

# Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Lieferung & Zahlungsart

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# PRODUCT INFORMATION



# (-)-Epigallocatechin Gallate-d<sub>3</sub>/d<sub>4</sub>

Item No. 25467

Formal Name: (2R,3R)-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl-2,6-d<sub>2</sub>)

> 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-d<sub>2</sub> (1:1)

Synonym: EGCG-d<sub>3</sub>/d<sub>4</sub>

MF: C<sub>22</sub>H<sub>15</sub>D<sub>3</sub>O<sub>11</sub> (for d<sub>3</sub>)

FW: 461.4 (for d<sub>3</sub>)

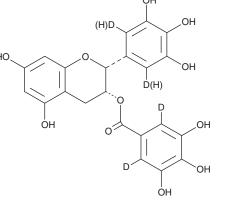
**Chemical Purity:** ≥95% ((-)-Epigallocatechin Gallate)

Deuterium

Incorporation: ≥99% deuterated forms  $(d_1-d_3/d_4)$ ; ≤1%  $d_0$ 

Supplied as: A solid Storage: -20°C Stability: ≥2 years

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



## **Laboratory Procedures**

(-)-Epigallocatechin gallate-d<sub>3</sub>/d<sub>4</sub> 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- $d_3/d_4$  is supplied as a solid. A stock solution may be made by dissolving the (-)-epigallocatechin gallate- $d_3/d_4$  in the solvent of choice, which should be purged with an inert gas. (-)-Epigallocatechin gallate-d<sub>3</sub>/d<sub>4</sub> 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 (MBC<sub>50</sub>) value of 0.53 pM.<sup>4</sup> It decreases oxidation of deoxyguanosine and tyrosine nitration ( $IC_{50}$ s = 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.<sup>3</sup> EGCG inhibits heregulin-β1-induced activation of ErbB2 and ErbB3 as well as migration and invasion of MCF-7 breast cancer cells. 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).
- 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.

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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