

인간 대장암 세포에서 Corosolic acid의 Death Receptor Signaling을 통한 Apoptosis 유도

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**Corosolic Acid Induces Apoptosis via
Death Receptor Signaling in Human Colon Carcinoma Cells**

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Objectives

Corosolic acid is a pentacyclic triterpene compound. It leads to TRAIL-mediated apoptosis signaling pathway. We investigated the effect of corosolic acid on the apoptosis of human colon carcinoma (HCT-116) cells.

Materials and Methods

○ Materials - Corosolic acid, RC DC protein assay kit, Anti-DR4/TRAIL-R1, Anti-DR5/Apo2/TRAIL-R2

○ Methods - cell culture, cell cycle analysis, western blot analysis

Results

The cytotoxic effect of corosolic acid was investigated using human colon carcinoma (HCT-116) cells. This compound showed dose-dependent cytotoxicity in HCT-116 cells. Corosolic acid also increased the sub-G1 cell population of HCT-116 cells. Corosolic acid appeared to cooperate with mitochondrial pathway as well as TRAIL-mediated apoptosis signaling pathway in HCT-116 cells. Thus, TRAIL-mediated apoptosis related proteins were determined by western blot analysis or immunofluorescence analysis. The level of death receptor 5 (DR5) protein increased in HCT-116 cells after 20 hr incubation with corosolic acid. Taken together, our results indicate that corosolic acid leads to death receptor-mediated apoptosis signaling pathway in HCT-116 cells.

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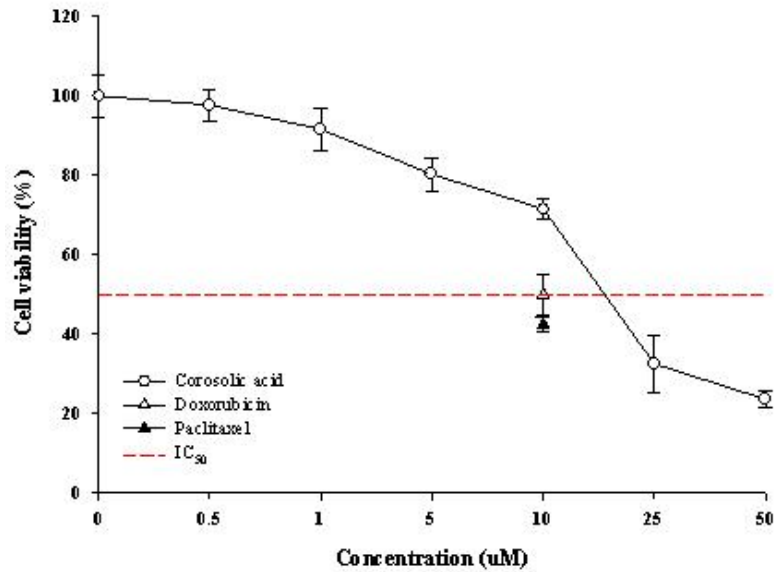


Figure 1. Effect of corosolic acid on the cytotoxicity against HCR-116. The cells were treated with various concentrations of corosolic acid for 24 hrs and cell viability was determined by MTT assay. All data were expressed as mean \pm S.D. of triplicate.

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