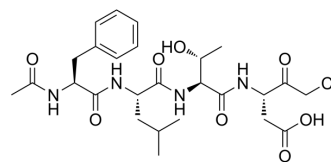


Ac-FLTD-CMK

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	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		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		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.39 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.39 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.39 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-1 β 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.

CUSTOMER VALIDATION

- Cell Death Dis. 2022 Mar 29;13(3):281.
- Mol Divers. 2022 Apr 19.

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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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