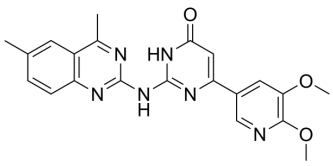
IDD-8E

Cat. No.:	HY-161395
Molecular Formula:	$C_{21}H_{20}N_6O_3$
Molecular Weight:	404.42
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

IDD-8E is an effective anti-pseudomonal agent (MIC =4.4 μM) with no cytotoxicity. IDD-8E shows significant pseudomonal killing and disruption of pseudomonal biofilm. IDD-8E binds to the ATP-binding pocket of WaaP and also inhibits other ESKAPE pathogens. [1]

In Vitro

IDD-8E (10-100 μM; 24 h) remains unchanged at higher concentrations compared to untreated controls using RAW cells, showing no cytotoxicity[1].

IDD-8E (2, 4.4 μM; 0-5 h) is observed to significantly reduce the number of Pseudomonas aeruginosaand and is as effective as Rifampicin (HY-B0272). It is also found to have the ability to disrupt biofilm[1].

IDD-8E is synergistic with each of the three antibiotics (Rifampicin (HY-B0272), Lincomycin (HY-117660), Carbenicillin (HY-B0525)) in several combinations. Synergistic combinations effectively reduces the minimum inhibitory concentrations (MICs) of the antibiotics[1].

IDD-8E can inhibit the growth of other ESKAPE pathogens, with MIC values of 6.25 μM, 50 μM, 12.5 μM,12.5 μM and 50 μM against A. baumannii, K. pneumoniae, Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant Enterococcus faecalis (VRE) and E. coli, respectively [1].

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

***Cell Cytotoxicity Assay*[1]**

Cell Line:	RAW cells
Concentration:	100 μM, 70 μM, 40 μM, and 10 μM
Incubation Time:	24 h
Result:	IDD-8E showed no significant cytotoxic effects at the concentrations tested, similar to the negative control, Rifampicin. This indicates that IDD-8E is potentially safe for further development as it does not harm the macrophage cells at effective antibacterial concentrations.

REFERENCES

[1]. Rakshit M et al. Uncovering the potentiality of quinazoline derivatives against Pseudomonas aeruginosa with antimicrobial synergy and SAR analysis. J Antibiot. 2024 MAR

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