

## (-)-Gallocatechin gallate Datasheet

5<sup>th</sup> Edition (Revised in January, 2017)

### [ Product Information ]

**Name:** (-)-Gallocatechin gallate

**Catalog No.:** CFN99571

**Cas No.:** 4233-96-9

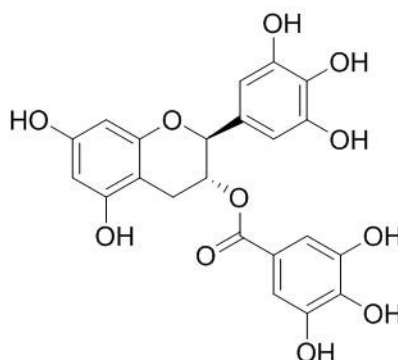
**Purity:** >=98%

**M.F:** C<sub>22</sub>H<sub>18</sub>O<sub>11</sub>

**M.W:** 458.37

**Physical Description:** White powder

**Synonyms:** (2S,3R)-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-3,4-dihydro-2H-chromen-3-yl 3,4,5-trihydroxybenzoate.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Others.

### [ Source ]

The wood of *Acacia catechu* (L.F.) Willd.

## **[ Biological Activity or Inhibitors ]**

(-)-Gallocatechin gallate can effectively inhibit cholesterol absorption in rats, it is effective to precipitate cholesterol.<sup>[1]</sup>

Gallocatechin gallate can decrease osteoclastogenesis at 20 microM, it has positive effects on bone metabolism through inhibiting osteoclast differentiations.<sup>[2]</sup>

Gallocatechin gallate has anti-adipogenic activities, it can significantly reduce the intracellular lipid droplets and expressions of major adipogenic transcription factors, such as PPAR  $\gamma$ , SREBP-1c and C/EBP  $\alpha$ , it also can dose-dependently decrease the intracellular ROS level, attenuate MAPK pathway activation in 3T3-L1 differentiations, decrease the activation of NF- $\kappa$ B, and down-regulate the production of IL-6 and MCP-1 induced by LPS.<sup>[3]</sup>

Gallocatechin gallate has anti-diabetic effects by increasing sensitivity of insulin.<sup>[4]</sup>

Gallocatechin gallate has antioxidant activity.<sup>[5]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

## **[ HPLC Method ]<sup>[6]</sup>**

Mobile phase: 2% Acetic acid in water- Acetonitrile, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 35 °C;

The wave length of determination: 280 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

- [1] Ikuo Ikeda, Makoto Kobayashi, Tadateru Hamada, *et al. J. Agric. Food Chem.*, 2004, 51(25):7303-7.
- [2] Chunhay K, Kitman L, Wingyee C, *et al. J. Agric. Food Chem.*, 2009, 57(16):7293-7.
- [3] Li K K, Peng J M, Zhu W, *et al. J.Funct. Foods*, 2017, 30:159-67.
- [4] Xie L, Guo Y, Cai B, *et al. Med. Chem.Res.*, 2013, 22(7):3372-8.
- [5] Muzolfpanek M, Gliszczynska-Swigło A, Szymusiak H, *et al. Polish Journal of Food and Nutrition Sciences*, 2011,61(1):55.
- [6] Yao L, Jiang Y, Datta N, *et al. Food Chem.*, 2004, 84(2):253-63.

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