

B형 간염 표면 항원과 e 항원 생성을 억제시키는 진세노사이드 탐색
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Screening of Ginsenosides for the Inhibition of the production of Hepatitis B Surface
Antigen (HBsAg) and E antigen (HBeAg) in HepG2.2.15 Cells

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Objectives

The aim of this study is the screening of ginsenosides to find out the anti-hepatitis effects using hepatitis B virus containing HepG2.2.15 cells.

Materials and Methods

○ Materials

Dulbecco's modified Eagle's medium (DMEM), fetal bovine serum, penicillin-streptomycin, and related compounds to maintain cell culture were purchased from PAA (USA). Ginsenosides were purchased from AMBO (Korea). HepG2.2.15 cell was kindly gifted by professor Guhung Jung (Seoul National University).

○ Methods

Cell Culture

HepG2.2.15 cells were maintained in Dulbecco's modified Eagle's medium (DMEM) with 10% fetal bovine serum and antibiotics (100U/ml each of penicillin and streptomycin) adding 200ug/ml of G418 in 5% CO₂-humidified air at 37 °C. The cultures were passaged by trypsinization every 3 days. Cells were plated either in 100mm culture dishes at a density of 2x10⁶ cells/dish or in 48-well plates at a density of 1x10⁵ cells/well.

Cell viability assay (WST assay)

To analyze the effects of ginsenosides on the cell proliferation, we performed cell viability assay using WST assay kit (DaeilLab, Korea). The cells were splitted with 9 x 10³ cells/well in 96-well plates and treated with various concentration of ginsenosides. WST assay was performed followed by manufacturer's instruction.

Determination of HBsAg and HBeAg production

To measure the levels of secreted HBsAg and HBeAg into the media, HepG2.2.15 cells were plated in 48-well plates and treated various concentration of ginsenosides

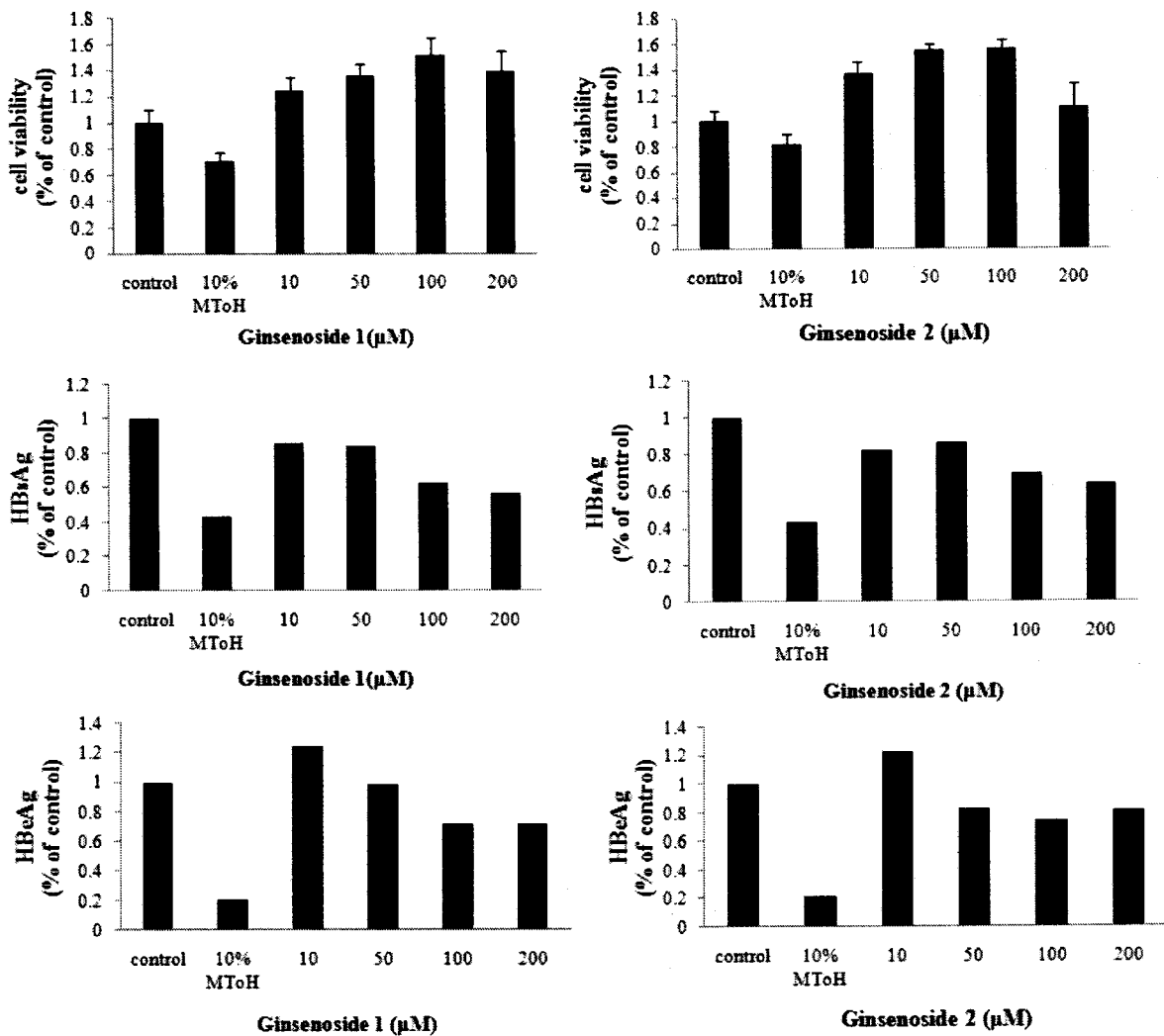
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for 24 hrs and harvested media. The levels of HBsAg and HBeAg in the media were measured with ELISA assay kits (KOMA Biotech, Korea) according to manufacture's instruction manual.

Results

The eleven ginsenosides were screened and analyzed with ELISA assay to verify the effects on the levels of HBsAg and HBeAg in HepG2.2.15 cells. Among them, two ginsenosides inhibited the production of HBsAg and HBeAg dose-dependently.

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