

Product Data Sheet

Product Name: Vanillylmandelic acid

Cat. No.: GC61438

Chemical Properties

Cas. No. 55-10-7

SMILES O=C(O)C(O)C1=CC=C(O)C(OC)=C1

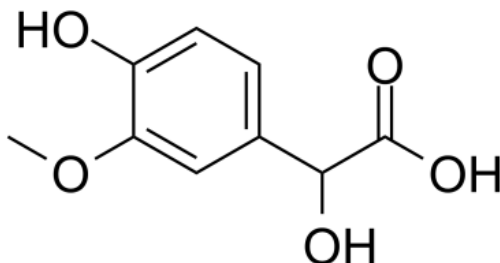
Formula C9H10O5 M.Wt 198.17

Solubility DMSO: 250 mg/mL (1261.54 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

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 IC50 value of 33 µM[1].

Vanillylmandelic acid has antioxidant activity, the IC50 value is determined as the amount of VMA required to reduce 50% of the starting concentration of free radical is 33*10⁻⁶ M in the UV-Vis

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

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decolourisation DPPH assay[1].

Vanillylmandelic acid (intra-arterial injection over 1 min; 1, 10 and 100 mg/kg; the 60 min-observation period) produces a significant difference between vanillylmandelic acid groups and controls.

Vanillylmandelic acid decreases the heart rate by 17.5%, 17.9% and 18.9% after 1, 10 and 100 mg/kg, respectively. Mean blood pressure is decreased by 13.5% in control animals as compared to 37%, 23% and 26% after 1, 10 and 100 mg/kg, respectively, in wistar rats[1].

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