Experience the versatility of Stratagene mammalian protein expression solutions.

Our complete solution includes the new Adeno-associated viral (AAV) Helper-Transfection reagent, AdEasy™ Transfection reagent, LipoTAXI Transfection Reagent, and ViraPack Transfection Kit. The AdEasy™ system allows for five unique vectors with epitope tagging technologies (c-Myc and FLAG®) and offers the highest protein yields, with improved purification and analysis. GeneJammer Transfection Reagent offers increased transfection efficiency and facilitates multiple expression constructs with different drug-resistance genes. Adeno-associated viral (AAV) provides three copies of either the FLAG or c-Myc tags that are added to your protein for easy detection. Easy detection with epitope tagging simplifies studies of protein interactions. Stratagene raised the standard for fast, efficient, site-directed functional cloning with induction as high as 1,700-fold. Dose-responsive inducible mammalian expression with induction as method completed in less than one day.

We have created this educational poster to increase understanding of the means of viral mediated gene delivery. Representing the Adenoviridae family is the adenovirus, a double-stranded DNA virus with broad tropism, adenovirus can infect both dividing and non-dividing cells. The adenovirus is a well known replicating vector, which allows for the generation of viral stock, in contrast to retroviral vectors that require complex systems for packaging and infection. The adenovirus is a promising vector for gene delivery because it can infect both dividing and non-dividing cells, but the adenovirus still carries a large degree of restriction when considering cell lines. Each of these viruses has its advantages and disadvantages, so which to use for a particular experiment may depend on multiple factors, including insert size, titer required, target gene expression level, type of expression desired (short- or long-term) and host cell type. Selection of a delivery system should be carefully considered when attempting to apply the technology to gene therapy. However, with the improved methods and techniques being developed, viral gene delivery systems are becoming better suited for efficient and low toxin treatments. The introduction of foreign DNA into eukaryotic cells by transfection has become a standard method for many cell types. Viral delivery of foreign DNA using viral vectors has not been without its problems, particularly when attempting to deliver genes to non-dividing cells, as well as providing a better understanding of our immune response, as well as of the viruses themselves, through the study of viral life cycles for adenovirus, AAV, and retrovirus. The viral life cycles for adenovirus, AAV, and lentivirus walks the reader through the important steps in the pathway from selection of the viral vector to application of the vector in mammalian cells. The annotated graphical representation of the viral life cycles for adenovirus, AAV, and retrovirus enables the reader to follow the important steps in the pathway from selection of the viral vector to application of the vector in mammalian cells.

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