



VSV-T7 Transient Gene Expression System

High Efficiency Recombinant Protein Expression in a Very Wide Range of Cell Types

In the biopharmaceutical and biotech industries, there is a crucial need to produce large amounts of recombinant proteins for various purposes, including vaccine production, gene therapy, drug development, and reagent use

There are two types of transient gene expression methods: plasmid DNA vectors and viral vectors. Viral vectors are preferred for their efficiency and ability for post-translational modifications for the gene of interest. However, they generally are more labor intensive and costly to produce.

Where high protein yield is desired, virus-based expression systems utilizing vaccinia, adenovirus, and Sindbis are employed. However, such virus-based systems may seriously compromise product safety to achieve expression due to high risk of



recombination and genome insertion. Furthermore, they are incompatible with many cell types making it almost impossible to express a wide array of protein types.

Dr. Jacques Perrault has developed a high efficiency recombinant protein expression system that overcomes many of the limitations found in industry-leading expression systems. Dr. Perrault's expression system is based on the vesicular stomatitis virus (VSV) system, which drives expression by an engineered VSV recombinant encoding T7 RNA Polymerase. This complex in turn drives the expression of foreign genes.

While gene expression using eukaryotic transmission is generally more labor intensive and costly, the opposite is true of the VSV T7 promoter system. Lack of a need to construct virus recombinants make this system simpler and cheaper to produce than many leading eukaryotic gene expression systems. Furthermore, the VSV T7 protein expression system is compatible with almost all mammalian and insect cells at any stage of the cell

cycle, thus capable of producing many novel protein products.

The VSV-T7 system meets or exceeds the efficiency of many industry-leading eukaryotic expression systems. Finally, it is easy to manipulate, enabling production of a wide variety of engineered plasmids targeting a wide array of cells.

Benefits

- VSV infects all higher eukaryotic cell types, including primary cells
- Rapid and efficient transient expression of foreign genes
- Absolutely free of infectious virus
- VSV genome not subject to recombination

Advantages

- Accelerated research process
- Saves time and expense
- High level gene expression
- Target to specific cell types

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