Vanillylmandelic acid-d3

Cat. No.: HY-113121S

CAS No.: 74495-70-8

Molecular Formula: $C_9H_7D_3O_5$

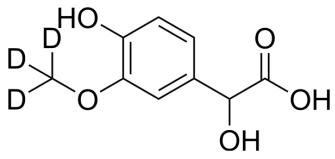
Molecular Weight: 201.19

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (621.30 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.9704 mL	24.8521 mL	49.7043 mL
	5 mM	0.9941 mL	4.9704 mL	9.9409 mL
	10 mM	0.4970 mL	2.4852 mL	4.9704 mL

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

BIOLOGICAL ACTIVITY

Description

Vanillylmandelic acid-d3 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.

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