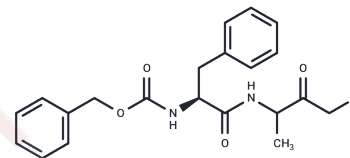


Z-FA-FMK

Chemical Properties

CAS No. :	197855-65-5
Formula:	C ₂₁ H ₂₃ FN ₂ O ₄
Molecular Weight:	386.42
Storage:	Store under nitrogen Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Z-FA-FMK can irreversibly inhibit cysteine protease and also inhibit effector caspases.
Targets(IC50)	Apoptosis,Caspase,Cysteine Protease,SARS-CoV
In vitro	Z-FA-FMK inhibits the development of Ras-induced carcinogenic tumors and respiratory viral infections in the cardiac tissue of mice with severe combined immunodeficiency (SCID). In a mouse model of intranasal pneumococcal infection, Z-FA-FMK significantly promotes the growth of Streptococcus pneumoniae in both the lungs and the bloodstream.
In vivo	Z-FA-FMK effectively inhibits T-cell proliferation induced by interleukin-2 (IL-2) and mitogens in vitro. It also prevents the degradation of fibrillar collagen through its actions on fibroblasts and osteoclasts. Furthermore, Z-FA-FMK suppresses the expression of NF-κB-dependent genes in macrophages, thereby inhibiting the production of cytokines induced by lipopolysaccharides.
Cell Research	T cell proliferation following mitogen stimulation is determined using [3H]thymidine incorporation. In brief, PBMCs or purified T cells are seeded in a 96-well plate and stimulated with either PHA (5 μg/ml), costimulated with anti-CD3 mAb (5 μg/ml) and anti-CD28 mAb (2.5 μg/ml) or PMA plus ionomycin in the presence or absence of z-FA-FMK. The cells are cultured for 72 h with the last 16 h pulsed with [methyl-3H]thymidine (0.037 MBq). The cells are harvested onto glass fiber filter mats using a Tomtec automated multiwell harvester. (Only for Reference)

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 145 mg/mL (375.24 mM),Sonication is recommended. Ethanol: 32 mg/mL (82.81 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (25.88 mM),Suspension. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.18 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.</i>

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In vivo Formulation	<i>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>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5879 mL	12.9393 mL	25.8786 mL
5 mM	0.5176 mL	2.5879 mL	5.1757 mL
10 mM	0.2588 mL	1.2939 mL	2.5879 mL
50 mM	0.0518 mL	0.2588 mL	0.5176 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

- Rasnick D. Anal Biochem. 1985, 149(2), 461-465.
van Noorden CJ, et al. Biochem Biophys Res Commun. 1991, 178(1), 178-184.
Schotte P, et al. J Biol Chem. 2001, 276(24), 21153-21157.
Lawrence CP, et al. J Immunol. 2006, 177(6), 3827-3836.
Kim M, et al. Antivir Ther. 2010, 15(6), 897-905.

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