

The New Standard of mRNA R&D: Creative Biolabs Combines Methylation Assays with saRNA Synthesis

Leveraging its integrated "design-synthesis-quality control" system, Creative Biolabs is overcoming bottlenecks in mRNA drug expression and in vivo stability.

SHIRLEY, NY, UNITED STATES, January 22, 2026 /EINPresswire.com/ --

Leveraging its integrated "design-synthesis-quality control" system, Creative Biolabs is dedicated to overcoming core bottlenecks in mRNA drug expression duration and in vivo stability.

During the development of mRNA drugs, achieving efficient protein expression and ensuring consistency at the molecular level are the main challenges in clinical translation. Creative Biolabs has focused its research efforts on the precision of the underlying processes. Through multi-dimensional technical interventions, it provides more reliable experimental pathways for global research institutions.

High-quality sequence design is the foundation of drug development. The Creative Biolabs' comprehensive mRNA platform covers the entire process from codon optimization to in vitro transcription (IVT). This platform precisely regulates the 5' cap structure and 3' poly(A) tail, aiming to enhance the translation initiation efficiency of mRNA and delay its degradation rate within the cell. This standardized process flow effectively reduces quality variations between different batches.



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meet the stringent regulatory requirements. The epigenetic modifications of mRNA (such as m6A methylation) directly affect the stability and immunogenicity of the molecule. Creative Biolabs has launched an [RNA methylation detection](#) service, which uses high-sensitivity detection technology to precisely quantify the modification efficiency. This quality control step not only ensures that the chemical structure of the drug molecule conforms to the design expectations but also provides key data support for evaluating the in vivo immunogenicity of the drug.

To further break through the limitations of short expression time and high dosage of traditional mRNA, Creative Biolabs has deeply established a [customized saRNA synthesis service](#). saRNA utilizes the mechanism of viral replicon systems and can replicate itself after entering cells. Experiments have confirmed that this "self-amplification" property allows for therapeutic efficacy at as little as one-tenth the dose of conventional mRNA. This technical approach not only lowers the production cost but also significantly improves the patient's tolerance, providing new possibilities for the treatment of chronic diseases and complex immune disorders.

About

Creative Biolabs is a global enterprise specializing in biotechnology services. Through its integrated "production + quality control + evolution" strategy, the company transforms the complex RNA research and development process into a predictable and scalable scientific solution.

Candy Swift
Creative Biolabs
+1 631-830-6441
marketing@creative-biolabs.com

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