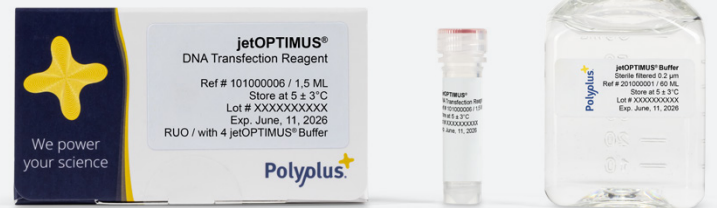


# jetOPTIMUS®

## Best-In-Class DNA Transfection Reagent



### Product Information

jetOPTIMUS® is a powerful transfection reagent that improves cellular uptake and endosomal escape of DNA in adherent cells resulting in higher transfection efficiency, even in hard-to-transfect cells. Tested on various primary cells and cancer cell lines, jetOPTIMUS® proved its superiority by reaching higher transfection efficiencies and gene expression with minimal impact on cell viability and morphology.

jetOPTIMUS® is highly efficient for DNA delivery for various applications, such as transient and stable gene expression, CRISPR genome editing using DNA approach, as well as virus production in small scale.

### Features and Benefits

- **Highly efficient:** Maximal gene expression in easy and hard-to-transfect cells
- **Cost-effective:** Minimum reagent volume and DNA quantity required
- **Cell integrity maintenance:** Excellent cell viability and morphology
- **Timesaving:** Transfection with optimized ready-to-use protocol

# Introduction

## Relevant Applications

- Transient and stable gene expression from plasmid DNA transfection
- CRISPR Genome editing using DNA approach
- Transfection of hard-to-transfection cells (primary cells, stem cells, neurons, fibroblasts)
- Small scale virus production (AAV, LV, retroviral vectors) for academics | Biotech

## Relevant Process Steps

- DNA transfection | plasmid DNA transfection

# Technical Specifications

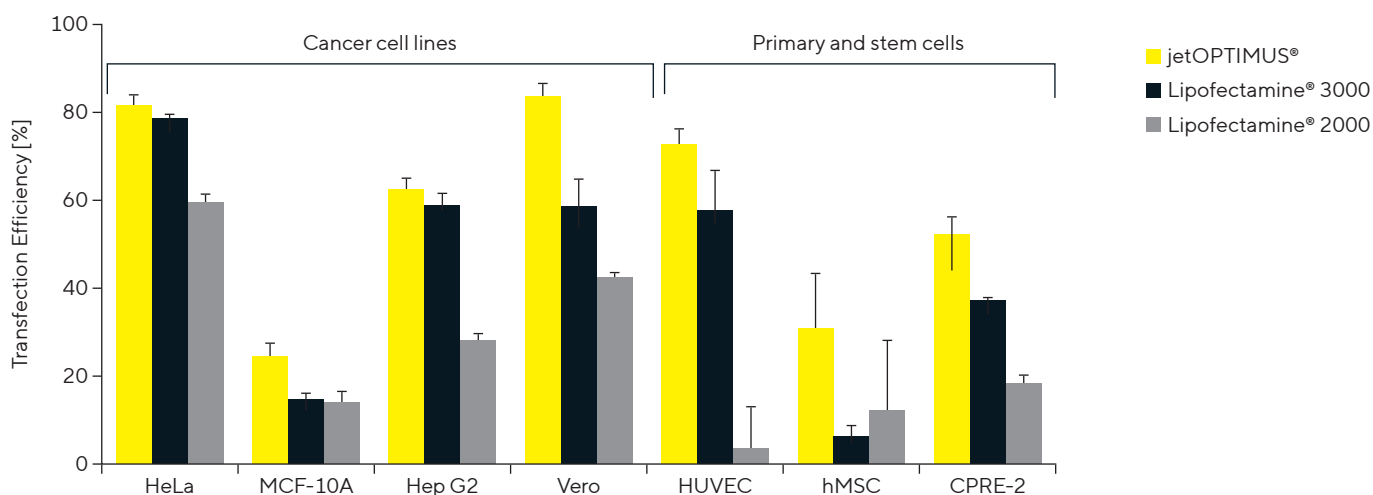
Molecule delivered	Plasmid DNA
Cell Types	Adherent cells and hard-to-transfect cells: <ul style="list-style-type: none"><li>▪ Primary cells (epithelial, hepatocyte, endothelial, fibroblast)</li><li>▪ Stem cells (embryonic, mesenchymal, induced pluripotent)</li><li>▪ Cancer cell lines</li><li>▪ Neurons after fibroblast</li></ul>
Number of transfections	1.5 mL of jetOPTIMUS® transfection reagent is sufficient to perform 3,000 transfections in 24-well plates or 750 transfections in 6-well plates following the standard protocol.
Storage	Store jetOPTIMUS® at 5 °C ± 3 °C. Expiry date is indicated in the certificate of analysis and on the product.
Provided with	jetOPTIMUS® Buffer

# Capabilities

## ▪ Superior Gene Expression in Easy-To-Hard-To-Transfect Cells

jetOPTIMUS® improves DNA transfection efficiency in easy- and difficult-to-transfect cells used as in vitro cell culture models. Tested on various primary cells and cancer cell lines, jetOPTIMUS® proves its superiority by reaching higher transfection efficiencies and gene expression than main competitors

**Figure 1:** jetOPTIMUS® Outperforms Its Main Competitor

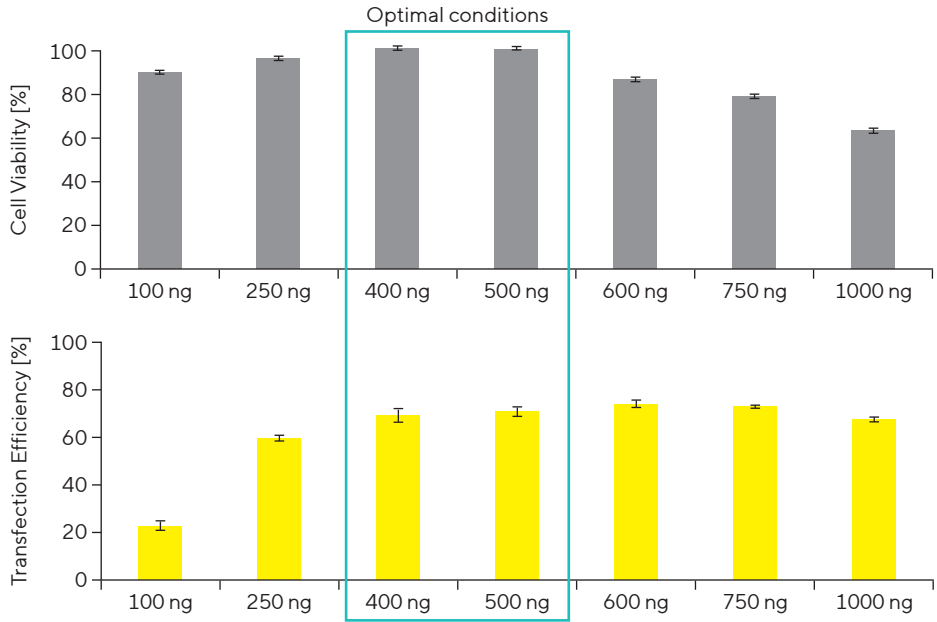


Note. Transfection efficiency was assessed by FACS analysis 24 h after transfection of plasmid DNA encoding EGFP (pCMV-EGFP) with jetOPTIMUS®, Lipofectamine® 2000 and Lipofectamine® 3000 in primary cells and cancer cell lines.

▪ **High Gene Expression Using Low DNA Amount**

jetOPTIMUS® has been developed to increase transfection efficiency into a wide range of cell types, while keeping the amount of DNA as low as possible and reducing the volume of reagent required compared to main competitors.

**Figure 2:** Excellent Viability and High Gene Expression Using Low DNA Amount

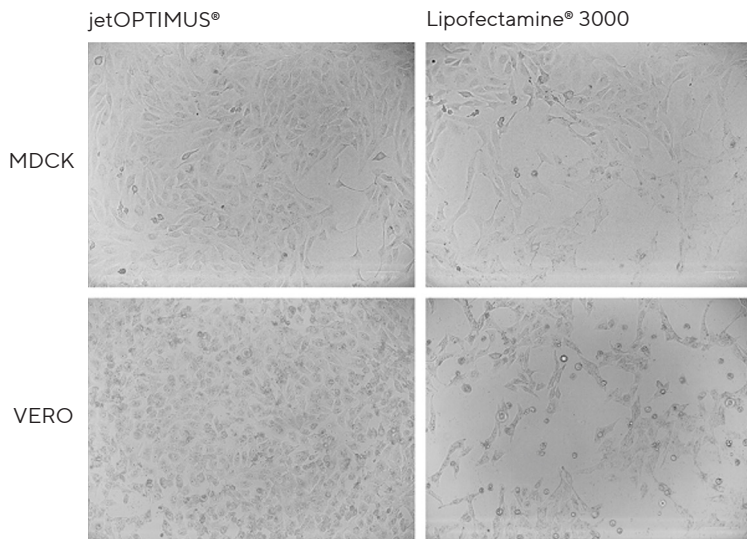


Note. Cell viability (in gray) was assessed with XTT analysis in HeLa cells 24 h after transfection of EGFP plasmid (pCMV-EGFP) with jetOPTIMUS® in 24-well plates. GFP expression (in yellow) was analyzed by FACS also 24 h after transfection.

▪ **Excellent Cell Viability and Morphology**

Reaching high transfection efficiencies is often at the expense of cellular integrity, with adverse effects on cell cycle, metabolism and signaling pathways. At Sartorius, we make no compromise on cell integrity: jetOPTIMUS® transfection reagent is gentle on cells, preserving cell viability and morphology, which allows generation of biologically relevant data from gene expression studies.

**Figure 3:** Cells Transfected With jetOPTIMUS® Remain Healthy and Keep a Good Morphology 24 Hours After Transfection



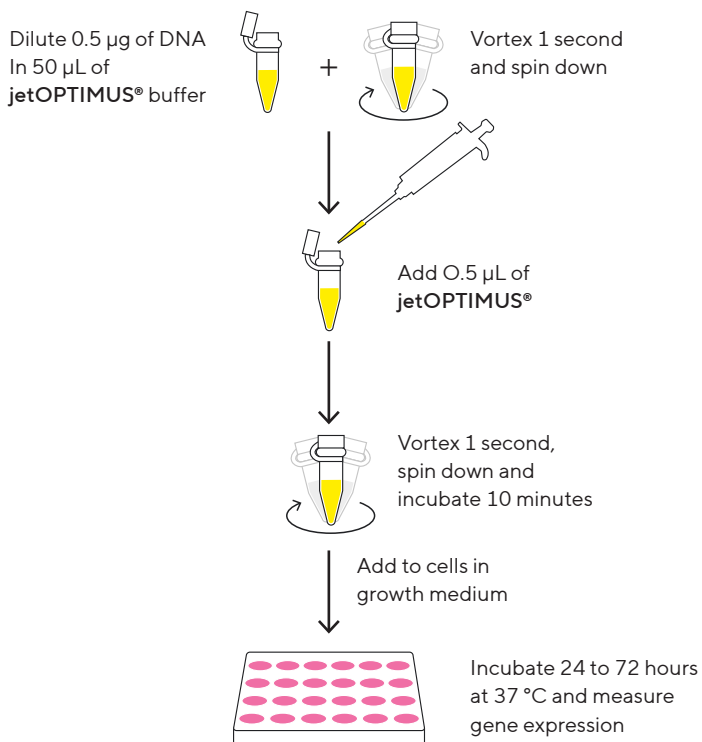
Note. Phase contrast microscopy of both MDCK and Vero cells 24 hours after transfections with a plasmid coding for a GFP protein performed according to the manufacturer's recommendations for each reagent.

## ▪ Timesaving With Optimized Ready-To-Use Protocol

jetOPTIMUS® is a ready-to-use transfection reagent provided with its own complexation buffer (jetOPTIMUS® Buffer). The protocol is optimized for simplicity of use (all plate sizes), culture medium compatibility (antibiotics, serum) and cost-effectiveness (lowest amount of DNA and volume of reagent).

**Figure 4:** Simplicity of the jetOPTIMUS® Protocol for DNA Transfection, Here in 24-Well Plates

### jetOPTIMUS® Transfection Protocol for 24-Well Plates



## Ordering Information

Item	Description	Package   Volume   Quantity   Size	Order Number
jetOPTIMUS® 0.1 mL	DNA Transfection Reagent provided with associated Buffer	0.1 mL Vial (+ 10 mL Buffer bottle)	101000051
jetOPTIMUS® 0.75 mL		0.75 mL Vial (+ 2 x 60 mL Buffer Bottle)	101000025
jetOPTIMUS® 1.5 mL		1.5 mL Vial (+ 4 x 60 mL Buffer Bottle)	101000006
jetOPTIMUS® Buffer 60 mL	jetOPTIMUS® associated Buffer	60 mL Bottle	201000001

Bulk quantities are available upon request.

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