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Modified Sleeping Beauty Transposon Gene Transfer System

Technology ID
99002

Category
Life Sciences/Biomarkers
Life Sciences/Therapeutics

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Modified Sleeping Beauty™ Transposon System with Functional Genomics Applications

The modified Sleeping Beauty™ (SB) transposon allows even greater application to various areas of biotechnology and human therapy. The synthetic transposon system uses modified Sleeping Beauty vectors to accomplish a wide range of applications in functional genomics. For example, the vectors can be used to identify and characterize genomic coding sequences and localize gene expression. This system can also be used to identify, isolate and characterize transcriptional regulatory sequences.

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Sleeping Beauty™ Transposon Uses Gene Transfer for Therapeutic Gene Therapy

The modification of SB also allows for gene transfer, and long-term expression of genes in chromosomes. The transfer of new genes into a cell allows for the restoration of defective or missing functions in the genome. This aspect of the SB technology makes it useful in applications such as therapeutic gene therapy, which has the potential to treat genetic diseases such as hemophilia and sickle-cell anemia.

BENEFITS OF THE MODIFIED SLEEPING BEAUTY™ GENE TRANSFER SYSTEM:

- Ability to integrate into vertebrate genome and localize areas of expression
- Identify coding sequences in cell
- Restore defective or missing functions of genes
- Mechanism for therapeutic gene therapy
- Greater biotechnology application