Cytotoxicity effects of extracts and essential oil of Kaempferia galanga on cervical cancer C33A cell line


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Abstract

The in vitro cytotoxic properties of Kaempferia galanga extracts were studied. crude extracts of the rhizomes were obtained by extraction with methanol (KMG), petroleum ether (KGE), n-hexane (KHE) and ethyl acetate (KEA). Meanwhile, the essential oil (KEOA) was produced by steam distillation method. The aim of the present work was to screened the cytotoxic activity of <crude extracts and essential oil on cervical cancer C33A cell line>. The cytotoxic activities were assessed on C33A cell line using MTT and scratch assays. Results of MTT assay showed that KHEA and KEOA were the most toxic at 2000 μg/mL with cell viability of 11% and 14%, respectively. Lower cytotoxic activities were shown by KGE and KGOA with 6% and 8.5% cell viability, respectively. Meanwhile, KEOA was slightly cytotoxic at concentration of 100 μg/mL with cell viability of 76%. However, the actinidia were able to inhibit or at least slow down cell growth when treated using the extract assay. It can be concluded that K. galanga seems to have cytotoxic properties and may be used as an antitumor agent. © 2017, Oriental Scientific Publishing Company. All rights reserved.

Author keywords

Cervical cancer C33A cell line, Kaempferia galanga

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