Buforin II

Cat. No.: HY-P1630

CAS No.: 172998-24-2

Molecular Formula: $C_{106}H_{184}N_{40}O_{26}$

Molecular Weight: 2434.85

Sequence Shortening: TRSSRAGLQFPVGRVHRLLRK

TRSSRAGLQFPVGRVHRLLRK

Target: Bacterial

Pathway: Anti-infection

Storage: Sealed storage, away from moisture and light, under nitrogen

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (41.07 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.4107 mL	2.0535 mL	4.1070 mL
	5 mM	0.0821 mL	0.4107 mL	0.8214 mL
	10 mM	0.0411 mL	0.2054 mL	0.4107 mL

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

BIOLOGICAL ACTIVITY

Description

Buforin II, derived from buforin I, a protein isolated from the stomach of the Asian toad Bufo bufo gargarizans, is a potent antimicrobial peptide. Buforin II has antimicrobial activity against a broad spectrum of Gram-positive and Gram-negative bacteria[1].

In Vitro

Buforin II inhibits A. baumanniiATCC 19606 and multiresistant strains with the similar MIC values of 8 mg/L[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Buforin II (intravenously a single dose, 1 mg/kg) has potent antibacterial activity that effectively reduces lethality and leads to a significant reduction in plasma endotoxin and cytokine concentrations in male Wistar rat model of sepsis[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats weighing 200 to 300 g with A. baumannii ATCC 19606[1]

Dosage:	1 mg/kg
Administration:	Intravenously a single dose
Result:	Reduced mortality by 40% in the treatment group and by 20% in the rifampicin (10 mg/kg) combination group. Reduced TNF, IL-6 and endotoxin plasma levels by 33%, 25% and 32%, respectively.

Animal Model:	Male Wistar rats weighing 200 to 300 g with the multiresistant strain[1]
Dosage:	1 mg/kg
Administration:	Intravenously a single dose
Result:	Reduced mortality by 46.6% in the treatment group and by 20% in the rifampicin (10 mg/kg) combination group. Reduced TNF, IL-6 and endotoxin plasma levels by 46%, 20% and 28%, respectively.

REFERENCES

[1]. Oscar Cirioni, et al. Therapeutic efficacy of buforin II and rifampin in a rat model of Acinetobacter baumannii sepsis. Crit Care Med. 2009 Apr;37(4):1403-7.

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