



DNA Transfection Reagent Product Manual

Catalog Number	Amount	Storage
LP4k	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);

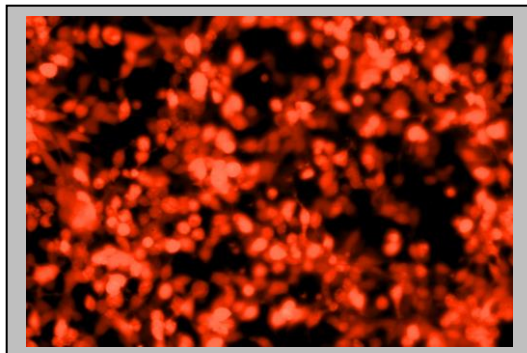


- 3) Add diluted LP4K reagent into diluted DNA, incubate at room temperature for 10 min;
3. Transfer the DNA-LP4k complex to cells: add the mixture above (~100ul) to your cell culture, into one well in 24-well plate (with serum or serum-free cell culture). Then, place the cell culture back to incubator, 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:

Lentivirus Category (click to see)	Product Description
Target Expression	Premade lentivirus express a human, mouse or rat gene with Fluorescent-Antibiotic fusion dual selection.
Luciferase expression	Premade lentivirus express all kinds of luciferase: firefly; Renilla; Cypridina; Red-Luc; Nano-Luc , with different fluorescent and antibiotic selection.
Fluorescent markers	Preamde lentivirus express human codon optimized fluorescent protein, GFP / RFP / CFP / BFP / YFP / niRFP / unstable GFP, etc.
Cytoskeleton Imaging	Fluorescent (GFP / RFP / CFP) labelled cell skeleton protein (Actin; Tubulin; Paxillin; Vimentin)
Cell Organelle imaging	Premade lentivirus for cell organelle imaging. The fluorescent labelled cell organelle lentivirus for living cell imaging.
CRISPR /hu CAS9	Preamde lentivirus express humanized wild-type Cas9 endonuclease for genomic editing by CRISPR
Fluorescent Fusion target	Lentivirus express the " Fluorescent-Target " fusion proteins. A desired target is fused to Green, Blue, Red , or Cyan Fluorescent Protein, demonstrating the target's functionality and localization
CRE recombinase	Premade lentivirus for expressing nuclear permeant CRE recombinase with different flurescent and antibiotic markers.
LoxP ColorSwitch	Premade lentivirus expressing "LoxP- GFP -Stop-LoxP- RFP " cassette, used to monitor the CRE recombination event in vivo.
SEAP Reporter	SEAP (Secreted Embryonic Alkaline Phosphatase) secreted expression lentivirus under different promoter.
TetR repressor expression	Premade lentivirus expressin TetR (tetracycline regulator) protein, the repressor protein for the inducible expression system.
rtTA Expression	Lentivirus express the reverse tetraccyline transcription activator gene, rtTA-M2 with different selection.
Pathway Reporter	Different Report lentivirus (Luc, RFP, GFP, SEAP) under a pathway specific response promoter.



Cell Immortalization	Comprehensive lentivirus for cell immortalization, for different cell types.
Cell Specific reporter	Different Report lentivirus driven by cell specific promoter.
Infectious Antigens	Lentivirus express all kinds of infectious antigens.
Viral Like Particle (VLP)	Lentiviral particles pseudo-typed with high density of surface envelope protein.
Immuno Therapy	Lentivirus products for Immuno Therapy application.
iPS factors	Premade lentivirus for human and mouse iPS (Myc, NANOG, OCT4, SOX2, FLK4) factors with different fluorescent and antibiotic markers
LacZ expression	Express different full length β-galactosidase (lacZ) with different selection markers
Anti-miRNA lentivirus	Pre-made lentivirus expression a specific anti-miRNA cassette.
Pre-made shRNA lentivirus	Premade shRNA lentivirus for knockdown a specific genes (P53, LacZ, Luciferase and more).
microRNA and anti-microRNA lentivirus	Premade lentivirus expression human or mouse precursor miRNA . And anti-miRNA lentivector and virus for human and mouse miRNA.
Negative control lentiviruses	Premade negative control lentivirus with different markers : serves as the negative control of lentivirus treatment, for validation of the specificity of any lentivirus target expression effects.
Other Enzyme	Ready-to-use lentivirus, expressing specific enzymes with different selection markers.