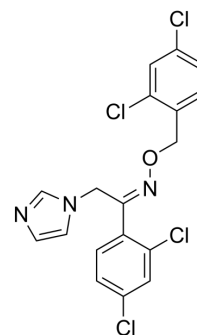


Oxiconazole

Cat. No.:	HY-B1324A
CAS No.:	64211-45-6
Molecular Formula:	C ₁₈ H ₁₃ Cl ₄ N ₃ O
Molecular Weight:	429.13
Target:	Fungal; Cytochrome P450; Antibiotic
Pathway:	Anti-infection; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Oxiconazole (Ro 13-8996) is a broad spectrum anti-fungal agent which can inhibit the growth of <i>Candida</i> , <i>Aspergillus</i> and <i>Trichophyton</i> . Oxiconazole is also a highly efficacious activator of CYP3A4 transactivation, which could be antagonized by Rifampicin (HY-B0272) in a competitive manner. Oxiconazole exhibits inhibitory effect against colorectal cancer (CRC) via peroxiredoxin-2 (PRDX2)-mediated autophagy arrest ^{[1][2][3]} .																														
IC₅₀ & Target	CYP3A4																														
In Vitro	<p>Oxiconazole (24 h; 0-40 μM) inhibits CRC cell growth^[3]. Oxiconazole has antifungal activity against <i>Candida</i>, <i>Aspergillus</i> and <i>Trichophyton</i>^[1]. Antifungal Activities of Oxiconazole^[1].</p> <table border="1"> <thead> <tr> <th></th> <th><i>Candida albicans</i></th> <th><i>Candida glabrata</i></th> <th><i>Candida parapsilosis</i></th> <th><i>Aspergillus fumigatus</i></th> <th><i>Aspergillus flavus</i></th> <th><i>Trichophyton mentagrophytes</i></th> <th><i>Trichophyton rubrum</i></th> </tr> </thead> <tbody> <tr> <td>Oxiconazole</td> <td>0.03 μg/mL</td> <td>0.01 μg/mL</td> <td>0.008 μg/mL</td> <td>2 μg/mL</td> <td>2 μg/mL</td> <td>2 μg/mL</td> <td>2 μg/mL</td> </tr> </tbody> </table> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Proliferation Assay^[3]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HCT116, SW480, RKO, DLD-1, SW620, LoVo and NCM460</td> </tr> <tr> <td>Concentration:</td> <td>0-40 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Exhibited inhibitory activity against HCT116, SW480, RKO, DLD-1, SW620, LoVo and NCM460 with IC₅₀s of 25.86 μM, 27.34 μM, 21.01 μM, 25.56 μM, 21.75 μM, 24.87 μM and 126.4 μM.</td> </tr> </table>								<i>Candida albicans</i>	<i>Candida glabrata</i>	<i>Candida parapsilosis</i>	<i>Aspergillus fumigatus</i>	<i>Aspergillus flavus</i>	<i>Trichophyton mentagrophytes</i>	<i>Trichophyton rubrum</i>	Oxiconazole	0.03 μg/mL	0.01 μg/mL	0.008 μg/mL	2 μg/mL	2 μg/mL	2 μg/mL	2 μg/mL	Cell Line:	HCT116, SW480, RKO, DLD-1, SW620, LoVo and NCM460	Concentration:	0-40 μM	Incubation Time:	24 h	Result:	Exhibited inhibitory activity against HCT116, SW480, RKO, DLD-1, SW620, LoVo and NCM460 with IC ₅₀ s of 25.86 μM, 27.34 μM, 21.01 μM, 25.56 μM, 21.75 μM, 24.87 μM and 126.4 μM.
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In Vivo	<p>Oxiconazole (50 mg/kg/day; IP; for 12 days) significantly restrains CRC cell growth^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>BALB/c nude mice (injected subcutaneously with HCT116 cells (1×10⁷/mouse)^[3]</td> </tr> </table>							Animal Model:	BALB/c nude mice (injected subcutaneously with HCT116 cells (1×10 ⁷ /mouse) ^[3]																						
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Dosage:	50 mg/kg/day
Administration:	IP; for 12 days
Result:	Significantly restrained CRC cell growth and showed no obvious side effects.

CUSTOMER VALIDATION

- Int J Biol Sci. 2022; 18(9):3747-3761.

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REFERENCES

- [1]. Rossello A, et al. Synthesis, antifungal activity, and molecular modeling studies of new inverted oxime ethers of oxiconazole. J Med Chem. 2002 Oct 24;45(22):4903-12.
- [2]. Svecova L, et al. Azole antimycotics differentially affect rifampicin-induced pregnane X receptor-mediated CYP3A4 gene expression. Drug Metab Dispos. 2008 Feb;36(2):339-48.
- [3]. Shi J, et al. Repurposing Oxiconazole against Colorectal Cancer via PRDX2-mediated Autophagy Arrest. Int J Biol Sci. 2022 May 21;18(9):3747-3761.

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

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