



Ultra titer lentivirus product manual

Catalog#	Product Name	Amounts
ULVP-001	GFP (CMV-Bsd), Ultra titer lentivirus	50 ul (1x10 ⁹ IFU/ml)
ULVP-340	GFP (CMV-Puro), Ultra titer lentivirus	
ULVP-300	GFP (CMV-Neo), Ultra titer lentivirus	
ULVP-023	RFP (CMV-Bsd), Ultra titer lentivirus	
ULVP-309	RFP (CMV-Puro), Ultra titer lentivirus	
ULVP-323	Luciferase (firefly)-2A-GFP (CMV-Bsd), Ultra titer lentivirus	
ULVP-020	Luciferase (firefly)-2A-GFP (CMV-Puro), Ultra titer lentivirus	
ULVP-009	Luciferase (firefly)-2A-RFP (CMV-Bsd), Ultra titer lentivirus	
ULVP-324	Luciferase (firefly)-2A-RFP (CMV-Puro), Ultra titer lentivirus	
ULVP-337	CRE-2A-GFP (CMV-Bsd), Ultra titer lentivirus	
ULVP-408	CRE-2A-GFP (CMV-Neo), Ultra titer lentivirus	
ULVP-407	CRE-2A-GFP (CMV-Puro), Ultra titer lentivirus	
ULVP-013	CRE-2A-RFP (CMV-Bsd), Ultra titer lentivirus	
ULVP-027	CRE-2A-RFP (CMV-Neo), Ultra titer lentivirus	
ULVP-338	CRE-2A-RFP (CMV-Puro), Ultra titer lentivirus	

Storage: < -70 °C, avoid repeat freeze/thaw cycles. Stable for > 6 months.



Product Description:

Lentiviral particles or lentivirus is a gene delivery tool produced from lentivectors for gene expression or knockdown. It is a relative simple, yet highly efficient tool for the establishment of transgenic animals and for the mammalian genomic editing.

Also, lentivirus became the desirable gene therapy approaches in part because of their ability to incorporate into genomic DNA with high efficiency, especially in cells that are not actively dividing. And it promotes persistent transgene expression (over-expression or knockdown functional genetics).

Lentivirus can simply transduced into mammalian sperm cells or gremline cells, or stem cells for transgenic animal generation. However, for a robust and high efficient (or high success rate) transgenesis, the vivo manipulation of spermatogonial stem cells requires high quality, ultra-titer lentivirus. To meet the needs for lentivirus with very high titer, GenTarget produced the purified, concentrated Ultra-titer lentivirus which are purified and concentrated via our proprietary protocols, and provided in **50 ul of PBS** solution at titer around **1 x 10^{9~10} IFU/ml**. GenTarget's lentivectors are VSV-G pseudotyped, Human Immunodeficiency Virus-1 (HIV) based lentiviral system with the most advanced Bio-safety features (including SIN).

The Ultra-titer lentivirus can be used for the hard-to-transduced cells and for in vivo manipulation of sperm cells, or stem cells.

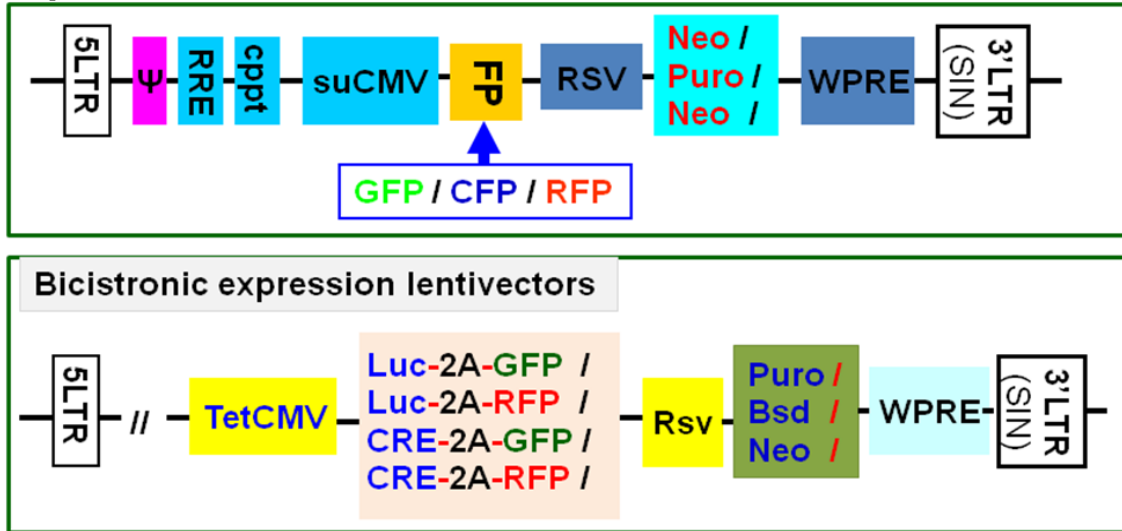
Each premade ultra-titer lentivirus expresses a fluorescent marker only (GFP or RFP), or co-express the firefly luciferase and a fluorescent marker under the same promoter, or co-express the nuclear penetrated CRE recombinase and a fluorescent marker under the same promoter, containing an antibiotic selection marker, Blastocidin (Bsd), Puromycin (Puro) or Neomycin (Neo). See the core-structure of the expression lentivectors below.

Expression lentivector was co-transfected with GenTarget's proprietary packaging mix (Cat# [HT-pack](#)) into 293T cells (cat# [TLV-C](#)). The pre-made lentivirus are VSV-G pseudotyped viruses, concentrated into PBS solution with sucrose stabilizer. Each lot of virus is validated lot by lot, and quality is guaranteed.

Particles are provided in PBS solution as 50 ul aliquots.



Expression cassette of the lentivectors:



For general questions about our ready-to-use lentiviral particles, please see [FAQ for pre-made lentiviral particles](#) (.pdf) on our website. (<http://www.gentarget.com/pdf/FAQ-Premade-Lentiviral-particles.pdf>).

For the [general lentivirus usage protocol](#), please visit our website (<http://www.gentarget.com/wp-content/uploads/2013/07/Transduction-protocols.pdf>).

Note: Filter wavelength settings:

BFP filter:	~Ex380	~Em460;
CFP filter:	~Ex436	~Em480;
GFP filter:	~Ex450-490	~Em525;
YFP filter:	~Ex500	~Em535;
RFP filter:	~Ex545	~Em620;
niRFP filter:	~Ex690	~Em715

Safety Precaution:

Gentarget lentiviral particles adapt must advanced lentiviral safety features (using the third generation vectors with self-inactivation SIN-3UTR), and the premade lentivirus is replication incompetent. However, please use extra caution when using lentiviral particles. Use the lentiviral particles in Bio-safety II cabinet. Wear glove all the time when handling Lentiviral particles! Please refer CDC and NIH's guidelines for more details regarding to safety issues.

References:

1. J Virol. 2000 November; 74(22): 10778-10784.
2. Hum Gene Ther (2003) 14: 1089-105.
3. Mol Ther (2002) 6: 162-8.
4. NIH Guidelines for [Biosafety Considerations for Research with Lentiviral Vectors](#). (Link).



Warranty:

This product is for research use only. It is warranted to meet its quality as described when used in accordance with its instructions. GenTarget disclaims any implied warranty of this product for particular application. In no event shall GenTarget be liable for any incidental or consequential damages in connection with the products. GenTarget's sole remedy for breach of this warranty should be, at GenTarget's option, to replace the products.

Related Products: GenTarget's Pre-made lentivirus Products:

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 fluorescent 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 tetracycline 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, FGF4) 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.