



Glycoprotein (116 kD) isolated from *Ulmus davidiana* Nakai protects from injury of 12-*O*-tetradecanoylphorbol 13-acetate (TPA)-treated BNL CL.2 cells

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Abstract:

Ulmus davidiana Nakai (UDN) has been used for a long time to cure inflammation in oriental medicine. To evaluate the cytoprotective effects of the UDN glycoprotein, we measured cytotoxicity, the level of intracellular reactive oxygen species (ROS), activity of nuclear factor- κ B (NF- κ B), nitric oxide (NO) production, and thiobarbituric acid-reactive substances (TBARS) formation in 12-*O*-tetradecanoylphorbol 13-acetate (TPA)-treated BNL CL.2 cells. In TPA-treated BNL CL.2 cells, the results showed that UDN glycoprotein has dose-dependent blocking activities against TPA-induced cytotoxicity and NF- κ B activation. In cytotoxic-related events, UDN glycoprotein (200 μ g/ml) has an inhibitory effect on intracellular ROS production, NO production, and TBARS formation, without any toxic effects in the BNL CL.2 cells. These results suggest that UDN glycoprotein has cytoprotective abilities against TPA-induced oxidative cell injury.

Key words:

UDN glycoprotein, intracellular ROS, NO production, NF- κ B
