

Product Data Sheet

Product Name: β -Hydroxypropiovanillone

Cat. No.: GC62551

Chemical Properties

Cas. No. 2196-18-1

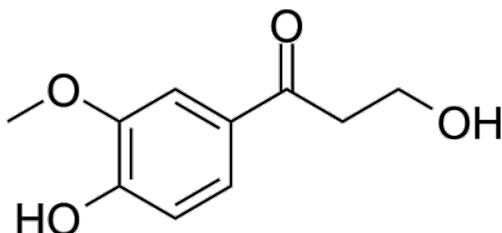
Formula $C_{10}H_{12}O_4$ M.Wt 196.2

Solubility DMSO : 100 mg/mL (509.68 mM; Need ultrasonic) Storage 4°C, protect from light

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

β -Hydroxypropiovanillone, a natural compound, shows significant concentration-dependent inhibitory effects on α -glucosidase with an IC₅₀ of 257.8 μ g/mL[1].

β -hydroxypropiovanillone and its analogs can be obtained by chemoselective catalytic oxidation of lignin using 2,3-dichloro-5,6-dicyano-1,4-benzoquinone/tert-butyl nitrite/O₂, followed by cleavage of arylglycerol- β -aryl ether with zinc[2]. In SYK-6 cells, β -hydroxypropiovanillone (HPV) is oxidized to vanilloyl acetic acid (VAA) via vanilloyl acetaldehyde (VAL). The resulting VAA was further converted

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

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into vanillate through the activation of VAA by coenzyme A[3].

[1]. Lv Q , et al. Dihydrochalcone-derived polyphenols from tea crab apple (*Malus hupehensis*) and their inhibitory effects on α -glucosidase in vitro. *Food Funct.* 2019;10(5):2881-2887.

[2]. Higuchi Y, et al. Bacterial Catabolism of β -Hydroxypropiovanillone and β -Hydroxypropiosyringone Produced in the Reductive Cleavage of Arylglycerol- β -Aryl Ether in Lignin. *Appl Environ Microbiol.* 2018;84(7):e02670-17. Published 2018 Mar 19.

[3]. Higuchi Y, et al. Discovery of novel enzyme genes involved in the conversion of an arylglycerol- β -aryl ether metabolite and their use in generating a metabolic pathway for lignin valorization. *Metab Eng.* 2019;55:258-267.

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