oleoyl-L-carnitine inhibits glycine transport by GlyT2. *Br. J. Pharmacol*. **168(4)**, 891-902 (2013).

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