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大會摘要預覽

BHE Induces p53-dependent Trans-activation and Fas/CD95-dependent Apoptosis Pathway in HCT 116 human Colorectal Cancer Cells

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In this study, we reported the cytotoxicity and action mechanism of BHE in HCT 116 human colorectal cancer cells. BHE showed growth inhibition, DNA damage and apoptosis in HCT 116 cells by using determination of MTT assay, morphologic changes, DAPI staining, comet assay and DNA gel electrophoresis. The results indicated that BHE induced the apoptotic cell death through extrinsic apoptotic pathway by the elevation of Fas/CD95, FADD and caspase-8 protein levels. Intracellular reactive oxygen species (ROS) generation was observed on BHE-stimulated HCT 116 cells. BHE induced early phosphorylation of p53Ser18 and histone H2AXSer139 through ataxia telangiectasia mutated (ATM) activation in response to ROS-induced DNA damage. The results of colorimetric assays revealed the activities of caspase-8 and caspase-3 were increased in BHE-treated cells. This is the first report on the activation of ROS-dependent ATM/p53 signaling as an important mechanism of BHE-induced cell death in HCT 116 human colorectal cancer cells.

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