عنوان مقاله:

Antiprolifrative effect of lovastatin in breast cancer cell lines through regulating of AKT-signaling pathway

محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

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خلاصه مقاله:

Introduction: Statins are cholesterol-lowering drugs with pleiotropic activities including inhibition of isoprenylation and reduction of signals driving cell proliferation and survival responses. In recent studies Lovastatin, demonstrated the antitumor activity in vitro against a variety of human cancer cells including melanomas, adenocarcinomas, and neuroblastoma. In this study, we examined the ability of lovastatin to induce apoptosis in breast cancer cell lines MCF7 and T47D invitro. Methods: MTT and flowcytometry assay were carried out to appraise the effect of lovastatin on cell viability and apoptosis respectively. Gene expression of AKT-signaling pathway was measured using Real Time PCR. All the experiments were performed in triplicate and the data are shown as mean ± SD. Result: In this study we had demonstrated that lovastatin induces G1/S arrest in MCF7 and T47D cells. Lovastatin also regulated the AKT-signaling pathway. Increased phosphatase and tensin homolog (PTEN) and decreased DJ-1 expression lead to a down-regulation of the active pAkt. Lovastatin s involvement in the AKT-signaling pathway was confirmed by an upregulation of its downstream target, tumor progressor NDRG1. Our research confirmed that lovastatin inhibits the growth of breast cancer cells. Conclusion: In this study, we demonstrated that the targeting of HMG-CoA reductase, represents a potential novel therapeutic approach in the treatment and control of Invasive ductal carcinoma of breast .and Lovastatin could be a potent anticancer agent for targeting breast cancer

کلمات کلیدی:

Lovastatin, Breat cancer, Apoptosis, AKT

لینک ثابت مقاله در پایگاه سیویلیکا: