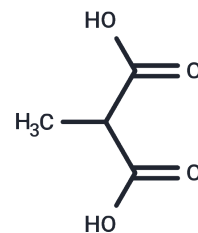


Methylmalonic acid

Chemical Properties

CAS No. :	516-05-2
Formula:	C ₄ H ₆ O ₄
Molecular Weight:	118.09
Storage:	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	Methylmalonic acid is an indicator of vitamin B-12 deficiency in cancer patients. Methylmalonic acid is a competitive succinate dehydrogenase inhibitor.
Targets(IC50)	Endogenous Metabolite, Dehydrogenase

Solubility Information

Solubility	DMSO: 73.8 mg/mL (624.95 mM), Sonication is recommended. H ₂ O: 100 mg/mL (846.81 mM), Sonication is recommended. Ethanol: 100 mg/mL (846.81 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 (16.94 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.4681 mL	42.3406 mL	84.6812 mL
5 mM	1.6936 mL	8.4681 mL	16.9362 mL
10 mM	0.8468 mL	4.2341 mL	8.4681 mL
50 mM	0.1694 mL	0.8468 mL	1.6936 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

Vashi P, et al. Methylmalonic Acid and Homocysteine as Indicators of Vitamin B-12 Deficiency in Cancer. PLoS One. 2016 Jan 25;11(1):e0147843.

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