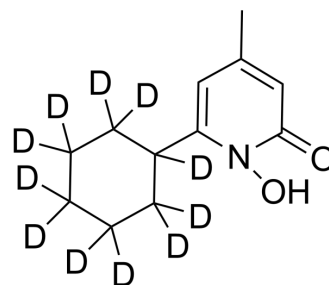


## Ciclopirox-d<sub>11</sub>

Cat. No.:	HY-B0450S
Molecular Formula:	C <sub>12</sub> H <sub>6</sub> D <sub>11</sub> NO <sub>2</sub>
Molecular Weight:	218.34
Target:	Fungal; Autophagy; Ferroptosis; Bacterial
Pathway:	Anti-infection; Autophagy; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

**Description** Ciclopirox-d<sub>11</sub> is the deuterium labeled Ciclopirox. 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[1].

**In Vitro** Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. 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. 47(6): p. 1805-17.
- [3]. Leem, S.H., et al., The possible mechanism of action of ciclopirox olamine in the yeast *Saccharomyces cerevisiae*. *Mol Cells*, 2003. 15(1): p. 55-61.
- [4]. Ratnavel, R.C., R.A. Squire, and G.C. Boorman, Clinical efficacies of shampoos containing ciclopirox olamine (1.5%) and ketoconazole (2.0%) in the treatment of seborrheic dermatitis. *J Dermatolog Treat*, 2007. 18(2): p. 88-96.

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

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