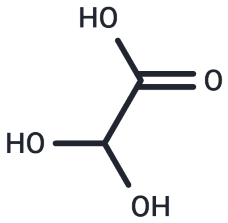
Data Sheet (Cat.No.T4843)

TargetMol

2,2-Dihydroxyacetic acid

Chemical Properties



CAS No. : 563-96-2

Formula: C2H4O4

Molecular Weight: 92.05

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

Biological Description

Description	2,2-Dihydroxyacetic acid (Formylformic acid) is an intermediate in the glyoxalate cycle, which enables certain organisms to convert fatty acids to carbohydrates.2,2-Dihydroxyacetic acid has been found to be associated with primary hyperoxaluria, an inborn error of metabolism. As an aldehyde, glyoxalate is also highly active and can modify proteins to form advanced glycosylation products (AGEs).
Targets(IC50)	Endogenous Metabolite

Solubility Information

Solubility	DMSO: 247.5 mg/mL (2688.76 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 (21.73 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	10.8637 mL	54.3183 mL	108.6366 mL
5 mM	2.1727 mL	10.8637 mL	21.7273 mL
10 mM	1.0864 mL	5.4318 mL	10.8637 mL
50 mM	0.2173 mL	1.0864 mL	2.1727 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

Lee S H , Kim S O , Chung B C . Gas chromatographic-mass spectrometric determination of urinary oxoacids using O-(2,3,4,5,6-pentafluorobenzyl)oxime-trimethylsilyl ester derivatization and cation-exchange chromatography[J]. Journal of Chromatography B, 1998, 719(1-2):1-7.

Wang Z, Cui L, Lin Y, et al.Cancer cell-intrinsic biosynthesis of itaconate promotes tumor immunogenicity.The EMBO Journal.2024: 1-18.