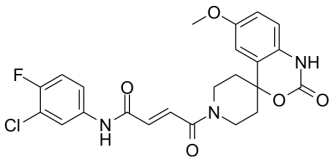
Chitin synthase inhibitor 12

Cat. No.:	HY-151422
CAS No.:	2725075-05-6
Molecular Formula:	$C_{23}H_{21}ClFN_3O_5$
Molecular Weight:	473.88
Target:	Fungal
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Chitin synthase inhibitor 12 is a chitin synthase inhibitor. Chitin synthase inhibitor 12 shows excellent inhibitory activity with an IC_{50} value of 0.16 mM. Chitin synthase inhibitor 12 also is a broad-spectrum antifungal agent and has significantly antifungal activity against drug-resistant fungal variants, such as C. albicans and C. neoformans. Chitin synthase inhibitor 12 can be used for the research of invasive fungal infections (IFIs)[1].
IC_{50} & Target	IC50: 0.16 mM (chitin synthase)[1] MIC: 64 μg/mL (C. albicans); 16 μg/mL (A. flavus); 64 μg/mL (A. fumigatus); 64 μg/mL (C. neoformans)[1]
In Vitro	Chitin synthase inhibitor 12 (compound 9t) (300 ug/mL) has good inhibitory activity against chitin synthase with an IC_{50} value of 0.16 mM[1]. Chitin synthase inhibitor 12 has antifungal activity for C. albicans, A. flavus, A. fumigatus and C. neoformans with MIC values of 64 μg/mL, 16 μg/mL, 64 μg/mL and 64 μg/mL, respectively[1]. Chitin synthase inhibitor 12 has broad-spectrum antifungal activity in vitro and has additive or synergistic effects combined with fluconazole[1]. Chitin synthase inhibitor 12 is related to the disruption of cell wall architecture[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yajie Xu, et al. Spiro[benzoxazine-piperidin]-one derivatives as chitin synthase inhibitors and antifungal agents: Design, synthesis and biological evaluation. Eur J Med Chem. 2022 Aug 31;243:114723

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