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DATASHEET

Propionyl-L-carnitine hydrochloride

Product overview

Name	Propionyl-L-carnitine hydrochloride
Cat No	HB4035
Purity	>98%
Description	Naturally occurring carnitine derivative

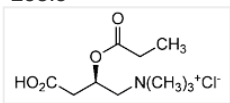
Biological Data

Biological description	Naturally occurring carnitine derivative formed by carnitine acetyltransferase during beta-oxidation of uneven chain fatty acids, with high affinity for muscular carnitine transferase. Increases cellular carnitine content, allowing free fatty acid transport into the mitochondria. Stimulates energy production in ischaemic muscles by increasing citric acid cycle flux and stimulating pyruvate dehydrogenase activity. Important for mitochondrial metabolism and energy regulation. Regulates the metabolism of both carbohydrates and lipids, leading to an increase of ATP generation. Selectively inhibits in vitro and ex vivo platelet-activating factor (PAF) synthesis from human neutrophils. Antioxidant. Shows free radical scavenging activity. Decreases the expression of inducible nitric oxide synthase (iNOS/NOS II) and NADPH-oxidase 4-mediated reactive oxygen species production in human umbilical vascular endothelial cells. Shows beneficial cardiovascular effects. Improves body weight, food intake, adiposity and insulin resistance in Type 2 diabetes. Stimulates endothelial nitric oxide (eNOS/NOS III) and increased NO production, via AMPK/Src-mediated signaling that leads to activation of PI3 kinase and Akt.
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Solubility & Handling

Storage instructions	+4 °C
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Molecular Weight	253.8
Chemical structure	 <p>The chemical structure shows a propionyl group (CH3-CH2-C(=O)-) attached to the L-carnitine backbone. The carnitine backbone consists of a 3-hydroxybutyrate moiety linked to a trimethylammonium cation. The full structure is HO2C-CH2-CH(O-C(=O)-CH2-CH3)-CH2-N+(CH3)3 Cl-.</p>
CAS Number	119793-66-7
PubChem identifier	0
SMILES	[Cl-].CCC(=O)O[C@H](CC(O)=O)C[N+](C)(C)C
InChiKey	KTFMPDDJYRFWQE-DDWIOCJRSA-N
Appearance	White to off-white solid