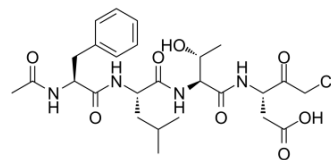


Ac-FLTD-CMK

Cat. No.:	HY-111675
CAS No.:	2376255-48-8
Molecular Formula:	C ₂₆ H ₃₇ ClN ₄ O ₈
Molecular Weight:	569.05
Target:	Caspase; Pyroptosis
Pathway:	Apoptosis; Immunology/Inflammation
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (175.73 mM; Need ultrasonic)																			
Preparing Stock Solutions	<table border="1"> <thead> <tr> <th rowspan="2">Solvent Concentration</th> <th colspan="3">Mass</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>1.7573 mL</td> <td>8.7866 mL</td> <td>17.5731 mL</td> </tr> <tr> <td>5 mM</td> <td>0.3515 mL</td> <td>1.7573 mL</td> <td>3.5146 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1757 mL</td> <td>0.8787 mL</td> <td>1.7573 mL</td> </tr> </tbody> </table>	Solvent Concentration	Mass			1 mg	5 mg	10 mg	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
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Please refer to the solubility information to select the appropriate solvent.																				
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 4.17 mg/mL (7.33 mM); Clear solution																			

BIOLOGICAL ACTIVITY

Description	Ac-FLTD-CMK, a gasdermin D (GSDMD)-derived inhibitor, is a specific inflammatory caspases inhibitor. Ac-FLTD-CMK is effective against caspases-1 (IC ₅₀ of 46.7 nM), caspases-4 (IC ₅₀ of 1.49 μM), caspases-5 (IC ₅₀ of 329 nM), and caspases-11, but not the apoptotic caspases such as caspase-3 ^[1] .			
IC₅₀ & Target	Caspase-1 46.7 nM (IC ₅₀)	Caspase-4 1.49 μM (IC ₅₀)	Caspase-5 329 nM (IC ₅₀)	Caspase-11
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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

REFERENCES

[1]. 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 Jun 26;115(26):6792-6797.

Caution: Product has not been fully validated for medical applications. For research use only.

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