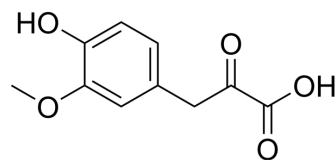


Vanilpyruvic acid

Cat. No.:	HY-101416
CAS No.:	1081-71-6
Molecular Formula:	C ₁₀ H ₁₀ O ₅
Molecular Weight:	210.18
Target:	Adrenergic Receptor; Monoamine Transporter; Opioid Receptor; Drug Metabolite; Endogenous Metabolite
Pathway:	GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 27 mg/mL (128.46 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.7578 mL	23.7891 mL	47.5783 mL
	5 mM	0.9516 mL	4.7578 mL	9.5157 mL
	10 mM	0.4758 mL	2.3789 mL	4.7578 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 (9.90 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.08 mg/mL (9.90 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Vanilpyruvic acid is a catecholamine metabolite and precursor to vanillic acid.

In Vitro

The catecholamines, dopamine, norepinephrine, and epinephrine, constitute a class of chemical neurotransmitters and hormones that occupy key positions in the regulation of physiological processes and the development of neurological, psychiatric, endocrine, and cardiovascular diseases^[1]. Catecholamines, namely dopamine (3,4-dihydrophenylethylamine), norepinephrine (noradrenaline) and epinephrine (adrenaline), act as neurotransmitters or hormones at central and peripheral levels. In addition to being the most abundant of the monoamine neurotransmitters, dopamine is also found in

non-neuronal tissues such as the gastrointestinal tract and the kidney, where it participates in the regulation of sodium balance^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Eisenhofer G, et al. Catecholamine metabolism: a contemporary view with implications for physiology and medicine. *Pharmacol Rev.* 2004 Sep;56(3):331-49.

[2]. Bicker J, et al. Liquid chromatographic methods for the quantification of catecholamines and their metabolites in several biological samples--a review. *Anal Chim Acta.* 2013 Mar 20;768:12-34.

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

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