Integrated CRDMO Service Provider for Cell & Gene Therapy

brigene®

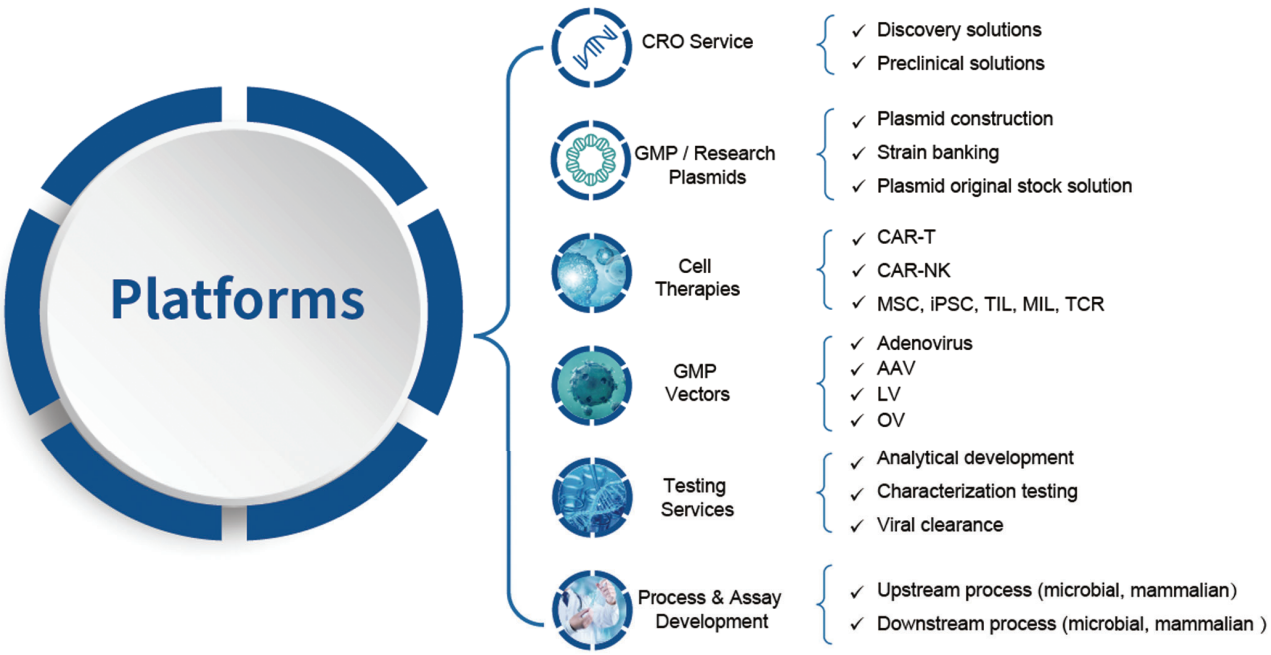
Your bridge from ATMPs concept to commercialization

About the company

uBriGene Biosciences is your bridge from ATMPs concept to commercialization. Our CDMO+ services include cell therapy (CAR-T, TCR-T, NK Cells, iPSC, Dendritic cells, Macrophages), viral vectors (AAV, LVV, RVV, AdV, oncolytic viruses), plasmids, and RNA (mRNA, circRNA, acRNA).

Our extensive experience in manufacturing, QC testing, and regulatory filing support of ATMPs, from early discovery and preclinical to clinical and commercialization, will help to accelerate your therapeutic programs from bench to bedside.

With four Centers of Excellence in North America, and Asia Pacific and more than 20 GMP clean room suites, uBriGene supports global CGT, vaccine, and mRNA product development.

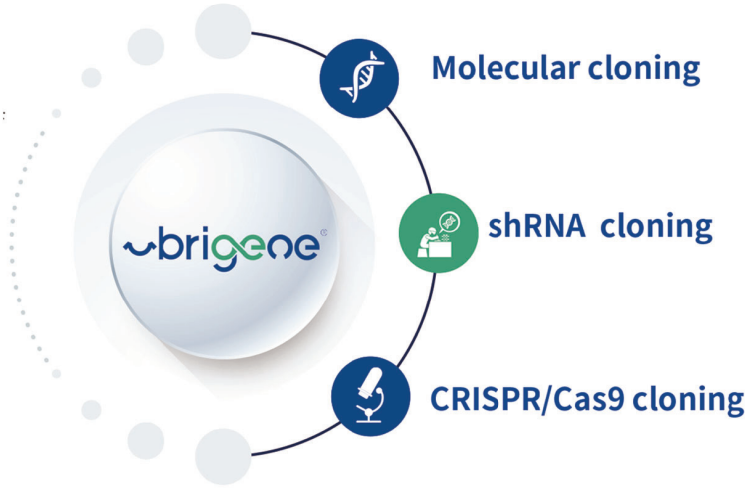


AAV and LVV - mediated Cell and Gene Therapy

As cell and gene therapy (CGT) landscape expands, AAV and LVV hold great promise in advancing cell and gene therapy treatments. uBriGene provides the whole process service including plasmid preparation, virus packaging and purification.

Plasmid Construction

As a crucial starting material for cell and gene therapies, plasmids are one of the most important tools in the field of cell and gene therapy (CGT). uBriGene offers a broad range of custom cloning services at a reasonable cost and speed delivery, including gene overexpression, interference, and CRISPR/Cas9 editing.



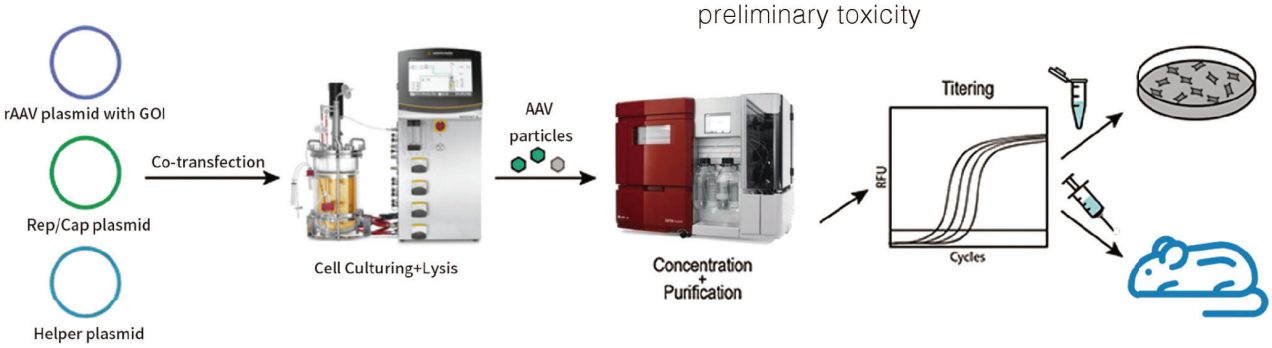
In stock plasmid We have an inventory of available control plasmids, which can be provided upon request.

AAV Catalog Products & Custom Production

uBriGene provides scalable and high-quality research-level Adeno-associated Virus (AAV) production services. The company utilized the 293 suspension cell system for production and employs a 2-step chromatography process (with the potential to smoothly scale up the AAV production) to purify the AAV vectors.

AAV Packaging

Production features:
1. Scalability, Scaling down from 200L scale
2. Suspension 293 cells and triple transfection
3. Chromatography steps for purification
4. TFF to concentrate and formulation
5. Ideal for animal studies of AAV drug efficacy and preliminary toxicity



In stock AAV

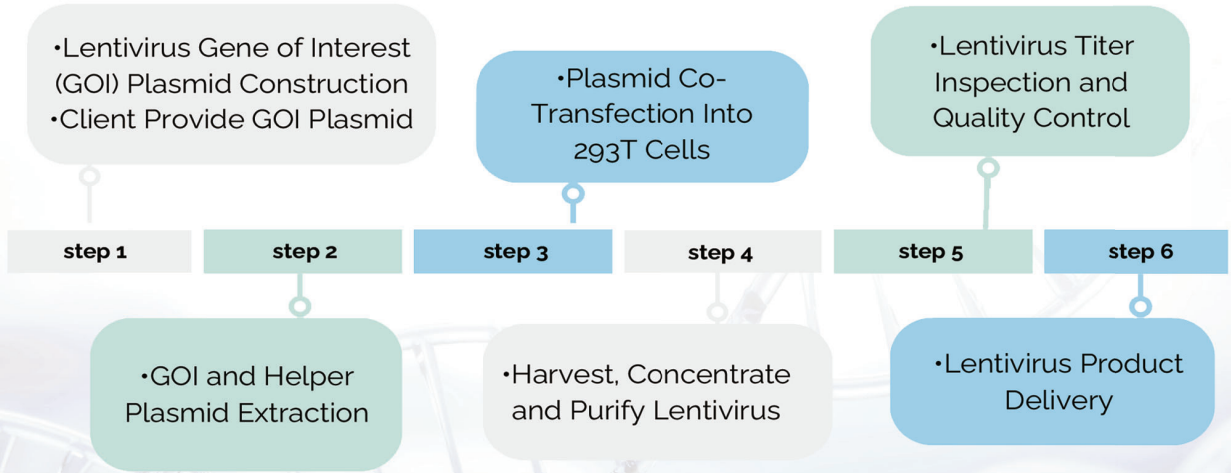
Commonly Used AAVs	Product Category	Applications
Fluorescent proteins	AAV-GFP, AAV-RFP, AAV-mCherry, AAV-tdTomato	To label cells or as negative control
Disease Modeling Tools	AAV-PCSK9, AAV-SNCA (A53T/A30P)	Convenient disease modelling; simple and safe operation
Recombinase	AAV-CRE	Used in combination with loxP cells or animals
Neuroscience research tool	Optogenetics, chemogenetics, calcium indicators, neurotransmitter probes	Used for physiological manipulation, neural circuitry, and other research

Lentivirus Catalog Products & Custom Packaging

uBriGene offers a wide range of products and services related to lentiviruses. This includes pre-made lentiviral vectors containing various fluorescent proteins such as GFP, RFP, and mCherry, as well as functional genes like CRE recombinase, autophagy markers, and viruses like SARS-CoV-2 and monkeypox virus. We also provide advanced lentiviral packing services tailored for Induced Pluripotent Stem Cell (iPSC lentivirus) and Chimeric Antigen Receptor T-cell (CAR-T lentivirus) applications.

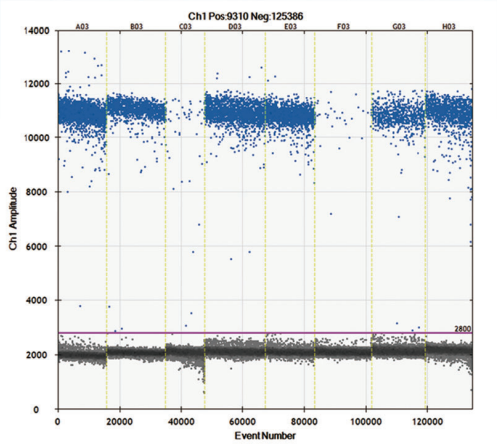
LVV Packaging

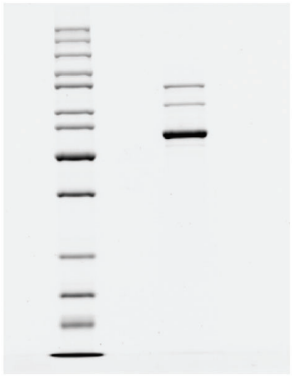
Lentiviruses can effectively infect both dividing and non-dividing cells, making them particularly suitable for challenging-to-transfect cells, such as primary cells and stem cells. Lentiviral vectors are often used in cell therapies, CAR-T, CAR-NK, and TCR-T.
We can package both 2nd generation and 3rd generation lentiviral particles, with high transduction efficiency.



Quality Control Testing

- ddPCR for titer
- AUC for empty/full ratio
- SDS-PAGE for purity
- Validated methodology for VP ELISA and HCD
- Very low endotoxin level, <2EU/ml





QC category		QC method
Concentration	Genomic titer	QPCR / ddPCR
	Physical titer	ELISA
Identification	Genetic identification	Sanger Sequencing
	Capsid protein identification	SDS-PAGE
Purity	Capsid protein purity	SDS-PAGE
	Residual host DNA	QPCR
	Residual plasmid DNA	QPCR
	Residual host protein	ELISA
	Bacterial Endotoxin	Gel Tests
	Empty capsid percentage	AUC/TEM

Additional quality control assays are available upon request.

Advantages

High yield>1.0E+14vg/L;
After purification,
Yield>6E+13vg/L

Serum-free
Suspension Culture

Scalable Linear Method:
3L-5L-50L-200L-500L

Comprehensive R&D
quality management:
Data Traceability

Nuclease

Ubrinuclease

uBriGene's cutting-edge nuclease product line, designed to meet both research and GMP needs. Experience unparalleled quality with our high-purity solutions.

Product Name	Product Specification	Product Grade	Purity
Ubrinuclease	25/100/500/2000/7650KU	Research/GMP	≥99%

Gene editing nuclease

uBriGene focuses on the forefront of gene editing technology and has introduced Cas9, Cas12a and other Cas proteins. These proteins are mainly used for CRISPR gene editing based on the Cas RNA system (direct delivery of Cas protein and sgRNA complex), which enhances editing efficiency.

Product Name	Product Specification	Product Grade	Purity
Ubri-Cas9 Gene Editing Nuclease	50ug/100ug/500ug	Research/GMP	≥99%
Ubri-Cas12 Gene Editing Nuclease	50ug/100ug/500ug	Research/GMP	≥99%
Ubri-Cas13 Gene Editing Nuclease	50ug/100ug/500ug	Research/GMP	≥99%

Transfection reagent

Ubri-transpower is optimized transfection reagents that composes of cationic polymer- PEI and transfection enhancer. In PEI transfection system, PEI/ nucleic acid complex enters into the cell via endocytosis and release nucleic acid (DNA or RNA). This product is free of animal-derived components and is compatible with serum-containing and serum-free systems. It provides stable and high transfection efficiency in various cell lines, such as HEK293/HEK293T.

Product Name	Product Components	Product Concentration
Ubri-transpower	A: Transfection reagent (PEI): 400 uL B: 20X transfection enhancer: 10mL	0.5mg/mL

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uBriGene Biosciences Inc.

Developing CGT treatments together

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