Regulation of cell survival by resveratrol involves inhibition of NF?B-regulated gene expression in prostate cancer cells

Benitez, Dixan A.

Hermoso, Marcela A.

Pozo-Guisado, Eulalia

Fernández-Salguero, Pedro M.

Castellón, Enrique A.

BACKGROUND. Polyphenols have been proposed as antitumoral agents. We have shown that resveratrol (RES) induced cell cycle arrest and promoted apoptosis in prostate cancer cells by inhibition of the PI3K pathway. The RES effects on NF?B activity in LNCaP cells (inducible NF?B), and PC-3 cells (constitutive NF?B) are reported. METHODS. Cells were treated with 1-150 ?M of RES during 36 hr. NF?B subcellular localization was analyzed by western blot and immunofluorescence. I?B? was evaluated by immunoprecipitation followed by Western blot. Specific DNA binding of NF?B was determined by EMSA assays and NF?B-mediated transcriptional activity by transient transfection with a luciferase gene reporter system. RESULTS. RES induced a dose-dependent cytoplasmic retention of NF?B mediated by I?B? in PC-3 cells but not in LNCaP. RES-induced inhibition ofNF?B specific binding toDNAwas more significant in PC-3 cells. NF?B-mediated transcriptional activity induced by EGF and TNF? were inhibited by RES i