Cecropin A TFA

Cat. No.: HY-P1539A

Molecular Formula: $C_{186}H_{314}N_{53}O_{48}F_3$

Molecular Weight: 4117.8

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage: Sealed storage, away from moisture
Powder -80°C 2 years
-20°C 1 year
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

KWKLFKKIEKVGQNIRDGIIKAGPAVAVVGQATQIAK-NH_2 (TFA salt)

SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 50 mg/mL (12.14 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	0.2428 mL	1.2142 mL	2.4285 mL
	5 mM	0.0486 mL	0.2428 mL	0.4857 mL
	10 mM	0.0243 mL	0.1214 mL	0.2428 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Cecropin A TFA is a linear 37-residue antimicrobial polypeptide isolated from Hyalaphora cecropia pupae. Cecropin A TFA exhibits anti-bacterial, anti-inflammatory[1] and anti-cancer activity[2].

In Vitro

Cecropin A (10, 20, 30, 40 and 50 μM) induces cytotoxicity on HL-60 cells in a dose-dependent manner. Cecropin A induces apoptosis independent of caspase activation[1].
Cecropin A shows good antibacterial activity against both multidrug-resistant Gram-negative bacteria such as A. baumanii (MDRAB) and multidrug-resistant P. aeruginosa (MDRPA) with IC_{50}s of 0.5-1 μM.
Cecropin A (0.1, 0.25 μM) exhibits anti-inflammatory activities. Cecropin A (25 μM) effectively suppresses the expression of mTNF-α, mIL-1β, and mMIP-2 mRNA and slightly inhibits the expression of mMIP-1 mRNA. Cecropin A also effectively inhibits LPS-induced phosphorylation of ERK, JNK, p38 MAPK, and reduced the expression of COX-2[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cerón JM, et al. The antimicrobial peptide cecropin A induces caspase-independent cell death in human promyelocytic leukemia cells. Peptides. 2010 Aug;31(8):1494-503.

[2]. Lee E, et al. Anti-inflammatory activities of cecropin A and its mechanism of action. Arch Insect Biochem Physiol. 2015 Jan;88(1):31-44.

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