3-O-Methylgallic acid

Cat. No.: HY-N2009

CAS No.: 3934-84-7

Molecular Formula: $C_8H_8O_5$

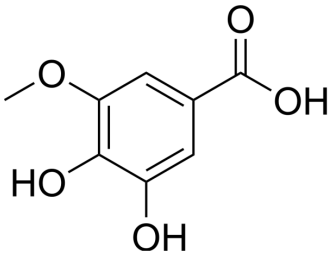
Molecular Weight: 184.15

Target: Apoptosis

Pathway: Apoptosis

Storage: -20°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (271.52 mM; Need ultrasonic)

H_2O : 2 mg/mL (10.86 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.4304 mL	27.1518 mL	54.3036 mL
5 mM	1.0861 mL	5.4304 mL	10.8607 mL
10 mM	0.5430 mL	2.7152 mL	5.4304 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 3.33 mg/mL (18.08 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (13.58 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (13.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

3-O-Methylgallic acid (3,4-Dihydroxy-5-methoxybenzoic acid) is an anthocyanin metabolite and has potent antioxidant capacity. 3-O-methylgallic acid inhibits Caco-2 cell proliferation with an IC_{50} value of 24.1 μM. 3-O-methylgallic acid also induces cell apoptosis and has anti-cancer effects[1][2].

REFERENCES

[1]. Forester SC, et al. Gut metabolites of anthocyanins, gallic acid, 3-O-methylgallic acid, and 2,4,6-trihydroxybenzaldehyde, inhibit cell proliferation of Caco-2 cells. J Agric

Food Chem. 2010 May 12;58(9):5320-7.

[2]. Forester SC, The anthocyanin metabolites gallic acid, 3-O-methylgallic acid, and 2,4,6-trihydroxybenzaldehyde decrease human colon cancer cell viability by regulating pro-oncogenic signals. Mol Carcinog. 2014 Jun;53(6):432-9.

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