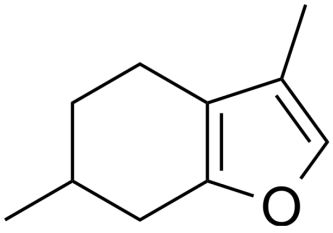
Menthofuran

Cat. No.:	HY-N9484
CAS No.:	494-90-6
Molecular Formula:	$C_{10}H_{14}O$
Molecular Weight:	150.22
Target:	Drug Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (665.69 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	6.6569 mL	33.2845 mL	66.5690 mL
	5 mM	1.3314 mL	6.6569 mL	13.3138 mL
	10 mM	0.6657 mL	3.3285 mL	6.6569 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Menthofuran is a proximate toxic metabolite of (R)-(+)-Pulegone. Menthofuran regulates essential oil biosynthesis in peppermint by controlling a downstream monoterpene reductase[1][2].

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.

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