Antibacterial agent 138

Cat. No.: HY-149089

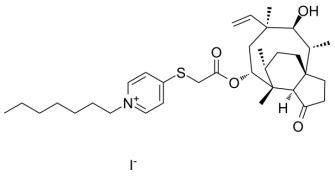
Molecular Formula: $C_{34}H_{52}INO_4S$

Molecular Weight: 697.75

Target: Bacterial

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Antibacterial agent 138 has excellent antibacterial activity to multi-drug resistant bacteria. Antibacterial agent 138 inhibits bacterial protein synthesis but bacterial cell walls[1].

In Vitro

Antibacterial agent 138 (compound e4) (0.063 μg/mL, 24 h) shows excellent inhibition against MRSA and MRSE[1].
Antibacterial agent 138 has antimicrobial activity against multi-drug resistant bacteria, with MICs (0.063-32μg/mL) 16-64 times lower than that of Tiamulin[1].
Antibacterial agent 138 (60 μg/mL, 24 h) shows no signs of cytotoxicity in HEPG2 and HEK293 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	S. aureus, MRSA, S. pneumonia, MRSE, B. subtilis, VRE, K. peneumoniae.
Concentration:	0-50 μg/mL approximately.
Incubation Time:	24 h
Result:	MICs: 0.063, 0.063, <0.031, 0.063, 4, 4, 2 μg/mL

In Vivo

Antibacterial agent 138 (compound e4) (2.5-40 mg/kg, i.p.) shows antibacterial activity in a mice model of systemic multi-drug resistant S. aureus infection [1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice model of systemic multi-drug resistant S. aureus infection[1]
Dosage:	2.5, 5, 10, 20, 40 mg/kg
Administration:	i.p.
Result:	Prolonged survival rate. Reduced bacterial loads in the lungs and liver of infected mice.

REFERENCES

[1]. Yi Y, et al. Novel pyridinium cationic pleuromutilin analogues overcoming bacterial multidrug resistance. Eur J Med Chem. 2023 May 5;251:115269.

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