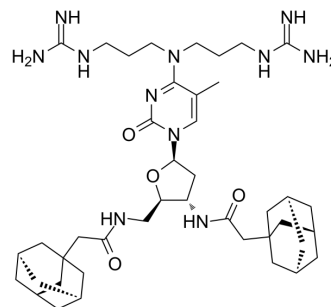


ADG-2e

Cat. No.:	HY-147522
CAS No.:	2419951-75-8
Molecular Formula:	C ₄₂ H ₆₇ N ₁₁ O ₄
Molecular Weight:	790.05
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	ADG-2e is a potent antibacterial agent with MICs of 16, 4, 2, and 2 µg/mL for E. coli [KCTC 1682], P. aeruginosa [KCTC 1637], B. subtilis [KCTC 3068], and S. aureus [KCTC 1621], respectively. ADG-2e shows anti-metastatic activity against breast cancer cells ^[1] .																		
In Vitro	<p>ADG-2e (1-64 µg/mL, 22 hours) exhibits twice the antibacterial activity compared to other antibiotics in methicillin-resistant S. aureus (MRSA) or multidrug-resistant P. aeruginosa (MDRPA) ^[1].</p> <p>ADG-2e (0-60 µg/mL, 2 hours) shows only slight hemolysis with increasing concentration^[1].</p> <p>ADG-2e (0-100 µM, 24 hours) does not inhibit the proliferation of MDA-MB-231 cells but has a role in the migration of cancer cells by inserting into the surface of them and affecting cell motility^[1].</p> <p>ADG-2e (0-40 µM, 6 hours) causes actin reorganization to promote its multiple lamellar structures formation^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Cytotoxicity Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Sheep red blood cells (sRBCs)</td> </tr> <tr> <td>Concentration:</td> <td>0-60 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>2 hours</td> </tr> <tr> <td>Result:</td> <td>Showed any hemolysis until 16 µg/mL and showed slight hemolysis at 32 µg/mL.</td> </tr> </table> <p>Cell Proliferation Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Metastatic breastcancer cell line MDA-MB-231</td> </tr> <tr> <td>Concentration:</td> <td>0-100 µM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>No significant inhibitory effect on the proliferation of MDA-MB-231 cells.</td> </tr> </table> <p>Immunofluorescence^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Metastatic breastcancer cell line MDA-MB-231</td> </tr> </table>	Cell Line:	Sheep red blood cells (sRBCs)	Concentration:	0-60 µg/mL	Incubation Time:	2 hours	Result:	Showed any hemolysis until 16 µg/mL and showed slight hemolysis at 32 µg/mL.	Cell Line:	Metastatic breastcancer cell line MDA-MB-231	Concentration:	0-100 µM	Incubation Time:	24 hours	Result:	No significant inhibitory effect on the proliferation of MDA-MB-231 cells.	Cell Line:	Metastatic breastcancer cell line MDA-MB-231
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Concentration:	0-40 μ M
Incubation Time:	6 hours
Result:	Showed an increase in actin lamellipodium generation.

REFERENCES

[1]. Sridhar Chirumarry, et al. Antibacterial AZT derivative regulates metastasis of breast cancer cells. Eur J Med Chem. 2020 May 1;193:112233.

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