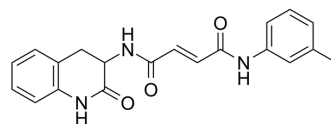


Chitin synthase inhibitor 2

Cat. No.:	HY-150583
CAS No.:	2416338-24-2
Molecular Formula:	C ₂₀ H ₁₉ N ₃ O ₃
Molecular Weight:	349.38
Target:	Fungal; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Chitin synthase inhibitor 2 (compound 2b) is a potent inhibitor of chitin synthase with the IC ₅₀ value of 0.09 mM and the K _i value of 0.12 mM. Chitin synthase inhibitor 2 has antimicrobial activities in vitro and shows synergistic or additive effects with fluconazole or polyoxin B ^[1] .
IC₅₀ & Target	IC ₅₀ : 0.09 mM; K _i : 0.12 mM ^[1]
In Vitro	<p>Chitin synthase inhibitor 2 (compound 2b) (0, 0.032, 0.126, and 0.25 mM) inhibits chitin synthase with inhibition constant K_i value of 0.12 mM and the inhibition percent (IP) of 78.3% at 0.3 mM^[1].</p> <p>Chitin synthase inhibitor 2 (1-4 µg/mL) has excellent antifungal activity with MIC (minimum inhibitory concentration) 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^[1].</p> <p>Chitin synthase inhibitor 2 (128-512 µg/mL) has 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) ^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

[1]. Li B, Shen Y, Wu H, Wu X, Yuan L, Ji Q. Design, synthesis and biological evaluation of novel 3,4-dihydro-2(1H)-quinolinone derivatives as potential chitin synthase inhibitors and antifungal agents. *Eur J Med Chem.* 2020 Jun 1;195:112278.

Caution: Product has not been fully validated for medical applications. For research use only.

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