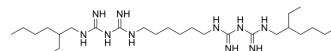


Alexidine

Cat. No.:	HY-B1474
CAS No.:	22573-93-9
Molecular Formula:	C ₂₆ H ₅₆ N ₁₀
Molecular Weight:	508.79
Target:	Fungal
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Alexidine, a bis-biguanide, exhibits antifungal and antibiofilm activity against a diverse range of fungal pathogens. Alexidine is an anticancer agent that targets a mitochondrial tyrosine phosphatase, PTPMT1, in mammalian cells and causes mitochondrial apoptosis ^[1] .																
In Vitro	<p>Alexidine (10 μM, 24 hours) treatment can decimate the biofilm community^[1]. Alexidine (0-60 μg/ml, 24 hours) treatment can kill HUVECs and lung A549 cells^[1]. 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"> <tr> <td>Cell Line:</td> <td>C. albicans, C. auris, A. fumigatus</td> </tr> <tr> <td>Concentration:</td> <td>10 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Could significantly kill 80% of mature biofilm community.</td> </tr> </table> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HUVECs, lung A549 cells</td> </tr> <tr> <td>Concentration:</td> <td>0-60 μg/ml</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>resulted in 50% killing of HUVECs and lung A549 cells (CC₅₀ > 7.37 μg/ml).</td> </tr> </table>	Cell Line:	C. albicans, C. auris, A. fumigatus	Concentration:	10 μM	Incubation Time:	24 hours	Result:	Could significantly kill 80% of mature biofilm community.	Cell Line:	HUVECs, lung A549 cells	Concentration:	0-60 μg/ml	Incubation Time:	24 hours	Result:	resulted in 50% killing of HUVECs and lung A549 cells (CC ₅₀ > 7.37 μg/ml).
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In Vivo	<p>Alexidine (Jugular vein-catheterized; 48 hours; 3 μg/ml; once) can decimate preformed biofilms growing in the jugular vein catheters of mice^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>8-week-old C57BL/6 male mice</td> </tr> <tr> <td>Dosage:</td> <td>3 μg/ml</td> </tr> </table>	Animal Model:	8-week-old C57BL/6 male mice	Dosage:	3 μg/ml												
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Administration:	Jugular vein-catheterized, 48 hours, 3 µg/ml, once
Result:	Inhibited 67% of fungal biofilm growth and viability, compared to the control untreated biofilms.

REFERENCES

[1]. Zeinab Mamouei, et al. Alexidine Dihydrochloride Has Broad-Spectrum Activities against Diverse Fungal Pathogens. mSphere. 2018 Oct 31;3(5):e00539-18.

Caution: Product has not been fully validated for medical applications. For research use only.

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