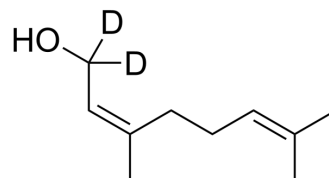


Nerol-d₂

Cat. No.:	HY-N7063S
CAS No.:	32637-85-7
Molecular Formula:	C ₁₀ H ₁₆ D ₂ O
Molecular Weight:	156.26
Target:	Apoptosis; Mitochondrial Metabolism; Fungal; Endogenous Metabolite; Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	Apoptosis; Metabolic Enzyme/Protease; Anti-infection; Immunology/Inflammation; NF-κB; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Nerol-d ₂ is deuterated labeled Octanal (HY-N8015). Octanal is an aromatic aldehyde, with antioxidant and antimicrobial activities. Octanal shows cytotoxicity against Hela cells ^[1] .
In Vitro	<p>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^[1].</p> <p>Nerol induces apoptosis associated with the generation of ROS and Ca²⁺ overload in saprotrophic fungus <i>Aspergillus flavus</i> [2].</p> <p>The antifungal activity of Nerol (NEL) against <i>Candida albicans</i>, a pathogenic fungus, has a minimum inhibitory concentration (MIC) of 4.4 μM that causes noteworthy candidacidal activity through an apoptosis-like mechanism^[3].</p> <p>Nerol triggers mitochondrial dysfunction and disruption via elevation of Ca²⁺ and ROS in <i>Candida albicans</i>^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Tian J, et al. Nerol-induced apoptosis associated with the generation of ROS and Ca²⁺ overload in saprotrophic fungus *Aspergillus flavus*. *Appl Microbiol Biotechnol*. 2018 Aug;102(15):6659-6672.
- [2]. Tian J, et al. Nerol triggers mitochondrial dysfunction and disruption via elevation of Ca²⁺ and ROS in *Candida albicans*. *Int J Biochem Cell Biol*. 2017 Apr;85:114-122.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.

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

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