

Antibacterial agent 131

Chemical Properties

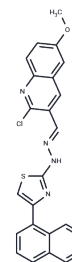
CAS No. :

Formula: C₂₄H₁₇ClN₄O₅

Molecular Weight: 444.94

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Antibacterial agent 131 is a compound with antibacterial properties.
Targets(IC50)	Antibacterial, Antibiotic, Antifungal
In vitro	Antibacterial agent 131 (compound 4m) exhibits antibacterial activity with MIC ₉₀ values of 9.81 µg/mL against Escherichia coli ATCC 35218, E. coli ATCC 25922, Staphylococcus aureus ATCC 6538, and methicillin-resistant S. aureus (MRSA), and shows anti-Candida effects with MIC ₉₀ values of ≤0.06, 0.24, 1.95, and 1.95 µg/mL against Candida krusei ATCC 6258, Candida parapsilosis ATCC 22019, Candida albicans ATCC 24433, and C. glabrata ATCC 90030, respectively. Additionally, it has low cytotoxicity with an IC ₅₀ value of 34.51 µM in NIH/3T3 cells, inhibits DNA gyrase against Escherichia coli at concentrations of 0.06-3.91 µg/mL, and has antifungal activity by blocking ergosterol production.[1]

Solubility Information

Solubility	DMSO: 50 mg/mL (112.37 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2475 mL	11.2375 mL	22.4749 mL
5 mM	0.4495 mL	2.2475 mL	4.495 mL
10 mM	0.2247 mL	1.1237 mL	2.2475 mL
50 mM	0.0449 mL	0.2247 mL	0.4495 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Evren AE, et al. Investigation of Novel Quinoline-Thiazole Derivatives as Antimicrobial Agents: In Vitro and In Silico Approaches. ACS Omega. 2022 Dec 29;8(1):1410-1429.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481