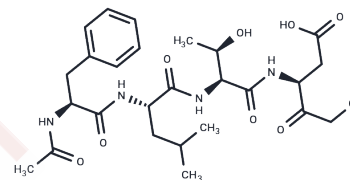


Ac-FLTD-CMK

Chemical Properties

CAS No. :	2376255-48-8
Formula:	C ₂₆ H ₃₇ ClN ₄ O ₈
Molecular Weight:	569.05
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	Ac-FLTD-CMK is an inhibitor derived from abscisic acid (GSDMDD) with specific inhibitory effects on inflammatory caspases. ac-FLTD-CMK showed inhibitory effects on caspases-1, caspases-4 and caspases-11 with IC ₅₀ s of 46.7 nM, 1.49 μM and 329 nM, respectively. Ac-FLTD-CMK showed potency against caspases-1, caspases-4 and caspases-11, but not against apoptosis-associated caspase-3.
Targets(IC ₅₀)	Caspase,Pyroptosis
In vitro	Ac-FLTD-CMK, inhibits GSDMD cleavage by caspases-1, -4, -5, and -11 in vitro, suppresses pyroptosis downstream of both canonical and noncanonical inflammasomes, as well as reduces IL-1β release following activation of the NLRP3 inflammasome in macrophages. By contrast, Ac-FLTD-CMK does not target caspase-3 or apoptotic cell death. Crystal structure of caspase-1 in complex with Ac-FLTD-CMK reveals extensive enzyme-inhibitor interactions involving both hydrogen bonds and hydrophobic contacts.[1]

Solubility Information

Solubility	DMSO: 150 mg/mL (263.6 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 (5.8 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	1.7573 mL	8.7866 mL	17.5731 mL
5 mM	0.3515 mL	1.7573 mL	3.5146 mL
10 mM	0.1757 mL	0.8787 mL	1.7573 mL
50 mM	0.0351 mL	0.1757 mL	0.3515 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

Jie Yang, et al. Mechanism of gasdermin D recognition by inflammatory caspases and their inhibition by a gasdermin D-derived peptide inhibitor. *Proc Natl Acad Sci U S A*. 2018;115(26):6792-6797.

Wang P, et al. Ac-FLTD-CMK inhibits pyroptosis and exerts neuroprotective effect in a mice model of traumatic brain injury. *Neuroreport*. 2021;32(3):188-197.

Tian XX, et al. NLRP6-caspase 4 inflammasome activation in response to cariogenic bacterial lipoteichoic acid in human dental pulp inflammation. *Int Endod J*. 2021;54(6):916-925.

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