P7

在人類鱗狀口腔癌細胞中 OSU-2S 誘導細胞凋亡及自噬作用

OSU-2S induces apoptosis and autophagy in human oral squamous carcinoma cells

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Abstract

Oral cancer has been one of the top 10 causes of death from cancer since 1991 in Taiwan and the death toll for oral cancer in males has been rising at a surprising rate. [1] OSU-2S is a novel protein kinase C delta-targeted antitumor agent, which is devoid of sphingosine-1- phosphate 1 receptor activity and is highly effective in suppressing liver cancer cells. [2]

In this study, we aimed to investigate its potential anti-tumor activity in oral cancer cells. The results showed that OSU-2S could inhibit the growth of the oral cancer cells with IC_{50} value 4.7 and 3.7 μM for SCC2095, and 3.7 and 2.6 μM for SCC4 in 24h and 48h, respectively. Flow cytometric analysis indicated that OSU-2S suppressed the viability of SCC2095 cells by inducing apoptosis. Western blotting demonstrated that OSU-2S down regulated the expression of phosphorylated Akt and up regulated the expression of LC3B-II in a dose-dependent manner. The above data suggested that OSU-2S exerts anti-tumor effects by inducing apoptosis and autophagy in human oral squamous carcinoma cells.

Keyword: OSU-2S, oral cancer, apoptosis, autophgy