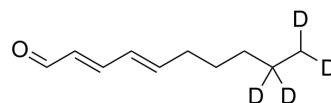


trans,trans-2,4-Decadienal-d₄

Cat. No.:	HY-W013627S
CAS No.:	1335436-29-7
Molecular Formula:	C ₁₀ H ₁₂ D ₄ O
Molecular Weight:	156.26
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	trans,trans-2,4-Decadienal-d ₄ is deuterated labeled Elemicin (HY-N6807). Elemicin is an orally active alkenylbenzene widely distributed in many herbs and spices. Elemicin inhibits Stearoyl-CoA Desaturase 1 (SCD1) by metabolic activation. Elemicin has anti-influenza activities, antimicrobial, antioxidant, and antiviral activities. Elemicin and its reactive metabolite of 1'-Hydroxyelemicin can induce hepatotoxicity ^{[1][2][3][4]} .
In Vitro	<p>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].</p> <p>Two metabolic pathways for the biotransformation of trans,trans-2,4-Decadienal (tt-DDE) in vivo are proposed: (i) the oxidation of tt-DDE to the corresponding carboxylic acid, 2,4-decadienoic acid, in liver cells and (ii) glutathione (GSH) conjugation, GSH breakdown, and aldehyde reduction, which generate cysteine-conjugated 2,4-decadien-1-ol in both liver and lung cells.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

[1]. Kao-Lu Pan, et al. Identification of trans,trans-2,4-decadienal metabolites in mouse and human cells using liquid chromatography-mass spectrometry. *Chem Res Toxicol.* 2014 Oct 20;27(10):1707-19.

[2]. 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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