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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.

Solubility & Handling

Storage instructions

Storage of solutions

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Shipping Conditions

Stable for ambient temperature shipping. Follow storage instructions on receipt.

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 **Chemical structure** 253.8 119793-66-7

CAS Number PubChem identifier

SMILES InChiKey **Appearance**

[CI-].CCC(=O)O[C@H](CC(O)=O)C[N+](C)(C)CKTFMPDDJYRFWQE-DDWIOCJRSA-N

White to off-white solid