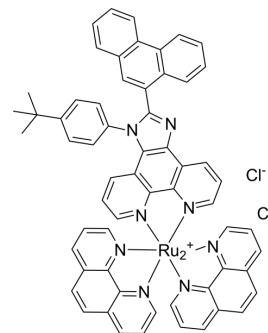


Antibacterial agent 140 chloride

Cat. No.:	HY-149801A
Molecular Formula:	C ₆₁ H ₄₄ Cl ₂ N ₈ Ru ₂ ⁻
Molecular Weight:	1162.1
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Antibacterial agent 140 chloride is a promising antibacterial agent. Antibacterial agent 140 chloride is also the first Ru-based AIEgen photosensitizer for simultaneous dual applications of Gram-positive bacteria (G+) detection and treatment. Antibacterial agent 140 chloride uniquely selective discriminates and efficient exterminates Gram-positive bacteria (G+) from other bacteria due to its interaction with lipoteichoic acids (LTA). Antibacterial agent 140 chloride also possessed robust antibacterial activity for G+ under light irradiation ^[1] .								
In Vitro	<p>Antibacterial agent 140 chloride (0.1-5 μg/mL/1 h) exhibits a dose-dependent viability from 78% to 0% in the dark, demonstrating the dark toxicity of Ru₂ toward <i>S. aureus</i>^[1].</p> <p>Antibacterial agent 140 chloride (0.1-5 μg/mL/1 h) displays an obvious dose-dependent and time-dependent killing efficiencies upon 120s light irradiation, Ru₂ almost completely inhibited the growth of <i>S. aureus</i> at a very low concentration upon light irradiation^[1].</p> <p>Antibacterial agent 140 chloride (0-32 μM/1 h) exhibits more than 80% of HeLa cells remained alive after incubation with < 32 μM in the dark. It leads to >73% of HeLa cells alive at concentrations of ≤32 μM under the light irradiation^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>Antibacterial agent 140 chloride (20 μg/mL/50 μL; 1-10 days) displays a remarkable reduction in wound size under light irradiation, it results in almost complete wound healing after 7 day in female Kunming mice after <i>S. aureus</i>. infection^[1].</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>Female Kunming mice (5-6 weeks old) mice model with skin infected by <i>S. aureus</i>.^[1]</td> </tr> <tr> <td>Dosage:</td> <td>50 μL (20 μg/mL)</td> </tr> <tr> <td>Administration:</td> <td>50 μL (20 μg/mL); skin application; 1-10 days</td> </tr> <tr> <td>Result:</td> <td>99.50% of the infected wound areas were healed after 10 days under Ru₂/light treatment. Exhibited photodynamic antibacterial therapeutic efficacy.</td> </tr> </table>	Animal Model:	Female Kunming mice (5-6 weeks old) mice model with skin infected by <i>S. aureus</i> . ^[1]	Dosage:	50 μL (20 μg/mL)	Administration:	50 μL (20 μg/mL); skin application; 1-10 days	Result:	99.50% of the infected wound areas were healed after 10 days under Ru ₂ /light treatment. Exhibited photodynamic antibacterial therapeutic efficacy.
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REFERENCES

[1]. Mengling Liu, et al. Specific discrimination and efficient elimination of gram-positive bacteria by an aggregation-induced emission-active ruthenium (II) photosensitizer.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA