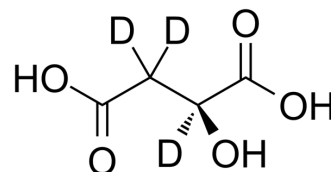


## (S)-Malic acid-d<sub>3</sub>

<b>Cat. No.:</b>	HY-Y1069S		
<b>CAS No.:</b>	59652-74-3		
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>3</sub> D <sub>3</sub> O <sub>5</sub>		
<b>Molecular Weight:</b>	137.11		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### BIOLOGICAL ACTIVITY

<b>Description</b>	(S)-Malic acid-d <sub>3</sub> is the deuterium labeled (S)-Malic acid. (S)-Malic acid ((S)-2-Hydroxysuccinic acid) is a dicarboxylic acid in naturally occurring form, contributes to the pleasantly sour taste of fruits and is used as a food additive[1][2].
<b>In Vitro</b>	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 <sup>[1]</sup> . 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]. Landete JM, et al. Requirement of the *Lactobacillus casei* MaeKR two-component system for L-malic acid utilization via a malic enzyme pathway. *Appl Environ Microbiol.* 2010 Jan;76(1):84-95.

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

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