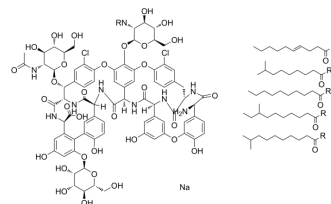


Teicoplanin sodium

Cat. No.:	HY-A0097A
CAS No.:	184539-13-7
Target:	HIV; SARS-CoV; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Teicoplanin sodium is a glycopeptide antibiotic indicated for use in serious infections caused by Gram-positive bacteria, including Methicillin-resistant Staphylococcus aureus and Enterococcus aureus. Teicoplanin sodium shows antiviral activity for HIV-1, SARS-CoV1 and SARS-CoV2. Teicoplanin sodium shows anti-MRSA activity ^{[1][2]} .									
IC₅₀ & Target	Glycopeptide									
In Vitro	<p>Teicoplanin sodium shows antiviral activity with IC₅₀s of 0.39, 1.66, 15.7 μM for HIV-luc/SARS-CoV-S pseudotyped viruses in HEK293T cells, 2019-nCoV-Spike-pseudoviruses in A549 cells, SARS-CoV-2 in Vero E6 cells, respectively^[1].</p> <p>Teicoplanin sodium can inhibit HIV-1 virus in human CEM cell culture with EC₅₀ value of 17 μM^[1].</p> <p>The mechanism is the inhibition of the cathepsin L protease through the interaction of the teicoplanin lipophilic moiety with the enzyme and inhibits cathepsin L activity, stops the SARS-CoV release from the late endosome^[1].</p> <p>Teicoplanin sodium shows anti-MRSA activity with MICs of 0.5 mg/L in MRSA ATCC 43300^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>									
In Vivo	<p>Teicoplanin sodium (10, 30 mg/kg; i.v.) shows a dose-dependent decline in the total bacterial density in murine MRSA thigh infection model^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>20-30 g, Male CD1 mice (2 * 10⁶ cfu/mL MRSA (43300) 50 μL; murine thigh infection model)^[2]</td> </tr> <tr> <td>Dosage:</td> <td>10, 30 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>I.v.; once every 12 h</td> </tr> <tr> <td>Result:</td> <td>Showed a dose-dependent decline in the total bacterial density with the total bactericidal effect was achieved with dosages of ≥10 mg/kg/day and suppression of resistance with dosages ≥30 mg/kg/day.</td> </tr> </table>		Animal Model:	20-30 g, Male CD1 mice (2 * 10 ⁶ cfu/mL MRSA (43300) 50 μL; murine thigh infection model) ^[2]	Dosage:	10, 30 mg/kg	Administration:	I.v.; once every 12 h	Result:	Showed a dose-dependent decline in the total bacterial density with the total bactericidal effect was achieved with dosages of ≥10 mg/kg/day and suppression of resistance with dosages ≥30 mg/kg/day.
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CUSTOMER VALIDATION

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- Infect Drug Resist. 2021 Dec 16;14:5449-5456.

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REFERENCES

- [1]. Vimberg V. Teicoplanin-A New Use for an Old Drug in the COVID-19 Era? Pharmaceuticals (Basel). 2021 Nov 26;14(12):1227.
- [2]. Ramos-Martín V, et al. Pharmacodynamics of teicoplanin against MRSA. J Antimicrob Chemother. 2017 Dec 1;72(12):3382-3389.
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Caution: Product has not been fully validated for medical applications. For research use only.

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