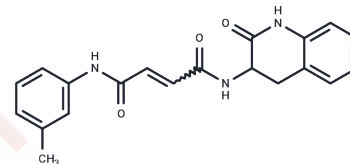


Chitin synthase inhibitor 2

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 2416338-24-2 |
| Formula: | C ₂₀ H ₁₉ N ₃ O ₃ |
| Molecular Weight: | 349.38 |
| 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 | Chitin synthase inhibitor 2 (compound 2b) is a highly potent inhibitor of chitin synthase, with an IC ₅₀ of 0.09 mM and a K _i of 0.12 mM. This compound exhibits antimicrobial activity in vitro and demonstrates synergistic or additive effects when combined with fluconazole or polyoxin B [1]. |
| Targets(IC ₅₀) | Others,Antibiotic,Antifungal |
| In vitro | Chitin synthase inhibitor 2 (compound 2b) effectively inhibits chitin synthase with a 78.3% inhibition percent (IP) at 0.3 mM and an inhibition constant (K _i) of 0.12 mM. It exhibits significant antifungal properties, with minimum inhibitory concentration (MIC) values of 2, 4, 1, and 2 µg/mL against <i>C. albicans</i> (ATCC 76615), <i>A. fumigatus</i> (GIMCC 3.19), <i>C. albicans</i> (ATCC 90023), and <i>A. flavus</i> (ATCC 16870), respectively. However, at concentrations between 128-512 µg/mL, it shows no antibacterial activity against MRSA (N. 315), <i>S. aureus</i> (ATCC 25923), <i>B. subtilis</i> (ATCC 6633), <i>C. coli</i> (JM 109), <i>P. aeruginosa</i> (ATCC 9027), and <i>B. proteus</i> (ATCC 8427). |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 2.8622 mL | 14.3111 mL | 28.6221 mL |
| 5 mM | 0.5724 mL | 2.8622 mL | 5.7244 mL |
| 10 mM | 0.2862 mL | 1.4311 mL | 2.8622 mL |
| 50 mM | 0.0572 mL | 0.2862 mL | 0.5724 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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