



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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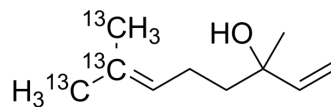
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## Linalool-<sup>13</sup>C<sub>3</sub>

<b>Cat. No.:</b>	HY-N0368S1
<b>Molecular Formula:</b>	C <sub>7</sub> <sup>13</sup> C <sub>3</sub> H <sub>18</sub> O
<b>Molecular Weight:</b>	157.23
<b>Target:</b>	Apoptosis; Endogenous Metabolite; iGluR; Bacterial; Isotope-Labeled Compounds
<b>Pathway:</b>	Apoptosis; Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Neuronal Signaling; Anti-infection; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Linalool- <sup>13</sup> C <sub>3</sub> is <sup>13</sup> C labeled α-Hexylcinnamaldehyde (HY-W014118). α-Hexylcinnamaldehyde, a compound derived from Cinnamaldehyde. α-Hexylcinnamaldehyde has the potential antimutagenic and chemosensitizing properties. α-Hexylcinnamaldehyde is widely used as an ingredient in many personal care, and as an additive in food and the pharmaceutical industry <sup>[1]</sup> .
<b>In Vitro</b>	<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<sup>[1]</sup>.</p> <p>Linalool (0-2000 μM, 24-72 h) can induce apoptosis of cancer cells (U87-MG, HepG-2, SW620 and so on) through oxidative stress while protecting normal cells PC12<sup>[4]</sup>.</p> <p>Linalool (0-2000 mg/mL, 0-72 h) exerts antibacterial effects by damaging cell membranes<sup>[4]</sup>.</p> <p>Linalool (0-2 mM, 24-48 h) inhibits A549 cell proliferation by inducing G0/G1 and/or G2/M cell cycle arrest, and without affecting the cell viability of normal lung WI-38 cells. Linalool inhibits A549 cell migration<sup>[5]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>Linalool (150, 200, 250 mg/kg orally every alternate day for 21 days) reduces tumor growth by 50% in the S-180 solid tumor mouse model, inhibits oxidation in normal liver, and promotes oxidation in tumor tissue<sup>[6]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### REFERENCES

- [1]. Oner Z1, et al. The protective and therapeutic effects of linalool against doxorubicin-induced cardiotoxicity in Wistar albino rats. *Hum Exp Toxicol*. 2019 Apr 12;960327119842634.
- [2]. Jana S, et al. Antitumorigenic potential of linalool is accompanied by modulation of oxidative stress: an in vivo study in sarcoma-180 solid tumor model. *Nutr Cancer*. 2014;66(5):835-48.
- [3]. Jun HJ, et al. Linalool is a PPARα ligand that reduces plasma TG levels and rewires the hepatic transcriptome and plasma metabolome. *J Lipid Res*. 2014 Jun;55(6):1098-110.
- [4]. Rodenak-Kladniew B, et al. Anti-cancer mechanisms of linalool and 1,8-cineole in non-small cell lung cancer A549 cells. *Heliyon*. 2020 Dec 15;6(12):e05639.
- [5]. An Q, et al. Recent updates on bioactive properties of linalool. *Food Funct*. 2021 Nov 1;12(21):10370-10389.

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

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