

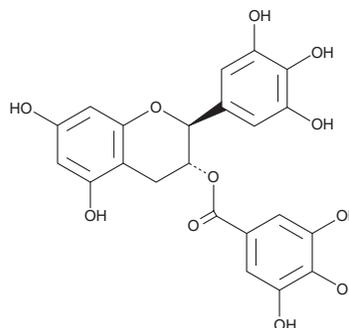
PRODUCT INFORMATION



(-)-Gallocatechin Gallate

Item No. 24962

CAS Registry No.: 4233-96-9
Formal Name: 3,4,5-trihydroxy-benzoic acid, (2S,3R)-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester
Synonyms: (-)-GCG, NVP-XAA225
MF: C₂₂H₁₈O₁₁
FW: 458.4
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 275 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(-)-Gallocatechin gallate ((-)-GCG) is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-GCG in the solvent of choice, which should be purged with an inert gas. (-)-GCG is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of (-)-GCG in these solvents is approximately 10 mg/ml.

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 (-)-GCG can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (-)-GCG in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(-)-GCG is a catechin polyphenol that has been found in oolong tea stems and green tea extracts with diverse biological activities.¹⁻⁵ It inhibits histamine release from anti-egg albumin (EA) IgE antibody-sensitized rat peritoneal mast cells when used at concentrations ranging from 0.1 to 1 mg/ml.¹ (-)-GCG reduces proliferation of MDA-MB-231 breast cancer cells (IC₅₀ = 22 µg/ml) and human umbilical vein endothelial cells (HUVECs) in a concentration-dependent manner.² It also inhibits human placental aromatase activity (IC₅₀ = 15 µM).³ (-)-GCG is lytic against *T. cruzi* amastigotes, with a 50% bactericidal concentration (MBC₅₀) value of 0.12 pM.⁴ It also decreases RAW 264.7 osteoclastogenesis when used at a concentration of 20 µM.⁵

References

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- Paveto, C., Güida, M.C., Esteva, M.I., *et al. Antimicrob. Agents Chemother.* **48(1)**, 69-74 (2004).
- Ko, C.H., Lau, K.M., Choy, W.Y., *et al. J. Agric. Food Chem.* **57(16)**, 7293-7297 (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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