

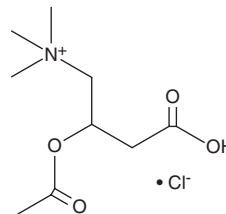
PRODUCT INFORMATION



Acetyl-DL-carnitine (chloride)

Item No. 31015

CAS Registry No.: 2504-11-2
Formal Name: 2-(acetyloxy)-3-carboxy-N,N,N-trimethyl-1-propanaminium, monochloride
Synonyms: (±)-Acetylcarnitine, DL-Acetylcarnitine, CAR 2:0, C2:0 Carnitine, DL-Carnitine acetyl ester
MF: C₉H₁₈NO₄ • Cl
FW: 239.7
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Acetyl-DL-carnitine (chloride) is supplied as a solid. A stock solution may be made by dissolving the acetyl-DL-carnitine (chloride) in the solvent of choice. Acetyl-DL-carnitine (chloride) is soluble in organic solvents such as methanol and acetonitrile, which should be purged with an inert gas. Acetyl-DL-carnitine (chloride) is slightly soluble in acetonitrile. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Acetyl-DL-carnitine is a racemic mixture of the short-chain acylcarnitine acetyl-D-carnitine and the mitochondrial metabolite acetyl-L-carnitine (Item No. 16948). It increases the oxidation rate of the branched-chain 2-oxo acid 3-methyl-2-butanoate in isolated rat muscle mitochondria in the absence of carnitine when used at a concentration of 1 mM.¹ Acetyl-DL-carnitine decreases the hind limb vasculature blood flow rate in rats in a dose-dependent manner.² It decreases the levels of palmitic acid (Item No. 10006627) and oleic acid (Item Nos. 90260 | 24659) in the cerebral cortex during the recovery period in a dog model of hypoglycemic brain injury induced by insulin.³

References

1. Veerkamp, J.H., van Moerkerk, H.T.B., and Wagenmakers, A.J.M. Interaction of short-chain and branched-chain fatty acids and their carnitine and CoA esters and of various metabolites and agents with branched-chain 2-oxo acid oxidation in rat muscle and liver mitochondria. *Int. J. Biochem.* **17(9)**, 967-974 (1985).
2. Louis-Ferdinand, R.T., Cutroneo, K.R., Kosegarten, D.C., *et al.* Flow decrease through rat hind limb vasculature by (plus or minus)-carnitine, (plus or minus)-acetylcarnitine and (plus or minus)-chloroacetylcarnitine chlorides. *J. Pharm. Pharmacol.* **22(9)**, 704-705 (1970).
3. Benzi, G., Gorini, A., Dossena, M., *et al.* Recovery after hypoglycemic brain injury. Action of some biological substances on the cerebral metabolism. *Biochem. Pharmacol.* **32(6)**, 1083-1091 (1983).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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