

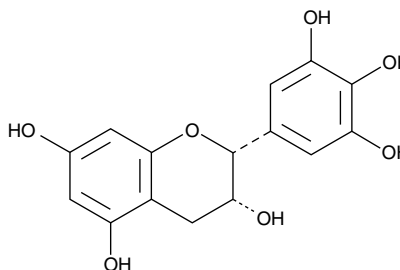
Product Information



(-)-Epigallocatechin

Item No. 11809

CAS Registry No.: 970-74-1
Formal Name: (2R,3R)-3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3,5,7-triol
Synonyms: (-)-EGC, *epi*-Galocatechin, NSC 674039
MF: C₁₅H₁₄O₇
FW: 306.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 209 nm



Laboratory Procedures

For long term storage, we suggest that (-)-epigallocatechin ((-)-EGC) be stored as supplied at -20°C. It should be stable for at least two years.

(-)-EGC is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-EGC in the solvent of choice. (-)-EGC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of (-)-EGC 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 (-)-EGC can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (-)-EGC in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

(-)-EGC is a major green tea polyphenol with antioxidant, anti-inflammatory, and anticancer activities. It has been shown to scavenge DPPH radicals with an EC₅₀ value of 0.01 mM and to prevent the growth of several different AML cell lines at micromolar concentrations.¹⁻³ Furthermore, at 30 μM (-)-EGC can inhibit heregulin-β1-induced migration/invasion of MCF-7 human breast cancer cells.⁴

References

- Xu, J.Z., Yeung, S.Y.V., Chang, Q., *et al.* Comparison of antioxidant activity and bioavailability of tea epicatechins with their epimers. *Br. J. Nutr.* **91**(6), 873-881 (2004).
- Kadome, Y. and Fujisawa, S. Radical-scavenging activity of dietary phytophenols in combination with co-antioxidants using the induction period method. *Molecules* **16**, 10457-10470 (2011).
- Ly, B.T.K., Chi, H.T., Yamagishi, M., *et al.* Inhibition of FLT3 expression by green tea catechins in FLT3 mutated-AML cells. *PLoS One* **8**(6), 1-9 (2013).
- Kushima, Y., Iida, K., Nagaoka, Y., *et al.* Inhibitory effect of (-)-epigallocatechin and (-)-epigallocatechin gallate against heregulin β1-induced migration/invasion of the MCF-7 breast carcinoma cell line. *Biol. Pharm. Bull.* **32**(5), 899-904 (2009).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11809

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com