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Lieferung & Zahlungsart

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Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
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Sublancin

Cat. No.:	HY-P10230
CAS No.:	207410-26-2
Molecular Formula:	$C_{162}H_{254}N_{50}O_{51}S_5$
Molecular Weight:	3878.38
Sequence:	Gly-Leu-Gly-Lys-Ala-Gln-Cys-Ala-Ala-Leu-Trp-Leu-Gln-Cys-Ala-Ser-Gly-Gly-Thr-Ile-Gly-{Cys(D-glucopyranosyl)}-Gly-Gly-Gly-Ala-Val-Ala-Cys-Gln-Asn-Tyr-Arg-Gln-Phe-Cys-Arg (disulfide bridge: Cys7-Cys36, Cys14-Cys29)
Sequence Shortening:	GLGKAQCAALWLQCASGGTIG-{Cys(D-glucopyranosyl)}-GGGAVACQNYRQFCR (disulfide bridge: Cys7-Cys36, Cys14-Cys29)
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Sublancin is an antimicrobial peptide, which inhibits DNA replication, transcription and translation, without affecting membrane integrity. Sublancin suppresses glucose uptake for the competition of phosphotransferase system (PTS). Sublancin inhibits B. subtilis strain 168 ΔSPβ with MIC of 0.312 μM[1][2].

In Vitro

Sublancin (0-500 μM, 24 h) inhibits methicillin-resistant Staphylococcus aureus (MRSA) with MIC of 15 μM, and exhibits no cytotoxicity in RAW246.7 macrophage cells, mouse peritoneal macrophages, and human Caco-2 253 epithelial cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	RAW246.7, Caco-2, P-Mac
Concentration:	0-500 μM
Incubation Time:	24 h
Result:	Maintained cell viability.

In Vivo

Sublancin (0.5-4 mg/kg, ip, single dose) ameliorates the MRSA infection in MRSA infected mice model through induction of IL-6 and MCP-1, attenuate the intestinal inflammation by inhibition of the NF-κB activation[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Methicillin-resistant Staphylococcus aureus infected mice[1]
Dosage:	0.5-4 mg/kg
Administration:	ip, single dose
Result:	Improved the survival rate, reduced body weight loss.

REFERENCES

[1]. Wang S, et al., Use of the Antimicrobial Peptide Sublancin with Combined Antibacterial and Immunomodulatory Activities To Protect against Methicillin-Resistant Staphylococcus aureus Infection in Mice. J Agric Food Chem. 2017 Oct 4;65(39):8595-8605.

[2]. Wu C, et al., Investigations into the Mechanism of Action of Sublancin. ACS Infect Dis. 2019 Mar 8;5(3):454-459.

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