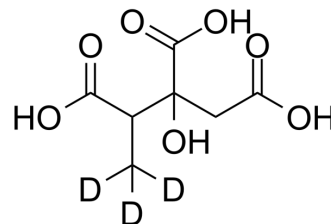


2-Methylcitric acid-d₃

Cat. No.:	HY-113371S
CAS No.:	146764-58-1
Molecular Formula:	C ₇ H ₇ D ₃ O ₇
Molecular Weight:	209.17
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	2-Methylcitric acid-d ₃ 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 markedly inhibits ADP-stimulated and uncoupled respiration in mitochondria supported by glutamate[1].
In Vitro	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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA