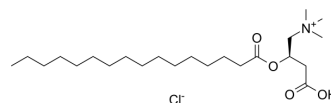


L-Palmitoylcarnitine chloride

Cat. No.:	HY-113147A
CAS No.:	18877-64-0
Molecular Formula:	C ₂₃ H ₄₆ ClNO ₄
Molecular Weight:	436.07
Target:	Potassium Channel; Endogenous Metabolite
Pathway:	Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (114.66 mM; Need ultrasonic)					
	H ₂ O : < 0.1 mg/mL (insoluble)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.2932 mL	11.4660 mL	22.9321 mL
5 mM			0.4586 mL	2.2932 mL	4.5864 mL	
	10 mM		0.2293 mL	1.1466 mL	2.2932 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.08 mg/mL (4.77 mM); Suspended solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.08 mg/mL (4.77 mM); Suspended solution; Need ultrasonic					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.08 mg/mL (4.77 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	L-Palmitoylcarnitine chloride, a long-chain acylcarnitine and a fatty acid metabolite, accumulates in the sarcolemma and deranges the membrane lipid environment during ischaemia. L-Palmitoylcarnitine chloride inhibits K _{ATP} channel activity, without affecting the single channel conductance, through interaction with Kir6.2 ^[1] .	
IC₅₀ & Target	Kir6.2	Human Endogenous Metabolite
In Vitro	L-Palmitoylcarnitine (1 μM) inhibits KATP channel activity, without affecting the single channel conductance, through interaction with Kir6.2. L-Palmitoylcarnitine simultaneously enhances the ATP sensitivity of the channel (IC ₅₀ fell from 62 to	

30 μ M)^[1].

Modulation of the membrane lipid environment caused by L-Palmitoylcarnitine alters the K_{ATP} channel function mainly through the interaction with endogenous PI cascade, especially PIP₂^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Prod Bioprospect. 2023 Nov 8;13(1):48.

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REFERENCES

[1]. Haruna T, et al. Alteration of the membrane lipid environment by L-palmitoylcarnitine modulates K(ATP) channels in guinea-pig ventricular myocytes. Pflugers Arch. 2000;441(2-3):200-207.

Caution: Product has not been fully validated for medical applications. For research use only.

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