

عنوان مقاله:

silibinin induce apoptosis in breast cancer MCF7 cells through down regulation of PI3K/Akt/mTOR pathway

محل انتشار:

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خلاصه مقاله:

background: a natural polyphenolic flavonoid, is a major bioactive component of silymarin isolated from the plant milk thistle Silybum marianum. It has received the special attention of many chemists and clinicians, since it has been shown to have cancer-preventive and anticarcinogenic effects. In this study, we evaluated the effect of silibinin on human breast cancer MCF7 cell line. Methods: Human breast cancer cell line MCF7 cells were treated with various concentration of silibinin. Cellular viability was assessed by MTT assay and apoptosis and cell cycle distribution by flow cytometry. Akt, mTOR genes expression were detected by real-time polymerase chain reaction. Results: In this study it was demonstrated that silibinin inhibits proliferation and induces apoptosis in MCF75 cells in dose dependent manner. Silibinin effectively induces apoptosis and arrests MCF7 cells in the G2/M phase of the cell cycle. We found that silibinin reduced the expressions of Akt/mTOR and extracellular-signal-related kinase (ERK). Conclusion: we demonstrate that silibinin inhibits the proliferation of MCF7 cells, and it induces apoptosis and causes cell cycle arrest . by down-regulating PI3K/Akt/mTOR pathway

کلمات کلیدی:

Silibinin, breast cancer, Akt , mTOR, ERK

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