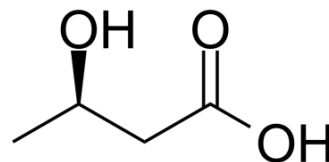


(R)-3-Hydroxybutanoic acid

Cat. No.:	HY-W051723		
CAS No.:	625-72-9		
Molecular Formula:	C ₄ H ₈ O ₃		
Molecular Weight:	104.1		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 25 mg/mL (240.15 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		9.6061 mL	48.0307 mL	96.0615 mL
	5 mM		1.9212 mL	9.6061 mL	19.2123 mL
	10 mM		0.9606 mL	4.8031 mL	9.6061 mL

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

BIOLOGICAL ACTIVITY

Description

(R)-3-Hydroxybutanoic acid is a metabolite, and converted from acetoacetic acid catalyzed by 3-hydroxybutyrate dehydrogenase. (R)-3-Hydroxybutanoic acid has applications as a nutrition source and as a precursor for vitamins, antibiotics and pheromones^{[1][2]}.

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

(R)-3-Hydroxybutanoic acid (D-3-Hydroxybutyric acid) is a metabolite, and converted from acetoacetic acid. Enhanced hepatic fatty acid oxidation results in the increased production of acetoacetic acid which is in turn converted to (R)-3-Hydroxybutanoic acid by a reaction catalyzed by 3-hydroxybutyrate dehydrogenase^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ide T. Enzymatic-HPLC method to analyze D-3-hydroxybutyric acid in rat serum. Biosci Biotechnol Biochem. 2010;74(8):1578-82.

[2]. Mateusz Biernacki, et al. Production of (R)-3-hydroxybutyric acid by *Arxula adeninivorans*. AMB Express. 2017 Dec;7(1):4.

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

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