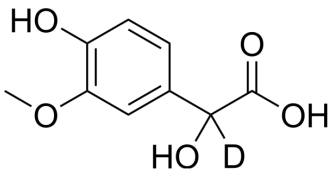
Vanillylmandelic acid-d1

Cat. No.:	HY-113121S1
CAS No.:	53587-34-1
Molecular Formula:	$C_9H_9DO_5$
Molecular Weight:	199.18
Target:	Endogenous 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	Vanillylmandelic acid-d1 is the deuterium labeled Vanillylmandelic acid. Vanillylmandelic acid is the endproduct of epinephrine and norepinephrine metabolism. Vanillylmandelic acid can be used as an indication of the disorder in neurotransmitter metabolism as well. Vanillylmandelic acid has antioxidant activity towards DPPH radical with an IC_{50} value of 33 μM[1].
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]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Michalis K Kolentinis, et al.Cardiovascular effects of vanillylmandelic acid in rats. Eur J Pharmacol. 2013 Mar 5;703(1-3):46-52.

[3]. Dušan Dimić, et al. Experimental and theoretical elucidation of structural and antioxidant properties of vanillylmandelic acid and its carboxylate anion. Spectrochim Acta A Mol Biomol Spectrosc. 2018 Jun 5;198:61-70.

Caution: Product has not been fully validated for medical applications. For research use only.

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