

PRODUCT INFORMATION



(-)-Epigallocatechin Gallate-d₃/d₄

Item No. 25467

Formal Name: (2R,3R)-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl-2,6-d₂) chroman-3-yl 3,4,5-trihydroxybenzoate-2,6-d₂ compound with (2R,3R)-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl-2-d) chroman-3-yl 3,4,5-trihydroxybenzoate-2,6-d₂ (1:1)

Synonym: EGCG-d₃/d₄

MF: C₂₂H₁₅D₃O₁₁ (for d₃)

FW: 461.4 (for d₃)

Chemical Purity: ≥95% ((-)-Epigallocatechin Gallate)

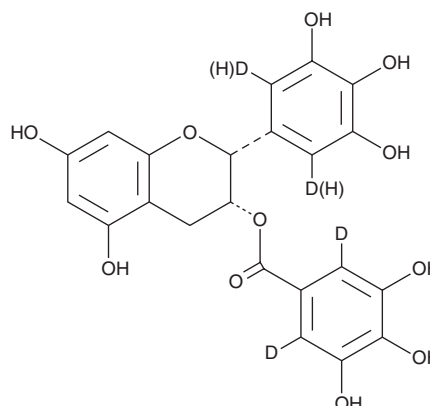
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₃/d₄); ≤1% d₀

Supplied as: A 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

(-)-Epigallocatechin gallate-d₃/d₄ is intended for use as an internal standard for the quantification of (-)-epigallocatechin gallate (Item No. 70935) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

(-)-Epigallocatechin gallate-d₃/d₄ is supplied as a solid. A stock solution may be made by dissolving the (-)-epigallocatechin gallate-d₃/d₄ in the solvent of choice, which should be purged with an inert gas. (-)-Epigallocatechin gallate-d₃/d₄ is slightly soluble in methanol and DMSO.

Description

(-)-Epigallocatechin gallate (EGCG) is a phenol that has been found in a variety of plants including green and black tea plants and has diverse biological activities.¹⁻⁶ It is lytic against *T. cruzi* amastigotes, with a 50% bactericidal concentration (MBC₅₀) value of 0.53 pM.⁴ It decreases oxidation of deoxyguanosine and tyrosine nitration (IC₅₀s = 0.25 and 0.11 mM, respectively) and inhibits macrophage-mediated LDL oxidation *in vitro*.^{1,2} EGCG increases LDL receptor binding activity and lowers cholesterol levels in HepG2 cells *via* increased cholesterol efflux.³ EGCG inhibits heregulin-β1-induced activation of ErbB2 and ErbB3 as well as migration and invasion of MCF-7 breast cancer cells.⁵ *In vivo*, EGCG reduces food intake and body weight, serum levels of insulin, leptin, testosterone, and growth hormone, and the size of the ventral prostate, testis, liver, and spleen in male Sprague Dawley, lean Zucker, and obese Zucker rats when administered at doses of 82, 81, and 92 mg/kg, respectively.⁶

References

1. Fiala, E.S., Sodum, R.S., Bhattacharya, M., *et al. Experientia* **52(9)**, 922-926 (1996).
2. Yoshida, H., Ishikawa, T., Hosoai, H., *et al. Biochem. Pharmacol.* **58(11)**, 1695-1703 (1999).
3. Bursill, C.A. and Roach, P.D. *J. Agric. Food Chem.* **54(5)**, 1621-1626 (2006).
4. Paveto, C., Güida, M.C., Esteva, M.I., *et al. Antimicrob. Agents Chemother.* **48(1)**, 69-74 (2004).
5. Kushima, Y., Iida, K., Nagaoka, Y., *et al. Biol. Pharm. Bull.* **32(5)**, 899-904 (2009).
6. Kao, Y.H., Hiipakka, R.A., and Liao, S. *Endocrinology* **141(3)**, 980-987 (2000).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/18/2022

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