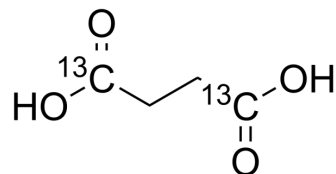


Butanedioic acid-¹³C₂

Cat. No.:	HY-N0420S3
CAS No.:	79864-95-2
Molecular Formula:	C ₂ ¹³ C ₂ H ₆ O ₄
Molecular Weight:	120.07
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Butanedioic acid- ¹³ C ₂ is the ¹³ C labeled Succinic acid[1]. Succinic acid is a potent and orally active anxiolytic agent. Succinic acid is an intermediate product of the tricarboxylic acid cycle. Succinic acid can be used as a precursor of many industrially important chemicals in food, chemical and pharmaceutical industries[2][3].
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 Feb;53(2):211-216.
- [2]. Zhang YJ, et al. Optimization of succinic acid fermentation with *Actinobacillus succinogenes* by response surface methodology (RSM). *J Zhejiang Univ Sci B.* 2012 Feb;13(2):103-10.
- [3]. A T JOHNS, et al. The production of propionic acid by decarboxylation of succinic acid in a bacterial fermentation. *Biochem J.* 194842(1):ii.
- [4]. Si Wei Chen, Anxiolytic-like effect of succinic acid in mice. *Life Sci.* 2003 Nov 773(25):3257-64.

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

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