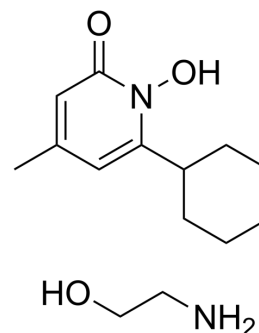


## Ciclopirox olamine (GMP)

Cat. No.:	HY-B0450AG
CAS No.:	41621-49-2
Molecular Formula:	C <sub>14</sub> H <sub>24</sub> N <sub>2</sub> O <sub>3</sub>
Molecular Weight:	268.35
Target:	Bacterial; Fungal; Ferroptosis
Pathway:	Anti-infection; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	<p>Ciclopirox (olamine) (GMP) is Ciclopirox olamine (HY-B0450A) produced by using GMP guidelines. GMP small molecules work appropriately as an auxiliary reagent for cell therapy manufacture. Ciclopirox (HOE296b) is a synthetic antifungal agent that can be used for superficial mycoses research. Ciclopirox olamine has a very broad spectrum of activity and inhibits dermatophytes, yeasts, molds, and many Gram-positive and Gram-negative species pathogenic<sup>[1]</sup>.</p>																
<b>In Vitro</b>	<p>In a study conducted to further elucidate Ciclopirox GMP's mechanism, several <i>Saccharomyces cerevisiae</i> mutants were screened and tested. Results from interpretation of the effects of both the drug treatment and mutation suggested that Ciclopirox GMP may exert its effect by disrupting DNA repair, cell division signals and structures (mitotic spindles) as well as some elements of intracellular transport<sup>[2]</sup>.</p> <p>Ciclopirox GMP is a broad-spectrum antifungal with anti-inflammatory properties effective against the yeast implicated in seborrhoeic dermatitis, <i>Malassezia</i> spp<sup>[3]</sup>.</p> <p>Ciclopirox (olamine) (0.9 μM, 24 h) protects human iPSC-derived RPE cells exposed to TBHP-induced cell from oxidative damage<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>iPSC-derived RPE cells</td> </tr> <tr> <td>Concentration:</td> <td>0.9 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Protected human iPSC-derived RPE cells exposed to TBHP-induced cell death.</td> </tr> </table> <p>Real Time qPCR<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>iPSC-derived RPE cells</td> </tr> <tr> <td>Concentration:</td> <td>0.9 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Expressed RPE markers (RPE65, BEST1, MITF).</td> </tr> </table>	Cell Line:	iPSC-derived RPE cells	Concentration:	0.9 μM	Incubation Time:	24 h	Result:	Protected human iPSC-derived RPE cells exposed to TBHP-induced cell death.	Cell Line:	iPSC-derived RPE cells	Concentration:	0.9 μM	Incubation Time:	24 h	Result:	Expressed RPE markers (RPE65, BEST1, MITF).
Cell Line:	iPSC-derived RPE cells																
Concentration:	0.9 μM																
Incubation Time:	24 h																
Result:	Protected human iPSC-derived RPE cells exposed to TBHP-induced cell death.																
Cell Line:	iPSC-derived RPE cells																
Concentration:	0.9 μM																
Incubation Time:	24 h																
Result:	Expressed RPE markers (RPE65, BEST1, MITF).																

---

## CUSTOMER VALIDATION

- Clin Transl Med. 2022 Aug;12(8):e999.
- Pharmacol Res. 7 January 2022, 106046.
- Front Pharmacol. 2021 May 10;12:670224.
- Eur J Pharmacol. 2022 Jul 19;175156.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

---

## REFERENCES

- [1]. Niewerth M, et al. Ciclopirox olamine treatment affects the expression pattern of Candida albicans genes encoding virulence factors, iron metabolism proteins, and drug resistance factors. Antimicrob Agents Chemother. 2003 Jun;47(6):1805-17.
- [2]. Cai H, et al. High-throughput screening identifies compounds that protect RPE cells from physiological stressors present in AMD. Exp Eye Res. 2019 Aug;185:107641.
- 

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA