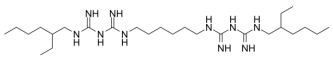
Alexidine

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

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.

Cell Viability Assay[1]

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 Viability Assay[1]

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).

In Vivo

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.

Animal Model:	8-week-old C57BL/6 male mice
Dosage:	3 μg/ml

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.

CUSTOMER VALIDATION

- Int J Parasitol Drugs Drug Resist. July 2022.

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REFERENCES

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

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