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[\[PDF \(2039K\)\]](#) [\[References\]](#)**Differentiation-associated alteration in sensitivity to apoptosis induced by (-)-epigallocatechin-3-O-gallate in HL-60 cells**[Noriyoshi Okada](#)<sup>1)</sup>, [Hiroki Tanabe](#)<sup>1)</sup>, [Hideaki Tazoe](#)<sup>1)</sup>, [Yoko Ishigami](#)<sup>1)</sup>, [Ryuuta Fukutomi](#)<sup>2)</sup>, [Kensuke Yasui](#)<sup>3)</sup> and [Mamoru Isemura](#)<sup>1)</sup>

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**ABSTRACT**

Green tea and its constituent (-)-epigallocatechin-3-O-gallate (EGCG) are known to have apoptosis-inducing activity on tumor cells including human leukemia HL-60 cells, providing an explanation for their anti-cancer effects. In the present study, we compared the sensitivity of undifferentiated cells and differentiated HL-60 cells with normal-like phenotypic characters. HL-60 cells treated with three differentiating agents were found to be resistant to EGCG-mediated apoptosis as compared with undifferentiated cells. Gene and protein expression of 67 kDa laminin receptor was down-regulated in differentiated HL-60 cells, suggesting its contribution to the difference in sensitivity in view of the fact that the receptor is a target of EGCG's action to induce apoptosis. The finding supports the view that EGCG induces apoptosis preferentially in cancer cells as compared with normal counterparts.

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