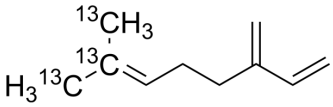
Myrcene-$^{13}C_3$

Cat. No.:	HY-N0803S1
Molecular Formula:	$C_7{}^{13}C_3H_{16}$
Molecular Weight:	139.21
Target:	NF-κB; Isotope-Labeled Compounds
Pathway:	NF-κB; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Myrcene-$^{13}C_3$ is ^{13}C labeled trans-2-Decenal (HY-W015551). trans-2-Decenal is an important raw material and intermediate used in organic synthesis, medicine, pesticides and dyes.
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]. Myrcene (50 μM, 100 μM; 24 h, 48 h) inhibits 10 ng/mL TNFα-induced NF-κB activity, through causing the inactivation of IKK in MDA-MB-231 cells[3]. Myrcene (0.25-1.0 μg/mL; 24 h, 48 h) inhibits clonal sphere formation in A549 cells, and arrests cell cycle in the G0/G1 phases to cause apoptosis[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Myrcene (100 mg/kg, 200 mg/kg; ip; 30 days) can improve the effects of $AlCl_3$ (5 mg/kg; p. o.) and D-galactose (60 mg/kg; i. p.) in mice. Alleviates neurobehavioral and neuropathological effect[5]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Eunson Hwang, et al. Myrcene, an Aromatic Volatile Compound, Ameliorates Human Skin Extrinsic Aging via Regulation of MMPs Production. Am J Chin Med. 2017;45(5):1113-1124.

[2]. Jeong-Ho Lee, et al. Anti-invasive effect of β-myrcene, a component of the essential oil from Pinus koraiensis cones, in metastatic MDA-MB-231 human breast cancer cells. Journal of the Korean Society for Applied Biological Chemistry volume 58, pages563–569.

[3]. Bai X, et al. Myrcene exhibits antitumor activity against lung cancer cells by inducing oxidative stress and apoptosis mechanisms[J]. Natural Product Communications, 2020, 15(9): 1934578X20961189.

[4]. Islam AUS, et al. Myrcene Attenuates Renal Inflammation and Oxidative Stress in the Adrenalectomized Rat Model. Molecules. 2020 Sep 30;25(19):4492.

[5]. Kumar R, et al. Ameliorative effect of myrcene in mouse model of Alzheimer's disease. Eur J Pharmacol. 2021 Nov 15;911:174529.

[6]. 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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