

FMK 9a

Chemical Properties

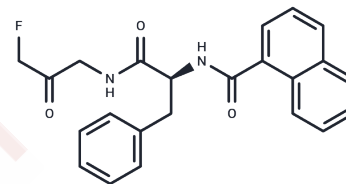
CAS No. : 1955550-51-2

Formula: C₂₃H₂₁FN₂O₃

Molecular Weight: 392.42

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	FMK 9a is an irreversible inhibitor of ATG4B with IC ₅₀ values of 80 and 73 nM in the TR-FRET and cellular-based LRA assays.
Targets(IC ₅₀)	Autophagy,Cysteine Protease,ATG
In vitro	FMK 9a forms a covalent bond with the more reactive thiol group of Cys74 located at the catalytic site of ATG4B thereby inactivating ATG4B proteolytic activity[1].
In vivo	FMK 9a shows moderate solubility and high liver microsome clearances for human and mice of 13.9 and 70 mL/kg/min[1].

Solubility Information

Solubility	DMSO: 95 mg/mL (242.09 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 (8.41 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	2.5483 mL	12.7415 mL	25.4829 mL
5 mM	0.5097 mL	2.5483 mL	5.0966 mL
10 mM	0.2548 mL	1.2741 mL	2.5483 mL
50 mM	0.051 mL	0.2548 mL	0.5097 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

Qiu Z, et al. Discovery of Fluoromethylketone-Based Peptidomimetics as Covalent ATG4B (Autophagin-1) Inhibitors. ACS Med Chem Lett. 2016 Jun 25;7(8):802-6.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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