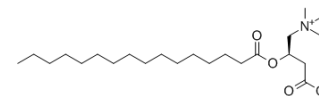


L-Palmitoylcarnitine

Cat. No.:	HY-113147		
CAS No.:	2364-67-2		
Molecular Formula:	C ₂₃ H ₄₅ NO ₄		
Molecular Weight:	399.61		
Target:	Potassium Channel; Endogenous Metabolite		
Pathway:	Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (625.61 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.5024 mL	12.5122 mL	25.0244 mL
		5 mM	0.5005 mL	2.5024 mL	5.0049 mL
10 mM		0.2502 mL	1.2512 mL	2.5024 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.21 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (5.21 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	L-Palmitoylcarnitine, a long-chain acylcarnitine and a fatty acid metabolite, accumulates in the sarcolemma and deranges the membrane lipid environment during ischaemia. L-Palmitoylcarnitine 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 K _{ATP} 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 μM) ^[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.

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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