

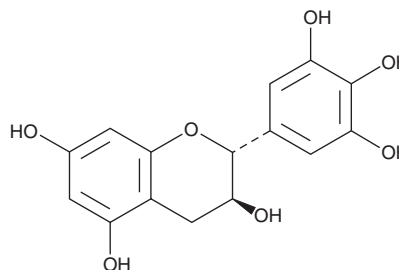
# PRODUCT INFORMATION



## (+)-Gallocatechin

Item No. 25125

**CAS Registry No.:** 970-73-0  
**Formal Name:** (2R,3S)-3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3,5,7-triol  
**Synonym:** NSC 674038  
**MF:** C<sub>15</sub>H<sub>14</sub>O<sub>7</sub>  
**FW:** 306.3  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/green tea



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

(+)-Gallocatechin is supplied as a crystalline solid. A stock solution may be made by dissolving the (+)-gallocatechin in the solvent of choice, which should be purged with an inert gas. (+)-Gallocatechin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (+)-gallocatechin in these solvents is approximately 5, 15, and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (+)-gallocatechin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (+)-gallocatechin in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

(+)-Gallocatechin is a polyphenol and flavonoid that has been isolated from the leaves of tea plants and has diverse biological activities.<sup>1-3</sup> It inhibits the adherence of *P. gingivalis* onto human buccal epithelial cells by more than 50% when used at a concentration of 250 µg/ml.<sup>4</sup> (+)-Gallocatechin has antimutagenic properties in UV-irradiated *E. coli* cells.<sup>2</sup> It inhibits cell death induced by D-galactosamine and TNF-α in primary cultured mouse hepatocytes by 29.9% when used at a concentration of 80 µM.<sup>3</sup> (+)-Gallocatechin (100 µM) inhibits HCT116 colorectal cancer cell proliferation by 57%.<sup>1</sup>

### References

1. Du, G.J., Zhang, Z., Wen, X.D., *et al.* Epigallocatechin gallate (EGCG) is the most effective cancer chemopreventive polyphenol in green tea. *Nutrients* **4**(11), 1679-1691 (2012).
2. Matsuo, T., Hanamura, N., Shimoi, K., *et al.* Identification of (+)-gallocatechin as a bio-antimutagenic compound in *Psidium guava* leaves. *Phytochemistry* **36**(4), 1027-1029 (1994).
3. Xiong, Q., Fan, W., Tezuka, Y., *et al.* Hepatoprotective effect of *Apocynum venetum* and its active constituents. *Planta Med.* **66**(2), 127-133 (2000).
4. Sakanaka, S., Aizawa, M., Kim, M., *et al.* Inhibitory effects of green tea polyphenols on growth and cellular adherence of an oral bacterium, *Porphyromonas gingivalis*. *Biosci. Biotechnol. Biochem.* **60**(5), 745-749 (1996).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM