

PE4) Plant Glycoprotein Isolated from *Rhus Verniciflua* Stokes Blocks Apoptosis Induced by *V. vulnificus*

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1. 초록

Rhus Verniciflua Stokes (RVS) has traditionally been used for both the preservation of antique furniture and the healing of inflammatory diseases in Korea. In this study, we carry out to investigate the cellular mechanism of 36 kDa glycoprotein isolated from RVS in apoptosis induced by anaerobic Gram-negative marine bacterium *Vibrio (V.) vulnificus* in HCT116 colon epithelial cells. Recombinant protein (r) VvhA produced by *V. vulnificus* stimulated the apoptosis in HCT116 cells by activating phosphorylation of Protein Kinase C (PKC) through production of intracellular Reactive Oxygen Species (ROS). However, RVS glycoprotein inhibited production of ROS as well as activation of PKC in rVvhA-stimulated HCT116 cells. Interestingly, we found that RVS glycoprotein has inhibitory effects on phosphorylation of c-Jun N-terminal kinase, which are responsible for the phosphorylation of nuclear factor-kappa B and expression of cleaved caspase-3 in HCT116 cells treated with rVvhA. Moreover, RVS glycoprotein normalized the ratio of Bax/Bcl2 increased by rVvhA. On the basis of these results, we suggest that RVS glycoprotein inhibits the apoptosis induced by rVvhA via inhibition of ROS-mediated signal events in HCT116 cells.

2. 참고문헌

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