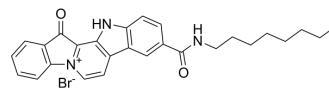


FtsZ-IN-8

Cat. No.:	HY-149226
Molecular Formula:	C ₂₇ H ₂₈ BrN ₃ O ₂
Molecular Weight:	506.43
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	FtsZ-IN-8 is a potent FtsZ inhibitor, to promote FtsZ polymerization and inhibit GTPase activity of FtsZ. Thus, FtsZ-IN-8 inhibits bacterial division to lead to death of bacterial cells. FtsZ-IN-8 shows bactericidal activity with no significant tendency to trigger bacterial resistance as well as rapid bactericidal properties. And FtsZ-IN-8 shows low hemolytic activity and cytotoxicity to mammalian cells ^[1] .								
In Vitro	<p>FtsZ-IN-8 (compound B16) inhibits the tested Gram-positive bacteria including methicillin-resistant <i>S. aureus</i> (MRSA) (MIC=0.098 µg/mL), <i>B. subtilis</i> (MIC=0.098 µg/mL) and <i>S. pneumoniae</i> (MIC=0.39 µg/mL)^[1].</p> <p>FtsZ-IN-8 (1-4× MIC; 0-24 h) inhibits bacterial growth. And FtsZ-IN-8 (4× MIC; 4 h) disturbs the cell surface of MRSA ATCC43300, with notable wrinkling and filamentation on their surfaces^[1].</p> <p>FtsZ-IN-8 (4 µg/mL; 10 min; 25 %) promotes FtsZ polymerization and (0.02-0.64 µg/mL; 30 min) inhibits the GTPase activity of FtsZ dose-dependently^[1].</p> <p>FtsZ-IN-8 (12.5 µg/mL; 1 h; 37 %) revealing the negligible hemolytic activity against human erythrocytes RAW264.7 cells^[1]. 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" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>MRSA ATCC43300</td> </tr> <tr> <td>Concentration:</td> <td>1 × , 2 × , 4 × MIC; MIC=0.098 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>0 h, 0.5 h, 1 h, 1.5 h, 2 h, 4 h, 6 h, 8 h, 12 h, 22 h, and 24 h</td> </tr> <tr> <td>Result:</td> <td>Inhibited the growth of bacteria, and more fast compared with Vancomycin (HY-B0671).</td> </tr> </table>	Cell Line:	MRSA ATCC43300	Concentration:	1 × , 2 × , 4 × MIC; MIC=0.098 µg/mL	Incubation Time:	0 h, 0.5 h, 1 h, 1.5 h, 2 h, 4 h, 6 h, 8 h, 12 h, 22 h, and 24 h	Result:	Inhibited the growth of bacteria, and more fast compared with Vancomycin (HY-B0671).
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REFERENCES

[1]. Qiu H, et al. Design and synthesis of fascaplysin derivatives as inhibitors of FtsZ with potent antibacterial activity and mechanistic study. *Eur J Med Chem.* 2023 Jun 5;254:115348.

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