

LL-37

LL-37 is the 37-amino-acid antimicrobial peptide released from human cathelicidin hCAP18. It is studied for direct antimicrobial activity and immune-modulating effects in cell, animal and early human studies, and is not approved for any use.



■ Hydrophobic
 ■ Acidic
 ■ Basic
 ■ Polar
 ■ Gly, Pro, Cys
 ■ Non-standard

Length	37 residues
Formula	C ₂₀₅ H ₃₄₀ N ₆₀ O ₅₃
Average mass	4,493.26 g/mol
Monoisotopic mass	4,490.5754 Da
Evidence	Early clinical studies
US status	Not FDA-approved for any use
WADA	Check the current Prohibited List

37 residues; the active fragment of human cathelicidin (hCAP18).

Expected ions (monoisotopic)

[M+H] ⁺	[M+2H] ²⁺	[M+3H] ³⁺	[M+4H] ⁴⁺
4,491.5827	2,246.2950	1,497.8658	1,123.6511

What the COA should show

A good certificate of analysis should confirm identity by mass spectrometry, with the observed mass matching the expected mass shown on this page, and report HPLC purity with the chromatogram. As a long synthetic peptide, LL-37 is prone to deletion and truncation impurities, which should appear as related-substance peaks. Its strong positive charge means it carries many counter-ions, so the salt form and net peptide content are important; residual TFA can itself affect cell-based assays. LL-37 aggregates and adsorbs to surfaces, so solubility behavior and the presence of oligomers may influence analytical and biological results. Endotoxin testing is relevant because LL-37 binds lipopolysaccharide, which can mask or confound endotoxin measurements.

Storage and stability

Store lyophilized LL-37 sealed at -20 °C or colder, protected from moisture and light, and equilibrate before opening. Although it lacks oxidation-prone residues, it is susceptible to aggregation and to adsorption onto glass and plastic, so low-binding tubes are advisable and concentrations should be verified after dissolution. Dissolve in water or dilute acid before adding to salt-containing buffers, which can promote aggregation. Aliquot solutions for frozen storage and avoid repeated freeze-thaw cycles.

Full entry, references and latest research: <https://peptidewiki.net/compounds/II-37/>
For laboratory research reference only. Not medical advice; not for human or veterinary use.