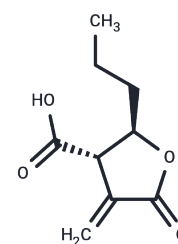


## Butyrolactone 3

## Chemical Properties

CAS No. :	778649-18-6
Formula:	C <sub>9</sub> H <sub>12</sub> O <sub>4</sub>
Molecular Weight:	184.19
Storage:	Store at low temperature Powder: -20°C for 3 years <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Butyrolactone 3 (MB-3) is a histone acetyltransferase Gcn5 inhibitor with a weak affinity for CBP. Butyrolactone 3 has antimicrobial activity and has been used in cancer, metabolic and neurological disorders.
Targets(IC50)	Epigenetic Reader Domain, Histone Acetyltransferase, Antibacterial
In vitro	Butyrolactone 3 (50, 100, 200 μM; 16 h; RCH-ACV cells) can reduce Gcn5 acetylation and induces E2A-PBX1 degradation. Butyrolactone 3 decreased the protein levels of E2A-PBX1 and E2A in a dose-dependent manner, and reduced Wnt16 and GCN5 protein levels.[3]

## Solubility Information

Solubility	DMSO: 150 mg/mL (814.38 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: 3.3 mg/mL (17.92 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

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	1mg	5mg	10mg
1 mM	5.4292 mL	27.1459 mL	54.2918 mL
5 mM	1.0858 mL	5.4292 mL	10.8584 mL
10 mM	0.5429 mL	2.7146 mL	5.4292 mL
50 mM	0.1086 mL	0.5429 mL	1.0858 mL

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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

Biel M, et al. Design, synthesis, and biological evaluation of a small-molecule inhibitor of the histone acetyltransferase Gcn5. *Angew Chem Int Ed Engl.* 2004 Jul 26;43(30):3974-6

Haque ME, et al. The GCN5: its biological functions and therapeutic potentials. *Clin Sci (Lond).* 2021 Jan 15;135(1):231-257.

Holmlund T, et al. GCN5 acetylates and regulates the stability of the oncoprotein E2A-PBX1 in acute lymphoblastic leukemia. *Leukemia.* 2013 Mar;27(3):578-85.

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