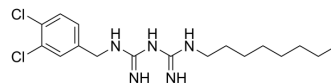


Olanexidine

Cat. No.:	HY-125654
CAS No.:	146510-36-3
Molecular Formula:	C ₁₇ H ₂₇ Cl ₂ N ₅
Molecular Weight:	372.34
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Olanexidine is an antibacterial agent. Olanexidine is active against a wide range of bacteria, including both Gram-positive and Gram-negative bacteria. Olanexidine is also an antiseptic. Olanexidine can be used in the research of infection and inflammation ^{[1][2][3]} .								
In Vitro	<p>Olanexidine (50 µM, 48 h) exhibits broad-spectrum bactericidal activity against Gram-positive cocci and Gram-negative bacteria^[1].</p> <p>Olanexidine (50 µg/mL, 24 h) inhibits chronic inflammatory reactions in oral mucosal cells^[2].</p> <p>Olanexidine (Olanexidine gluconate, 0-15000 µg/mL) inhibits the binding ability of virus-like particles to the binding receptor of human norovirus and increases the aggregation of virus-like particles^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>Gram-positive cocci, Enterococcus spp., Gram-positive bacilli, Gram-negative strains</td> </tr> <tr> <td>Concentration:</td> <td>0-1 mg/mL approximately</td> </tr> <tr> <td>Incubation Time:</td> <td>30 s</td> </tr> <tr> <td>Result:</td> <td>Inhibited bacterial activity with MIC values ranging from 6.8 to 1740 µg/mL approximately.</td> </tr> </table>	Cell Line:	Gram-positive cocci, Enterococcus spp., Gram-positive bacilli, Gram-negative strains	Concentration:	0-1 mg/mL approximately	Incubation Time:	30 s	Result:	Inhibited bacterial activity with MIC values ranging from 6.8 to 1740 µg/mL approximately.
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In Vivo	<p>Olanexidine (1 -2% in saline, applied to the skin) is active against transient or resident bacterial flora on the skin of male cynomolgus monkeys^[4].</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>Male cynomolgus monkeys^[4]</td> </tr> <tr> <td>Dosage:</td> <td>1 %, 1.5%, 2% in saline</td> </tr> <tr> <td>Administration:</td> <td>Applied to the skin</td> </tr> <tr> <td>Result:</td> <td>Showed the fast-acting and long-lasting bactericidal effects at 1.5% concentration.</td> </tr> </table>	Animal Model:	Male cynomolgus monkeys ^[4]	Dosage:	1 %, 1.5%, 2% in saline	Administration:	Applied to the skin	Result:	Showed the fast-acting and long-lasting bactericidal effects at 1.5% concentration.
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REFERENCES

- [1]. Hagi A, et al. Bactericidal Effects and Mechanism of Action of Olanexidine Gluconate, a New Antiseptic. *Antimicrob Agents Chemother*. 2015 Aug;59(8):4551-9.
- [2]. Nii T, Yumoto H, Hirota K, Miyake Y. Anti-inflammatory effects of olanexidine gluconate on oral epithelial cells. *BMC Oral Health*. 2019 Nov 8;19(1):239.
- [3]. Imai K, et al. Disinfection efficacy and mechanism of olanexidine gluconate against norovirus. *Am J Infect Control*. 2022 Jul;50(7):764-771.
- [4]. Nakata H, et al. Effects of olanexidine gluconate on preoperative skin preparation: an experimental study in cynomolgus monkeys. *J Med Microbiol*. 2017 May;66(5):678-685.
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Caution: Product has not been fully validated for medical applications. For research use only.

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