

Product Data Sheet

Product Name: Acetyl coenzyme A-d 3

Cat. No.: GC80478

Chemical Properties

Cas. No. 121443-44-5

Formula $C_{23}H_{35}D_3N_7O_{17}P_3S$

M.Wt 812.59

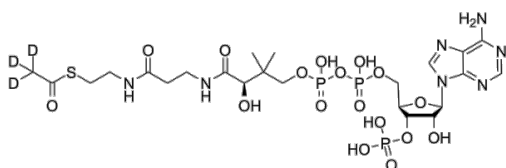
Solubility

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Acetyl coenzyme A -d 3 (Acetyl-CoA-d 3) is the deuterium labeled Acetyl coenzyme A. Acetyl-coenzyme A (Acetyl-CoA) is a membrane-impermeant central metabolic intermediate, participates in the TCA cycle and oxidative phosphorylation metabolism. Acetyl-coenzyme A, regulates various cellular mechanisms by providing (sole donor) acetyl groups to target amino acid residues for post-translational acetylation reactions of proteins. Acetyl Coenzyme A is also a key precursor of lipid synthesis [1] [2] [3] [4].

In Vitro, Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into

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drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs.

References:

- [1]. Choudhary C, et al. The growing landscape of lysine acetylation links metabolism and cell signalling. *Nat Rev Mol Cell Biol.* 2014 Aug;15(8):536-50.
- [2]. Mariño G, et al. Regulation of autophagy by cytosolic acetyl-coenzyme A. *Mol Cell.* 2014 Mar 6;53(5):710-25.
- [3]. Zhu H, et al. Cardiac autophagy is a maladaptive response to hemodynamic stress. *J Clin Invest.* 2007 Jul;117(7):1782-93.
- [4]. Pietrocola F, et al. Acetyl coenzyme A: a central metabolite and second messenger. *Cell Metab.* 2015 Jun 2;21(6):805-21.

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