

论文

DMSO、地塞米松对于HBV感染HepCHLine-4细胞能力的影响

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摘要:

目的 评价二甲基亚砷(DMSO)、地塞米松对于乙型肝炎病毒(HBV)感染HepCHLine-4细胞能力的影响。**方法** HBV感染前将HepCHLine-4细胞分为DMSO处理组(A组)、地塞米松处理组(B组)、DMSO及地塞米松处理组(C组)和对照组(D组)。含胎牛血清100mL/L的细胞培养基中, A组添加20mL/L DMSO, B组添加 5×10^{-5} mol/L地塞米松, C组添加20mL/L DMSO及 5×10^{-5} mol/L地塞米松, D组不添加上述两种试剂。用相应培养基培养各组细胞4d以备病毒感染。将HBV病毒颗粒加入各组细胞中于37℃中孵育24h。电化学发光法检测感染后各组细胞培养上清中HBsAg和HBeAg的滴度; 荧光定量PCR检测感染后各组细胞培养上清的HBV DNA。结果 DMSO处理组HBsAg和HBeAg的滴度相对较高; 地塞米松处理组HBV DNA值相对较高; DMSO及地塞米松处理组HBsAg和HBeAg的滴度及HBV DNA值均较高, 其最高值分别是125.790 IU/mL, 4.784 S/Co, 5.930×10^5 copies/mL; 对照组HBsAg和HBeAg的滴度及HBV DNA值均较低, 其最高值分别是85.490 IU/mL, 1.896 S/Co, 3.729×10^4 copies/mL。**结论** DMSO、地塞米松有提高HepCHLine-4细胞被HBV自然感染能力的趋势。

关键词: 乙肝病毒; 二甲基亚砷; 地塞米松; 感染

Influences of DMSO and dexamethasone on HBV infection in HepCHLine-4 cells

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Abstract:

Objective To evaluate the influences of dimethyl sulfoxide (DMSO) and dexamethasone on the ability of HepCHLine-4 cells to Hepatitis B virus (HBV) infection. **Methods** HepCHLine-4 cells were divided into four groups: the DMSO group, in which HepCHLine-4 cells were cultured in Dulbecco's modified Eagle's medium(DMEM) with 20mL/L DMSO for 4 days; the dexamethasone group, in which HepCHLine-4 cells were cultured in DMEM with 5×10^{-5} mol/L dexamethasone for 4 days; the DMSO plus dexamethasone group, in which HepCHLine-4 cells were cultured in DMEM with 20mL/L DMSO and 5×10^{-5} mol/L dexamethasone for 4 days; and the control group, in which HepCHLine-4 cells were cultured in DMEM without DMSO or dexamethasone for 4 days. Further, HepCHLine-4 cells were incubated with HBV at 37℃ for 24 hours. Hepatitis B surface antigen (HBsAg) and hepatitis Be antigen (HBeAg) in the supernatant of infected cells were detected by electrochemiluminescence(ECL) and HBV DNA was detected by fluorescence quantitative real-time polymerase chain reaction (FQ-RCR). **Results** 1) In the DMSO group the titer of HBsAg and HBeAg was relatively high; 2) In the dexamethasone group the titer of HBV DNA was relatively high; 3) In the DMSO plus dexamethasone group the titer of HbsAg, HBeAg and HBV DNA were higher. The highest levels were 125.790IU/mL, 4.784S/Co and 5.930×10^5 copies/mL respectively; 4) In the control group the titer of HbsAg, HBeAg and HBV DNA were lower, with the highest levels being 85.490IU/mL, 1.896S/Co, 3.729×10^4 copies/mL respectively. **Conclusion** DMSO and dexamethasone can improve the ability of HepCHLine-4 to HBV infection

Keywords: Hepatitis B virus; Dimethyl sulfoxide; Dexamethasone; Infection

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