

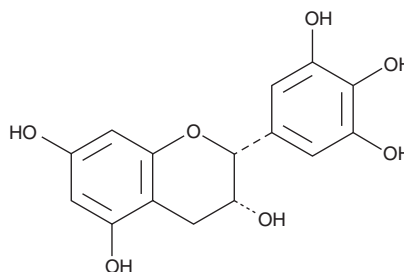
# PRODUCT INFORMATION



## (-)-Epigallocatechin

Item No. 11809

<b>CAS Registry No.:</b>	970-74-1
<b>Formal Name:</b>	(2R,3R)-3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3,5,7-triol
<b>Synonyms:</b>	(-)-EGC, <i>epi</i> -Gallocatechin, NSC 674039
<b>MF:</b>	C <sub>15</sub> H <sub>14</sub> O <sub>7</sub>
<b>FW:</b>	306.3
<b>Purity:</b>	≥98%
<b>UV/Vis.:</b>	λ <sub>max</sub> : 209 nm
<b>Supplied as:</b>	A crystalline solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years



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

### Laboratory Procedures

(-)-Epigallocatechin ((-)-EGC) is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-EGC in the solvent of choice, which should be purged with an inert gas. (-)-EGC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. 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.

### Description

(-)-EGC is a major green tea polyphenol with antioxidant, anti-inflammatory, and anticancer activities. It has been shown to scavenge DPPH radicals with an EC<sub>50</sub> value of 0.01 mM and to prevent the growth of several different AML cell lines at micromolar concentrations.<sup>1-3</sup> Furthermore, at 30 μM (-)-EGC can inhibit heregulin-β1-induced migration/invasion of MCF-7 human breast cancer cells.<sup>4</sup>

### 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(12)**, 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)**, e66378 (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).

#### 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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