Comparative evaluation of gene delivery devices in primary cultures of rat hepatic stellate cells and rat myofibroblasts

ABSTRACT

The results suggest FuGENETM6-based techniques can be optimized to provide a practical means of gene transfer into rat (not shown in this article) hepatic stellate cells, and that the use of "adenoviral-mediated" transfer is also proving effective for gene delivery to these cellular targets.

INTRODUCTION

The current knowledge on gene delivery systems is limited to the use of gene delivery systems that use a single gene as a delivery system. In animal models, gene delivery systems have been used to deliver genes to cells, which have been termed gene delivery devices. It is hypothesized that gene delivery devices can be used to deliver genes to cells that are in a state of genetic reprogramming, and therefore have a different genetic profile than the cell that is receiving the gene delivery system. The aim of this study was to evaluate the effect of gene delivery devices on myofibroblast differentiation and gene expression in rat liver stellate cells and rat myofibroblast myofibrosis (MFM), using a comparative evaluation of gene delivery devices in primary cultures of rat liver stell Transplantation is the process of inserting foreign molecules, such as promoter constructs or cDNAs, into eukaryotic cells. It has become a useful tool for studying gene functions and analyzing gene expression. Detailed protocols for efficient gene transfer to various cell types, including monolayers/suspected cells, have been developed over the past decades. However, in practice, most of these systems are inefficient. In particular, quiescent HSCs (also known as iterative HCS) and their transdifferenti

CONCLUSION

Remarkable conclusions Our data confirms the effectiveness of adenoviral-based techniques for gene delivery to cultured rHSCs, as it is an effective method for achieving high efficiency of gene transfer. Furthermore, our data indicates that introducing foreign DNA into RF and MFBs can be achieved through specialized vector systems. Further studies are necessary to determine the optimal in vivo conditions for adenoviral gene transfer to rHSCs/rMFBs.