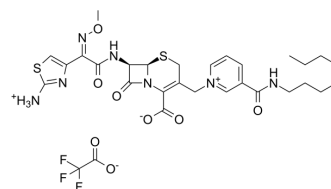


Anti-MRSA agent 10

Cat. No.:	HY-161330
Molecular Formula:	C ₃₀ H ₃₆ F ₃ N ₇ O ₈ S ₂
Molecular Weight:	743.77
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Anti-MRSA agent 10 (Compound 2d) is a Cephalosporin (HY-144229) derivative and exhibits antibacterial activity. Anti-MRSA agent 10 is slightly drug resistant and exhibits low cytotoxicity in cells HUVEC and HBZY-1 ^[1] .								
In Vitro	<p>Anti-MRSA agent 10 reveals no significant cytotoxicity in sheep red blood cells, HUVECs and HBZY-1 cells, with a safe dose of more than 128 µg/mL^[1].</p> <p>Anti-MRSA agent 10 is antibacterial active against Gram-negative <i>Stenotrophomonas maltophilia</i> and <i>Staphylococcus aureus</i>, Gram-positive <i>Escherichia coli</i> and <i>Stenotrophomonas maltophilia</i>, and methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) with MICs of 0.7, 4, 8, 8 and 2-4 µg/mL, respectively^[1].</p> <p>Anti-MRSA agent 10 (0-128 µg/mL) inhibits cellular respiration and viability in bacteria <i>S. aureus</i> through targeting penicillin binding proteins (PBP), disrupting bacterial cell wall structure and promoting oxidative damage^[1].</p> <p>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>S. Aureus, HUVEC, HBZY-1</td> </tr> <tr> <td>Concentration:</td> <td>0-128 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Inhibited metabolic process of <i>S. aureus</i>. Maintained viability of HUVEC and HBZY-1 cells.</td> </tr> </table>	Cell Line:	S. Aureus, HUVEC, HBZY-1	Concentration:	0-128 µg/mL	Incubation Time:	48 h	Result:	Inhibited metabolic process of <i>S. aureus</i> . Maintained viability of HUVEC and HBZY-1 cells.
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REFERENCES

[1]. Chen S, et al., Design, synthesis and antibacterial evaluation of low toxicity amphiphilic-cephalosporin derivatives. *Eur J Med Chem.* 2024 Mar 15;268:116293.

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

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