



## DNA Transfection Reagent Product Manual

Catalog Number	Amount	Storage
<a href="#">LP4k</a>	1.0 ml / (1 vial)	Store at 4oC (do not freeze)

### Product Description:

Effectively deliver plasmid DNA into cultured cells is most important step for over-expression, knockdown or lentivirus production. The most common used delivery method is to use Transfection Reagents.

There are different types of transfection reagents, such as cationic polymer, small molecule (like PEG, DEAE), calcium phosphate solution, and lipids. For best delivery large size plasmid with wide accommodation to DNA amounts, Gentarget provides a lipid based transfertion reagent. It is developed with the best formulation for high transfection efficiency in most human, mouse or insert cell types. It has been used to produce thousand of lentivirus products, demonstrating a superior performance for virus production.

### Key Features:

1. Best for the transfection of large plasmid or multiple plasmid mixture;
2. No need for DNA/Lipid ratio optimization, simply use 1.5 ul of LP4k reagent per 500 ng of DNA in serum-free culture, or 2.0 ul of LP4K per 500 ng of DNA in serum culture;
3. High transfection efficiency in most cell types, both adherent and suspension cells;
4. High transfection efficiency in both serum-containing and serum-free media;
5. Consistent performance with highly reproducibility

### Transfection Protocol:

1. See cells to obtain about 70-90% confluent at time for transfection;
2. Dilute DNA and LP4K reagent:

**Note:** The following set up is for one well in 24-well plate. Depends on transfection scale, you can scale up proportionally as needed.

- 1) add total 500 ng of plasmids into 50 ul of serum-free medium;
- 2) add 2.0 ul (or 1.5 ul, for serum-free cell culture) of LP4K reagent into 50 ul of serum-free medium;  
(note: you can use Opti-Mem medium or your cell culture medium without serum for both dilution);

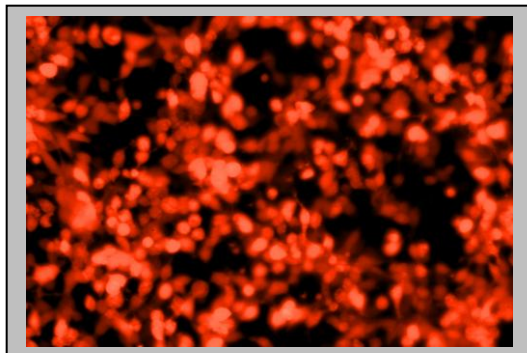


- 3) Add diluted LP4K reagent into diluted DNA, incubate at room temperature for 10 min;
3. Transfer the DNA-LP4k complex to cells: add the mixture above (~100ul) to your cell culture, into one well in 24-well plate (with serum or serum-free cell culture). Then, place the cell culture back to incubator, continue to culture at desired conditions.
4. Analyze or check the transfection efficiency at 1 to 3 days depends on cell types. (Note: no need to change or add medium during transfection process.)

### **Quality Control:**

Each lot transfection reagent was tested in HEK293 cells and only the products with high transfection efficiency are provided to customers.

### **Sample transfection photos:**



The 14.3 kb expression lentivector (CAT#: [LVP390](#)) and three packaging plasmids were transfected into HEK293-T cell (0.5 ug DNA / 2 ul of LP4K).

Image was taken at 12 hour post transfection

### **Warranty and user terms**

- This product is warranted to perform as described when used in accordance with this manual. GenTarget, Inc. MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. GenTarget's sole remedy for breach of warranty should be, at the option of GenTarget, to repair or replace the product if this product does not meet the stated quality standard.
- This product is provided for research use only. GenTarget is not liable, and does not have any responsibility or liability, whatsoever for any direct and indirect, consequential, or other damages resulting from using this Product.

**Attachment:** GenTarget's pre-made lentivirus product categories.



<b>Product Category</b>	<b>Product Description (please click into each category's page)</b>
<a href="#">Pathway Reporter</a>	Lentivirus for all kinds of pathway assays
<a href="#">Cell Immortalization</a>	Lentivirus for cell immortalization: Large T-antigen, hTERT, EBNA1/EBNA2, HpV16-E6/E7, Adenovial E1A, Kras_G12V, HOXA9, et al.
<a href="#">ImmunoOncology Research</a>	Lentivirus products for immuno therapy research, CAR-T, TCR-T, Assay cell lines, and Cell Antigens & Receptors.
<a href="#">CRISPR Gene Editing</a>	Preamde lentivirus express humanized wild-type <b>Cas9</b> endonuclease, the <b>dCas9</b> , gRNAs, <b>CRISPR</b> gene editing research
<a href="#">Cell-Specific Reporter</a>	a set of reporter lentiviruses to express a luminescence or fluorescent reporter (firefly Luciferase, Renilla luciferase, RFP or GFP fluorescent marker) under a tissue specific promoter
<a href="#">Infectious Antigens</a>	Lentivirus that express all kinds of infectious antigens with C-term 6His-tag.
<a href="#">Virus Like Particles (VLP)</a>	Lentiviral Like Particles, pseudo-typed with a different envelope proteins.
<a href="#">Non-integrating LV</a>	Integration Defective Lentivirus, express different targets for transient expression without the unwanted insertional mutagenesis.
<a href="#">shRNA Knockdown</a>	Knockdown verified and customized shRNA lentivirus for target knockdown,
<a href="#">microRNA lentivirus</a>	Premade lentivirus expression human or mouse <b>precursor miRNA</b> . And <b>anti-miRNA</b> lentivector and virus for human and mouse miRNA.
<a href="#">Anti-miNA lentivirus</a>	Pre-made lentivirus expression a specific anti-miRNA cassette.
<a href="#">Human and mouse ORFs</a>	Premade lentivirus expressin a <b>human, mouse or rat</b> gene with RFP-Blastididin fusion dual markers.
<a href="#">Luciferase expression</a>	Premade lentivirus for all kinds of luciferase protein expression: <b>firefly and Renilla, Red-Luc and more</b> , with different antibiotic selection markers.



<a href="#">Fluorescent Markers</a>	Lentivirus express all commonly used fluorescent proteins: GFP, RFP, CFP, BFP YFP, niRFP, unstable GFP and others.
<a href="#">Luminescent Imaging</a>	Lentivirus express Nano-Latern as Bio-probes for in vivo imaging of sub-cellular structural organization and dynamic processes in living cells and organisms
<a href="#">Cytoskeleton Imaging</a>	A fluorescent marker (GFP, RFP or CFP) fusion with a cellular structure protein, provides a convenient tool for visualization of cytoskeletal structure
<a href="#">Unstable GFP</a>	Lentivirus express the the destabilized GFP (uGFP) which provides fast turnover responses in signal pathway assay and in knockdown / knockout detection
<a href="#">near-infrared RFP</a>	The near-infrared Red fluorescent (niRFP) expression Lentiviurs provides the whole-body images with better contrast and brighter images
<a href="#">Fluorescent-ORF fusion</a>	Pre-made lentivirus expression a " <b>GFP/RFP/CFP-ORF</b> " fusion target.
<a href="#">CRE recombinase</a>	Premade lentivirus for expressing <b>nuclear permeant CRE</b> recombinase with different flurescent and antibiotic markers.
<a href="#">LoxP ColorSwitch</a>	Premade lentivirus expressing "LoxP-GFP-Stop-LoxP-RFP" cassette, used to monitor the CRE recombination event in vivo.
<a href="#">SEAP Reporter</a>	lentivirus expressing SEAP under different promoters (TetCMV, EF1a, CAG, Ubc, mPGK, Actin-beta or a signal pathway responsive promoter),
<a href="#">TetR Repressor</a>	Premade lentivirus expressin TetR (tetracycline regulator) protein, the repressor protein for the inducible expression system.
<a href="#">rtTA Expression</a>	rtTA binds to the tetracycline operator element (TetO) in the presence of doxycycline (Dox). Used for Tet-On /OFF inducible system.
<a href="#">iPS factors</a>	Premde lentivirus for human and mouse iPS ( <b>Myc, NANOG, OCT4, SOX2, FLF4</b> ) factors with different fluorescent and antibiotic markers
<a href="#">LacZ expression</a>	Express different full length <b><math>\beta</math>-galactosidase (lacZ)</b> with different selection markers
<a href="#">Negative control lentiviruses</a>	Premade <b>negative control lentivirus with different markers</b> : serves as the negative control of lentiviruses treatment, for validation of the specificity of any



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	lentivirus target expression effects.
<a href="#">Other Enzyme expression</a>	Ready-to-use lentivirus, expressing a specific enzymes with different selection markers.
<a href="#">Ultra titer lentivirus</a>	Ultra-titer lentivirus used for the hard-to-transduced cells and for in vivo manipulation of sperm cells, or stem cells.