

Pexiganan

Cat. No.:	HY-105088	
CAS No.:	147664-63-9	
Molecular Formula:	C ₁₂₂ H ₂₁₀ N ₃₂ O ₂₂	
Molecular Weight:	2477.17	Gly-Ile-Gly-Lys-Phe-Leu-Lys-Lys-Ala-Lys-Lys-Phe-Gly-Lys-Ala-Phe-Val-Lys-Ile-Leu-Lys-Lys-NH ₂
Sequence Shortening:	GIGKFLKAKKFGKAFVKILKK-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)	

SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (40.37 mM; Need ultrasonic)
 DMSO : 5 mg/mL (2.02 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	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].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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.

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

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