

LL-37, human acetate

Cat. No.:	HY-P1222B	
Molecular Formula:	$C_{205}H_{340}N_{60}O_{53} \cdot XC_2H_4O_2$	
Sequence Shortening:	LLGDFFRKSKEKIGKEFKRIVQRIKDFLRNLPRTES	
Target:	Bacterial	LLGDFFRKSKEKIGKEFKRI VQRIKDFLRN LVPRTES (acetate salt)
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 ₂ O : 100 mg/mL (Need ultrasonic)
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BIOLOGICAL ACTIVITY

Description	LL-37, human acetate is a 37-residue, amphipathic, cathelicidin-derived antimicrobial peptide, which exhibits a broad spectrum of antimicrobial activity. LL-37, human acetate could help protect the cornea from infection and modulates wound healing ^{[1][2][3]} .
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In Vitro	<p>LL-37, human acetate (1-20 µg/mL; 24 h) affects HCECs migration^[2].</p> <p>LL-37, human acetate (0.0001-5 µg/mL; 6-24 h) affects cytokine secretion in HCECs^[2].</p> <p>LL-37, human acetate (1-100 µg/mL; 24 h) shows dose-dependently cytotoxic to HCECs at concentrations over 10 µg/mL^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
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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 cells 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 acetate (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.

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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.

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