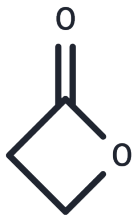
Data Sheet (Cat.No.T81388)

TargetMol

Propiolactone

Chemical Properties



CAS No. : 57-57-8

Formula: C3H4O2

Molecular Weight: 72.06

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	Propiolactone (β-propiolactone; 2-Oxetanone), a chemosterilant, effectively inactivates viruses, rendering them non-infectious. It has been utilized at a 1:1000 (v:v) ratio alongside SARS-CoV to create the BPL-inactivated influenza virus vaccine (Flu-BPL) [1] [2], additionally serving as a bacteriostatic agent.
Targets(IC50)	SARS-CoV
In vitro	Propiolactone (β-propiolactone) is utilized for vaccine purification.
In vivo	Mice were immunized with inactivated influenza A virus using Propiolactone (β-propiolactone) (~25 mg total protein per dose; intramuscular injection). Post-inactivation with Propiolactone, the SARS was non-lethal to young BALB/c mice. Although the virus replicated in the mice's respiratory tract, it was cleared by day 5. Treatment with Propiolactone yielded 1.5 μg of total hemagglutinin protein, resulting in negative infection outcomes in the mice [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	13.8773 mL	69.3866 mL	138.7732 mL
5 mM	2.7755 mL	13.8773 mL	27.7546 mL
10 mM	1.3877 mL	6.9387 mL	13.8773 mL
50 mM	0.2775 mL	1.3877 mL	2.7755 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.

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