Malic acid-d_3

Cat. No.: HY-Y1311S

CAS No.: 104596-63-6

Molecular Formula: $C_4H_3D_3O_5$

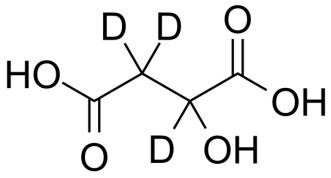
Molecular Weight: 137.11

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 100 mg/mL (729.34 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	7.2934 mL	36.4671 mL	72.9341 mL
5 mM	1.4587 mL	7.2934 mL	14.5868 mL
10 mM	0.7293 mL	3.6467 mL	7.2934 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Malic acid-d_3 is the deuterium labeled Malic acid. Malic acid (Hydroxybutanedioic acid) is a dicarboxylic acid that is naturally found in fruits such as apples and pears. It plays a role in many sour or tart foods[1][2].

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]. Dai Z, et al. Current advance in biological production of malic acid using wild type and metabolic engineered strains. Bioresour Technol. 2018 Jun;258:345-353.

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