(-)-Gallocatechin gallate

Cat. No.: HY-N0522

CAS No.: 4233-96-9

Molecular Formula: $C_{22}H_{18}O_{11}$

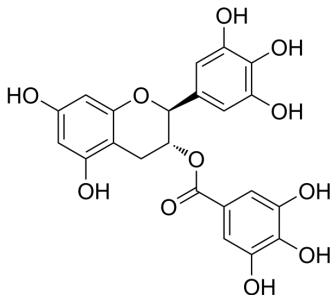
Molecular Weight: 458.37

Target: Others

Pathway: Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (218.16 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1816 mL	10.9082 mL	21.8164 mL
5 mM	0.4363 mL	2.1816 mL	4.3633 mL
10 mM	0.2182 mL	1.0908 mL	2.1816 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.54 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(-)-Gallocatechin gallate is the polyphenol isolated from tea, with cancer-preventive activities.

In Vitro

The amount of (-)-Gallocatechin gallate does not differ in leaves of different stages, and the content is relatively low[1]. (?)-gallocatechin gallate in combination with active catechins ((?)-epigallocatechin gallate) has synergistic effects on the induction of apoptosis and inhibition of cell growth for PC-9 cells. (?)-gallocatechin gallate shows inhibitory effect on α-Glucosidase and DPPH, with IC_{50}s of 30.2 μM and 12.2 μg/mL[2].

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

PROTOCOL

Cell Assay [2]

Cell viability is examined by measuring the capability of cells to metabolize MTT to a purple formazan dye. Human liver cancer HepG2 cells are maintained in DMEM medium supplemented with 10% fetal bovine serum, 100 units/mL penicillin, and 50 units/mL streptomycin at 37°C in a humidified incubator with 5% CO_2 atmosphere. Cells are seeded in 96-well tissue culture plates for 24 h and then incubated with the tested compounds at different concentrations for 72 h. After incubation, 25 μL MTT in 5 mg/mL PBS is added and incubated for 4 h. The medium is aspirated and replaced with 150 μL dimethyl sulfoxide (DMSO) to dissolve the formazan salt. The color intensity of the formazan solution, which reflects the cell growth condition, is measured at 570 nm using a microplate spectrophotometer.

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

CUSTOMER VALIDATION

- Acta Pharm Sin B. 2021 Jan;11(1):143-155.
- Sci Adv. 2022 Dec 16;8(50):eadd5366.

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REFERENCES

[1]. Zhang LQ, et al. Accumulation of catechins and expression of catechin synthetic genes in Camellia sinensis at different developmental stages. Bot Stud. 2016 Dec;57(1):31.

[2]. Zhou H, et al. C-geranylated flavanones from YingDe black tea and their antioxidant and α-glucosidase inhibition activities. Food Chem. 2017 Nov 15;235:227-233.

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