

Product Data Sheet

Product Name: Diethyl succinate-13C4

Cat. No.: GC74731

Chemical Properties

Cas. No. 1628796-56-4

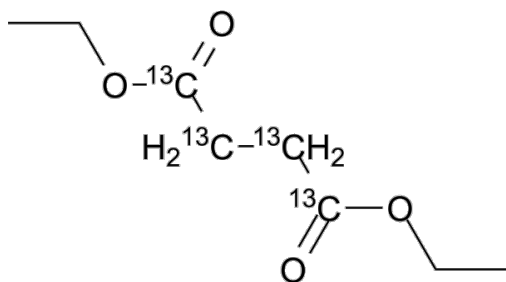
Formula C₄¹³C₄H₁₄O₄ M.Wt 178.16

Solubility Storage -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

Diethyl succinate-13C4 is the 13C labeled Diethyl succinate[1]. Diethyl succinate (Diethyl Butanedioate) is used at physiological pH and crosses biological membranes, incorporates into cells in tissue culture and is metabolized by the TCA cycle. Diethyl succinate is known to be non-toxic and used in fragrances and flavoring[2].

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

Caution: Product has not been fully validated for medical applications. For research use only.

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drugs[1].

References:

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Zacharias NM, et al. Real-time molecular imaging of tricarboxylic acid cycle metabolism in vivo by hyperpolarized 1-(13)C dietary succinate. *J Am Chem Soc*. 2012 Jan 18;134(2):934-43.

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