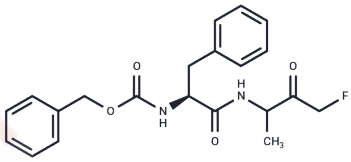
# Data Sheet (Cat.No.T6738)

TargetMol

## Z-FA-FMK

### Chemical Properties



CAS No. : 197855-65-5

Formula: C21H23FN2O4

Molecular Weight: 386.42

Storage: Store under nitrogen
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| 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

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|---|---|
| Solubility | H2O: < 1 mg/mL (insoluble or slightly soluble),<br>DMSO: 71 mg/mL (183.74 mM),Sonication is recommended.<br>Ethanol: 32 mg/mL (82.81 mM),Sonication is recommended.<br>(< 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 (5.18 mM),Sonication is recommended.<br>*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* |

| | |
|---|---|
| In vivo Formulation | *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.* |

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.