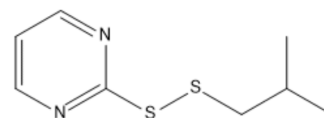


Antifungal agent 38

Cat. No.:	HY-151284
Molecular Formula:	C ₈ H ₁₂ N ₂ S ₂
Molecular Weight:	200.32
Target:	Bacterial; Fungal
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Antifungal agent 38 is a heterocyclic disulfide, an antifungal and antibacterial agent. Antifungal agent 38 induces the shrinkage of hyphae, disrupts the integrity of the plasma membrane, and causes the damage and leakage of cell contents ^[1] .								
In Vitro	<p>Antifungal agent 38 (50 µg/mL) shows anti-fungal activity against 10 pathogenic fungi with inhibition rates of 56.57% (R. solani), 100% (S. sclerotiorum), 55.09% (B. cinerea), 71.23% (F. graminearum), 37.32% (M. oryzae), 50.87% (P. capsici), 100% (A. flavus), 59.75% (P. expansum), 100% (M. fructicola), 65.78% (R. stolonifer), respectively^[1].</p> <p>Antifungal agent 38 (5 µg/mL) damages plasma membrane integrity of M. fructicola^[1].</p> <p>Antifungal agent 38 (100 µg/mL) displays excellent anti-bacterial activity against X. oryzae accc 11602, X. axonopodis^[1].</p> <p>Antifungal agent 38 inhibits fungus growth with EC₅₀s of 17.09 µg/mL (R. solani), 6.34 µg/mL (S. sclerotiorum), 25.24 µg/mL (F. graminearum), >10 µg/mL (A. flavus), 10.42 µg/mL (M. fructicola), 45.71 µg/mL (B. cinerea), respectively^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>M. fructicola</td> </tr> <tr> <td>Concentration:</td> <td>10, 25, 50 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>2, 4, 6 days</td> </tr> <tr> <td>Result:</td> <td>Inhibited M. fructicola growth.</td> </tr> </table>	Cell Line:	M. fructicola	Concentration:	10, 25, 50 µg/mL	Incubation Time:	2, 4, 6 days	Result:	Inhibited M. fructicola growth.
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Concentration:	10, 25, 50 µg/mL								
Incubation Time:	2, 4, 6 days								
Result:	Inhibited M. fructicola growth.								
In Vivo	<p>Antifungal agent 38 (compound S8) (200 µg/mL) displays equivalent curative and higher protective effects as the positive drug Thiophanate-Methyl (HY-B0842) in vivo^[1].</p> <p>Antifungal agent 38 (50, 100, 200 µg/mL, 30 mL; sprinkling) applies on pears and inhibits M. fructicola growth in vivo^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								

REFERENCES

[1]. Wang JR, et al. Allicin-Inspired Heterocyclic Disulfides as Novel Antimicrobial Agents. J Agric Food Chem. 2022 Sep 6.

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

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