

عنوان مقاله:

Anticancer effects of hesperidin on Nalm-6 cells

محل انتشار:

نهمین کنگره بین المللی سرطان پستان (سال: 1392)

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خلاصه مقاله:

Introduction: In recent years, flavonoids have received much attention due to their anti- carcinogenesis properties. Flavonoids may exert anti-cancer properties via inhibiting PI3K/AKT signaling pathway. Dysregulation of this pathway result in different cell responses such as proliferation, survival, migration and tumor development. In this article the anti -tumor features of citrus flavonoid, hesperidin, and its mechanism have been assayed in human lymphoblastic leukemia Nalm-6 cells. **Methods and material:** Nalm-6 cells were treated with hesperidin (25, 50 μ M) in the presence and absence of insulin. The cytotoxic activity of hesperidin was assayed by MTT test. The cell apoptotic death was measured by ELISA test. The phosphorylation levels of AKT, IKKs, IB, and GSk-3 (key proteins in PI3K/AKT pathway) were determined by western blot analysis. **Results:** Hesperidin significantly reduced survival and induced apoptosis in Nalm-6 cells. Also, hesperidin inhibited constitutive and insulin-induced phosphorylation and activation of AKT, IKKs, IB, GSk-3 and inhibited PI3K/Akt pathway. **Conclusion:** Our findings indicate that hesperidin can exert anti-survival and proapoptotic activity via inhibiting PI3K/Akt/IKK/I B and NF-B pathway. So, this flavonoid can introduce as an effective agent along with other anticancer drugs in the treatment of cancer.

کلمات کلیدی:

Hesperidin, Cancer, PI3K/Akt

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