

研究简报

Lipofectamine<sup>TM</sup>和Fugene-6介导GFP基因转染绵羊胎儿成纤维细胞的比较研究

马玉珍[1,2] 王瑞[2] 闫真[2] 王利民[2] 刘东军[2] 夏国良[1]

[1]中国农业大学生物学院,北京100094 [2]内蒙古大学哺乳动物繁殖生物学与生物技术教育部重点实验室,呼和浩特010021

摘要:

分别用Lipofectamine<sup>TM</sup>和Fugene-6介导质粒pEGFP-C1转染体外培养的绵羊胎儿成纤维细胞 (sheep fetal fibroblast cells,sFFCs),比较了DNA浓度、转染试剂用量以及细胞暴露于DNA、转染试剂中作用时间对转染效率的影响,通过含G418的DMEM/F12培养液筛选得到转基因单克隆细胞。结果表明脂质体转染试剂Lipofectamine<sup>TM</sup>转染效率优于Fugene-6。另外,对转基因细胞进行了染色体核型分析。结果表明,转基因细胞中二倍体核型占74.5%,与对照组比较没有显著性差异。以上研究为其他基因转染sFFCs以及利用体细胞克隆法生产转基因绵羊提供了参考依据。

关键词: 绵羊胎儿成纤维细胞 脂质体 转基因 染色体

Comparison Between Sheep Fetal Fibroblast Cells transfected with GFP by Lipofectamine<sup>TM</sup> and by Fugene-6

MA Yu-zhen, WANG Rui, YAN Zhen, WANG Li-min | LIU Dong-jun | XIA Guo-liang

1. College of Biological Science, China Agricultural University, Beijing 100094|2. Key Laboratory of Mammal Reproductive Biology and Biotechnology, Ministry of Education, Inner Mongolia University, Huhhot 010021, China

Abstract:

Sheep fetal fibroblast cell were transfected with pEGFP-C1 by using Lipofectamine<sup>TM</sup> or Fugene-6 substance respectively. The impacts of DNA concentration, concentration of transfection agents, exposure time and incubation time on transfection efficiency were carefully compared. The transfected cells were incubated in DMEM/F12 media containing G418. The results showed that the efficiency of transgenic with Lipofectamine<sup>TM</sup> were excelled Fugene-6. Chromosome analysis shows no remarkable difference between transgenic and normal cells. Lipofectamine<sup>TM</sup> transfection method developed in this paper can be easily adopted by most research labs and will provide a basic reference for transfection of sheep fetal fibroblast cells with other gene and transgenic nuclear transfer.

Keywords: sheep fetal fibroblast cell liposome gene transfer chromosome

收稿日期 2007-12-29 修回日期 2008-01-11 网络版发布日期

DOI:

基金项目:

国家自然科学基金项目(30060059)和新疆建设兵团博士基金项目(05JC03)资助.

通讯作者:

作者简介: 马玉珍|副研究员|博士|主要从事动物生殖生物学和生物技术研究。Tel: 0471-4992443; E-mail: mayz@imnu.edu.cn

作者Email:

参考文献:

本刊中的类似文章

文章评论

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(274KB)
- ▶ [HTML全文]
- ▶ 参考文献[PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 绵羊胎儿成纤维细胞 脂质体 转基因 染色体

本文作者相关文章

PubMed

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text"/> 8596