

论著

# 人精子携带的HBs和HBc基因在早期胚胎细胞中的蛋白表达

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**摘要** 背景与目的: 探讨由人精子带入受精卵中的HBs和HBc基因能否在早期胚胎细胞中进行蛋白表达。材料与方法: 人精子经重组质粒pIRES2-EGFP-HBV转染后, 与金黄地鼠去透明带卵母细胞离体受精, 选择带绿色荧光的2-细胞胚, 用免疫荧光技术检测HBs和HBc基因在胚胎细胞中的蛋白表达, 用ELISA方法分别对HBsAg和HBcAg进行半定量和定性分析。结果: 在带绿色荧光的2-细胞胚中免疫荧光检测可见清楚的HBsAg和HBcAg阳性信号; ELISA结果表明, 单个2-细胞胚内HBsAg的量小于0.064 ng/ml, 对HBcAg的检测得到阳性结果。结论: 人精子携带到卵内的HBV基因可在早期胚胎细胞中表达表面抗原和核心抗原。

**关键词** [HBV基因](#); [人精子](#); [胚胎细胞](#); [蛋白表达](#)

## Protein Expression of Human Spermatozoa-mediated HBs Gene and HBc Gene in Early Embryonic Cells

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**Abstract** BACKGROUND AND AIM: To study the protein expression of HBs and HBc genes brought into embryos via human spermatozoa. MATERIALS AND METHODS: Human spermatozoa were transfected with recombinant plasmid pIRES2-EGFP-HBV and were then fertilized with zona pellucida-free golden hamster ova. The 2-cell embryos with and without green fluorescence were collected by immunofluorescence assay and ELISA analysis, respectively. RESULTS: The immunofluorescence assay showed that no HBsAg- and HBcAg- positive signal was observed in 2-cell embryos without green fluorescence and the clear HBsAg- and HBcAg- positive signals were detected in ones with green fluorescence. ELISA analysis showed that the amount of HBsAg in a single 2-cell embryo was about 0.064 ng/ml and the positive result for HBcAg was detected. CONCLUSION: Human sperm-mediated HBs and HBc genes are able to express their proteins in early embryonic cells.

**Keywords** [HBV gene](#) [human spermatozoa](#) [embryonic cells](#) [protein expression](#)

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