

Baicalein Inhibits the Proliferation of Cervical Cancer Cells Through the GSK3 β -Dependent Pathway.

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Abstract

Baicalein, a flavonoid derived from the root of *Scutellaria baicalensis*, has been reported to possess multiple pharmacological activities, such as anti-cancer and anti-inflammatory properties. This study investigated the effect of baicalein in cervical cancer cells. Cell growth curve and MTT assay were performed and revealed that baicalein inhibited the proliferation of SiHa and HeLa cells in a dose-dependent manner. We further found that baicalein arrested cell cycle of SiHa and HeLa cells at the G0/G1 phase by suppressing the expression of cyclin D1 through the down-regulation of phosphorylated protein kinase B (p-AKT) and phosphorylated glycogen synthase kinase 3 β (p-GSK3 β) by using FACS assays and western blotting. Moreover, when CHIR-99021, a GSK3 β inhibitor, was added to baicalein-treated SiHa cells, the expression of cyclin D1 was recovered, and cell proliferation was promoted. In conclusion, these data indicated that baicalein suspended the cell cycle at the G0/G1 phase via the down-regulation of cyclin D1 through the AKT-GSK3 β signaling pathway and further inhibited the proliferation of SiHa and HeLa cervical cancer cells.