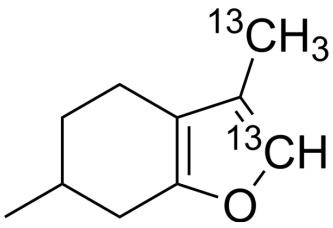
Menthofuran-$^{13}C_2$

Cat. No.:	HY-N9484S
Molecular Formula:	$C_8{}^{13}C_2H_{14}O$
Molecular Weight:	152.2
Target:	Drug Metabolite; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Menthofuran-$^{13}C_2$ is ^{13}C labeled Menthol (HY-N1369). Menthol is an analgesic and TRPM8 modulator. TRPM8 is a cold temperature sensing ion channel, and Menthol can regulate TRPM8 to exert analgesic and anti-irritation mechanisms. Menthol stimulates cold receptors and produces a cooling sensation by inhibiting Ca^{++} currents in neuronal cell membranes. Menthol also improves oral nicotine rejection in mice[1][2][3].
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.

REFERENCES

[1]. Gordon WP, et al. The metabolism of the abortifacient terpene, (R)-(+)-pulegone, to a proximate toxin, menthofuran. Drug Metab Dispos. 1987 Sep-Oct;15(5):589-94.

[2]. Mahmoud SS, et al. Menthofuran regulates essential oil biosynthesis in peppermint by controlling a downstream monoterpene reductase. Proc Natl Acad Sci U S A. 2003 Nov 25;100(24):14481-6.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA