

2-Oxobutanoic acid

Chemical Properties

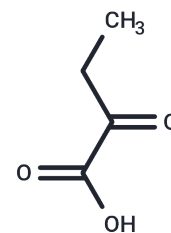
CAS No. : 600-18-0

Formula: C₄H₆O₃

Molecular Weight: 102.09

Storage: Store under nitrogen, Store at low temperature
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-Oxobutanoic acid (alpha-Ketobutyric Acid) is a product of the lysis of cystathionine. It is also one of the degradation products of threonine. It can be converted into propionyl-CoA, and thus enter the citric acid cycle.
Targets(IC50)	Endogenous Metabolite
In vivo	Brequinar sodium-treated (10-20 mg/kg/day) mice has a 31% reduction in percentage of packed cell volume compared with untreated BALB/c mice. Brequinar sodium reduces UTP and CTP levels in bone marrow cells by 30 and 25%, respectively.

Solubility Information

Solubility	DMSO: 250 mg/mL (2448.82 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 (19.59 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	9.7953 mL	48.9764 mL	97.9528 mL
5 mM	1.9591 mL	9.7953 mL	19.5906 mL
10 mM	0.9795 mL	4.8976 mL	9.7953 mL
50 mM	0.1959 mL	0.9795 mL	1.9591 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

CARROLL WR, et al. alpha-Ketobutyric acid as a product in the enzymatic cleavage of cystathionine. J Biol Chem. 1949 Aug;180(1):375-82.

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