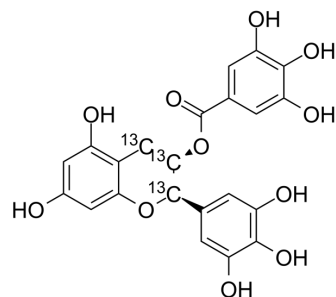


## (+/-)-Epigallocatechin Gallate-13C3

<b>Cat. No.:</b>	HY-13653S
<b>Molecular Formula:</b>	C <sub>19</sub> <sup>13</sup> C <sub>3</sub> H <sub>14</sub> O <sub>11</sub>
<b>Molecular Weight:</b>	457.32
<b>Target:</b>	Autophagy; Reactive Oxygen Species; HIV; Ferroptosis; Mitochondrial Metabolism; Endogenous Metabolite
<b>Pathway:</b>	Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Anti-infection; Apoptosis
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	(+/-)-Epigallocatechin Gallate-13C3 is the 13C-labeled (-)-Epigallocatechin Gallate. (-)-Epigallocatechin Gallate is a tea flavonoid with potent antioxidant, antiinflammatory, and anticarcinogenic properties. (-)-Epigallocatechin Gallate is reported to inhibit EGFR signaling and thereby exert anticancer effects <sup>[1]</sup> . (-)-Epigallocatechin Gallate (EGCG) is a glutamate dehydrogenase 1/2 (GDH1/2, GLUD1/2) inhibitor. Epigallocatechin-3-gallate induces oxidative phosphorylation (OXPHOS) by activating cytochrome c oxidase.
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Jin H, et al. Epigallocatechin gallate inhibits the proliferation of colorectal cancer cells by regulating Notch signaling. *Onco Targets Ther.* 2013;6:145-53.
- [3]. Peeters TH, et al. Isocitrate dehydrogenase 1-mutated cancers are sensitive to the green tea polyphenol epigallocatechin-3-gallate. *Cancer Metab.* 2019 May 20;7:4.
- [4]. Wing Pui Tsang, et al. Epigallocatechin gallate up-regulation of miR-16 and induction of apoptosis in human cancer cells. *The Journal of Nutritional Biochemistry.* 2010, 21(2): 140-146.
- [5]. De Amicis F, et al. Epigallocatechin gallate inhibits growth and Epithelial-to-Mesenchymal Transition in human thyroid carcinoma cell lines. *J Cell Physiol.* 2013 Apr 1.
- [6]. Castellano-González G, et al. Epigallocatechin-3-gallate induces oxidative phosphorylation by activating cytochrome c oxidase in human cultured neurons and astrocytes. *Oncotarget.* 2016 Feb 16;7(7):7426-40.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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