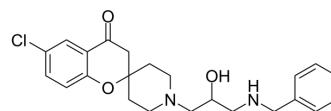


Antibacterial agent 141

Cat. No.:	HY-149983
CAS No.:	2930013-56-0
Molecular Formula:	C ₂₃ H ₂₇ ClN ₂ O ₃
Molecular Weight:	414.93
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Antibacterial agent 141 (Compound B14) has antibacterial activity against four plant pathogens Xoo, Xac, Psa and Cmm, with an EC ₅₀ value of 1.28 μM. Antibacterial agent 141 can inhibit the formation of cell membrane and change cell permeability.																
In Vitro	<p>Antibacterial agent 141 significantly induces cell membrane rupture in Xoo bacteria^[1].</p> <p>Antibacterial agent 141 increases bacterial membrane permeability in a concentration-dependent manner in Xoo bacteria^[1].</p> <p>Antibacterial agent 141 damages the cell membrane surface in Xoo bacteria^[1].</p> <p>Antibacterial agent 141 (3.2, 6.4 μM) significantly reduces the expression of ACC, ACP and Fab family genes in Xoo bacteria^[1].</p> <p>Antibacterial agent 141 significantly suppresses the formation of Xoo biofilm with the increase of concentration^[1].</p> <p>Antibacterial agent 141 is low toxic to HepG2 and HK-2 cell^[1].</p> <p>Antibacterial agent 141 (0.64-5.12 μM; 3-30 h) significantly inhibits the growth of Xoo bacteria^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Real Time qPCR</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Xoo bacteria</td> </tr> <tr> <td>Concentration:</td> <td>3.2, 6.4 μM</td> </tr> <tr> <td>Incubation Time:</td> <td></td> </tr> <tr> <td>Result:</td> <td>Significantly reduced the expression of ACC, ACP and Fab family genes in Xoo bacteria.</td> </tr> </table> <p>Cell Viability Assay</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Xoo bacteria</td> </tr> <tr> <td>Concentration:</td> <td>0.64, 1.28, 2.56, 5.12 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>3, 6, 9, 12, 15, 18, 21, 24, 27, 30 h</td> </tr> <tr> <td>Result:</td> <td>Had a slight inhibitory effect on bacterial growth with the concentration of 0.64, 1.28, 2.56 μM. Inhibited the growth of bacteria more obviously when the drug concentration reached 5.12 μM.</td> </tr> </table>	Cell Line:	Xoo bacteria	Concentration:	3.2, 6.4 μM	Incubation Time:		Result:	Significantly reduced the expression of ACC, ACP and Fab family genes in Xoo bacteria.	Cell Line:	Xoo bacteria	Concentration:	0.64, 1.28, 2.56, 5.12 μM	Incubation Time:	3, 6, 9, 12, 15, 18, 21, 24, 27, 30 h	Result:	Had a slight inhibitory effect on bacterial growth with the concentration of 0.64, 1.28, 2.56 μM. Inhibited the growth of bacteria more obviously when the drug concentration reached 5.12 μM.
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In Vivo

Antibacterial agent 141 (200 µg/mL; 7 days; single dose) is 4.64% and 43.33% of curative and protective activity toward bacterial blight, respectively^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu SS, et al. Novel spiro[chromanone-2,4'-piperidine]-4-one derivatives as potential inhibitors of fatty acid synthesis in pathogens: Design, synthesis, and biological evaluation. *Eur J Med Chem.* 2023 Mar 15;250:115215.

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

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