Pexiganan

Cat. No.:	HY-105088
CAS No.:	147664-63-9
Molecular Formula:	$C_{122}H_{210}N_{32}O_{22}$
Molecular Weight:	2477.17
Sequence Shortening:	GIGKFLKKAKKFGKAFVKILKK-NH2
Target:	Bacterial
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)

GIGKFLKKAKKFGKAFVKILKK-NH_2

SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (40.37 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	0.4037 mL	2.0184 mL	4.0369 mL
	5 mM	0.0807 mL	0.4037 mL	0.8074 mL
	10 mM	0.0404 mL	0.2018 mL	0.4037 mL

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

BIOLOGICAL ACTIVITY

Description

Pexiganan (MSI 78 free base) is a synthetic analog of magainin 2. Pexiganan is a potent and orally active broad-spectrum antimicrobial peptide. Pexiganan can be used in the research of infections, such as diabetic foot ulcer infections[1].

In Vitro

Pexiganan (MIC: 0-128 μg/mL approximately) shows broad-spectrum antibacterial activity against 3,109 clinical isolates of gram-positive and gram-negative, anaerobic and aerobic bacteria[2].

Pexiganan (4 μg/mL) inhibits gastric ulcer strain and gastric cancer strain[3].

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

In Vivo

Pexiganan (1, 3, 10 or 30 mg/kg, p.o., daily for three consecutive days) shows H. pylori clearance efficiency in H. pylori-infected mouse[3].

Pexiganan (1 mg/kg, i.p.) shows antimicrobial activity in rat models of Gram-negative septic shock[4].

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Animal Model:	H. pylori-infected mouse[3].
Dosage:	1, 3, 10 or 30 mg/kg
Administration:	Oral administration, daily for three consecutive days.
Result:	Lowered H. pylori urease activities in mouse stomachs.

Animal Model:	Rat models of Gram-negative septic shock (induced by E.coli ATCC 25922)[4].
Dosage:	1 mg/kg
Administration:	Intraperitoneal injection (i.p.)
Result:	Displayed antimicrobial activities and survival rates of 67.7%.

REFERENCES

[1]. Lamb HM, et al. Pexiganan acetate. Drugs. 1998 Dec;56(6):1047-52; discussion 1053-4.

[2]. Ge Y, et al. In vitro antibacterial properties of pexiganan, an analog of magainin. Antimicrob Agents Chemother. 1999 Apr;43(4):782-8.

[3]. Zhang XL, et al. The synthetic antimicrobial peptide pexiganan and its nanoparticles (PNPs) exhibit the anti-helicobacter pylori activity in vitro and in vivo. Molecules. 2015 Mar 2;20(3):3972-85.

[4]. Giacometti A, et al. Effects of pexiganan alone and combined with betalactams in experimental endotoxic shock. Peptides. 2005 Feb;26(2):207-16.

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