

Product Data Sheet

Product Name: 2-Methylcitric acid-d3

Cat. No.: GC70373

Chemical Properties

Cas. No. 146764-58-1

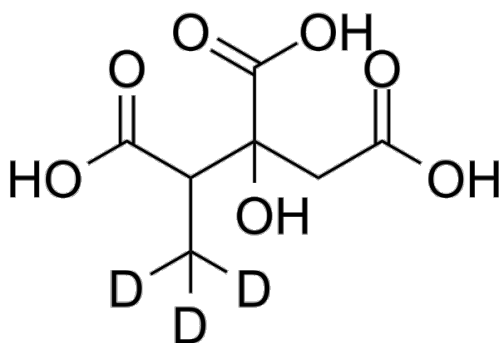
Formula $C_7H_7D_3O_7$ M.Wt 209.17

Solubility H_2O : 100 mg/mL (478.08 mM; Need ultrasonic); DMSO : 100 mg/mL (478.08 mM; Need ultrasonic; Hygroscopic DMSO has a significant impact on the solubility of product, please use newly opened DMSO) Storage 4°C, sealed storage, away from moisture

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

2-Methylcitric acid-d3 is the deuterium labeled 2-Methylcitric acid. 2-Methylcitric acid (Methylcitric acid) is an endogenous metabolite in the 2-methylcitric acid cycle. 2-Methylcitric acid accumulates in methylmalonic and propionic acidemias and acts as a marker metabolite. 2-Methylcitric acid

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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markedly inhibits ADP-stimulated and uncoupled respiration in mitochondria supported by glutamate[1].

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 drugs[1].

References:

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. Palacios S, et al. Propionyl Coenzyme A Is a Common Intermediate in the 1,2-Propanediol and Propionate Catabolic Pathways Needed for Expression of the prpBCDE Operon during Growth of *Salmonella enterica* on 1,2-Propanediol. *J Bacteriol*. 2003 May;185(9):280

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