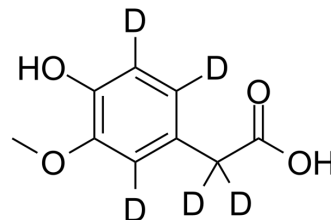


Homovanillic acid-d₅

Cat. No.:	HY-N0384S2
CAS No.:	53587-32-9
Molecular Formula:	C ₉ H ₅ D ₅ O ₄
Molecular Weight:	187.2
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (534.19 mM)
 DMSO : ≥ 100 mg/mL (534.19 mM)
 H₂O : 8.33 mg/mL (44.50 mM; Need ultrasonic)
 H₂O : 8.33 mg/mL (44.50 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	5.3419 mL	26.7094 mL	53.4188 mL
	5 mM	1.0684 mL	5.3419 mL	10.6838 mL
	10 mM	0.5342 mL	2.6709 mL	5.3419 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (11.11 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (11.11 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (11.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Homovanillic acid-d₅ is the deuterium labeled Homovanillic acid. Homovanillic acid is a dopamine metabolite found to be associated with aromatic L-amino acid decarboxylase deficiency, celiac disease, growth hormone deficiency, and sepiapterin reductase deficiency.

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.

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

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