Serving over 1,000 institutions worldwide.

Partnering with the top 20 healthcare companies globally.

Recognized Citations in over 5,000+ peer-reviewed papers.

vector biolabs
FORTIS LIFE SCIENCES COMPANY

Who are we?

Vector Biolabs', a Fortis Life Sciences ® company, mission has always been to offer the highest quality AAVs and adenoviruses to accelerate scientific discovery.

What have we worked on in the past 20 years?

Ensuring **stability** and **reliability** in our vectors to get you the most consistent results.

Leveraging thousands of case studies to offer **tailored guidance** for customer requests.

Providing a streamlined process to help our customers plan and execute their studies efficiently.

What we strive to become

An intelligent, reliable, and thoughtful partner in Gene Delivery.

We believe that success is a collaborative journey. With **20 years of accumulated knowledge and experience,** we are dedicated to providing personalized guidance to empower your scientific discovery. Let's re-write the code together.

Who are we?

Custom End-to-End Service from Gene Synthesis to Titration

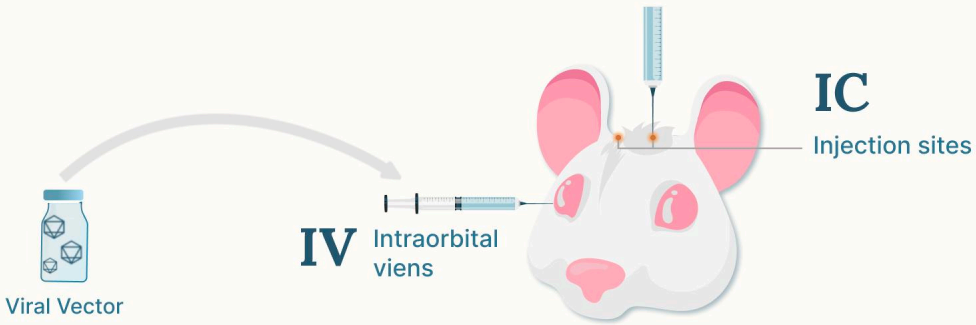
For pharmaceutical companies

1. Develop & produce pre-clinical viral vectors for gene therapy.
2. Produce viral vectors that can be used to create disease models for screening other therapeutic reagents (small molecule, RNAi, etc.)
3. Produce viral vectors to be used as tool for target validation to expedite drug development.

Case Study

A pharmaceutical company needed AAV vectors encoding 2 neuroprotective factors to inject into brain cells for Parkinson's disease research. Vector Biolabs helped the customer come up with the best design, cloned both genes into our AAV backbone, and produced the ready for injection AAV virus. Every stage was monitored with quality control (QC) assays to ensure a high-quality virus for advancing therapeutic development.

The turnaround time from cloning to final QC was between **4 to 5 weeks.**



For academic research labs

1. Overexpress Proteins of Interest
2. Gene Knockdown with shRNA
3. Gene editing with sgRNA

Case Study

A research lab aimed to study the role of a novel protein in neuronal development. They provided the plasmid encoding the protein. Vector Biolabs packaged the gene into AAV vectors and ensured precise quality control at each stage. The vectors were then used to transduce neurons, resulting in robust overexpression of the protein. Subsequent experiments revealed its crucial role in neuronal differentiation and growth, significantly advancing understanding in this area of neuroscience.

The turnaround time from packaging was between **2 to 3 weeks.**

Navigating AAV

We simplify your decision-making process to help you identify the right path.

5 Do you require physical titration?

VBL offers AAV Bioanalysis.

4 Which AAV serotype?

VBL will guide you to reach the optimal vector design.

3 Do you require cloning/synthesis of your gene?

a. VBL will clone /synthesize your GOI.

b. Guide you for tissue-specificity or wide-spread expression for AAV packaging.

2 Is AAV or ADV the best route to take for my research study?

With 20 years of experience VBL can advise you on the best path to take.

1 Which Viral Vector?

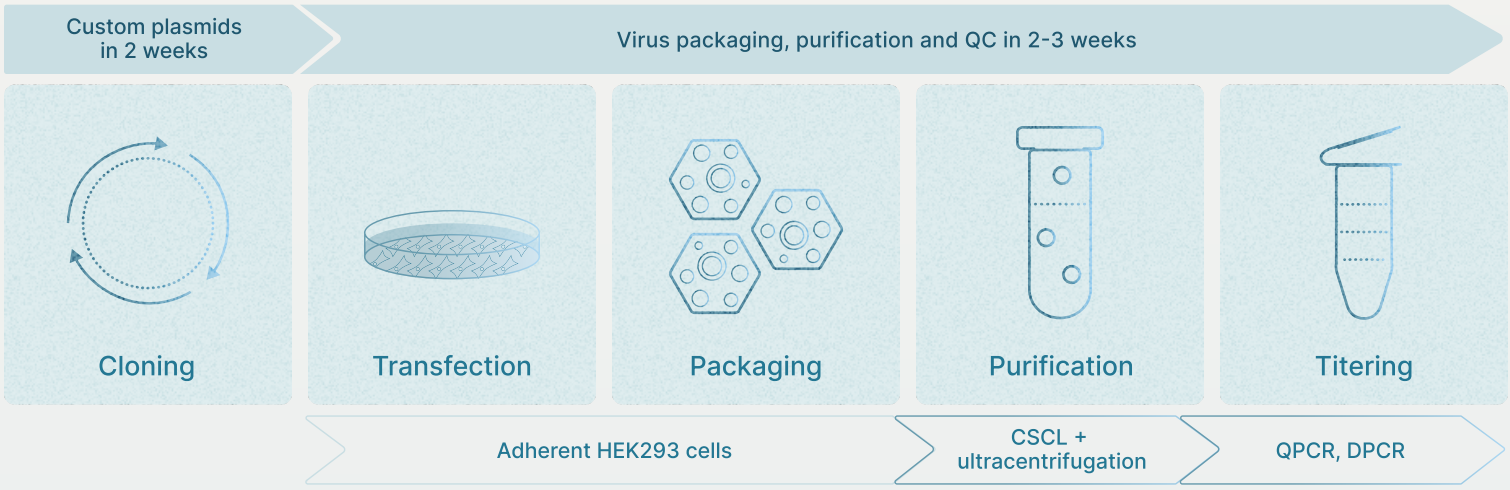
VBL will advise the appropriate viral vector and initiate a pilot-experiment.

How we work

Streamlined Process & Fast Turnaround Times

1. Insert the gene of interest (GOI), shRNA, or gRNA into a pAAV plasmid.
2. Prepare large quantities of the cis-pAAV plasmid and trans-plasmid (replication and capsid)
3. Transfect the plasmids into adherent HEK293 cells
4. Collect the AAV production cells and purify the rAAVs using CsCl centrifugation combined with ultracentrifugation.
5. Measure the viral stock concentration (genome copies per ml) using quantitative real-time PCR or digital PCR.

Production delivery within 4-5 weeks from our bench to your bench.



How to get started

A For a complete service from pAAV cloning, provide:

1. Over-expression AAV construct, 5-10 ug plasmid DNA, vector map, and sequence for your plasmid.
2. For shRNA AAV service, the exact RNAi sequence to be cloned into the recombinant AAV vector or your shRNA plasmid.
3. For gRNA AAV, the gRNA sequence.

B For plasmid packaging, provide:

1. 150-600ug of your pAAV plasmid.
2. The plasmid map/sequence for viral production.

Why us

Our customers value the **fast response** and **smooth ordering process.** We keep them informed about the status and readiness of their orders, helping them prepare for studies and accelerate discovery.

We Accelerate Your Discovery

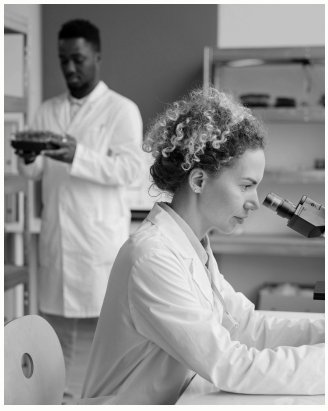
We understand our customers' specific needs and **provide tailored, informed solutions**. Many of our customers are experts in their fields but not necessarily in vector design. We educate them on the vector space and offer customized recommendations.

We Equip You with In-Depth Knowledge

We pride ourselves on reliable timelines and consistent product quality, with a focus on **accurate titers** and **stable results.**

We Ensure Reliable and Consistent Quality

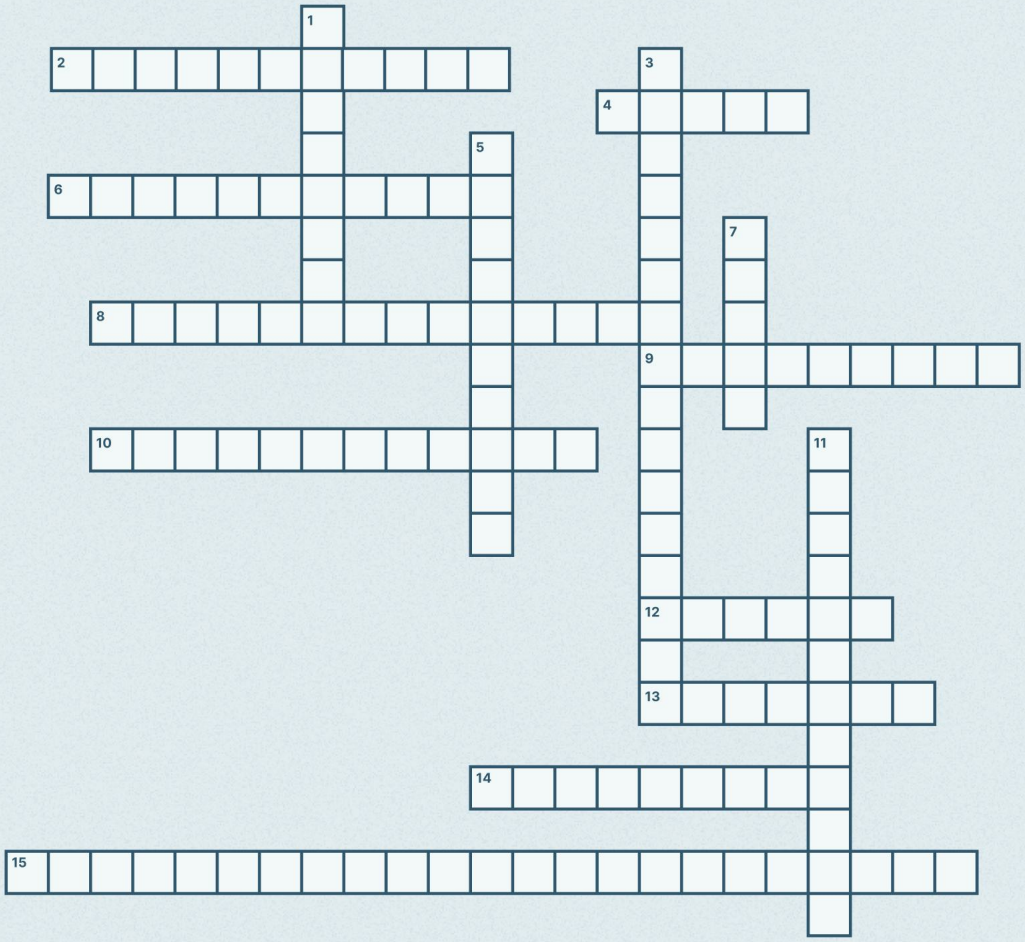
Being customer-centric is in our 'genes.



Final Words from the Founders

As scientists ourselves, we understand the importance of predictability. We have invested in technology to streamline our processes, so customers always know when they will receive their orders. This significantly shortens the study cycle.

We spend hours with each customer because we enjoy such discovery conversations. During these conversations, we advise our customers on the best vectors and best practice for implementation. Our dedication has allowed us to build a playbook that addresses most vector-related issues, ensuring our customers' success.



Across

2. Direct injection requiring surgery to deliver substances into specific brain regions, avoiding systemic exposure.
4. Brain barrier, Selective semi-permeable membrane protecting the brain from substances circulating in the bloodstream.
6 Part of the brain responsible for memory.
8. A method often used to purify AAV vectors, ensuring they are free from contaminants.
9. Basic unit of the nervous system.
10. Systemic injection used to deliver substances directly into the animal's eye.
12. Vector Biolabs' expertise in AAV design spansover this many years.
13. Cells, Glial cells that form the myelin sheatheon axons outside the brain.
14. Immune cells present throughout the CNS.
15. Systemic injection used to deliver substances directly into the brain's ventricular system.

Down

1. Cluster of interconnected nuclei that constitutethe subcortical basal ganglia.
3. Type of neuroglia that generates and maintainsthe myelin sheath around the axons in the brainimal's eye.
5. Star-shaped cells that are a type of glial cells.
7. This is the trial volume of ultrapure preps offered by Vector Biolabs.
11. Part of the brain that helps maintain homeostasis.

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Let's Re-write The Code Together