



Myristoyl-L-carnitine-14,14,14-d₃ (chloride)

Cat. No.:	OB0626WX-1526
Appearance:	Solid
Purity:	≥99% (deuterated forms, d1-d3)
Identity:	Confirmed by NMR and TLC.
Size:	1 mg; 5 mg; 10 mg; 20 mg

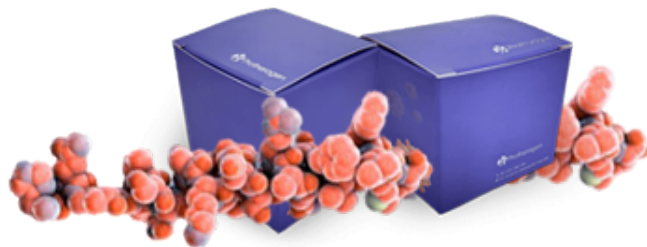
This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	Myristoyl-L-carnitine-14,14,14-d ₃ is a per-deuterated stable isotope internal standard optimized for the quantitative mass spectrometric tracking of native myristoyl-L-carnitine. The corresponding unlabelled target molecule is a naturally occurring long-chain acylcarnitine that serves as a vital metabolic indicator, demonstrating significant depletions in chronic fatigue syndrome while expanding marker profiles during end-stage renal pathology.
Labeling	Stable isotope-labeled
Synonyms	(2R)-3-carboxy-N,N,N-trimethyl-2-[(1-oxotetradecyl)oxy-14,14,14-d ₃]-1-propanaminium, monochloride; CAR 14:0-d ₃ ; C14:0 Carnitine-d ₃ ; L-Carnitine myristoyl ester-d ₃ ; L-Carnitine tetradecanoyl ester-d ₃ ; L-Myristoylcarnitine-d ₃ ; Tetradecanoyl-L-carnitine-d ₃ ; L-Tetradecanoylcarnitine-d ₃
Formula	C ₂₁ H ₃₉ D ₃ NO ₄ • Cl
Formula Weight	411

Specification

Solubility in DMSO	14 mg/mL
Solubility in Ethanol	20 mg/mL
Solubility in DMF	20 mg/mL
InChI	InChI=1S/C21H41NO4.ClH/c1-5-6-7-8-9-10-11-12-13-14-15-16-21(25)26-19(17-20(23)24)18-22(2,3)4;/h19H,5-18H2,1-4H3;1H/t19-;/m1./s1/i1D3;

**InChI Key**

TWGWHMYOGIGWDM-KDVTVOGPSA-N

Canonical SMILESOC(C[C@H](C[N+](C)(C)C)OC(CCCCCCCCCCCCC([2H])([2H])([2H])=O)=O).[Cl-]**Stability**

1 year

Storage

Storage at -20°C.

Applications

Myristoyl-L-carnitine-14,14,14-d₃ (chloride) serves as a site-specifically deuterated medium-to-long chain acylcarnitine internal standard optimized for mass spectrometry dilution assays, enabling precise quantification of native acylcarnitines and tracking mitochondrial fatty acid transport dynamics.