Gene Delivery to Mammalian Cells: Volume 2: Viral Gene Transfer Techniques (Methods in Molecular Biology)

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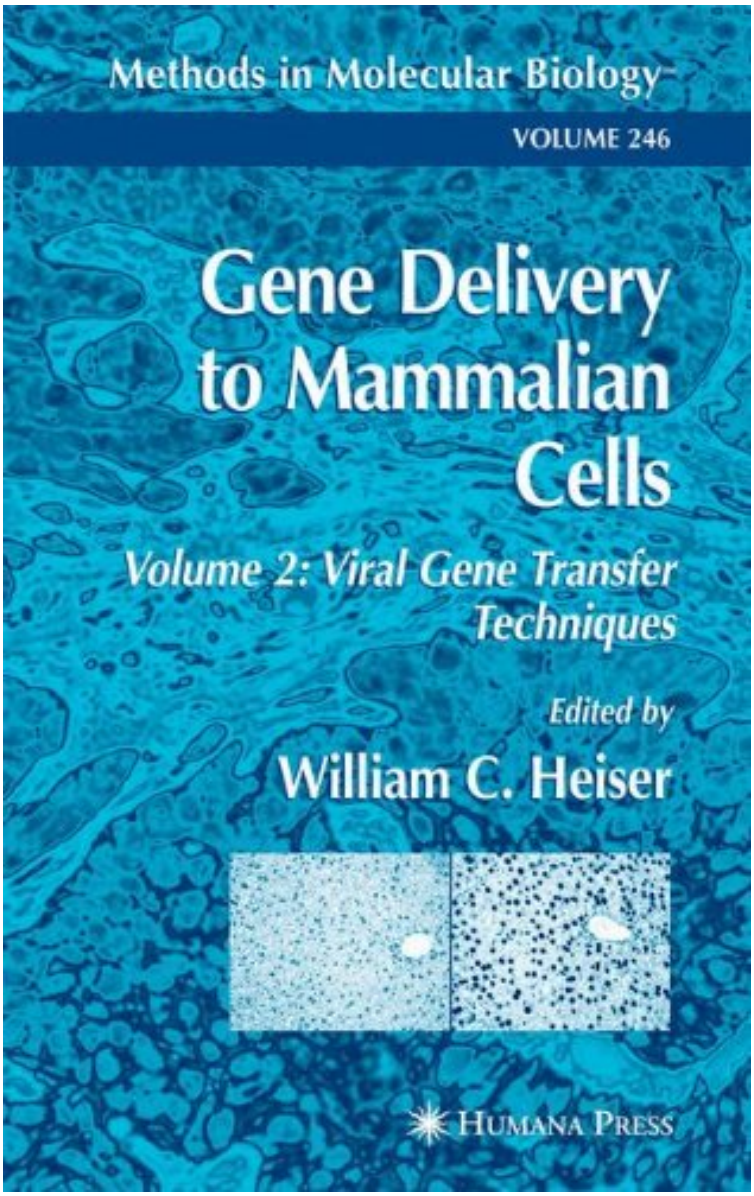

#4483065 in Books Humana Press 2003-10-28Original language:EnglishPDF # 1 9.29 x 1.21 x 6.41l, 1.99 #File Name: 1588290956566 pages | File size: 30.Mb

From Brand: Humana Press : Gene Delivery to Mammalian Cells: Volume 2: Viral Gene Transfer Techniques (Methods in Molecular Biology) before purchasing it in order to gage whether or not it would be worth my time, and all praised Gene Delivery to Mammalian Cells: Volume 2: Viral Gene Transfer Techniques (Methods in Molecular

Biology):

The efficiency of delivering DNA into mammalian cells has increased t- mendously since DEAE dextran was first shown to be capable of enhancing transfer of RNA into mammalian cells in culture. Not only have other chemical methods been developed and refined, but also very efficient physical and viral delivery methods have been established. The technique of introducing DNA into cells has developed from transfecting tissue culture cells to delivering DNA to specific cell types and organs in vivo. Moreover, two important areas of biologyassessment of gene function and gene therapyrequire succe- ful DNA delivery to cells, driving the practical need to increase the efficiency and efficacy of gene transfer both in vitro and in vivo. TM These two volumes of the Methods in Molecular Biology series, Gene Del- ery to Mammalian Cells, are designed as a compendium of those techniques that have proven most useful in the expanding field of gene transfer in mammalian cells. It is intended that these volumes will provide a thorough background on chemical, physical, and viral methods of gene delivery, a synopsis of the myriad techniques currently available to introduce genes into mammalian cells, as well as a practical guide on how to accomplish this. It is my expectation that it will be useful to the novice in the field as well as to the scientist with expertise in gene delivery.

For Volumes 1 2 "This unrivaled collection of proven, reliable methods for the chemical, physical, and viral delivery of genes into mammalian cells, presented in great detail by experienced researchers, should be a valuable reference work for novices in this filed and experienced researchers alike." - Medical Oncology "...clearly and succinctly presented...a must for any biology or medical library." - ASM NewsFrom the Back CoverWhether to assess the function of new genes identified from the Human Genome Project or to apply gene therapy successfully, it is often necessary to deliver genes to specific cells. In Gene Delivery to Mammalian Cells, highly experienced researchers describe in great detail methods that have proven most useful in delivering genes to mammalian cells. Volume 2: Viral Gene Transfer Techniques details procedures for delivering genes to cells in vitro and in vivo, including the use of lentiviral vectors, adenovirus, adeno-associated viruses, alphavirus, herpes simplex virus, baculovirus, and retrovirus. Many of these techniques have only been in practice for a few years and are still being refined and updated. Some are being used not only in basic science, but also in gene therapy applications. Each protocol contains step-by-step instructions, along with background notes, equipment and reagent lists, and tips on troubleshooting and avoiding known pitfalls. Introductory chapters review the delivery methods presented, discussing their advantages and disadvantages, how they have been used successfully for gene delivery, and the future of their technology. An accompanying volume, Volume 1: Nonviral Gene Transfer Techniques, focuses on gene delivery by a variety of chemical and physical methods. Comprehensive and cutting-edge, Gene Delivery to Mammalian Cells, volumes 1 and 2, offers biomedical specialists in industry and academia an unrivaled collection of reliable methods for the chemical, physical, and viral delivery of genes to mammalian cells, all prepared to save laboratory time and ensure experimental success.