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DATASHEET

LL-37 (human)

Product overview

Name	LL-37 (human)
Cat No	HB4444
Biological description	<p>Cell permeable antimicrobial host defense peptide derived from the C-terminal of human cathelicidin. Acts on host cells to exert immunomodulatory functions as part of its role in host defense and immunity. Mediates chemotaxis, promotes wound healing, angiogenesis and induces tumorigenic effects in various cancers.</p> <p>Recently shown to reduce SARS-CoV-2 infection by blocking the S1 spike protein RBD (receptor binding domain) ($K_d = 11.2$ nM). LL-37 inhibits SARS-CoV-2 pseudovirion infection ($IC_{50} = 4.74$ μg/mL) <i>in vitro</i> and <i>in vivo</i> and also binds to ACE2 ($K_d = 25.5$ nM) to cloak the LBD (ligand binding domain) to decrease S1 adherence and protect cells against pseudovirion infection <i>in vitro</i>.</p> <p>Displays antimicrobial, antibacterial, antitumour, anti-cancer and antiviral activities.</p>
Alternative names	<i>Control Peptide</i> also available.
Biological action	Ropocamptide, hCAP 18, Cathelicidin
Purity	Peptide
Description	>95% Antimicrobial peptide. Reduces SARS-Cov2 infection.

Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in aqueous buffer (1 mg/ml), and in DMSO
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Molecular Weight	4493.3
Molecular Formula	$C_{205}H_{340}N_{60}O_{53}$
Sequence (one letter)	LLGDFFRKSKEKIGKEFKRIVQRIKDFLRNLPRTES
Sequence (three letter)	H-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-OH
CAS Number	154947-66-7
PubChem identifier	16198951
InChiKey	POIUWJQBRNEFGX-XAMSPGMSA-N

References

Spotlight on Human LL-37, an Immunomodulatory Peptide with Promising Cell-Penetrating Properties

Seil et al (2010) Pharmaceuticals (Basel). 3(11)

Human Cathelicidin Inhibits SARS-CoV-2 Infection: Killing Two Birds with One Stone

Wang C *et al* (2021) ACS Infect Dis 7(6)

PubMedID

33849267
