

عنوان مقاله:

PI3K/Akt/mTOR and CDK4 combined inhibition enhanced apoptosis of thyroid cancer cell lines

محل انتشار:

مجله بین المللی تحقیقات پیشرفته زیست شناختی و زیست پزشکی، دوره 8، شماره 2 (سال: 1399)

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خلاصه مقاله:

Introduction Thyroid cancer is a malignant disease with poor prognosis. The PI3K/Akt/mTOR and Cyclin-Dependent Kinase 4 (CDK4) pathways are vital regulators of tumor cell proliferation and survival. Therefore the present study was designed to use dual inhibition of such pathways to kill thyroid cancer cells. Methods and materials The effects of each inhibitors on human ATC and BCPAP cell lines were evaluated by MTT assay. The suitable concentrations of inhibitors were determined and synergistic effects of such inhibitors were evaluated by bax/bcl-2 mRNA ratio, Caspase-3, and Caspase-9 activity assay as well as Akt, mTOR, and CDK4. Results: Our finding showed that both ATC and BCPAP cell proliferation is significantly inhibited by PD-332991 (PD) and NVP-BEZ235 (NVP) in a time and concentration-dependent manner (P

کلمات کلیدی:

Thyroid cancer, Carcinoma, Apoptosis, NVP-BEZ235, PD-332991

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