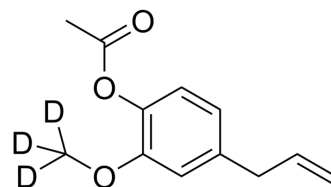


## Eugenol acetate-d<sub>3</sub>

Cat. No.:	HY-W014612S
Molecular Formula:	C <sub>12</sub> H <sub>11</sub> D <sub>3</sub> O <sub>3</sub>
Molecular Weight:	209.26
Target:	Bacterial; Endogenous Metabolite; Fungal; Isotope-Labeled Compounds
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Eugenol acetate-d <sub>3</sub> is deuterated labeled Decyl aldehyde (HY-W012570). Decyl aldehyde is a simple ten-carbon aldehyde. Decyl aldehyde is a bacterial luciferase substrate.
<b>In Vitro</b>	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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Eugenol acetate (15% v/v for 30 µL; twice per wk for 28 wk) causes increased expression of p53 and p21WAF1 in mouse skin, and apoptosis in cancer tissue <sup>[3]</sup> . Eugenol acetate (3-300 mg/kg; po or ip, single dose) can exert an analgesic effect and inhibit different mouse acute pain models caused by acetic acid, glutamate, and kainic acid, respectively <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Kaur G, et al. Eugenol precludes cutaneous chemical carcinogenesis in mouse by preventing oxidative stress and inflammation and by inducing apoptosis. *Mol Carcinog.* 2010 Mar;49(3):290-301.
- [2]. Dal Bó W, et al. Eugenol reduces acute pain in mice by modulating the glutamatergic and tumor necrosis factor alpha (TNF-α) pathways. *Fundam Clin Pharmacol.* 2013 Oct;27(5):517-25
- [3]. Mustafa KS, et al. Antifungal potential of eugenyl acetate against clinical isolates of *Candida* species. *Microb Pathog.* 2016 Oct;99:19-29.
- [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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