

LL-37, human

Cat. No.:	HY-P1222	
CAS No.:	154947-66-7	
Molecular Formula:	C ₂₀₅ H ₃₄₀ N ₆₀ O ₅₃	
Molecular Weight:	4493.26	LLGDFFRKSK EKIGKEFKRI VQRIKDFLRN LVPRTES
Sequence:	Leu-Leu-Gly-Asp-Phe-Phe-Arg-Lys-Ser-Lys-Glu-Lys-Ile-Gly-Lys-Glu-Phe-Lys-Arg-Ile-Val -Gln-Arg-Ile-Lys-Asp-Phe-Leu-Arg-Asn-Leu-Val-Pro-Arg-Thr-Glu-Ser	
Sequence Shortening:	LLGDFFRKSKEKIGKEFKRIVQRIKDFLRNLVPRTES	
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

H₂O : 100 mg/mL (22.26 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.2226 mL	1.1128 mL	2.2256 mL
	5 mM	0.0445 mL	0.2226 mL	0.4451 mL
	10 mM	0.0223 mL	0.1113 mL	0.2226 mL

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

BIOLOGICAL ACTIVITY

Description

LL-37, human is a 37-residue, amphipathic, cathelicidin-derived antimicrobial peptide, which exhibits a broad spectrum of antimicrobial activity. LL-37, human could help protect the cornea from infection and modulates wound healing^{[1][2][3]}.

In Vitro

LL-37, human (1-20 µg/mL; 24 h) affects HCECs migration^[2].
 LL-37, human (0.0001-5 µg/mL; 6-24 h) affects cytokine secretion in HCECs^[2].
 LL-37, human (1-100 µg/mL; 24 h) shows dose-dependently cytotoxic to HCECs at concentrations over 10 µg/mL^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.
 Cell Migration Assay^[2]

Cell Line:	Human corneal epithelial cell (HCEC)
------------	--------------------------------------

	Concentration:	1, 2.5, 5, 10 and 20 µg/mL
	Incubation Time:	24 hours
	Result:	Dose-dependently stimulated HCEC migration but showed no effect on cell proliferation.
	Cell Viability Assay ^[2]	
	Cell Line:	Human corneal epithelial cell (HCEC)
	Concentration:	0.0001, 0.001, 0.01, 0.1, 0.5, 1, and 5 µg/mL
	Incubation Time:	6 and 24 hours
	Result:	Dose-dependently increased IL-8, IL-6, IL-1β and TNF-α secretion at 6 and 24 hours in HCEC.
In Vivo	LL-37, human (0.4-2.0 mg/kg; intratracheal injection once) ameliorates MRSA-induced pneumonia of mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	6-8 week-old C57BL/6 mice with MRSA-induced pneumonia ^[3]
	Dosage:	0.4, 0.8, 1.2, 1.6 and 2.0 mg/kg
	Administration:	Intratracheal injection; 0.4-2.0 mg/kg once
	Result:	Decreased IL-6 and TNF-α release to attenuated MRSA-induced pneumonia of testing mice.

CUSTOMER VALIDATION

- Commun Biol. 2022 Jun 8;5(1):559.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Hou M, et al. Antimicrobial peptide LL-37 and IDR-1 ameliorate MRSA pneumonia in vivo. Cell Physiol Biochem. 2013;32(3):614-23.
- [2]. Dürr UH, et al. LL-37, the only human member of the cathelicidin family of antimicrobial peptides. Biochim Biophys Acta. 2006 Sep;1758(9):1408-25.
- [3]. Huang LC, et al. Multifunctional roles of human cathelicidin (LL-37) at the ocular surface. Invest Ophthalmol Vis Sci. 2006 Jun;47(6):2369-80.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA