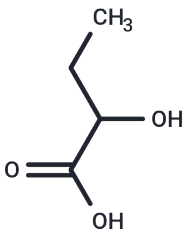
Data Sheet (Cat.No.T4322)

TargetMol

2-Hydroxybutyric acid

Chemical Properties



CAS No. : 600-15-7

Formula: C4H8O3

Molecular Weight: 104.1

Storage: Keep away from moisture,Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	2-Hydroxybutyric acid (α-Hydroxybutyric acid) is a product of protein metabolism and serves as a biomarker for type 2 diabetes and pre-eclampsia.
Targets(IC50)	Endogenous Metabolite
In vitro	2-Hydroxybutyric acid (0-40 mM; 24-48 hours) can decrease AP-induced toxicity in AML12, BRL3A, and primary hepatocytes from mice[3].
In vivo	2-Hydroxybutyric acid (250 mg/kg; i.p. for 3 days) Prevented AP-induced liver injury in C57 mice[3].

Solubility Information

Solubility	DMSO: 50 mg/mL (480.31 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (19.21 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.1921 mL	0.9606 mL	1.9212 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Landaas S, et al. The formation of 2-hydroxybutyric acid in experimental animals. Clin Chim Acta. 1975 Jan 6;58(1):23-32.

Shantavasinkul PC, et al., Improvement in insulin resistance after gastric bypass surgery is correlated with a decline in plasma 2-hydroxybutyric acid. Surg Obes Relat Dis. 2018 Aug;14(8):1126-1132.

Zheng N, et al., Vancomycin pretreatment attenuates acetaminophen-induced liver injury through 2-hydroxybutyric acid. J Pharm Anal. 2020 Dec;10(6):560-570.

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