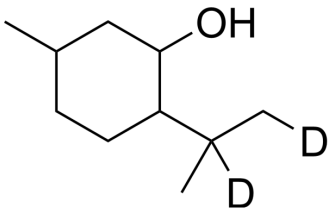
Menthol-d_2

Cat. No.:	HY-N1369S1
CAS No.:	1335435-38-5
Molecular Formula:	$C_{10}H_{18}D_2O$
Molecular Weight:	158.28
Target:	Calcium Channel; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Menthol-d_2 is deuterated labeled trans-2,cis-6-Nonadienal (HY-W127515). Trans-2, cis-6-NonadienalIt is an organic compound belonging to aldehydes. It has a strong, pungent smell and is commonly found in a variety of foods, including fruits and vegetables. Trans-2, cis-6-NonadienalIt has a variety of applications in the flavor and fragrance industry, especially as a fragrance agent in products such as perfume, cologne and air fresheners. In addition, it can also be used as an intermediate in the synthesis of various chemicals and drugs.
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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Menthol (10-200 μg/mL; po; single dose) reduces the aversive effects of oral nicotine (200 μg/mL) in mice, and at higher concentrations, Menthol itself produces irritant[3]. Menthol also strongly inhibits respiratory tract irritation responses via TRPM8 and increases cotinine in the blood. Menthol, as a cigarette additive, may promote smoking and nicotine addiction[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. NicolettaGaleotti, et al. Menthol: a natural analgesic compound. Neuroscience Letters. 2002 Apr.

[2]. Ha MA, et al. Menthol attenuates respiratory irritation and elevates blood cotinine in cigarette smoke exposed mice. PLoS One. 2015 Feb 13;10(2):e0117128.

[3]. Fan L, et al. Menthol decreases oral nicotine aversion in C57BL/6 mice through a TRPM8-dependent mechanism. Tob Control. 2016 Nov;25(Suppl 2):ii50-ii54.

[4]. 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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