

Product Data Sheet

Product Name: Gallic acid hydrate

Cat. No.: GC61436

Chemical Properties

Cas. No. 5995-86-8

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

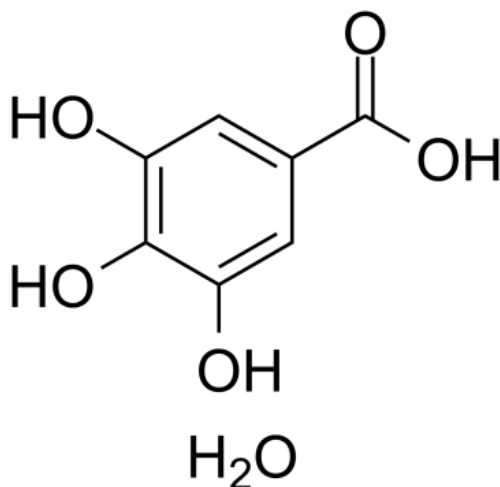
Formula C7H8O6 M.Wt 188.13

Solubility DMSO : 50 mg/mL (265.77 mM; Need ultrasonic) 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

Gallic acid (3,4,5-Trihydroxybenzoic acid) hydrate is a natural polyhydroxyphenolic compound and a free radical scavenger to inhibit cyclooxygenase-2 (COX-2)[1]. Gallic acid hydrate has various activities, such as antimicrobial, antioxidant, antimicrobial, anti-inflammatory, and anticancer activities[2].

Gallic acid is an antioxidant which can inhibit both COX-2[1]. After 18 h treatment with Gallic acid, the

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number of viable neutrophils is dramatically decreased from 40.3% to 27.7%, highly comparable with 26.4% for untreated neutrophils. Gallic acid fails to attenuate isoproterenol-induced myocytolysis[3].

The food intake (2.6 ± 0.08 g/day, $p=0.69$) and the body weight (2.5 ± 0.69 g, $p=0.76$) of the Gallic acid group do not differ significantly from those of the control group (food intake; 2.41 ± 0.14 g/day and the body weight; 2.83 ± 0.84 g/day). The blood glucose tolerance in the Gallic acid group is significantly improved after 2 weeks of treatment. The blood glucose tolerance of the Gallic acid group after a treatment period of 2 weeks is also significantly better than that of the control group at 90 and 120 min ($p<0.05$). The serum triglyceride concentration in the Gallic acid group (0.67 ± 0.03 mM, $p<0.05$) is significantly reduced relative to that of the control group (1.08 ± 0.20 mM). The total cholesterol concentration is similar in the control (3.19 ± 0.27 mM) and Gallic acid (3.01 ± 0.18 mM) groups[2].

[1]. Amaravani M, et al. COX-2 structural analysis and docking studies with gallic acid structural analogues. Springerplus. 2012 Dec;1(1):58. [2]. Bak EJ, et al. Gallic acid improves glucose tolerance and triglyceride concentration in diet-induced obesity mice. Scand J Clin Lab Invest. 2013 Dec;73(8):607-14. [3]. Cheng Y, et al. Plant Natural Products Calycosin and Gallic Acid Synergistically Attenuate Neutrophil Infiltration and Subsequent Injury in Isoproterenol-Induced Myocardial Infarction: A Possible Role for Leukotriene B4 12-Hydroxydehydrogenase• Oxid Med Cell Longev. 2015;2015:434052. [4]. Felipe Hugo Alencar Fernandes, et al. Gallic Acid: Review of the Methods of Determination and Quantification. Crit Rev Anal Chem

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