PE5) Plant Glycoprotein Isolated from Cudrania Tricuspidata Induces Proliferation of Human Epithelial Cells by Activation of Protein Kinase C

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1. 서론

Cudrania tricuspidata Bureau (CTB), a species of Moraceae plant, has been used for treatment of bruise recovery. The purpose of this study is to determine whether the 75 kDa glycoprotein extracted from the CTB has regulatory effect on the proliferation of human colon epithelial HT-29 cells. We found that CTB glycoprotein activated the phosphorylation of protein kinase C alpha (PKCα) by increasing of reactive oxygen species (ROS) production in HT-29 cells. CTB glycoprotein activated c-jun n-terminal kinase (JNK) responsible for the phosphorylation of transcription factor, nuclear factor kappa B (NF-κB). In addition, CTB glycoprotein induced NF-κB-dependent expression of cell-cycle-related proteins (CDK2, CDK4, cyclinD1 and cyclinE) during it promotion of cell proliferation. These results demonstrate that CTB glycoprotein induces NF-κB-dependent cell proliferation via ROS production by activation of PKCαand JNK in HT-29 cells. We suggest that CTB glycoprotein has therapeutic potentials agent for the growth of human colon epithelial cells.

2. 참고문헌

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