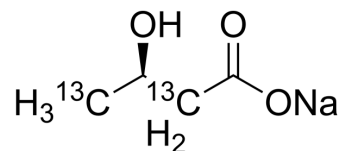


(R)-3-Hydroxybutanoic acid-¹³C₂ sodium

Cat. No.:	HY-B0228S10
CAS No.:	202114-54-3
Molecular Formula:	C ₂ ¹³ C ₂ H ₇ NaO ₃
Molecular Weight:	128.07
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)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 125 mg/mL (976.03 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		7.8082 mL	39.0411 mL	78.0823 mL
	5 mM		1.5616 mL	7.8082 mL	15.6165 mL
	10 mM		0.7808 mL	3.9041 mL	7.8082 mL

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

BIOLOGICAL ACTIVITY

Description

(R)-3-Hydroxybutanoic acid-¹³C₂ (sodium) is the ¹³C labeled [\(R\)-3-Hydroxybutanoic acid \(sodium\)](#) (HY-W015851). (R)-3-Hydroxybutanoic acid (sodium) is a metabolite converted from acetoacetic acid catalyzed by 3-hydroxybutyrate dehydrogenase. (R)-3-Hydroxybutanoic acid sodium can function as a nutrition source, and as a precursor for vitamins, antibiotics and pheromones[1][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;53(2):211-223.
- [2]. Ide T. Enzymatic-HPLC method to analyze D-3-hydroxybutyric acid in rat serum. *Biosci Biotechnol Biochem.* 2010;74(8):1578-82.

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

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