DELIVERY OF CRISPR EPIGENETIC EDITING TECHNOLOGIES

Tech ID: 33665 / UC Case 2025-004-0

PATENT STATUS

Patent Pending

BRIEF DESCRIPTION

This invention provides a novel method for delivering epigenetic editor components into cells using virus-like particles (VLPs). The VLPs are designed to encapsulate the necessary genetic and protein components for targeted epigenetic editing without integrating into the host cell's genome. This non-integrating approach reduces the risk of off-target effects and potential for unintended genetic modifications, making it a safer and more precise delivery system for therapeutic and research applications. The VLPs can be engineered to target specific cell types, ensuring that the epigenetic editing components are delivered only where they are needed.

SUGGESTED USES

- Gene therapy for genetic diseases
- Targeted drug delivery
- Epigenetic research
- Biomanufacturing

ADVANTAGES

- Enhanced Safety: The VLP-based system is non-integrating, minimizing the risk of insertional mutagenesis and off-target effects.
- Increased Precision: The technology allows for targeted delivery to specific cell types, improving the efficiency and safety of therapeutic applications.
- Broad Applicability: The system can be adapted for a wide range of epigenetic editors and cargo, making it a versatile tool for various research and clinical needs.
- Reduced Immunogenicity: VLPs are generally less immunogenic than traditional viral vectors, which could lead to a lower risk of immune response in patients.

RELATED MATERIALS

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

▶ Programmable Transcriptional Tuning in Eukaryotic Cells with MeCP2-dCas9

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OTHER INFORMATION

CATEGORIZED AS

» **Biotechnology**
» Genomics
» Health
» **Medical**
» Delivery Systems
» Gene Therapy
» Research Tools
» Therapeutics
» **Research Tools**
» Nucleic Acids/DNA/RNA

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