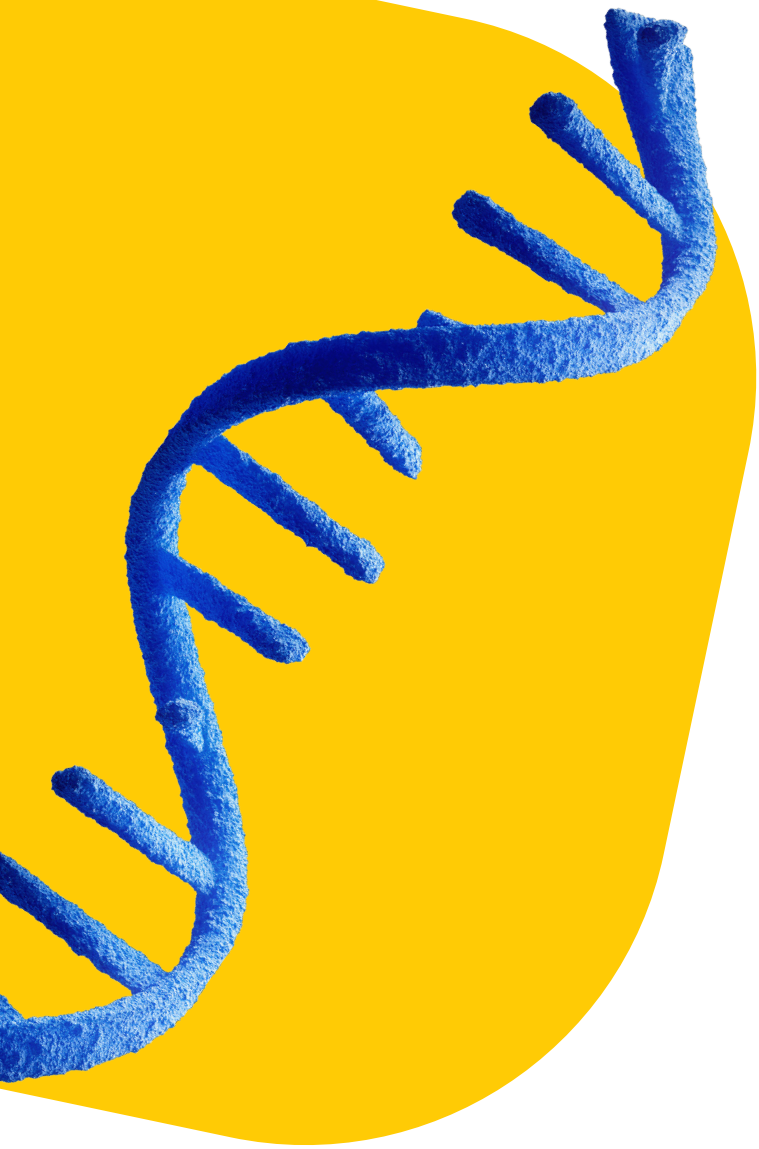
Millipore®
CTDMO Services

MERCK



mRNA CDMO Services to accelerate your mRNA program

Next generation PCR-based mRNA manufacturing at your service

As part of our globally integrated CTDMO capabilities, our mRNA CDMO Service is laying the foundation for the success of your mRNA programs with a flexible, robust, and scalable process that can be adapted for each new project. This enables highest product yield and quality for every individual mRNA sequence. Our manufacturing expertise is complemented by in-house, state-of-the art analytical method development and validation capabilities.

Discover our mRNA Center of Excellence

We are expanding our offering by establishing two new mRNA manufacturing sites for GMP grade mRNA manufacturing, all under the umbrella of our mRNA Center of Excellence.

This expansion will enable us to provide mRNA at all scales and qualities, from research through all clinical stages to commercial needs – becoming the single source provider of mRNA drug substance, for all mRNA program life cycle steps.*

*mRNA as active substance for human use requires a GMP manufacturing authorization issued by the National Competent Authority.

Next generation PCR-based mRNA manufacturing

Scalable & flexible manufacturing platform

Plasmid DNA

Polymerase Chain Reaction (PCR)

Tangential flow filtration (TFF)

In Vitro Transcription (IVT)

Chromatography

Quantifaction & dilution

Bioburden filtration & fill

Key features of PCR-based mRNA manufacturing

Discover more about our mRNA CDMO

With our proven PCR-based workflow, mRNA manufacturing is highly reproducible, and the final product has excellent properties.

Debottleneck pDNA supply chain

PCR-based manufacturing requires ~10,000 fold less pDNA compared to conventional linearization approach.

Reproducibility

Consistent reproducible results from lenghts of 200 to 9,000 nucleotides, longer upon request.

Time and cost savings

Low quantity of pDNA required may not necessitate Master Cell Banking establishment, potentially saving months. pDNA according to GMP principles, only.

Quality

Highly homogenous *in vitro* generated template for IVT synthesized with high fidelity polymerases, minimize trailing or truncated IVT templates.

Flexibility

Highly adaptable synthetic mRNA template generation, poly(A)-tail introduction during PCR-step.

Purity

Cell free *in vitro* process, mitigating risks of microbial DNA, microbial protein and endotoxins carryover.

Our integrated CDMO capabilities:
Your experienced partner from mRNA to final drug product

As part of the Millipore® CTDMO Services offering, we provide fully integrated CDMO capabilities to support all stages of your mRNA-LNP drug development and manufacturing process, from mRNA, through lipids and lipid nanoparticles (LNPs) to final Fill & Finish.

Discover more about our mRNA-LNP CTDMO services and contact us at:
SigmaAldrich.com/mRNA-CTDMO-Contact

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