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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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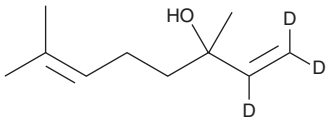
PRODUCT INFORMATION

(±)-Linalool-d_3

Item No. 9004273

CAS Registry No.: 1216673-02-7
Formal Name: 3,7-dimethyl-1,6-octadien-1,1,2-d_3-3-ol
Synonym: dl-Linalool-d_3
MF: $C_{10}H_{15}D_3O$
FW: 157.3
Chemical Purity: ≥95% ((±)-Linalool)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(±)-Linalool-d_3 is intended for use as an internal standard for the quantification of (±)-linalool (Item No. 21575) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

(±)-Linalool-d_3 is supplied as a solution in chloroform. To change the solvent, simply evaporate the chloroform under a gentle stream of nitrogen and immediately add the solvent of choice. (±)-Linalool-d_3 is slightly soluble in chloroform, ethyl acetate, and methanol.

Description

(±)-Linalool is a monoterpene alcohol that has been found in *C. sativa*, *C. indica*, and hemp with diverse biological activities.[1-6] It induces cell cycle arrest at the G_0/G_1 and G_2M phase in U937 and HeLa cells, respectively.[2] (±)-Linalool is cytotoxic to U937 and HeLa cells (IC_{50}s = 2.59 and 11.02 µM, respectively). It induces recruitment of a PGC-1α coactivator peptide to the PPARα ligand binding domain (EC_{50} = 5.45 µM in a TR-FRET assay).[3] *In vivo*, (±)-linalool reduces plasma triglyceride concentration in mice fed a Western diet and transgenic mice expressing human ApoE2, but not PPARα$^{-/-}$ mice. It has molluscicidal and larvicidal effects *in vitro* (LC_{50}s = 0.25 and 0.07 mg/L for *O. hupensis* and *S. japonicium*, respectively), and it reduces the amount of schistosomulum recovered from mouse skin after *S. japonicium* challenge infection.[4] (±)-Linalool (10-40 mg/kg) reduces the number of macrophages and neutrophils, as well as the production of TNF-α, IL-6, IL-1β, IL-8, and MCP-1, in bronchoalveolar lavage fluid (BALF) in a mouse model of cigarette smoke-induced acute lung inflammation.[5] It also decreases immobility time in the forced swim test in mice, indicating antidepressant-like activity.[6]

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PRODUCT INFORMATION

References

1. Hazekamp, A., Tejkalová, K., and Papadimitriou, S. *Cannabis*: From cultivar to chemovar II—A metabolomics approach to *Cannabis* classification. *Cannabis Cannabinoid Res.* **1(1),** 202-215 (2016).
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3. Jun, H.J., Lee, J.H., Kim, J., *et al.* Linalool is a PPARα ligand that reduces plasma TG levels and rewires the hepatic transcriptome and plasma metabolome. *J. Lipid. Res.* **55(6),** 1098-1110 (2014).
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