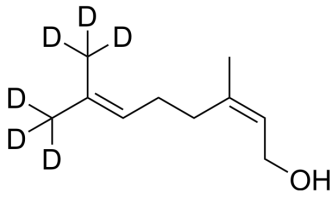
Nerol-d_6

Cat. No.:	HY-N7063S1
CAS No.:	66063-45-4
Molecular Formula:	$C_{10}H_{12}D_6O$
Molecular Weight:	160.29
Target:	Mitochondrial Metabolism; Fungal; Endogenous Metabolite; Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	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_6 is deuterated labeled Oct-1-en-3-ol (HY-W010410). Oct-1-en-3-ol, a fatty acid fragrant, is a self-stimulating oxylipin messenger. Oct-1-en-3-ol serves as a signaling molecule in plant cellular responses, plant-herbivore interactions, and plant-plant interactions. Oct-1-en-3-ol causes dopamine neuron degeneration through disruption of dopamine handling[1][2].
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[1]. Nerol induces apoptosis associated with the generation of ROS and Ca^{2+} overload in saprotrophic fungus Aspergillus flavus [2]. The antifungal activity of Nerol (NEL) against Candida albicans, a pathogenic fungus, has a minimum inhibitory concentration (MIC) of 4.4μM that causes noteworthy candidacidal activity through an apoptosis-like mechanism[3]. Nerol triggers mitochondrial dysfunction and disruption via elevation of Ca^{2+} and ROS in Candida albicans[3]. 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 Feb;53(2):211-216.

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